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THE PALGRAVE HANDBOOK OF INFERTILITY IN HISTORY

Edited by
Gayle Davis and Tracey Loughran



The Palgrave Handbook of Infertility in History

‘Infertility is not only, nor even primarily a bio-medical issue. Rather, infertility intersects with broader contextual and historical currents: religion, politics, economics and culture, notwithstanding the impact involuntary childlessness did, and does have on individuals and their families. *The Palgrave Handbook of Infertility in History* examines a vast array of varied historical and contemporary accounts ranging from deeply personal ‘stories’ of childlessness and attempts at assisted fertility, ancient through to modern-day medical attitudes to infertility and male and female impotence, and the politicisation of reproduction and population concerns at the sixteenth-century French court, in twentieth-century China and India, to the commercialisation of reproductive medicine and the commodification of body parts and fluids in a variety of global contexts.

The Palgrave Handbook of Infertility in History resists ‘easy assumptions’ and definitions of infertility. It raises difficult questions: how do we talk about involuntary childlessness, as scholars, as human beings? What does it mean to be ‘infertile’ in different global and historical contexts and from different perspectives? A truly inter and intra-disciplinary volume, *The Palgrave Handbook of Infertility in History* confronts readers with the hard reality that the ways we think and write about reproductive health and intimate bodily and familial concerns like infertility not only reflect, but also shape and determine the meanings we as scholars, and the societies in which we live, ascribe to infertility. The authors do not shy away from the responsibility that entails, inviting readers in turn to reflect on their own choices. A vital corrective to the preponderance of scholarship on procreation and fertility, *The Palgrave Handbook of Infertility in History* is an important contribution to scholarship on gender, feminisms, sexualities, families, emotions, colonialism and much, much more. An incredibly moving and informative volume; this reader learned a lot and was often moved to tears.’

—Cathy McClive, Department of History, Durham University, UK

‘An outstanding work of scholarship and a joy to read. This wide-ranging, eye-opening and exquisitely compiled handbook intricately examines infertility from historical, political, socio-economic and individual perspectives. It provides a much-needed reminder in the face of ever-advancing reproductive technologies that infertility has always been with us and has always had a profound effect on human lives. Everyone with an academic, professional or personal interest in infertility and its treatment should read this unique and illuminating book.’

—Susan Golombok, Department of Psychology, University of Cambridge, UK

‘At a time when biomedicine is increasingly stratified, unevenly offering solutions for unwanted childlessness, the time is ripe to look back and forge a new field of inquiry into infertility itself. In this excellent book, editors Davis and Loughran have assembled a wide-ranging historical consideration of infertility that until now has been missing from the scholarship. The captivating essays collectively uncover areas less-travelled by scholars of

reproduction and turn attention to the power, politics, and affective experience of infertility in history. In doing so they provide readers with a deeply feminist consideration of infertility that affirms embodied, socio-cultural, and political experience. This is a welcome companion to the literature and a fresh new perspective on the field.’

—Laura Mamo, San Francisco State University, USA

‘Davis and Loughran are to be warmly congratulated on assembling an excellent multi-disciplinary cast of scholars. They collectively demonstrate how much can be gained from taking a thoroughly historicist approach to a high-profile contemporary issue. Equally, how much historians can learn about an apparent absence in the historical record, when provoked by a salient concern today. They show, however, that infertility is far from a new personal or social dilemma, far from a technological or purely medical matter. The focus on an age-old phenomenon and the diversity of responses it has elicited provides an important new historical resource. This pioneering Handbook will be the starting point and guide for future historical scholars stimulated to explore further this intrinsically obscure, yet revealing topic.’

—Simon Szreter, Faculty of History, University of Cambridge, UK

Gayle Davis • Tracey Loughran
Editors

The Palgrave Handbook of Infertility in History

Approaches, Contexts and Perspectives

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*Dedicated to the staff of the Assisted Conception Service,
Glasgow Royal Infirmary, and their colleagues around the world (GD)
and
To all the women and men, past and present, who have wanted children
and have not been able to bring them into the world (TL)*

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This volume arose out of a conference we co-convened on ‘Infertility in History, Science and Culture’, held at the University of Edinburgh in July 2013. This volume has a substantially different shape to the conference programme – many of the contributors spoke at the conference, but not always on the same topics, and we have also accumulated many new authors. Nevertheless, the intellectually stimulating and supportive environment of the conference provided the initial spur to this edited collection (for more information on the conference, see <http://sites.cardiff.ac.uk/ihsc/>). We would therefore like to thank the Wellcome Trust for providing funding for the conference, and the History Departments of the University of Edinburgh and Cardiff University, plus the Society for the Social History of Medicine, for providing additional monies.

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ABBREVIATIONS

AI	artificial insemination
AID	artificial insemination by donor
AIH	artificial insemination by husband
ARTs	assisted reproductive technologies
ASRM	American Society for Reproductive Medicine
CDA	critical discourse analysis
DHS	Demographic and Health Survey
EBM	evidence-based medicine
ESC	embryonic stem cells
ESHRE	European Society for Human Reproductive Embryology
FINRRAGE	Feminist International Network of Resistance to Reproductive and Genetic Engineering
HEW	Department of Health, Education, and Welfare
HFEA	Human Fertilisation and Embryology Authority
ICMART	International Committee for Monitoring Assisted Reproductive Technology
ICSI	intracytoplasmic sperm injection
iPSC	induced pluripotent stem cells
IUI	intrauterine insemination
IVF	in vitro fertilization
MFA	media framing analysis
MRC	Medical Research Council
NHS	National Health Service
NIH	National Institutes of Health
NRT	new reproductive technology
PCC	patient-centred care
PGD	preimplantation genetic diagnosis
TESE	testicular sperm extraction
WFS	World Fertility Survey
WHO	World Health Organization
WLM	Women's Liberation Movement

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Introduction: Infertility in History: Approaches, Contexts and Perspectives

Tracey Loughran and Gayle Davis

In April 2016, at the age of 55, Sharon Cutts gave birth to triplets. Cutts and her partner had taken out loans of £15,000 to pay for in vitro fertilization (IVF), and had travelled to Cyprus for the procedure, as the British National Health Service (NHS) does not perform IVF on women over 42 years old. Cutts, who already had four adult children from a previous relationship, is now mother to infants younger than her own grandchildren.¹ While this story was sufficiently news-worthy to be splashed across the British media – television, radio, and tabloids and broadsheets alike – what is perhaps most remarkable is how mundane it seems. In 2010, an estimated 48.5 million couples worldwide were infertile.² Attitudes towards infertility, and the experiences of people who are involuntarily childless, vary in accordance with family support, local tradition, national policies, and supranational approaches to population control. There are as many potential stories of infertility as there are sufferers, 97 million ways that we might understand infertility in the world today, and yet culture-bound media responses tend to reduce this amazing diversity to a few all too familiar narratives.

In Britain, reporting on infertility and reproductive technology frequently recycles the same long-stale ingredients: the increasingly tattered-looking ‘miracle’ of postmenopausal women giving birth, the use of expensive technologies, the exploitation of lax legal controls in foreign climes, and the creation of strange new family relationships, most likely with a generous dash of moral judgement stirred in (few newspapers managed to resist including photographs

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of Cutts in heavy make-up and tight clothes, mentioning that she had Botox injections and hair extensions fitted while pregnant, or noting the 15-year age gap between her and her partner).³ Other, less explicitly stigmatizing, narratives are also common: tales of women freezing their eggs in the hope of winning their battle against the tyrannical biological clock, or features on the ‘IVF journey’ that are typically structured around the themes of loss and redemption.⁴ Any eagle-eyed consumer of modern news media has probably read, or perhaps yawningly skipped over, at least one such story in the last month.

Infertility generates media interest partly because in such stories two trends in contemporary life intersect: unease about the continual remaking of gendered and sexual identities that has been such a feature of the Western world since the 1960s, and ambivalence about the proliferation and deployment of technologies.⁵ There is also a specific historical context to contemporary media reporting on infertility. It would not be too difficult to trace back a direct line from prominent themes in today’s reporting on infertility through to the media brouhaha in 1978 around the birth of Louise Brown, the first baby conceived via IVF (or perhaps even earlier, to the media storm when Shirley Ann Lawson gave birth to quintuplets after treatment with the fertility drug gonadotrophin).⁶ The *Daily Mail* reportedly paid the Browns £325,000 for exclusive rights to the story of Louise’s birth, and if the subsequent public interest in infertility is any measure, then not a penny was wasted.⁷ For the past half-century, different publics have avidly consumed stories about infertility and reproductive technology. Sharon Cutts is simply the latest in a long line of women whose lives, choices, and bodies became public property from the moment their children squalled their first breaths.

These kinds of news stories matter because they are one of the most important resources for understanding infertility in the contemporary world. They are a crucial component of the inchoate impressions of those who will never read any more on the topic or set foot in an infertility clinic, and they help to determine the preconceptions and experiences of those who will embark on longer and more painful struggles in their quest for parenthood. Whatever else separates them – whether they sympathize with infertile women or stigmatize them, whether they laud new technologies or fear their consequences, whether their aim is to probe the ethical and emotional consequences of assisted reproductive technologies (ARTs) or simply to bump up the readership figures – these media narratives share one integral feature: their depiction of infertility is relentlessly present-minded. In media coverage, infertility is invariably situated as a ‘problem’ related to the particular social conditions of Western women’s lives in the early twenty-first century – especially delayed child-bearing resulting from an increase in educational and professional opportunities for women and the dissolution of established patterns of marriage and household formation; and it is twinned with discussion of new reproductive technologies.

This present-mindedness is to be expected from media outlets – after all, ‘news’ should be new – but it is also reinforced by the dominant trends of

research on infertility and reproductive technology in the social sciences. Since the early 1990s, a wealth of outstanding ethnographic research has been published on experiences of infertility and related issues in diverse local, national, and global contexts.⁸ However, as Charis Thompson acknowledges, the ‘ethnographic gaze is limited in that it focuses on one site at one time’, and it therefore ‘tends to be relatively blind to things that take place over time or that involve reflections of or relations to other systems of meaning and stratification’.⁹ In addition, because ethnographies of infertility emerged hand in hand with – indeed, as a response to – the explosion of new reproductive technologies, this scholarship often unwittingly or implicitly reproduces the taken-for-granted association between these two quite different domains.

In popular and scholarly narratives alike, then, infertility is all too often conflated with the biomedical approaches that purport to ‘treat’ it. These dominant narratives have unintended but extremely important consequences for how infertility is conceptualized among both general and specialist audiences. The elision of infertility (as lived experience) with ARTs (a technological ‘solution’ to a medical condition) risks neglecting both the much longer history of the condition, and the diverse experiences of those who have experienced involuntary childlessness outside highly medicalized contexts. The present volume exists as a corrective to this partial perspective, and as an attempt to illuminate this historical blind spot.

INFERTILITY IN HISTORY

As far as we know, infertility is as old as humanity itself. It is certainly as old as recorded history. Ancient Mesopotamian and Egyptian medical texts include fertility tests and guidance on how to ensure conception.¹⁰ These texts formed an important source of knowledge for ancient Greek physicians, including Hippocrates (460–370 BCE).¹¹ The earliest extant Greek medical writings include ‘extensive and elaborate discussion of reproductive failure and its treatment’.¹² Via the Hippocratic Corpus, ancient conceptions of infertility influenced Western medicine for nearly 2,000 years.¹³

Of course, medical texts are not our only sources for understanding involuntary childlessness in past societies. Myth and literature are also replete with tales of infertility.¹⁴ The entire Judaeo-Christian tradition, and the civilizations that have been built on it, begins with a story of infertility.¹⁵ The Old Testament is littered with stories of barren women who conceive through divine aid; the voices of biblical matriarchs Sarah, Rebekah, and Rachel echo through Judaeo-Christian tradition.¹⁶ In pagan mythologies, female goddesses often presided over matters of reproduction, which could include interceding on behalf of infertile couples, as Frigga does in the much later thirteenth-century Icelandic *Saga of the Völsungs*.¹⁷ However, divine intervention could be for ill as well as good: in the Indian epic narrative *Mahābhārata*, which reached its final form sometime in the fourth century BCE, Pandu, King of Hastinapur, is cursed with childlessness (because he will die if he attempts to

make love to his wives), and consequently has to find creative ways of attaining fatherhood.¹⁸

Indeed, once we start looking, it can seem that infertility is almost everywhere in history, often unrecognized even though it is in full view. In an innovative reading, Rachel Bowlby unpicks Sophocles' *Oedipus Rex* (c.429 BCE) as a play about 'a second family, a problem of infertility and an adoption – and a transnational adoption at that':

Baby Oedipus, born in Thebes to Jocasta and Laius and abandoned to die because of the oracle saying he will kill his father, is adopted across the borders to parents in Corinth, Polybus and Merope; linked to this is their situation of childlessness. The second family is Jocasta's four children with Oedipus, following the death of the husband with whom she had had one child.¹⁹

Although rarely noted by commentators, the theme of childlessness threads through the play. Perhaps the most fascinating aspect of Bowlby's reading, however, is the implication that it is possible to unpack, Russian doll-like, childlessness as a hidden presence in contemporary life: Western culture is 'saturated by psychoanalysis'²⁰; the Oedipus complex is possibly the most important aspect of child development in Freudian psychoanalytic theory; and *Oedipus Rex* is the source text for the theory. Although Freud does not discuss childlessness in relation to this text (it is barely mentioned throughout his corpus),²¹ the absence of children haunts Sophocles' play, and therefore psychoanalysis too – and, by implication, all those shadowy half-understandings of our minds and motivations, ultimately derived from Freud, that constitute how we explain ourselves to ourselves.

Infertility has a history, and it leaves traces on the record, even when it is as the 'presence of absence', in Jill Allison's evocative phrase.²² Yet, for the most part, this history remains unwritten. In 1993, Naomi Pfeffer lamented that modern histories of sexuality and reproduction were full of 'women conceiving, contracepting, aborting, pregnant, in labour, breastfeeding, looking after and even abandoning children', but that those who remained involuntarily childless were 'almost never talked about'.²³ This assessment largely holds true more than two decades later. Pfeffer's own 'political history of reproductive medicine', an excoriating analysis of political and medical failures since the mid-nineteenth century, remains the most sustained history of infertility in modern Britain. North America is also well served, with two full-length historical studies of the topic in Elaine Tyler May's *Barren in the Promised Land: Childless Americans and the Pursuit of Happiness* (1995), and Margaret Marsh and Wanda Ronner's *The Empty Cradle: Infertility in America from Colonial Times to the Present* (1996). However, there is no comparable English-language monograph on the history of infertility for *any* European, Asian, or African country in *any* period.

Yet the picture is not entirely bleak. Not all research is published in monographs. In recent years there has been a substantial increase in historical interest

in infertility, evidenced especially in a flurry of article-length publications on the medieval and early modern periods.²⁴ Indeed, without a growing body of historical scholarship on the topic, the volume you are reading now could not exist. Nevertheless, students curious about the experiences of involuntarily childless women and men in past societies could be forgiven for not knowing where to look. Infertility is still most often discussed in a roundabout kind of fashion, in the midst of examinations of related topics such as reproduction, motherhood, or the family, rather than accorded sustained attention in its own right.²⁵ It is also still underprivileged in histories of sexuality, reproduction, and medicine.

To take a recent example, in Kate Fisher and Sarah Toulalan's superlative edited collection *The Routledge History of Sex and the Body: 1500 to the Present* (2013), a 28-chapter, 500-plus page work, there are ten references to 'infertility'. These appear in chapters on 'bodies, sex and the life cycle', 'reproduction', and 'sexual diseases since 1750', and most are mere mentions rather than longer accounts.²⁶ Conversely, in another excellent edited volume, Roger Cooter and John Pickstone's *Companion to Medicine in the Twentieth Century* (2003), neither 'infertility' nor related terms such as 'involuntary childlessness', 'sterility', or 'in vitro fertilization' appear in the index, even though there is a relatively in-depth discussion of the topic in at least one of the chapters.²⁷ In short, histories of infertility exist, but it can take some digging to find them, and it might even be said that, for the most part, these histories offer clues, not answers.

DEFINING INFERTILITY IN HISTORY

The first step towards providing these answers is to unpick some of the difficulties facing historians of infertility. It makes sense to start with some fundamental questions. If infertility is a multidimensional experience, then what constitutes its essence? How should it be defined? In the contemporary world, such questions hold urgent importance for many. The issue of how infertility is defined has repercussions for the status of sufferers and their ability to access social support and medical treatment. In healthcare systems regulated according to free-market principles, governments or insurers will only subsidize treatment when infertility is defined as a medical condition rather than as an unfulfilled desire.²⁸ These medical and legal systems affect how individuals define their own experience of involuntary childlessness. For example, in recent years, in order to achieve equal access to the financial resources to attain treatment, some women have argued that infertility constitutes a disability under the terms of the Americans with Disabilities Act (1990). Although disability is often perceived as stigmatizing in and of itself, these women perceive the disabled identity as providing not only financial benefits, but 'evidence of an authentic medical condition to present to those who questioned, blamed, or advised them otherwise'.²⁹ Definitions of infertility are complex, contested, and can be used and abused in many different ways, by many different agencies and individuals.

The World Health Organization (WHO) currently defines infertility as ‘a disease of the reproductive system defined by the failure to achieve a clinical pregnancy after 12 months or more of regular unprotected sexual intercourse’.³⁰ This clinical definition, or its earlier equivalents, has often been adopted by social scientists in their own research on infertility. In part, this reflects the fact that researchers need some kind of simple and widely accepted definition in order to proceed with research, and for their findings to be meaningful to other scholars. But it also indicates that medical models and aims can have disproportionate, and often unrecognized, influence on other fields. Indeed, in some Western countries, most psychological studies of infertility aim at answering medically oriented questions, because the main driver for such research is the perceived need to improve the success rates of IVF treatment.³¹ Although scholars may not intend their research to directly contribute to medical agendas, the unthinking adoption of a medicalized definition reveals certain underlying assumptions in approaches to infertility, shapes the research process, and therefore has important consequences for the outcomes of research.

Assumptions inherent in medicalized definitions can operate to hide political and structural issues that affect both the experience of infertility, and how it is researched. Deborah Lynn Steinberg argues that subsuming idiopathic (unexplained), environmentally induced and iatrogenic (medically induced) infertility into a medicalized framework has the end result of constituting infertility as an individualized and pathological diagnosis. The medical model of infertility therefore ‘eclipses or precludes social and political questions about medical (mal)practice and environmental pollution’.³² Moreover, in her view, medicalized definitions are ‘covertly gendered’ because it is assumed that women take greater responsibility for tackling infertility and that they are more distressed at the diagnosis (whether in themselves or in their partners). Crucially, women also bear the brunt of investigations and treatment, which are more invasive than the procedures applied to male bodies.³³ Adopting a medical model of infertility can thus prevent researchers from locating the experience of involuntary childlessness within wider systems of power, privilege, and suffering.

A similar point has been made by Arthur L. Greil and Julia McQuillan, who argue that because social science research on infertility is usually conducted on easily accessible clinic populations, researchers ‘implicitly and inadvertently’ define their subjects as ‘people who ask for and receive infertility treatment’. This specific subgroup comes to stand for all who are involuntarily childless, even though the very fact of motivated health-seeking behaviour differentiates in important ways this population from those who do not or cannot access medical systems. Moreover, standardized definitions of infertility as the failure to achieve pregnancy after a specified period of unprotected intercourse implicitly assumes that infertility is closely related to the *intention* to conceive, and therefore reinforces the perception of infertile individuals as help-seekers. Greil and McQuillan’s research uncovered a substantial subset of women who had experienced 12 months of unprotected sex, but answered ‘no’ when asked if

they were trying to get pregnant. The existence of these women highlighted prominent assumptions about ‘planfulness’ that divide individuals into two categories – those who do not wish to become pregnant, and are actively taking measures to prevent conception, and those who actively wish to become pregnant. Women, often less privileged, who do not fit into either of these categories occupy a liminal status.³⁴

The women in this study did not necessarily define themselves as ‘infertile’. Similarly, research on women’s experiences of infertility in New Zealand suggests that some women resent the perception that infertility has a ‘clear fixed and stable meaning’, and emphasize instead that involuntary childlessness is not ‘a black and white issue’.³⁵ Greil and McQuillan conclude from their research that focusing

on those who visit infertility clinics renders invisible the experiences of women who have not sought treatment, either because they do not identify as infertile or do not see their situation in medicalized terms. A focus on treatment seekers not only ignores the experiences of half of U.S. women who are infertile by the medical definition, but it takes for granted the biomedical concept of ‘infertility’ without subjecting that concept to a close examination.

Researchers must therefore trade ‘a spurious definitional certainty for complexity, ambiguity, and questions about intentionality’.³⁶

The same argument has been made by those researching infertility in different local and global contexts. Frank van Balen and Marcia C. Inhorn argue that while standardized definitions can be useful in Western clinical settings, ‘subjective meanings and experiences of infertility are culturally variable’: a woman may define herself as infertile if she does not become pregnant within a month or two of marriage; in some societies, bearing no sons may be perceived as the equivalent of having no children at all, making the parents socially infertile; and in places where cultural norms dictate that women bear seven or eight children, having only one or two babies may be seen as evidence of reproductive abnormality.³⁷ In Chinese medicine, the concept of infertility as a pathological condition barely exists. Instead, *bun zheng* (‘failure to become pregnant’) is perceived as ‘a failure to achieve a desired bodily state, rather than an undesired change that must be brought under control’.³⁸ There is no reason to assume that Westernized definitions apply to the rest of the world, and making this assumption can severely limit understandings of how infertility is perceived and understood in different contexts.

Although these warnings were issued with social science researchers in mind, they are equally applicable to historians. Historians rarely if ever explicitly define infertility; the contributors to this volume use a range of unarticulated working definitions, and in itself this illustrates the variety of potential approaches to its study. This lack of definitional clarity or consensus is primarily an outcome of gaps in the historical record (to be discussed further in the following section) and the constraints these impose on researchers. Most often,

historians are able to track infertility through history only when it has been perceived as pathological, whether by states, physicians, sufferers, or other interested commentators: it is under these circumstances that substantial discourse on infertility has been generated, resulting in the raw material from which historians build their narratives. It is therefore easier to write the history of infertility from the top-down than from the bottom-up, from the perspective of those concerned with regulation and rectification than from those whose lives and futures were disrupted by involuntary childlessness. However, it also means that historians usually adopt a *de facto* definition of infertility as describing the condition of people who experienced difficulties either in conceiving, or, less frequently, in having as many children as they wanted. The evidence is weighted towards those who sought help for this condition, because they left material traces of this aspect of their lives. Consequently, our historical knowledge is inevitably skewed towards the construction of infertility as a medicalized condition, even though scholars are aware that this constitutes at best only one aspect of the experience of infertility.

While it is not possible to fully resolve these issues, historians may be able to produce richer histories of infertility if they pay more attention to questions of definition, and interrogate their own assumptions about what exactly they intend to research. First, it is clear that different understandings of infertility have operated in different past societies. For example, in contrast to the assumptions of contemporary medicalized definitions, the intention to procreate played no part in ancient Greek terminology. Instead, the word *atokos* was employed 'to denote a woman who has not yet borne a child, regardless of whether or not she has tried; that is, it signifies a current physical state, with an open future'. Likewise, there is no noun directly equivalent to 'infertility', 'sterility', or 'barrenness' in ancient Greek. Instead, it is insisted 'through adjectives, participles, and periphrases, that it is infertile, sterile, or barren, individuals, bodies, and pairings, that are being described, explained, and treated'.³⁹ Explaining these linguistic differences is essential to historicizing infertility.

Second, we do not only need to shake off medical definitions of *infertility* when looking at past societies. We also need to consider how dramatic changes in the landscape of reproductive technology have altered our working assumptions about how the body is experienced and understood. Since the 1930s, it has been possible to establish pregnancy with some certainty in its earliest stages by measuring the level of progesterone in the urine. The test was expensive to carry out at that time, but in the late 1960s the home pregnancy testing-kit was invented, and is now easily accessible in the West.⁴⁰ In the 1950s, ultrasound was developed, and by the 1970s obstetricians were recommending use of the technique on all pregnant women.⁴¹ This ability to visualize the foetus in the womb has had important consequences for the politics of reproduction.⁴² These developments mean that we are now likely to perceive pregnancy as a positive and unmistakable state of being. However, Cathy McClive points out that the modern interpretation of pregnancy as 'a linear

progression from conception to delivery’ contrasts starkly with the corporeal uncertainty that was ‘an intrinsic and accepted part of the early modern understanding of the process of conception’. It was difficult to detect pregnancy, or to distinguish between ‘true’ and ‘false’ pregnancies, and pregnant women and medical practitioners often disagreed over their equally subjective interpretations of the proper signs of the condition.⁴³ To understand past experiences of infertility, we need to realize just how radically quite recent changes in medicine and technology have altered our perceptions and experiences of the body.

Finally, in order to move beyond medical approaches to the history of infertility, it is necessary to start looking for evidence – no matter how fragmentary or dispersed – in different places. It seems likely that historians have been unwittingly influenced not only by medicalized approaches to infertility, but by dominant cultural constructions of infertility as equivalent to childlessness. If primary infertility (the inability to achieve pregnancy despite regular unprotected sex) is difficult to locate in the historical record, then, perhaps perversely, secondary infertility (the inability to become pregnant or carry a pregnancy to term following the birth of one or more children without use of ARTs) is even more likely to remain hidden. For the modern era, demographic data tells us how many couples remained childless; while we do not know how many of these couples chose this status, it is reasonable to assume that in intensely pronatalist societies, and in the absence of effective forms of birth control, childlessness was more often involuntary than chosen. What we cannot know is how many of those who did have children were unable to achieve their desired family size, although evidence from the mid-twentieth century suggests that this figure may be surprisingly high.⁴⁴ If historians start asking different questions about how infertility was defined, then they are likely to come up with some different answers as to how it was perceived and experienced.

SILENCE, STIGMA AND GAPS IN THE HISTORICAL RECORD

Issues around definition cannot, however, explain the lack of sustained historical scholarship on infertility. Over the past three decades – a period coterminous with the initial deployment of IVF and the subsequent proliferation of other ARTs – two of the most vibrant and expansive fields of historical study have been the history of sexuality and the history of medicine.⁴⁵ Often, infertility exists at the intersection of these areas – so why have so few historians written about it? It might be tempting to view this historical neglect as one outcome of broader tendencies, within both the social policy and feminist movements of developed nations, to conceive of reproductive rights quite narrowly in terms of contraception and abortion on the one hand, and provision for maternity care on the other. However, the long-standing and still lively tradition of scholarship on infertility and reproductive technologies from within the social sciences undermines any explanation that ties lack of interest in infertility to the wider contemporary socio-political context. Of course, infertility has been neglected partly because historians have not been asking

the right questions, but it is also plausible that the lack of serious and widespread historical engagement with infertility stems at least partly from the particular challenges that its study raises for historians.

The most significant of these challenges, because it is the most difficult to overcome, is the maddeningly imperfect historical record. Historically, Western cultures have been marked by pervasive restrictions on open speech about sexual matters. Communication about sex has been heavily regulated, and perceived as reserved for certain social groups, or only permissible in certain contexts. As a consequence, sexuality and reproduction have often been experienced as private or even taboo. Sally Alexander interviewed a woman born in 1912 who recalled being slapped by her mother after asking what a fat lady she saw in the street had in her belly. Alexander reflects that public ‘silence about sex’ made it impossible ‘to articulate in a language of legitimacy, compassion or pleasure – without prurience – women’s bodily or sexual needs or wants’.⁴⁶ Similarly, Kate Fisher found that her female interviewees, all married in the first half of the twentieth century, lacked verbal fluency and an adequate vocabulary to describe sexual matters. Fisher interprets this lack of articulacy as evidence of the gendered structure of sexual knowledge, practices, and forms of communication for individuals coming to maturity in this period.⁴⁷

Infertility is an intimate matter, subject to any and all of the taboos surrounding sexuality and reproduction in a given culture. More than this, it is a marker of the failure of reproduction, of sexuality gone awry. Contemporary psychological and ethnographic research suggests that across societies with diverse political, economic, religious, and gender systems, infertility is experienced as a severe threat to identity (especially for women), and consequently it is often shrouded in silence.⁴⁸ A Bangladeshi proverb states that, ‘Even a fox or a dog does not eat the dead body of a childless woman’, and it is believed that even seeing the face of a *banja* (barren) woman is unlucky.⁴⁹ Although it will always be impossible to know for certain, it seems highly likely that many in the past experienced infertility as a source of shame and bewilderment, and therefore did not speak openly about it. Certainly, there is evidence that infertility has been perceived as a stigmatizing condition in diverse historical contexts, from medieval Japan to early modern England to nineteenth-century Turkey.⁵⁰ These barriers to vocalization of sexual matters in the past rebound upon the historian, who is faced with the dual tasks of excavating evidence and interpreting silences.

Of course, stigma is not the only reason for gaps in the historical record. The asymmetric nature of surviving evidence is a perennial problem for all historians. It is inevitable that those with power leave more historical traces. We know more about kings and queens than peasants, politicians than voters, doctors than patients, the white middle-class than black workers, men than women. Borrowing from anthropology, historians have developed innovative techniques for reading sources produced by the powerful ‘against the grain’ to uncover evidence of the thoughts and actions of oppressed and marginalized groups.⁵¹ Reading ‘against the grain’ is necessary where we

lack direct evidence. Nevertheless, it raises thorny – probably irresolvable – issues of interpretation, not least concerning the extent to which historians unwittingly refract the sources through their own mental worlds, and therefore end up treating historical actors less as witnesses, and more as ventriloquist's dummies.⁵²

These problems are magnified when tackling infertility, an experiential state that exists as an absence (the failure to engender pregnancy), that plays out on the bodies of women (a historically marginalized group), and that, it seems, often further stigmatizes its subjects (thus rendering them inarticulate or silent). Sometimes, historians are blessed with the serendipitous survival of direct or indirect testimony on involuntary childlessness in periods where little such evidence is available. However, even when such good fortune prevails, these sources can generate intractable problems of interpretation. We can illustrate some of these issues through discussion of historical research on two case studies of infertility, the thirteenth-century Anglo-Jewish woman Muriel of Oxford (fl.1240), and the sixteenth-century queen Elisabeth de Valois (1545–68), who married Philip II of Spain at the tender age of 13.⁵³ The evidence of these women's reproductive troubles survives only because of their social status. Muriel's husband was a prominent financier, often called to the royal court, and so she too came to the attention of the most powerful in the land. Meanwhile, as a queen, responsible for producing heirs and securing the line of succession, every minor fluctuation of Elisabeth's menstrual cycle was scrutinized. Her health mattered only because it was perceived to hold the key to the future of the Hapsburg monarchy in Spain, and to Franco-Spanish relations in a period of European turmoil.

Even for these high-ranking women, evidence of their intimate lives survives purely through the vagaries of chance. Muriel's husband divorced her because she was childless. As this was considered sufficient grounds for divorce under Jewish law, countless women across Europe must have suffered the same fate. We know about Muriel only because she initially contested the divorce, and her husband had enough social sway to successfully appeal to the king's council (the *curia regis*) for support. We are permitted a 'glimpse' of Muriel's situation – the word chosen by her biographer Charlotte Newman Goldy – only through the Latin documents generated by the court.⁵⁴ The source of our knowledge of Elisabeth's reproductive health is quite different: an extensive corpus of correspondence that passed between Elisabeth's mother, Catherine de' Medici, Elisabeth's attendant ladies-in-waiting, and the French ambassadors in Spain. As Susan Broomhall underlines in her analysis of this correspondence, in an era when women were expected to display reticence concerning sexuality and reproduction, this extensive documentation of discussion on bodily matters *between* women is extremely unusual. However, it only exists at all because Elisabeth was living in Spain and her mother was in France, and so 'discussion of her reproductive life, which might otherwise have occurred by word of mouth', had to be written down. There is virtually no extant

correspondence between Catherine and another daughter who remained in France after marriage.⁵⁵

In both these cases, then, historians might count themselves lucky to have evidence of otherwise neglected or untraceable female experiences. Yet there is still an important absence at the centre of the historical picture: the thoughts and feelings of Muriel and Elisabeth themselves. Goldy conducts a masterclass in informed speculation and reconstruction, locating Muriel within a broader milieu of involuntary childlessness in England (a milieu assumed on the basis that several prominent English families disappeared because they could not produce legitimate heirs), using contemporary medical texts and works of Jewish law to meditate on the steps Muriel might have taken to resolve her fertility problems, and wondering how she might have responded to stories from the Torah, read aloud in the synagogue on holidays, of barren women, or to the Marian cult that flourished in England and Europe at this time.⁵⁶ Ultimately, however, we can never know what Muriel thought or felt about her childless state; her experiences are irrecoverable.

Susan Broomhall makes a similar point regarding the dissection of Elisabeth's reproductive health in the letters that flew between Spain and France in the 1560s. The correspondence provides a rich resource for historians of gender, reproduction, and the body in early modern Europe but it does not tell us how Elisabeth understood her difficulties in conceiving: she was always the object of this correspondence, never its author. Broomhall suggests that Elisabeth was 'the most powerless participant in the treatment of her own body':

She appears as a blank slate upon whom the medical will of physicians, or the community of matrons, can be written. Male physicians devalued her corporeal sensations as subjective and unreliable, arguing that their medical knowledge and techniques enabled them to read the female body in pregnancy objectively [. . .] Elisabeth's mother, Catherine de' Medici, and her ladies-in-waiting seem to have ignored Elisabeth as too young and too inexperienced to understand her own body as they did. Both the men and the women surrounding Elisabeth saw her as unable to articulate her bodily signs in either appropriate medical or traditional female discourse.⁵⁷

Elisabeth was a queen, but she was also a young girl, caught up in political and professional power struggles not of her making and most likely beyond her ken. In turn, our understandings of her experiences can only be fragmented and speculative, based on incomplete sources and inexact reconstructions of the historical world in which she lived and died.

The gaps and deficiencies in the extant historical sources, which reflect very real asymmetries of power in past societies, mean that we are always likely to know more about those with power and status, and those who were most active in seeking help for reproductive problems (or perhaps, as in Elisabeth's case, having such attentions thrust upon them). Even when dealing with the more

recent past, when we have a mass of print documentation on popular responses to infertility, and it is possible to gather oral histories about the experiences of infertile men and women, these problems do not entirely disappear. It requires some skill to negotiate these challenges, but at least recognition of bias in the record helps us to avoid assuming that the sources we can most readily access speak for all those who suffered infertility in the past, and therefore to remain alive to other potential approaches to their history. Infertility has a history, even if it is sometimes difficult to find. This volume demonstrates the diverse possibilities and the plentiful rewards for scholars who are willing to embark on this search.

AIMS, APPROACHES AND AGENDAS FOR FUTURE RESEARCH

Humans are historical creatures. We locate ourselves in the world partly through placing ourselves in time. This means that we understand the self not only in relation to our individual pasts, presents, and futures, but in relation to the pasts of our families, communities, and nations. As Charis Thompson points out, patients ‘bring different experiences of historical and political time to their treatments’, which exert an important influence on how they view their experiences:

A white middle-class couple might view their treatment as part of a platform of federally protected reproductive rights that began with *Griswold v. Connecticut* (1965) and *Roe v. Wade* (1973). An African American couple might see the right to have children and to forge enduring bonds of kinship as helping to alter a history that has been marked by slavery’s centuries-long denial of kinship.⁵⁸

It is important, then, for scholars to understand how individuals historicize their own stories. More than this, though, for oppressed peoples and groups the ability to construct historical narratives of their experience is often an important part of the ability to take effective political action.⁵⁹ Knowledge of the history of infertility, and the ability to place their own experiences in historical perspective, could help involuntarily childless individuals to reconceptualize and come to terms with their situation (whatever form that might take). The ability to research, understand, and therefore exert increased control has been identified as an important mechanism for coping with infertility.⁶⁰ Historical understanding could contribute to these beneficial effects.

History holds such power for oppressed groups because it helps us understand what is new, what is purely contingent, and what has a more permanent appearance. At the beginning of this Introduction, we lamented the present-mindedness of contemporary representations of infertility, and suggested that it often obscures deeper understanding of the diversity of experiences of involuntary childlessness. But it is also impossible to fully comprehend the significance of recent changes without a fully historicized perspective. This

can be illustrated via four brief examples, all of which are covered in greater depth across different chapters: medicine and reproductive technology, kinship, stratified reproduction, and gender.

Medicine and Reproductive Technology

The development of successful ARTs, popularly if inaccurately viewed as ‘treatments’ for infertility, is a recent phenomenon. Until the 1950s, infertile couples had limited evidence-based medical options. From the mid-nineteenth century, experimental surgical treatments for infertility were pursued in North America, but it is unlikely that most of these operations helped couples to conceive.⁶¹ In the 1920s, tubal insufflation and the salpingogram were introduced as tests for tubal patency, but few surgeons were prepared to try to operate to repair damage, and the chances of women conceiving after surgery were still low.⁶² For most of the twentieth century, there was little agreement on the number of sperm necessary for conception, the factors influencing sperm motility and mobility, or how to boost sperm production, and so little hope of successfully treating male infertility.⁶³ Although artificial insemination by husband or donor (AIH/AID) has a long history, its use remained controversial in most contexts until at least the 1970s.⁶⁴

From the second half of the twentieth century, medical progress began to occur at startling speed. The 1950s saw pioneering oocyte induction by hormonal or chemical treatment; then came the successful deployment of IVF in the late 1970s; and this was followed in the 1990s by the development of intracytoplasmic sperm injection (ICSI).⁶⁵ Although these technologies have much lower success rates than is often realized,⁶⁶ they still represent great progress compared to the lack of viable medical options only 70 years previously. The proliferation of new reproductive technologies has had manifold consequences, including the creation of ‘bioethics’, state regulation of reproduction, and the emergence of a global industry in reproductive technology.⁶⁷

As suggested elsewhere in this Introduction, emphasis on new reproductive technologies can obscure other aspects of the experience of infertility. For example, even where biomedicine is available and accessible, individuals often engage in a range of health-seeking behaviours (whether this means consulting traditional healers or flirting with alternative therapies).⁶⁸ It seems that medical pluralism is the standard approach to individual management of infertility in many different settings. In turn, this suggests strong continuity with past societies, when it was common for individuals and couples to seek a variety of different possible resolutions to involuntary childlessness.⁶⁹ For example, as Katherine Park shows in her discussion of the case of Margherita Datini, a fourteenth-century Florentine woman who had difficulty conceiving, diverse approaches could be taken. Margherita’s family and friends variously recommended that she consult a high-ranking physician, use a poultice made by a female healer in her sister’s neighbourhood, wear a belt inscribed with incantations (which should be ‘girded on by a boy who is still a virgin’), and that she

devote herself to traditional acts of Christian piety. Park notes that none of those around Margherita saw these ‘different levels of practice and types of healing – learned, empirical, magical and religious’ as ‘incompatible, let alone mutually exclusive’.⁷⁰ Historical approaches therefore reveal diverse health-seeking behaviours, and indicate threads of continuity with past practices that are often ignored in contemporary representations of infertility.

Kinship and the Family

The same pattern is evident when we consider the effects of reproductive technologies on kinship and family formation. There is an extensive literature on the effects of ARTs on kinship, family forms, and relationships.⁷¹ Thanks to oocyte transplantation, the same woman can now be a child’s mother and its grandmother; children may now have two biological mothers; they may have multiple unknown biological half-siblings, all raised by different parents; and egg and sperm donors may not know that they have engendered a particular child.⁷² Yet while these technologies undoubtedly create radically new biological identities, their effects on social relationships may not be as dramatic as is often suggested. In sociological literature, there is a tendency to perceive the nuclear family as the ‘traditional’ form which is being fragmented, but historians now increasingly emphasize that households composed of two-parent families and a limited number of children, with no additional family members or servants, were a short-lived twentieth-century historical anomaly.⁷³

Similarly, the development of ARTs might seem to alter family relations through making it necessary to place contractual arrangements at the heart of family life – for example, in the negotiations between surrogate mothers or sperm donors and the parental couple. However, contract itself has long been part of the regulation of the intimate life of households, whether in marriage, or in arrangements with servants or near-kin.⁷⁴ While much has undoubtedly changed in the recent past, it is not entirely clear from what ‘norm’ we have departed, or what deserves to be reckoned as a ‘norm’ in historical terms. Historical research can help us to answer these questions, and to provide a more balanced assessment of the gains and losses occasioned by new reproductive technologies.

Stratified Reproduction

The historical perspective can also shed light on the precise processes by which inequalities become entrenched, and grip new populations. ‘Stratified reproduction’ is a key concern of sociological research on new reproductive technologies. Shellee Colen explains that the term refers to how:

physical and reproduction tasks are accomplished differentially according to inequalities that are based on hierarchies of class, race, ethnicity, gender, place in a global economy [...] The reproductive labor of bearing, raising and

socializing children [...] is differentially experienced, valued and rewarded according to inequalities of access to material and social resources in particular historical and cultural contexts.⁷⁵

Colen coined the term to describe relationships between West Indian nannies and their female employers in New York, but it has become even more pertinent with the explosion of reproductive tourism.⁷⁶ It is often argued that the fertility of (non-white, underprivileged) women in developing countries is exploited for the gain of (white, middle-class) women from industrialized nations. The growth of global markets and the ease of international travel, as well as the development of ARTs, have certainly created new opportunities for exploitation, which many commercial agencies are all too willing to seize upon.

At the same time, it is possible to trace 'stratified reproduction' back in time and through several historical forms. There is a long history of exploitation of the bodies of working-class and non-white women. In the USA in the mid-nineteenth century, experimental techniques for gynaecological surgery were tested out on the bodies of slave women.⁷⁷ In Britain, while middle-class women rarely underwent extensive internal examinations for infertility, working-class women were often subjected to these procedures.⁷⁸ And, of course, sexual difference itself structures stratified reproduction at the most fundamental level. As Rachel Bowlby points out:

As in sexual tourism, so-called, so in reproductive tourism, so-called: here the differences of women's bodies from men's determine what they can be used for or paid for; the technologisation and depersonalisation of baby production at one (scientific) level is matched at another by an age-old reliance on the bodily contributions of individual women's often painful work.⁷⁹

Historical research can reveal continuities within processes and experiences of stratified reproduction, and, in so doing, perhaps indicate how these inequalities could be resolved or at least mitigated.

Gender

Finally, thinking about how gender has structured infertility in different contexts can contribute to the projects of understanding and historicizing female oppression, and questioning popular perceptions of gendered 'responsibility' for infertility. Infertility is clearly a gendered experience. In many societies, past and present, the value of women's lives has depended on their ability to bear children.⁸⁰ Today, across the globe, women still seem 'to bear the major burden of infertility, in terms of blame for the reproductive failing; personal anxiety, frustration, grief, and fear; marital duress, dissolution, and abandonment; social stigma and community ostracism; and, in some cases, life-threatening medical interventions'.⁸¹

In the past, medical investigations into infertility tended to focus on women rather than men. Naomi Pfeffer cites the case of a childless woman who, over a two-year period in the late 1940s, underwent two dilation and curettage operations, a tubal insufflation, a salpingogram, an endometrial biopsy, and a host of injections, courses of tablets, and douches, before her husband's semen was tested and found to contain no spermatozoa.⁸² Arthur L. Greil suggests that this focus on the woman is perhaps inevitable: regardless of which partner in an infertile couple is ultimately found to have the biological 'problem', it is the woman who fails to become pregnant, and so most infertility treatment targets her body.⁸³ Consequently, it is no surprise that feminist, sociological, ethnographic, and historical research has also tended to concentrate on exploring the consequences of infertility for women.

In 2002, van Balen and Inhorn described male experiences of infertility as 'the great uncharted territory in the social science of infertility'.⁸⁴ Research in this field to date has suggested that although masculine identity is threatened by infertility, male (and female) responses to the condition often work to reinforce patriarchal conventions. In Egypt, infertile men and their wives go to great lengths to cover up their infertility, even at the risk of family and social condemnation of their wives. Women collude in this deception 'to avoid the stigma, psychological trauma, and possible marital disruptions such disclosure is likely to instigate'.⁸⁵ Interviews with infertile men in Britain show that they strive to present themselves as 'normal', 'according to conventional understandings of masculinity and femininity' dictated by hegemonic masculine culture.⁸⁶ Historians must use the insights of this research to further understand men's experiences of infertility in past societies. Research conducted to date suggests that the failure of men to reproduce has also been perceived as stigmatizing, and as potentially threatening the whole nexus of gender arrangements.⁸⁷ One potential direction for future research, then, is examination of how men have experienced and negotiated infertility in past societies. The chapters in this volume that reflect on male infertility make an important contribution to this emerging research agenda.⁸⁸

CONCLUSION

Infertility spills over into many different areas of historical research, including reproduction, sexuality, gender, the body, and the family; medicine, science, and technology; population, politics, and feminism; and law and ethics. The relevance of this topic to different fields is demonstrated by the diverse specialisms of the historians who have contributed to this volume. They describe their main areas of interest as classical studies, magic and popular religion, the politics of royal authority, world history, population policies, social policy and welfare, reproduction and technology, science and medicine, gender and sexuality, marriage and the family, and parenthood and childcare. As this list demonstrates, infertility is an important aspect of many histories, and can be

examined from many different perspectives. Historians should not need to be convinced of the importance of the topic.

Although most chapters in this volume take an historical approach, including many written by scholars who would not define themselves as historians, it also features contributions from the fields of literature, sociology, philosophy, psychology, and language and communication studies, and we hope it will be read by scholars in these and other disciplines. We have brought together scholars from so many different fields in this volume in order to challenge the narrow outlook that is so often a by-product of academic training and disciplinary specialization. Although interdisciplinarity is perceived as an important aim by many scholars, it is more often honoured in the breach than in the observance. Both the structures and the increasing pressures of academic life often make it difficult to look outside one's own specialist domain. Yet as this Introduction demonstrates, research in the social sciences and other fields can provoke important and interesting questions for historians. Likewise, we have aimed to show that historical perspectives may challenge and renew non-historical scholarship, and one of our main aspirations for this volume is that it will spark unexpected connections and encourage researchers to head off in different directions.

To this end, and to disrupt expectations and conventional reading practices, we have structured the volume around particular themes rather than chronological, geographical, or disciplinary boundaries. Part I, 'Defining the "Problem": Different Perspectives on Infertility', considers at greater length some of the definitional and methodological problems posed by studying infertility. Part II, 'The Body Politic and the Infertile Body', explores how infertile bodies have been situated as objects of political concern in past and present societies. Part III, 'Situating Infertility in Medicine', puts the spotlight on health-seeking behaviour and medical politics. Part IV, 'Agency and Invisibility in Constructions of Infertility', considers how constructions of infertility limited or expanded the capacities of different groups for action in the twentieth-century world. Part V, 'Reproductive Technologies and Imagined Futures', demonstrates the crucial role of imagination in determining how reproductive technologies have been, and may be, conceived, developed, and implemented.

This volume is the widest-ranging historical consideration of infertility to date. Chronologically, it spans the ancient world to the potential of reproductive technologies that have not yet been developed. Geographically, it cannot match the reach of its social science counterpart, Frank van Balen and Marcia C. Inhorn's social science-oriented collection *Infertility Around the Globe: New Thinking on Childlessness, Gender, and Reproductive Technologies* (2002). This spans all continents bar South America and Antarctica (and in the latter case, we may reasonably assume that infertility has not been a major problem, given that it was only in 1978 that the first human baby was born on the continent).⁸⁹ However, this volume does take in Europe, Asia, and North America. Although there is a bias towards Europe (and especially the United Kingdom) and the modern period, this reflects the dominant trends of historical research; perhaps the existence of the volume will inspire researchers of other nations and periods.

Finally, some readers may question the eclectic representation of non-historical disciplines. With two exceptions (the chapters by Gameiro and Boivin, and Almeling) we excluded the health and social sciences. There is a vibrant tradition of research on infertility in these fields; interested readers can follow up some of the references in this Introduction, and in the above-named chapters, if they wish to find out more. Our aim is to illuminate some of the less-travelled highways and byways of research on infertility. We also want to ensure that future researchers of infertility do not have to start from scratch, and in isolation, as so many of our contributors have done; this is why each chapter contains a list of research resources, setting out important primary and/or secondary sources.

As a field of historical research, infertility is young – even younger than Louise Brown. As an experience, it appears to be as old as recorded history. It presents opportunities for new scholarship, but the childless men and women of the past also demand our attention. Someone has to listen to their voices. This volume is a first step towards rectifying the historical neglect of infertility. It has been written for all those who lived and died childless, for all who were stigmatized by their failure to produce the required number or the ‘right’ children, and for all those who suffered and survived.

NOTES

1. ‘Grandmother Sharon Cutts, 55, becomes Britain’s Oldest Mother of Triplets’, *Guardian*, 6 April 2016: <https://www.theguardian.com/uk-news/2016/apr/06/grandmother-sharon-cutts-55-becomes-britains-oldest-mother-of-triplets>. Accessed 6 December 2016.
2. Maya N. Mascarenhas, Seth R. Flaxman, Ties Boerma, Sheryl Vanderpoel, and Gretchen A. Stevens, ‘National, Regional, and Global Trends in Infertility Prevalence since 1990: A Systematic Analysis of 277 Health Surveys’, *PLOS Medicine*, 9:12 (December 2012), p. 9.
3. Nikki Watkins, ‘Gran, 55, Gives Birth to TRIPLETS, Smashing British Record [...] and Looks Her Best for Birth with Botox’, *Sun*, 6 April 2016: <https://www.thesun.co.uk/archives/reallife/1115752/gran-55-gives-birth-to-triplets-smashing-british-record-and-looks-her-best-for-birth-with-botox/>; Martin Robinson and Keiligh Baker, ‘Grown Up Son of 55-Year-Old Grandmother Who Has Become Britain’s Oldest Mother of Triplets Reveals He Thinks She is Too Old to Go Through IVF’, *Mail Online*, 6 April 2016: <http://www.dailymail.co.uk/news/article-3525668/Grandmother-55-Britain-s-oldest-mother-triplets.html>; Paul Hooper, ‘Meet the Granny Who Has Just Become Britain’s Oldest Mum to Triplets’, *Mirror*, 6 April 2016: <http://www.mirror.co.uk/news/uk-news/meet-granny-who-just-become-7698453>. All accessed 6 December 2016.
4. For some recent examples of such stories, see Aidan Madigan-Curtis, ‘The How, What and Why of Freezing Your Eggs, From Someone Who Has Done It’, *Observer Business and Tech*, 11 January 2016: <http://observer.com/2016/01/i-took-control-of-my-biological-clock-at-age-30/>; Julia Leigh, ‘IVF: “I Had the Dread Feeling that I Was Part of Some Greater Experiment”’, *Guardian*, 6 May 2016: <https://www.theguardian.com/society/2016/may/07/ivf-i-had-the-dread-feeling-that-i-was-part-of-some-greater-experiment>. Both accessed 6 December 2016.

5. On the longer history of media reporting on gender and sexuality, see Adrian Bingham, *Family Newspapers? Sex, Private Life, and the British Popular Press 1918–1978* (Oxford and New York, 2009), and Adrian Bingham and Martin Conboy, *The Tabloid Century: The Popular Press in Britain, 1896 to the Present* (Oxford, 2015), pp. 131–6. On ambivalent responses to technology in modern culture, see David Bell, *Science, Technology and Culture* (Maidenhead and New York, 2006).
6. On responses to the birth of the Lawson quintuplets, see Linda Bryder, *The Rise and Fall of National Women’s Hospital* (Auckland, 2014), pp. 108–9.
7. David Beresford, ‘Test Tube Mother Has Girl’, *Guardian*, 26 July 1978; ‘And Here She Is . . . THE LOVELY LOUISE’, *Daily Mail*, 27 July 1978; José van Dijck, *Manufacturing Babies and Public Consent: Debating the New Reproductive Technologies* (New York, 1995), pp. 63–5.
8. Some important works include Sarah Franklin, *Embodied Progress: A Cultural Account of Assisted Reproduction* (London and New York, 1997); Gay Becker, *The Elusive Embryo: How Women and Men Approach New Reproductive Technologies* (Berkeley, CA, 2000); Marcia C. Inhorn and Frank van Balen (eds), *Infertility Around the Globe: New Thinking on Childlessness, Gender and Reproductive Technologies* (London, 2002); Monica Konrad, *Nameless Relations: Anonymity, Melanesia and Reproductive Gift Exchange between British Ova Donors and Recipients* (New York, 2005); Laura Mamo, *Queering Reproduction: Achieving Pregnancy in the Age of Technoscience* (Durham, NC, 2007); Marcia C. Inhorn and Soraya Tremayne (eds), *Islam and Assisted Reproductive Technologies: Sunni and Shia Perspectives*. (Oxford, 2012); Amrita Pande, *Wombs in Labor: Transnational Commercial Surrogacy in India* (New York, 2014).
9. Charis Thompson, *Making Parents: The Ontological Choreography of Reproductive Technologies* (Cambridge, MA and London, 2005), p. 79.
10. Marten Stol, *Birth in Babylonia and the Bible: Its Mediterranean Setting* (Groningen, 2000), pp. 33–7 and pp. 52–4; Eric Jauniaux, ‘An Introduction to Reproduction in Pharaonic Egypt’, *Reproductive Biomedicine*, 2:2 (2001), pp. 110–11.
11. On the influence of the ancient Egyptian medical tradition on Western medicine, see Marcia C. Inhorn, *Quest for Conception: Gender, Infertility, and Egyptian Medical Traditions* (Philadelphia, PA, 1994), pp. 52–67.
12. Rebecca Flemming, ‘The Invention of Infertility in the Classical Greek World: Medicine, Divinity, and Gender’, *Bulletin of the History of Medicine*, 87 (2013), p. 570.
13. On infertility in the ancient Greek and Roman worlds, see Philip van der Eijk, ‘On Sterility (‘HA X’), a Medical Work by Aristotle?’, *Classical Quarterly*, 49 (1999); Rebecca Flemming, *Medicine and the Making of Roman Women: Gender, Nature, and Authority from Celsus to Galen* (Oxford, 2000), pp. 161–72, 230–46; Helen King, *Hippocrates’ Woman: Reading the Female Body in Ancient Greece* (London, 1998), pp. 130–56.
14. See Zohreh Behjati-Ardakani, Mohammad Mehdi Akhondi, Homa Mahmoodzadeh and Seyed Hasan Hosseini, ‘An Evaluation of the Historical Importance of Fertility and Its Reflection in Ancient Mythology’, *Journal of Reproduction & Infertility*, 17:1 (2016).

15. Genesis 15:2–4: ‘And Abram said, Lord God, what wilt thou give me, seeing I go childless [. . .] And behold, the word of the Lord came unto him, saying [. . .] he that shall come forth out of thine own bowels shall be thine heir’.
16. Candida R. Moss and Joel S. Baden, *Reconceiving Infertility: Biblical Perspectives on Procreation and Childlessness* (Princeton, NJ, 2015), especially pp. 21–69; Rachel Havrelock, ‘The Myth of Birthing the Hero: Heroic Barrenness in the Hebrew Bible’, *Biblical Interpretation*, 16 (2008).
17. Marshall Cavendish, *Gods, Goddesses and Mythology*, Volume 4 (New York, 2005), p. 537.
18. For a fascinating reading of this part of the epic narrative, see Swasti Bhattacharyya, *Magical Progeny, Modern Technology: A Hindu Bioethics of Assisted Reproductive Technology* (Albany, NY, 2006), pp. 35–48.
19. Rachel Bowlby, ‘Generations’, *Textual Practice*, 21:1 (2007), p. 8.
20. Stephen Frosh, ‘The Freudian Century’, in Laura Marcus and Ankhi Mukherjee (eds), *A Concise Companion to Psychoanalysis, Literature, and Culture* (Chichester, West Sussex, 2014), p. 15.
21. Bowlby, ‘Generations’, p.10.
22. Jill Allison, *Motherhood and Infertility in Ireland: Understanding the Presence of Absence* (Cork, 2013), pp. 1–4.
23. Naomi Pfeffer, *The Stork and the Syringe: A Political History of Reproductive Medicine* (Cambridge, 1993), p. 3.
24. For an overview of this scholarship, see Daphna Oren-Magidor and Catherine Rider, ‘Introduction: Infertility in Medieval and Early Modern Medicine’, *Social History of Medicine*, 29:2 (2016). This is an introduction to a special issue of the journal on infertility in medieval and early modern medicine, further demonstrating the extent of recent interest in the field.
25. Elizabeth Roberts, *Women and Families: An Oral History, 1940–1970* (Oxford, 1995), pp. 81–2; Angela Davis, *Modern Motherhood: Women and Family in England, c. 1945–2000* (Manchester and New York, 2012), p. 183.
26. Kate Fisher and Sarah Toulalan (eds), *The Routledge History of Sex and the Body: 1500 to the Present* (Abingdon, Oxon., 2013), pp. 11, 280, 283–4, 302, 307, 353, 388, 484, 489.
27. The relevant chapter is Naomi Pfeffer, ‘The Reproductive Body’, in Roger Cooter and John Pickstone (eds), *Companion to Medicine in the Twentieth Century* (London and New York, 2003), pp. 287–8.
28. Frank van Balen and Marcia C. Inhorn, ‘Introduction. Interpreting Infertility: A View from the Social Sciences’, in Marcia C. Inhorn and Frank van Balen (eds), *Infertility Around the Globe: New Thinking on Childlessness, Gender, and Reproductive Technologies* (Berkeley, Los Angeles, CA, and London, 2002), p. 11.
29. Elizabeth A. Sternke and Kathleen Abrahamson, ‘Perceptions of Women with Infertility on Stigma and Disability’, *Sexuality and Disability*, 33 (2015), p. 12.
30. F. Zegers-Hochschild, G.D. Adamson, J. de Mouzon, O. Ishihara, R. Mansour, K. Nygren, E. Sullivan, and S. van der Poel, on behalf of ICMART and WHO, ‘The International Committee for Monitoring Assisted Reproductive Technology (ICMART) and the World Health Organization (WHO) Revised Glossary on ART Terminology, 2009’, *Human Reproduction*, 24:11 (2009), p. 2686.

31. Frank van Balen, 'The Psychologization of Infertility', in Marcia C. Inhorn and Frank van Balen (eds), *Infertility Around the Globe: New Thinking on Childlessness, Gender, and Reproductive Technologies* (Berkeley, Los Angeles, CA, and London, 2002), p. 94.
32. Deborah Lynn Steinberg, 'The Depersonalisation of Women through the Administration of "In Vitro" Fertilisation', pp. 93–4.
33. Steinberg, 'The Depersonalisation of Women', pp. 91–2. See also Deborah Lynn Steinberg, *Bodies in Glass: Genetics, Eugenics, Embryo Ethics* (Manchester and New York, 1997), pp. 25–74.
34. Arthur L. Greil and Julia McQuillan, "'Trying" Times: Medicalization, Intent, and Ambiguity in the Definition of Infertility', *Medical Anthropology Quarterly*, 24:2 (2010), pp. 139–41 (quotation p. 139).
35. Miriam Ulrich and Ann Weatherall, 'Motherhood and Infertility: Viewing Motherhood through the Lens of Infertility', *Feminism & Psychology*, 10:3 (2000), p. 330.
36. Greil and McQuillan, "'Trying" Times', pp. 150–1.
37. van Balen and Inhorn, 'Introduction. Interpreting Infertility', pp. 12–13. For further examples of some of the different orientations to infertility and fertility described by van Balen and Inhorn, see Irina L.G. Todorova and Tatyana Kotzeva, 'Social Discourses, Women's Resistive Voices: Facing Involuntary Childlessness in Bulgaria', *Women's Studies International Forum*, 26:2 (2003), p. 144; Anna Winkvist and Humaira Zareen Akhtar, 'God Should Give Daughters to Rich Families Only: Attitudes Towards Childbearing among Low-Income Women in Punjab, Pakistan', *Social Science & Medicine*, 51 (2000).
38. Judith Farquhar, 'Objects, Processes, and Female Infertility in Chinese Medicine', *Medical Anthropology Quarterly*, 5:4 (1991), p. 374.
39. Flemming, 'The Invention of Infertility', pp. 576–7.
40. Pfeffer, *The Stork and the Syringe*, pp. 76–7.
41. Ann Oakley, *The Captured Womb: A History of the Medical Care of Pregnant Women* (Oxford, 1984), pp. 156–68; Stuart Blume, 'Medicine, Technology and Industry', in Roger Cooter and John Pickstone (eds), *Companion to Medicine in the Twentieth Century* (London and New York, 2003), p. 408.
42. Rosalind Petchesky, 'Foetal Images: the Power of Visual Culture in the Politics of Reproduction', in Michelle Stanworth (ed.), *Reproductive Technologies: Gender, Motherhood and Medicine* (Cambridge, 1987).
43. Cathy McClive, 'The Hidden Truths of the Belly: The Uncertainties of Pregnancy in Early Modern Europe', *Social History of Medicine*, 15:2 (2002), quotations pp. 211–12.
44. Pfeffer, *The Stork and the Syringe*, pp. 16–17; Roberts, *Women and Families*, pp. 81–2.
45. For an overview of recent trends in the history of sexuality, see Jeffrey Weeks, *What is Sexual History?* (Cambridge, 2016); for the history of medicine, see Mark Jackson, 'Introduction', in Mark Jackson (ed.), *The Oxford Handbook of the History of Medicine* (Oxford and New York, 2011).
46. Sally Alexander, 'The Mysteries and Secrets of Women's Bodies: Sexual Knowledge in the First Half of the Twentieth Century', in Mica Nava and Alan O'Shea (eds), *Modern Times: Reflections on a Century of English Modernity* (London and New York, 1996), p. 163.

47. Kate Fisher, *Birth Control, Sex and Marriage in Britain, 1918–1960* (Oxford and New York, 2006), especially pp. 26–75, 189–237.
48. Arthur L. Greil, 'Infertility and Psychological Distress: A Critical Review of the Literature', *Social Science and Medicine*, 45:11 (1997), pp. 1682–83, 1694; Arthur L. Greil, Kathleen Slauson-Blevins, and Julia McQuillan, 'The Experience of Infertility: A Review of Recent Literature', *Sociology of Health and Illness*, 32:1 (2010), pp. 145, 147–8; Rossela Ardenti, Cinzia Campari, Lorenza Agazzi, and Giovanni Battista La Sala, 'Anxiety and Perceptive Functioning of Infertile Women During In-Vitro Fertilization: Exploratory Survey of an Italian Sample', *Human Reproduction*, 14:12 (1999), p. 3132; Gay Becker, Martha Castrillo, Rebecca Jackson and Robert D. Nachtigal, 'Infertility among Low-Income Latinos', *Fertility and Sterility*, 85:4 (2006), p. 886; Latifat Ibisomi and Netsayi Noris Mudege, 'Childlessness in Nigeria: Perceptions and Acceptability', *Culture, Health & Sexuality*, 16:1 (2014), pp. 62, 68; Ruoxi Yu, 'The Girl with the Peanut Necklace: Experiences of Infertility and In Vitro Fertilization in China', *EliScholar – A Digital Platform for Scholarly Publishing at Yale*, 24 April 2015, pp. 23–30: http://elischolar.library.yale.edu/cgi/viewcontent.cgi?article=1002&context=ceas_student_work. Accessed 6 December 2016.
49. Papreen Nahar and Annemiek Richters, 'Suffering of Childless Women in Bangladesh: The Intersection of Social Identities of Gender and Class', *Anthropology & Medicine*, 18:3 (2011), p. 331.
50. Katja Triplett, 'For Mothers and Sisters: Care of the Reproductive Female Body in the Medico-Ritual World of Early and Medieval Japan', *Dynamis: Acta Hispanica ad Medicinae Scientiarumque Historiam Illustrandam*, 34:2 (2014), p. 337; Daphna Oren-Magidor, 'From Anne to Hannah: Religious Views of Infertility in Post-Reformation England', *Journal of Women's History*, 27:3 (2015); Gülhan Balsoy, *The Politics of Reproduction in Ottoman Society, 1838–1900* (Abingdon, Oxon., and New York, 2013), pp. 109, 111.
51. For an account of reading 'against the grain', see Carlo Ginzburg, *History, Rhetoric and Proof: The Menahem Stern Jerusalem Lectures* (Hanover, NH, 1999), pp. 23–4. Roy Porter, 'The Patient's View: Doing Medical History From Below', *Theory and Society*, 14:2 (1985), pp. 183–5, contains perceptive reflections on how medical historians can approach the history of the (relatively) powerless.
52. The classic formulation of this problem is Gayatri Chakravorty Spivak, 'Can the Subaltern Speak?', in Cary Nelson and Lawrence Grossman (eds), *Marxism and the Interpretation of Culture* (Basingstoke, 1988). Estelle B. Freedman and John D' Emilio, 'Problems Encountered in Writing the History of Sexuality: Sources, Theory and Interpretation', in Jennifer Ellen Robinson (ed.), *Same-Sex Cultures and Sexualities: An Anthropological Reader* (Malden, MA, 2005) considers how these problems affect research in the history of sexuality.
53. The discussions that follow are based on Charlotte Newman Goldy, 'A Thirteenth-Century Anglo-Jewish Woman Crossing Boundaries: Visible and Invisible', *Journal of Medieval History*, 34:2 (2008), and Susan Broomhall, "'Women's Little Secrets": Defining the Boundaries of Reproductive Knowledge in Sixteenth-Century France', *Social History of Medicine*, 15:1 (2002).

54. Goldy, 'A Thirteenth-Century Anglo-Jewish Woman', p. 135.
55. Broomhall, "Women's Little Secrets", p. 3.
56. Goldy, 'A Thirteenth-Century Anglo-Jewish Woman', pp. 140–44. On infertility during the medieval period, see Joan Cadden, *Meanings of Sex Difference in the Middle Ages: Medicine, Science and Culture* (Cambridge, 1993), pp. 228–58.
57. Broomhall, "Women's Little Secrets", p. 14.
58. Thompson, *Making Parents*, p. 11.
59. See, for example, Melissa S. Williams, *Voice, Trust and Memory: Marginalized Groups and the Failings of Liberal Representation* (Princeton, NJ, 1998), especially pp. 176–202.
60. A. Woollett, 'Childlessness: Strategies for Coping with Infertility', *International Journal of Behavioral Development*, 8 (1985); D.C. Davis and C.N. Dearman, 'Coping Strategies of Infertile Women', *Journal of Obstetrics, Gynecologic, & Neonatal Nursing*, 20:3 (1991); Ulrich and Weatherall, 'Motherhood and Infertility', p. 329; D.C. Parry, 'Women's Experiences with Infertility: Exploring the Outcome of Empowerment', *Women's Studies*, 34:2 (2005).
61. See Margaret Marsh and Wanda Ronner, *The Empty Cradle: Infertility in America from Colonial Times to the Present* (Baltimore, MD, and London 1996), pp. 41–74.
62. Pfeffer, *The Stork and the Syringe*, pp. 62, 66.
63. Pfeffer, *The Stork and the Syringe*, pp. 123–6. Between the 1950s and the 1970s, there was considerable experimentation with testosterone rebound therapy, based on the theory that following withdrawal from testosterone therapy, the sperm count might actually rise. Although some trials in the 1970s suggested positive results, this therapy has been abandoned in recent years following research demonstrating that exogenous testosterone is detrimental to sperm production. Karen E. Boyle, 'Nonsurgical Treatment of Male Infertility: Empiric Therapy', in Larry I. Lipshultz, Stuart S. Howards, and Craig S. Niederberger (eds), *Infertility in the Male*, 4th edn (Cambridge, 2009), p. 447.
64. Pfeffer, *The Stork and the Syringe*, pp. 112–23, 157–8.
65. van Balen, 'The Psychologization of Infertility', p. 79.
66. In 2010, the average success rate for IVF in women under 35 was 32.2 per cent. See Human Fertilisation and Embryology Authority, 'Latest UK IVF Figures: 2010 and 2011': <http://www.hfea.gov.uk/ivf-figures-2006.html>. Accessed 6 December 2016.
67. On some of these consequences, see Duncan Wilson, *The Making of British Bioethics* (Manchester, 2014).
68. Farquhar, 'Objects, Processes, and Female Infertility in Chinese Medicine', pp. 373–4; Becker et al, 'Infertility among Low-Income Latinos', pp. 884, 886; Nahar and Richters, 'Suffering of Childless Women in Bangladesh', p. 332; J. Schaffir, A. McGee, and E. Kennard, 'Use of Nonmedical Treatments by Infertility Patients', *Journal of Reproductive Medicine*, 54:7 (2009).
69. van Balen, 'The Psychologization of Infertility', p. 93.
70. Katherine Park, 'Medicine and Magic: The Healing Arts', in Judith C. Brown and Robert C. Davis (eds), *Gender and Society in Renaissance Italy* (London, 1998), pp. 129–30.
71. See, for example, Mamo, *Queering Reproduction*; Lori Andrews, *Between Strangers: Surrogate Mothers, Expectant Fathers, and Brave New Babies* (New York, 1989); Sarah Franklin, *Biological Relatives: IVF, Stem Cells and the*

- Future of Kinship* (Durham, NC, 2013); Tabitha Freeman, Susanna Graham, Fatemeh Ebtehaj and Martin Richards (eds), *Relatedness in Assisted Reproduction: Families, Origins and Identities* (Cambridge, 2014); Susan Golombok, *Modern Families. Parents and Children in New Family Forms* (Cambridge, 2015).
72. Bowlby, 'Generations', pp. 4, 11.
 73. Pat Thane, 'Family Life and "Normality" in Postwar British Culture', in Richard Bessel and Dirk Schumann (eds), *Life After Death: Approaches to a Cultural and Social History of Europe During the 1940s and 1950s* (Cambridge, 2003), p. 198.
 74. Leonore Davidoff, Megan Doolittle, Janet Fink and Katherine Holden, *The Family Story: Blood, Contract and Intimacy, 1830–1960* (London and New York, 1999), especially pp. 77–98, 161–82, 267.
 75. Shellee Colen, "'Like a Mother to Them': Stratified Reproduction and West Indian Childcare Workers and Employers in New York", in Faye D. Ginsburg and Rayna Rapp (eds), *Conceiving the New World Order: The Global Politics of Reproduction* (Berkeley and Los Angeles, CA, 1995), p. 78.
 76. See, for example, Susan Markens, *Surrogate Motherhood and the Politics of Reproduction* (Berkeley and Los Angeles, CA, 2007); Holly Donahue Singh, 'The World's Back Womb? Commercial Surrogacy and Infertility Inequalities in India', *American Anthropologist*, 114 (2013); Sayantani Dasgupta and Shamita Das Dasgupta, (eds), *Globalization and Transnational Surrogacy in India: Outsourcing Life* (Lanham, MD, 2014); Pande, *Wombs in Labor*; Laura Harrison, "'I am the Baby's Real Mother": Reproductive Tourism, Race, and the Transnational Construction of Kinship', *Women's Studies International Forum*, 47 (2014); Frances Winddance Twine, *Outsourcing the Womb: Race, Class, and Gestational Surrogacy in a Global Market*, 2nd edn (New York, 2015).
 77. Marsh and Ronner, *The Empty Cradle*, pp. 50–1.
 78. Pfeffer, *The Stork and the Syringe*, pp. 41–3.
 79. Bowlby, 'Generations', p. 13.
 80. For a lively if dated anthropological and historical overview, see Sheila Kitzinger, *Women as Mothers* (Glasgow, 1978), pp. 72–103, 226–46.
 81. van Balen and Inhorn, 'Introduction. Interpreting Infertility', p. 7.
 82. Pfeffer, *The Stork and the Syringe*, p. 61.
 83. Arthur L. Greil, 'Infertile Bodies: Medicalization, Metaphor, and Agency', in Marcia C. Inhorn and Frank van Balen (eds), *Infertility Around the Globe: New Thinking on Childlessness, Gender, and Reproductive Technologies* (Berkeley, Los Angeles, CA, and London, 2002), p. 101.
 84. van Balen and Inhorn, 'Introduction. Interpreting Infertility', p. 19.
 85. Marcia C. Inhorn, "'The Worms are Weak": Male Infertility and Patriarchal Paradoxes in Egypt', *Men and Masculinities*, 5:3 (2003), pp. 248–9.
 86. Karen Throsby and Rosalind Gill, "'It's Different for Men": Masculinity and IVF', *Men and Masculinities*, 6:4 (2004), quotation p. 335.
 87. See for example Judith C. Mueller, 'Fallen Men: Representations of Male Impotence in Britain', *Studies in Eighteenth-Century Culture*, 28 (1999), p. 92; Michael Finn, 'Female Sterilization and Artificial Insemination at the French Fin de Siècle: Facts and Fictions', *Journal of the History of Sexuality*, 18:1 (2009), p. 26.
 88. See especially the chapters by Totelin, Gurtler, Roberts, and Rider.
 89. David Cross, 'Life Found Under S Pole Ice Shelf', *Times*, 10 January 1978, p. 6.

PART I

Defining the ‘Problem’: Perspectives
on Infertility

Introduction: Defining the ‘Problem’: Perspectives on Infertility

Tracey Loughran and Gayle Davis

‘IT’S A GIRL’, shouted the headline of the *Daily Express* the morning after Louise Brown’s birth. On 27 July 1978, newspaper readers across Britain met the blinking, slightly quizzical gaze of a baby no more than a few hours old, and to all outward appearances exactly the same as thousands of other babies born across the land that day. Of course, appearances can be deceptive. As the first child born as a result of the technique of in vitro fertilization (IVF), at that moment Louise Brown was utterly unique in the history of humankind. The successful deployment of IVF has had manifold consequences, including an irrevocable shift in public debates on reproductive technology, the creation of a discourse of the ‘rights’ of couples to biological parenthood, and new possibilities for the configuration of ‘the family’ itself. Above all, IVF has made infertility socially visible, but in such a way that involuntary childlessness is now often perceived as inseparable from issues surrounding the development and use of assisted reproductive technologies (ARTs).¹

This post-IVF conflation of infertility and ARTs is so ingrained in contemporary Western discourse that Margarete Sandelowski and Sheryl de Lacey have even claimed that infertility was ‘invented’ in 1978.² This claim rests on some very fine distinctions. They argue that infertility is ‘a medically and socially liminal state in which affected persons hover between reproductive incapacity and capacity’ because they believe that modern

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medicine can eventually bypass ‘virtually any kind of biological or physical impediment to reproduction’. As such, Sandelowski and de Lacey view ‘infertility’ as different to ‘barrenness’, which connotes ‘a divine curse of biblical proportions’, and to ‘sterility’, which implies ‘an absolutely irreversible physical condition’.³

The etymological differences between these terms provide some, albeit limited, support for this claim. Although the English word ‘infertile’ dates from the sixteenth century, it seems that until the mid-twentieth century, it was more often applied to animal and plant than to human life. The Middle English word ‘barren’, on the other hand, was used to describe women incapable of bearing children *before* it was applied to trees or plants, and the late Middle English term ‘sterile’ and its derivatives seem to have been indiscriminately applied to women, animals, and plant life more or less from their first entry into the language.⁴ The definite preference for ‘infertility’ over other available terms is a late twentieth-century phenomenon, and it is difficult to disentangle this etymological history from that of IVF.

Yet the claim that infertility was ‘invented’ in 1978 is not only about language. It implies first that the *experience* of late twentieth or early twenty-first-century ‘infertility’ is qualitatively different to earlier experiences of ‘barrenness’ or ‘sterility’, and second that this difference resides in the indeterminate status of infertility as a condition that sufferers believe can be bypassed (if not cured) by medical intervention. This approach emphasizes ‘infertility’ as a medicalized state, in which the possibilities of reproductive technology keep sufferers suspended in a state of hope. Some scholars implicitly or explicitly accept this definition, but argue that the ‘medicalization of infertility’ began much earlier, whether in early nineteenth-century North America or in ancient Greece.⁵ However, there are many other potential objections to Sandelowski and de Lacey’s argument: that it privileges a medicalized definition of infertility; that it is Western-centric; and that while it posits a definitive shift in the experience of involuntary childlessness as the result of IVF, it is clear that there are important continuities in the experience of infertility in different historical periods and contemporary cultures (see Introduction for further discussion of these issues).

Nevertheless, this radical statement about the ‘invention’ of infertility should not be dismissed out of hand, even if we ultimately find it unconvincing. Sandelowski and de Lacey’s argument highlights the existence of multiple definitions and concepts of infertility and related terms, and how and why they might change over time. Crucially, it also opens our eyes to the manifold ways in which current concepts of involuntary childlessness are inevitably shaped by our own location in a post-IVF world. It forces us to engage with the implicit and explicit definitions that scholars of infertility adopt, how these definitions shape their approaches to the subject, and the challenges they face in attempting to unpick past and present understandings and experiences of involuntary childlessness.

There are no simple solutions to these thorny issues of definition and method. The chapters in this section explore the variety of ways in which infertility has been defined in different periods and contexts, and illustrate a range of possible scholarly approaches to the condition. Taken together, they invite readers to consider the extent to which the 'biological' category of infertility has always been mediated by social and cultural concerns; how initial definitions of infertility help to determine the findings of any study; how changing definitions have shaped the experiences of sufferers; and some of the practical difficulties in researching the history of infertility. These chapters therefore reflect on issues of perennial importance to the history of infertility, controversies which have not been resolved, and methodological problems which remain constant. Like the volume itself, this section is a sustained attempt to resist easy assumptions about 'infertility', and in this way to generate more complex and historicized understandings of involuntary childlessness.

The section opens with Sally Bishop Shigley's moving meditation on different 'stories' about infertility, including her own. Shigley interweaves autobiography with medical, legal, and literary interpretations of infertility. She reflects on the consequences of defining infertility as disease and as disability, and how these definitions resonate (or do not) with the lived experience of infertility. Through examining a range of literary texts, including memoirs, chick-lit and comics, Shigley shows how prevalent modes of narrating stories about infertility can variously unsettle, reassure, or attempt to normalize certain aspects of the experience of infertility. Above all, she demonstrates how these 'stories' inflect the experience of infertile women, sometimes to reinforce stigma and self-blame, sometimes to delude with unrealistically neat happy endings, and sometimes to offer comfort through the identification of shared absurdities, indignities, and pain. Her chapter is not only a contribution to scholarly debates on infertility, but a story offering solace and strength to those who suffer now, and need to see how they might survive.

Laurence Totelin's chapter moves us from the contemporary USA to ancient Greece and Rome, and from personal experience to plant infertility. Totelin shows that ancient medical texts often employed agricultural metaphors to describe human fertility, and then examines how Greek and Roman authors explained plant fertility. She argues that references to plants in medical texts were not *only* metaphorical. In fact, the ancients extended their conclusions about the causes of sterility in plants to humans, and there are important similarities in their approaches to infertility in different forms of organic life. They perceived intervention by a human male *and* the active contribution of the female human/earth as essential to the 'treatment' of both human and plant infertility. This analysis of infertility provides new insight into how approaches to infertility were gendered in the ancient world, but even more importantly for our purposes, Totelin provokes radical new ways of thinking

about how we might study human infertility by looking at the topic from the unexpected angle of ancient botany. As in Shigley's chapter, Totelin's approach and her findings underscore that modes of narration are not incidental to the formation of knowledge about infertility: metaphors and analogies reveal shared origins of understanding across different domains, and both reflect and shape mentalities.

Bridget Gurtler's chapter picks up on many of the same themes, as she examines understandings and practices of artificial insemination in Britain, France, and the USA in the nineteenth and twentieth centuries. Before the cryopreservation of sperm became possible in the 1950s, eventually leading to the creation of commercial 'sperm banks', and especially in the pre-HIV era, artificial insemination was one of the simplest 'treatments' for infertility.⁶ It therefore has a much longer history than most of the treatments still in use in the Western world today. However, as Gurtler shows, shifts in the nomenclature of artificial insemination reflected important changes in the medical and social contexts of the practice. As the diverse vocabulary of 'artificial fructification', 'artificial fertilization', 'artificial fecundation', and 'artificial impregnation' (all terms common in the nineteenth century) gradually narrowed to the familiar language of 'artificial insemination' used today, medical science gradually established control of the procedure, and its practice became acceptable to shore up crumbling family structures. Alongside readings of medical texts, Gurtler draws on the possibilities offered by new digital technologies such as the Google N-Gram Viewer to analyse changing linguistic practices at the macro-level. This method provides an intriguing hint of one direction in which the histories of sexuality and reproduction might evolve as digital technology becomes more sophisticated, and historians more adept at exploiting it.⁷

From macro to micro: in the next chapter, Christina Benninghaus explores personal narratives and fictional accounts to illuminate the experience of infertility in nineteenth- and twentieth-century Germany, and to reflect on the challenges facing scholars of infertility. Benninghaus argues that the experience of infertility has left few traces on the historical record, and that this reflects the silences that surrounded infertility in earlier periods (and often still envelop the experience now). She explores the potential resonances of these silences, including the possibility that infertility was taboo or a stigmatized condition (ideas touched on in the previous chapters in this section, and which emerge elsewhere), but finally concludes that silence could be a valuable tool for couples as they sought to maintain their relationship, social status, and mental equilibrium in the face of severe difficulties. Benninghaus's focus on 'moments of communication' reinforces the message of earlier chapters that language (or its absence) shapes experience, but also frankly confronts how historians,

forced to rely on textual and material evidence to apprehend past lives, might creatively respond to the challenges posed by such absences in the sources.

The concluding chapter of the section, Angela Davis's oral history of infertility in postwar England, brings together many of these themes. Davis again emphasizes the importance of certain kinds of narration, suggests ways in which (contemporary) historians might confront silences, and considers how definitions of infertility have affected its study. Davis originally conducted the interviews which form the source material for this chapter for a project on motherhood. All the women she interviewed had at least one child, and she did not set out to probe fertility problems. However, as women narrated their stories, they also revealed difficulties and disappointments in the journey to motherhood. The interview process had unintended outcomes, and generated the unexpected finding that secondary infertility and subfertility remain 'hidden subjects' in history. In their ethnographic research on contemporary Bulgaria, Irina Todorova and Tatyana Kotzeva reached similar conclusions about the need to broaden out definitions of infertility in order to fully understand how the condition is lived.⁸ As Davis argues, these women had difficulty telling their stories of subfertility because their experiences did not match stereotypical images of the infertile woman; we could perhaps go further, and say that historians, constrained by both their own expectations of what constitutes infertility and lack of attentiveness to the silences, gaps, and erasures in historical evidence, have failed to look for these stories.

Among historians, psychologists, social scientists, and clinicians alike, approaches to infertility often simultaneously invoke fierce dispute about what exactly is being studied *and* rest on unexamined assumptions.⁹ As Arthur L. Greil and Julia McQuillan found when they examined the unarticulated beliefs about intent and planning that lie behind the standard biomedical definition of infertility as 'failure to achieve a successful pregnancy after 12 months or more of regular unprotected intercourse',¹⁰ these unexamined assumptions often arise out of, and reinforce, positions of power.¹¹ As this volume shows, throughout history infertile couples have shown determination and ingenuity in their active attempts to have children; but they have also, both before and after 1978, testified to intense feelings of powerlessness and despair. As historians, we are faced with limited, fragmentary, and often ambiguous evidence of past experiences of involuntary childlessness. If we are unable to look past the assumptions of our own cultures, our own times, then we unwittingly reinforce this powerlessness. This section shows that throughout past ages, individuals nevertheless brought their own understandings, shaped by manifold social, cultural and economic resources, to the experience of living with and

attempting to overcome infertility. In doing so, it builds on existing research on the history of infertility, but also interrogates the assumptions of this research, and opens out new possibilities for future histories.

NOTES

1. Naomi Pfeffer, *The Stork and the Syringe: A Political History of Reproductive Medicine* (Cambridge, 1993), pp. 27–8.
2. Margarete Sandelowski and Sheryl de Lacey, ‘The Uses of a “Disease”: Infertility as Rhetorical Vehicle’, in Marcia C. Inhorn and Frank van Balen (eds), *Infertility Around the Globe: New Thinking on Childlessness, Gender, and Reproductive Technologies* (Berkeley, Los Angeles, CA, and London, 2002), pp. 34–5.
3. Sandelowski and de Lacey, ‘The Uses of a “Disease”’, pp. 34–5.
4. See entries for ‘barren’, ‘infertile’, ‘infertility’, ‘sterile’, and ‘sterility’ in *Oxford English Dictionary*, 2nd edn (Oxford, 1989).
5. Margaret Marsh and Wanda Ronner, *The Empty Cradle: Infertility in America from Colonial Times to the Present* (Baltimore, MD, 1996), pp. 243–55; Rebecca Flemming, ‘The Invention of Infertility in the Classical Greek World: Medicine, Divinity, and Gender’, *Bulletin of the History of Medicine*, 87 (2013), pp. 567–8.
6. Donated semen must now be tested for HIV, which requires deep-freezing for the incubation period for HIV, thawing, and testing. This means that artificial insemination, if conducted via medical agencies rather than informal arrangements, is no longer a low-tech procedure. See Frank van Balen and Marcia C. Inhorn, ‘Introduction. Interpreting Infertility: A View from the Social Sciences’, in Marcia C. Inhorn and Frank van Balen (eds), *Infertility around the Globe: New Thinking on Childlessness, Gender, and Reproductive Technologies* (Berkeley, Los Angeles, CA, and London, 2002), p. 16. On the development of ‘sperm banks’, see Simone B. Novaes, ‘Semen Banking and Artificial Insemination by Donor in France: Social and Medical Discourse’, *International Journal of Technology Assessment in Health Care*, 2:2 (February 1986).
7. See Tim Hitchcock, ‘Confronting the Digital, or How Academic History Writing Lost the Plot’, *Cultural and Social History*, 10:1 (March 2013).
8. Irina L.G. Todorova and Tatyana Kotzeva, ‘Social Discourses, Women’s Resistive Voices: Facing Involuntary Childlessness in Bulgaria’, *Women’s Studies International Forum*, 26:2 (2003), p. 144.
9. For an example of clinical debates, see J.D.F. Habbema, J. Collins, H. Leridon, J.L.H. Evers, B. Lunenfeld and E.R. teVelde, ‘Towards a Less Confusing Terminology in Reproductive Medicine: A Proposal’, *Human Reproduction*, 19 (2004); and C. Gnoth, E. Godehardt, P. Frank-Herrmann, K. Friol, Jürgen Tigges and G. Freundl, ‘Definition and Prevalence of Subfertility and Infertility’, *Human Reproduction*, 20:5 (2005).
10. American Society for Reproductive Medicine, ‘Definitions of Infertility and Recurrent Pregnancy Loss’, *Fertility and Sterility*, 90:5, Supplement (2008), p. S60. This definition has since been superseded. See American Society for

Reproductive Medicine, 'Definitions of Infertility and Recurrent Pregnancy Loss: A Committee Opinion', *Fertility and Sterility*, 99:1 (2013), p. 63.

11. Arthur L. Greil and Julia McQuillan, "'Trying' Times: Medicalization, Intent, and Ambiguity in the Definition of Infertility", *Medical Anthropology Quarterly*, 24:2 (2010), pp. 140–1.

Great Expectations: Infertility, Disability, and Possibility

Sally Bishop Shigley

MY STORY

At a recent birthday gathering for a friend, a colleague asked everyone in the living room to describe her life in the 1990s. These women had travelled, written books, and started careers. Impressive stuff. When my turn came, I said the first thing that came to mind: ‘I was trying to get pregnant’. In 1990, I stopped using birth control. It was only a matter of time. I stopped drinking wine and started taking vitamins. In 1992, I sought medical help. My first foray into assisted reproductive technology (ART) was intrauterine insemination (IUI). My husband’s sperm was collected via a private room and a magazine and then treated to maximize motility and morphology: only well-shaped good swimmers allowed. Then the semen was injected into a catheter, an extra-long and flexible one because of my tipped uterus, which was inserted into my cervix. More efficient and uncomfortable than actual intercourse, but basically the same process. The first time (again the same as intercourse!) was fraught with a peculiar kind of energy: part anxiety that it would work, and part anxiety that it wouldn’t. As I lay on the table afterward, letting gravity do its job, I was preoccupied with details that would seem absurd later on: paint for the nursery, how many weeks I could take off work if I got pregnant that very day, the politics of whose family name would be the first versus middle name for our child. As we got in the car afterwards, I remember looking out over the valley just as the sun was starting to set and fretting that we wouldn’t be able to stop at the boutique baby store in the city to shop for furniture on the way home. Wood versus painted cribs, educational black and white mobiles versus stuffed lady bugs, gingham versus stripes. It all seemed so possible in a way that it never would

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again. I was still dwelling in what Susan Sontag calls the ‘kingdom of the well’: a place in which the cause and effect of this most simple and basic of human processes was delayed, but still very much possible.¹ The worry I experienced then was an anxiety of presence and detail: layettes and organic food and diaper bags, not the yawning story of exile and absence it would be later.

In 1995, I travelled 40 miles south to the university medical centre, which had a fertility clinic. I was tested and interviewed and started injecting and ingesting drugs: Lupron through the small subcutaneous needle to shut down my cycles so the reproductive endocrinologists could start them up on a schedule; Pergonal with the big intra-muscular needle to stimulate my ovaries to produce more eggs; oral antibiotics as the embryos were moved from petri dish to womb; viscous and irritating progesterone oil to help fertilized embryos to implant. I made the 80-mile round trip to the fertility centre with my bruised hips to have my follicles measured and my eggs counted. Many times. There were more eggs, but not enough. I needed to try harder, they joked. I tried a little harder. It didn’t work.

I had a brief and cruel surge of beta-Hcg that promised a pregnancy that never materialized. I was standing at my bathroom mirror combing my hair when I felt the hormones ebb. No drama, no tectonic shift, just a slow inexorable change in physiological weather. Then bleeding. Then enervation. I did another in vitro cycle with double the injectable drugs, this time without even false hope at the end. A long chat with the kindly doctor confirmed that while my infertility, like that of some of the 6.6% of infertile women in the USA, was and remains unexplained, he did not hold out much hope that I would ever carry a child to term.² Donor eggs? Surrogacy? Adoption? I was too tired to think. I came home and tried a little harder at the university where I teach and tried to decide what to do.

I received tenure in 1998. Before that I earned a PhD and published a book and articles and spoke to the legislature and was nominated for teaching awards. I ran in races and won medals and travelled with my husband and built water features in my garden and baked really good wholegrain bread. And all these years later, what I remember is that it was the 1990s and I was in my 30s and I could not get pregnant. Infertility is classified as a disease by the medical community, a disability by the US government, and an inestimable loss by the women experiencing it. This chapter explores what infertility can mean for individual women and for a culture, and how those meanings are expressed in infertility literature and my own story. While I am acutely aware that infertility happens to men and other family members as well, my focus is on women. I am interested in how and why women tell stories about infertility and how their stories and mine correlate with literary, medical, and legal interpretations.

INFERTILITY AS DISEASE

The American Society for Reproductive Medicine defines infertility as ‘a disease of the reproductive system that impairs one of the body’s most basic functions: the conception of children’. What follows is the physiology of why:

Conception is a complicated process that depends upon many factors: on the production of healthy sperm by the man and healthy eggs by the woman; unblocked fallopian tubes that allow the sperm to reach the egg; the sperm's ability to fertilize the egg when they meet; the ability of the fertilized egg (embryo) to become implanted in the woman's uterus; and sufficient embryo quality.³

The person who cannot conceive has a disease and the various parts that may not function are diseased.

The sadness and anxiety that accompanied infertility treatment made me feel as if I might be mentally ill sometimes, but I don't remember feeling physically ill, as if I had a disease. I associated illness with fevers and cancers and viruses. In *The Illness Narratives*, physician Arthur Kleinman (b. 1941) distinguishes between the terms illness, disease, sickness, and suffering. He defines illness as the 'innately human experience of symptoms and suffering. Illness refers to how the sick person and the members of the family or wider social network perceive, live with and respond to symptoms and disability' and 'the patient's judgments about how best to cope with the distress and with the practical problems in daily living it creates'.⁴ Disease, on the other hand, 'is what the practitioner creates in the recasting of illness in terms of theories of disorder' as 'the practitioner reconfigures the patient's and family's illness problems as narrow technical issues, disease problems'. Sickness, then, is 'the understanding of a disorder in its generic sense across a population in relation to macrosocial (economic, political, institutional) forces'.⁵ Kleinman notes that clinical medicine does not have an accurate taxonomy to evaluate or address suffering. Clinicians are 'silent'.⁶ While the suffering of infertility is as inevitable and insistent as the phases of the moon, I didn't experience it as a disease, but more of what Lisa Loomer calls 'a human disorder' or what Kleinman calls 'illness problems'.⁷ These phrases more accurately reflect the holistic effect created by bodily processes gone awry. By these definitions, infertility is a chronic illness such as heart disease or lupus or MS minus the life-threatening consequences, an interruption in a long-imagined story.

INFERTILITY AS STORY

The sociologist Arthur W. Frank maps the terrain of this kind of disrupted narrative as he explains the dilemmas facing 'the wounded storyteller', or in this case the infertile storyteller. Frank conflates the image of the wounded storyteller and the wounded healer, arguing that stories heal both the healer and the wounded.⁸ For Frank, the 'stories that ill people tell come out of their bodies. The body sets in motion the need for new stories when its disease disrupts the old stories [. . .]. These embodied stories have two sides, one personal and the other social', and their purpose is to make the strange, disrupted body feel familiar.⁹ This 'dyadic' body (so-called because its suffering is both individual and shared with others who have experienced similar pains) learns things

through its suffering, and it is the sufferer's responsibility to share this knowledge with others who are wounded.¹⁰

Shortly after I left fertility treatment for a nightmarish year pursuing domestic adoption, a work colleague even older than I was decided to start IVF. She was 42 to my 37. Adrift in the overwrought cocktail of ovarian stimulation drugs, she called me, in tears, for some pointers on getting through the process with her sanity, marriage, and career intact. What, she wanted to know, did her doubts and fears and anger mean? And why weren't any of the people treating her talking about it? I wrote her a long email in which I talked about my own wild optimism, my hypervigilant tallying of fat toddlers at the park, the tenacious self-doubt, exhaustion, and visceral grief that accompanied each step of the process. She printed out the email and carried it in her wallet, a smooth stone to rub for comfort and fellow feeling. Creating a breathing space for her created a small one for me as well. Frank continues: 'In stories, the teller not only recovers her voice; she becomes a witness to the conditions that rob others of their voices. When any person recovers his voice, many people begin to speak through that story'.¹¹

But that depends on whom you are talking to: Frank suggests that the 'shape of the telling is molded by all the rhetorical expectations that the storyteller has been internalizing ever since he first heard some relative describe an illness [...] or he was instructed to "tell the doctor what hurts" and had to figure out *what* counted as the story that the doctor wanted to hear'.¹² The fertility narrative for me and for many women changes depending on the audience for it. Frank cautions that the person telling the story of illness 'must also avoid embarrassing others, who should be protected from the specter of lost body control'.¹³ Keeping good company with the many shames that an infertile woman can experience is the potent shame of feeling like you have embarrassed people with your grief. In the midst of the second cycle of IVF, I took my 5-year-old nephew skiing because his mother was heavily pregnant with his younger brother and could not ski. That she was pregnant and I wasn't was enough grief for one day, but it got much worse. I put both his skis in between mine and we sailed down the hill making long, swoopy turns in the light, powdery snow. I yelled 'Cowabunga!' and he answered 'Cows are bunga!', which makes as much sense as the original. I brought him back to my parents' house at dusk and then, after his mother left, collapsed on my parents' couch sobbing into my cup of herb tea. No real tea or light beer for me. I might be conceiving. The irony of it never grows old. The catharsis that can accompany that kind of crying was interrupted by that now familiar emotion: shame. As my parents cleared their throats and asked me to stop being so (1) pessimistic (2) overwrought, and (3) pathologically sensitive, I understood that while my infertility itself might not embarrass them, my experience of it did. In all fairness, I know they love me and don't like me to be sad, but I would learn to tell my story and react to the stories of others in a way that made my experience more comfortable for others to hear. I still do. Athletically agnostic for most of my adult life, I still answer strangers' head-wagging sympathy about

my 'plight' with reassurance that things happen for a reason. It is not that I don't believe that, but the story elides the reality of years of my life in which I understood everything through the lens of what I wanted but could not have.

Frank discusses Paul Zweig's naming of these revisionist stories of reinvention as 'automythology', musing that the heroines of illness narratives rise phoenix-like from the ashes of their old stories, but such mythologizing glosses over the agony of the necessary burning.¹⁴ In her zine *X-Utero*, Paula Knight takes issue with this idea as well. In a series of panels entitled 'It Wasn't Meant to Be' (Fig. 1), the towel-clad female pointing to the all-important 14th day of the month 'begs to differ', reminding the reader that she and her partner had sex on purpose, 'unprotected because we meant it', and that 'the sperm was quite intent on its path'. The next panel shows the embryo tumbling out of the womb, because 'it just went wrong, as bodies are prone to do'.¹⁵ Knight pushes back against the comfortable narrative and inscribes one that leaves the reader in an uncertain, liminal space. She resists the tidy ending.

Frank argues that automythologies 'can easily become stories to remind the healthy that just as the author has risen above illness, they too can escape'.¹⁶ Many infertility stories, fictional and non-fictional, contain what the writer Peggy Orenstein calls, in her memoir *Waiting for Daisy* (2007), the 'deus ex machina of pregnancy'.¹⁷ Difficult adoption situations or yearned-for pregnancies resolve as the curtain closes. In Orenstein's and her husband's case, multiple miscarriages and only one working ovary nevertheless resulted in their daughter Daisy. Such stories reassure the hearer that if the storyteller has dodged the barren bullet, then he or she may also. Unexplained infertility such as mine, or that of the protagonist in Phoebe Potts's graphic memoir *Good Eggs* (2010), or Anne Taylor Fleming's memoir *Motherhood Deferred* (1994), makes readers uneasy because these ambivalent stories remove the sense of safety that Frank's phoenix stories promise. Prospective mothers want to know (physically or metaphysically) why they are infertile, to let themselves off the hook for being too old or too stressed out or for having doubts. Listeners to their stories want a narrative tune to whistle in the dark to allay their own anxiety. Blaming the ill person for complicity in her illness or citing vagueries about stress or age resolve the story even at the expense of the teller. In my case, the misspent time in graduate school, my advanced age and my revisionist mythmaking about probably being a terrible mother anyway created a safe space of blame that sidesteps the profound mystery and complexity that still surrounds conception. Like medieval scholastics musing about how many angels can dance on the head of a pin, listeners intent on precise social or psychological reasons for infertility find closure for their uneasiness, but miss the feathered rush of actual wings.

This sense of needing an explanation is not just the province of laypeople. One of the most painful 'what is to blame' scenarios of my infertility experience came at the hands of physician and bestselling author Christiane Northrup. In an argument echoing the reasoning of long-discredited psychogenic models of infertility discussed by Jacky Boivin and Sofia Gameiro in

"IT WASN'T MEANT TO BE"



Fig. 1 'It Wasn't Meant to Be'

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their contribution to this collection, Northrup makes the odd claim that '[o]n a personal level, many women do not get pregnant because in their hearts, they really do not want to – they are afraid of the demands a child will make on them. Whenever a woman feels conflicted over birthing, children, or the

restrictions that children may impose once they arrive, infertility may result'.¹⁸ I read this originally in her popular medical book *Women's Bodies Women's Wisdom: The Complete Guide to Women's Health and Wellbeing*, which was first published in 1994. During the writing of this chapter, I checked on her website and was surprised to find that, assuming the website is current, she stands by this medical advice. If all the women who were nervous over the implications of a wanted pregnancy were to be infertile, it would seem that the world's populations would be suffused with sparks and smoke as they drew to a grinding halt. She goes on to suggest that unhappy marriages create infertility that resolves when these women find 'more suitable partners', and repeats another outdated myth (discussed in both Cristina Pinheiro's and Shurlee Swain's chapters in this volume) when she claims that in her practice 'countless so-called infertile women conceive shortly after adopting a baby!'¹⁹ Orenstein points out that the rates of conception for infertile couples who have adopted and those who haven't are the same: between 3% and 10%.²⁰ I am certainly not suggesting that Northrup is mistaken about the results in her own practice. However, as an infertile woman, reading about how the root of my disease is lack of desire and failure of will adds another layer of blame and shame. Plus, it casts a strange light on pregnancies that are the result of rape or violence. Thinking that you could have controlled the outcome and did not is much worse in some ways than thinking that the infertility is a natural anomaly or fate. While, for the community of the sick person, this form of reasoning might mean that the culprit is apprehended and the normalizing narrative can continue, for the infertile woman it means that the chorus of self-doubt continues.

INFERTILITY AS DISABILITY

The idea of infertility as disease has been extrapolated further into a discussion of infertility as disabling, which is how I came to write this chapter. I thought about infertility as an academic topic the first time when I saw a call for papers on technologically assisted reproduction. I know a lot about that, so I started writing. A look back at the call for papers revealed that the topics included '*in vitro* fertilization and other types of technological assistance with pregnancy'. Maybe I did not know a lot about this. What about technological assistance without pregnancy? After all, nobody embarks on the expense and inconvenience of assisted reproductive technologies without the intention to get pregnant. Infertility is inexorably linked with pregnancy as a topic for inquiry. Putting aside the American Society for Reproductive Medicine's 'disease' designation for a minute, if the desire for fertility and, by extension, biologically related parents and children, is absent, the argument can be made that a person is not infertile. Infertility is aberrant only if fertility is normal. I used contraception for years before trying to get pregnant and had I never tried to get pregnant I would have been unaware that I am infertile. I would have passed into menopause assuming that pregnancy was a choice that I could have

made and not a diagnostic category. I was preventing a pregnancy that was physically impossible.²¹

I did not end up writing that paper, but the research for it revealed that in 1998 the Supreme Court ruled that under the Americans with Disabilities Act (ADA), infertility is included as a disability.²² The ADA defines disability as ‘a physical or mental impairment that substantially limits one or more major life activities’.²³ Legal challenges to the decision argue about what constitutes a ‘major life activity’ as opposed to a ‘lifestyle choice’, and whether or not ART procedures should be covered by insurance companies.²⁴ While infertility is certainly disappointing, disheartening, and distressing, what does it mean in this case for something to be considered disabling? I am unable to conceive and carry a child in my body, but it is an invisible disability unless I become teary-eyed at the ob-gyn office or decide to tell someone about my experience. Frank calls people whose remissions have made their disease invisible the ‘remission society’, those who suffer the memory of disease and the dread of recurrence, but no longer look or appear sick.²⁵ The flat stomachs of the infertile belie the disease. What does it mean to be disabled? Are there levels of disability? Does infertility fit? If I am disabled, it presents itself in my case primarily as an emotional disability, but the stakes were arguably higher for infertile women historically. I operate in a very privileged position compared to many of my historical and contemporary infertile sisters.

Obviously, I am unable to get pregnant, but the physical experience of the ART, the technology, and the procedures were the easy parts of the infertile experience. Mood swings, bloating, painful injections, and long hours of winter driving notwithstanding, the psychosocial impact – the grief, the self-blame, and the sense of longing and isolation – were the ‘disabling’ parts of the process. Being unable to conceive did not affect my ability to negotiate through the world or do my job, but it did affect my ability to sit calmly in restaurants while my friends announced their pregnancies, or to attend family gatherings without feeling like an alien: mothers, fathers, families, me. But is this any different from the presumed (and not governmentally sanctioned) disability of clinical depression or heart arrhythmias, both conditions which engender dread and grief but no outward physical manifestations?

A decade after my encounters with ART, I am the mother of twin girls whose birth mother in China decided not to parent them. This woman was unwilling or unable to parent. Was she ‘disabled’ by China’s population control strategies, her fertility a very visible and illegal disability? Her pregnancy solved my problem and my adoption solved the orphanage’s. Michael Humphrey notes, however, that ‘adoption may solve the problem of a couple’s *childlessness*, but not the problem of their *infertility*’.²⁶ This suggests that bringing children into your life will give you the traditional family unit, but it will not erase the pain and stigma (often self-imposed) associated with infertility. This became very clear recently when friends of mine decided to go back to China to adopt another child. They are in their mid-30s, healthy, and fit the increasingly strict criteria the Chinese government demands. At 50, with a slightly older

husband, I no longer qualify as an adoptive parent by Chinese standards. My experience of our friends' prospective adoption brought up feelings I thought had been long ago put to rest. Again, even if I wanted to, I could not add to my family. Once again I flinched at the sight of pregnant women and looked with awe at my 40-something friends whose pregnancies were shrouded in mystery that seemed almost incarnate. The familiar tears, as they had before, contained equal parts deep sadness and rage. I obsessively trolled the Internet for countries where I was 'legal' to adopt. I wasn't sure I wanted another child, but I didn't want something or someone telling me no again. Once again, my inability *felt* like disability. But is it? Disability theorist Lennard J. Davis argues that the discipline of disability studies needs to 'focus not so much on the construction of disability as on the construction of normalcy'. He further suggests that 'the "problem" is not the person with disabilities; the problem is the way that normalcy is constructed to create the "problem" of the disabled person'.²⁷ Religious and cultural history is replete with such problematic women. Women who want to get pregnant and cannot hover at the margins, unsure of their role. They are childless, but not what the obstetrician-gynaecologist Jean W. Carter and literary scholar Michael Carter call 'child free', a term inflected with choice, not fate.²⁸

Of course, infertility, according to the *Oxford English Dictionary (OED)*, is defined by what it is not. The root is the Latin *fertilis* with a negating prefix. Fertile is 'bearing or producing in abundance; fruitful, prolific'. It is also, the entry tells us, used to describe 'soil' or a 'district or region' and 'rarely' used to describe animals or, one may presume, people. For animals and the earth the word is 'fecund': 'capable of producing offspring or vegetable growth abundantly, prolific'. Fertile is the last synonym of fecund listed. Why then are women deemed infertile instead of 'infecund' if fertility is about soil and fecundity is about animals? Whatever fertility is, infertility is its opposite: not fertile, not fruitful, followed closely by 'barren' and 'sterile'. In *Waiting for Daisy*, Orenstein notes that the Japanese have a word, 'mizuko', to refer to an aborted or miscarried fetus. 'Mizuko' means 'water child' or a child that hadn't fully 'solidified into a human being, which happens at age seven'.²⁹ Similarly, in English, we don't have a word that exclusively means a woman who desires to but cannot have children. 'Barren' comes the closest. Barren, says the *OED*, is the opposite of fertile and specifically 'of a woman: bearing no children; without issue; childless'. The term 'without issue' is comically challenged in infertility chick lit, where 'issues' abound, but all the primary examples of usage for barren in the *OED* are inflected female, followed by definitions about animals, plants and land. For 'sterile', all of the quotes supporting the primary and secondary definitions are agricultural, with female sterility as the third definition, but 'barren' is listed as a synonym of 'sterile' and thus shares its feminine inflection. For 'infertile', four out of the five quotes illustrating the primary definition are agricultural, with one referring to women. Culturally speaking, 'barren' seems so inflected with cultural baggage that medicine and literature speak instead of infertility. Ask a class of American undergraduates the

definition and they will say infertility is the inability of women to produce live offspring. Those of us here know that there is such a thing as male infertility, but nobody seems to be writing novels about it.

Terms such as ‘barren’ or ‘sterile’ and ideas of divine retribution seem anachronistic, but contemporary society applies enormous psychological pressure to bodies, especially women’s bodies that do not conventionally perform or conform. Medical anthropologist Gay Becker’s book contains an entire chapter on the ‘identity disruption’ common to infertile women. Otherwise healthy young women describe themselves as old, grey, pointless failures.³⁰ I experienced infertility treatment in Utah, the state with the highest birth rate per capita in the USA.³¹ Babies are everywhere here, and the stigma I felt was imposed both internally and externally. My students, many of whom, despite their age, had children of their own, would ask me if I had children. When I said no, they would ask me why I didn’t like kids. From the inside, with each passing menstrual cycle, I became more convinced that my inability to conceive was divine fiat or natural selection. It was an irrational deduction based on anxiety and grief, but as the psychologist Lerita M. Coleman Brown explains, ‘what gives stigma its intensity and reality is fear’, in this case a deep-seated fear that both the Old Testament God smiting women with barrenness and my fertile young students had a point.³²

By Rosemarie Garland-Thomson’s definition of disability as ‘a pervasive cultural system that stigmatizes certain kinds of bodily variations’, I am disabled. My reproductive organs do not behave as most women’s do or can. I am also six feet two inches tall in a world where women my age are not. Garland-Thomson adds that ‘disability is a culturally fabricated narrative of the body, similar to what we understand as the fictions of race and gender’.³³ American society tells very differently inflected stories about tall, thin women than about women who cannot bear children. Neither of these stories resonates with my own.

For me, the quest for pregnancy felt like a ‘major life activity’, one that dominated my consciousness for ten years and still has the power to make me feel inferior and lost, but I am still not sure that I qualify as disabled. I would not trade my children for any others, biologically related or otherwise, but because they don’t look like I do, questions about how we became a family are considered appropriate from complete strangers in the grocery store whose delicacy in asking varies considerably. Ironically, my infertility is more visible now than it was when I was trying to ‘cure’ it.

INFERTILITY IN LITERATURE

The writer and literary critic Anatole Broyard (1920–90) mused that, after his cancer diagnosis, it seemed that, ‘Suddenly there was in the air a rich sense of crisis [. . .] my existence, whatever I thought, felt, or did had taken on a meter, as in poetry, or taxis’.³⁴ For Broyard, illness both caused him to reconceptualize his life in formal, profound, and metaphoric ways (the ‘poetry’) and to

intimately understand the cost and scarcity of time (the ‘taxi’). My experience of infertility and my reading of others’ texts about infertility could be characterized in much the same way. The thwarted attempts at childbearing render(ed) my life and the lives of the real and fictional women I studied profound and urgent. The urgency vibrated at a frequency well beyond the tired metaphor of the ticking biological clock. Identity crisis (another cliché) comes closer to the truth.

This is beautifully illustrated in the six texts I discuss below, diverse in almost every way except for their focus on the disruptive effects of infertility on the sense of self. Paula Knight’s comic panels in *Spooky Womb* (2012) and *Ex-Utero* (2011–13) visually and verbally explore the embodied grief, the simultaneous dislocation from their bodies, and hypervigilant connection with them that infertile women experience. Phoebe Potts’s graphic memoir *Good Eggs* (2010) expands from an exclusive focus on the body to how infertility plays out in social and religious spheres. The same themes are explored in Anne Taylor Fleming’s and Peggy Orenstein’s memoirs. Lisa Loomer in her play *Expecting Isabel* and novelist Sinéad Moriarty in her Emma Hamilton trilogy of novels take infertility stories into the fictional realm, both relying on comedy to explore the behavioural hyperbole and physiological gymnastics of infertility treatment.

In *Spooky Womb*, Paula Knight symbolizes the urgency of the desire for children through embodying the uterus with agency (Fig. 2). She is drawn with lashed eyes and rosy cheeks, the fallopian tubes looking like arms with hands at the end, and the ovaries dangling like earrings next to the womb-shaped face. The mute womb’s mood is indicated by changes in the expression in her eyes, and she communicates with the woman by tapping the end of her hand-like tube on the woman’s shoulder. Significantly, most of the panels are wordless. The intimacy and grief of infertility is portrayed as beyond the reach of language. The zine ends with the womb losing its hold on the embryo it holds, and walking into the sunset holding ‘hands’ with the woman.³⁵ Intimate and insistent, infertility was not part of the story that this woman and I had told ourselves of the future.

Regardless of their outcomes, the fertility stories I studied share a similar arc to my own. They start with a sense of surprise and alienation. They all dwell on medical intricacies, emotional dislocation, and changes in sex and sexuality, often with comic deflection, and they end in certain ways. The infertility stories of Potts, Taylor Fleming, Orenstein, Loomer and Moriarty fit this pattern. Potts and Taylor Fleming end their respective stories in limbo: no baby, no plans. Orenstein, Loomer, and Moriarty, on the other hand, have the ‘baby *ex machina*’, to paraphrase Orenstein, either in the form of a birth or an adoption. Obviously, the babies provide the happy, phoenix-rising endings of the comforting illness narrative, but even the liminal endings take pains to set up some sort of stasis, a frame around the chaos that allows the reader to leave the story at peace.

The protagonist in Lisa Loomer’s ‘baby *ex machina*’ play *Expecting Isabel* starts with a long musing on her unhappy life, her dysfunctional family, and the state of her marriage. The play is told in flashbacks with frequent, ironic, direct

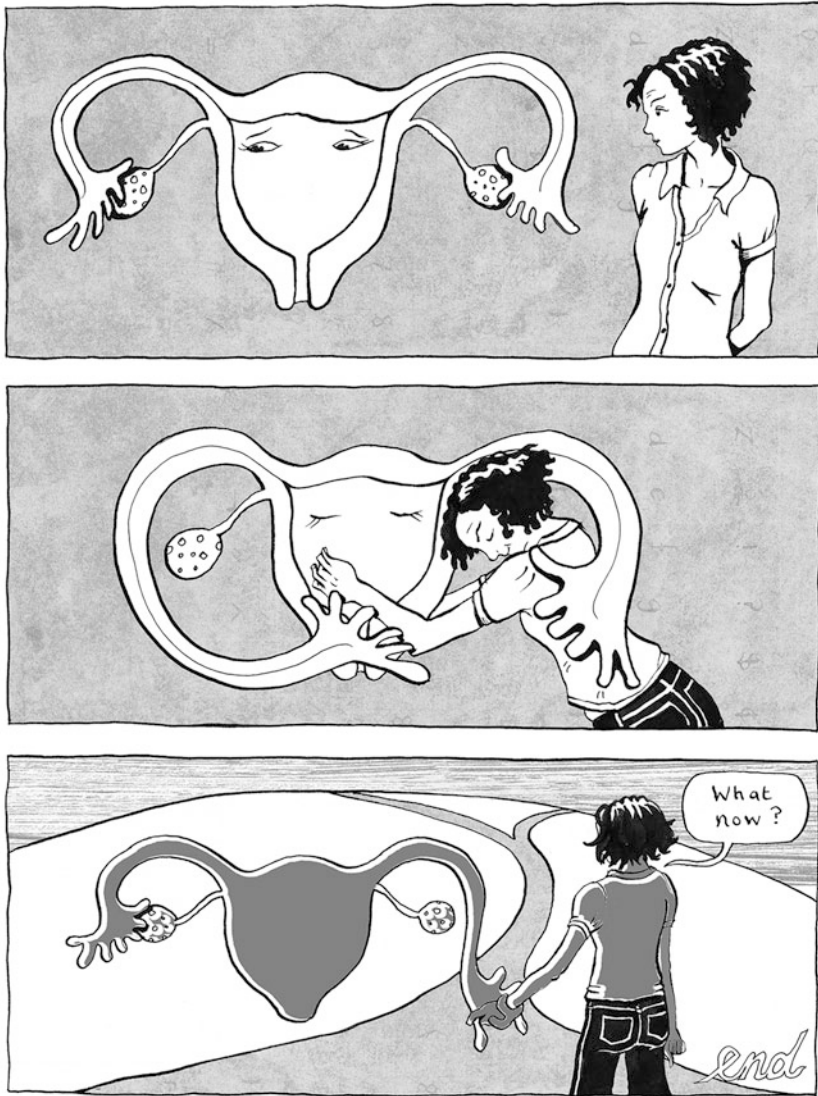


Fig. 2 *Spooky Womb: A True-ish Uterine Tale*, p. 12

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addresses to the audience. Infertility for Loomer's Miranda is a tragedy told through blackly humorous dialogues in which Miranda's mother's alcoholism, her father's death, her own uncertainty, and her husband's large xenophobic Catholic family are all played for laughs, and interspersed with the story of

Miranda and her husband's attempts to conceive and then to adopt a child. Miranda's hunger for a child, as in many stories, makes her self-involved to the point of hurting her marriage. This fact seems smoothly erased by a shared turkey and onion sandwich at the play's close and her mysterious sensation of 'just knowing' that the birth mother they have been matched with is the right one.³⁶ Don't get me wrong, I like happy endings as much as the next person, but this sudden, irrational certainty, after the failed ART and the parade of unsuitable, manipulative, or clueless birth mothers seems contrived. 'Just knowing' seems to fall perilously close to the territory Dr Northrup traverses with her indictment of the failed will of infertile women, and inability to recognize their heartfelt desire. Peggy Orenstein's memoir *Waiting for Daisy* tells the same kind of story more darkly, but with a similar end result. Orenstein's autobiographical account cannot be seen as contrived, of course, because it really happened, but the tone at the end is similar to Loomer's. Her anger at a friend for the phrase '[e]verything happens for a reason' gets subsumed in the 'reverent, radiant gratitude that's sweeter for having experienced its opposite'. She allows that she would 'give a lot not to have learned it' but is 'grateful for the lesson', a sentiment which replays Frank's phoenix metaphor for socially acceptable illness narratives.³⁷

The bittersweet comedy of Sinéad Moriarty's trilogy of novels *The Baby Trail* (2004), *A Perfect Match* (2005) and *From Here to Maternity* (2006) demonstrates a shift of tone and intention from both Loomer's and Orenstein's more literary explorations. These novels, which follow Emma Hamilton through the perils of infertility and adoption, read like a romance novel in which the man has been replaced by the baby as the sought-after acquisition. The indignities of infertility treatment and the intricacy of international adoption provide the humour that fuels these books, but Emma's boorish, outrageous behaviour doesn't endear so much as irritate. Emma ends up with children at the end of the third book, but her path there is so fraught with hyperbole and insensitive behaviour that the infertile reader, at least this one, has no fellow feeling for her. Only so much behaviour can be explained away by hormones. Sinéad Moriarty's website, however, indicates the popularity of these novels, with *The Baby Trail* translated into 25 languages to date.³⁸ This again speaks of the enduring appeal of the happy ending in infertility fiction.

On the other side of the fertility narrative, Phoebe Potts's graphic novel *Good Eggs* and Anne Taylor Fleming's memoir *Motherhood Deferred* present stories in which there is not a baby at the end of the rainbow. Potts's memoir traces the journey of Potts and her husband through infertility treatment, Jewish spirituality, and clinical depression, and ends with the couple mourning their losses, unready to consider the 'hope and heartbreak' of parenthood and adoption.³⁹ The afterword presents a liminal ending that directly addresses the power of storytelling in infertility. It suggests that life's path is not supposed to be linear, with Potts using the analogy of her Jewish ancestors looking for the promised land: in a panel showing a map, she writes 'looking at a map, you can see that the trip should have been a six day hike'. The following frame shows a

squiggly line and the caption ‘It took them forty years’, followed by ‘but God didn’t make them go it alone’.⁴⁰ The next page is a humorous series of frames depicting life for her ancestors. The remaining pages talk about the suffering and the celebration and the fact that they ‘accumulated material for stories/to make it through the long haul’.⁴¹ The stories and the comfort that her ancestors took from them and from each other do not erase the pain and dislocation she feels, but they offer an alternative way to cope. Fleming’s memoir ends in a similar way as she considers her lone frozen embryo and the future: she prays for the courage to ‘leave it be’ and let it stay in the ‘frigid tank [. . .] suspended between heaven and earth’.⁴² My daughters made the ending of my story different from Potts’s and Fleming’s, but ambivalent resolutions in their stories feel truer and more emotionally real to me than the others.

Near the beginning of this chapter I joke rather bitterly about the importance of ‘trying harder’. On a number of topics (producing ova, acting appropriately, visualizing my womb as a lush rainforest) I felt or was persuaded to feel as if I needed to try harder. The idea that there is a relationship between trying and conceiving is a common, dismaying one in infertility writing. In her zine *X-Utero: A Cluster of Comics*, Paula Knight creates two panels that speak to this topic (Fig. 3). In the first, she shows an embryo detaching from the endometrium with the word ‘failed’ stamped in red over the woman’s abdomen. In the panel below, a sinister blue finger points at a woman in a dunce cap with the words ‘must try harder’ taking up the same amount of space as the woman.⁴³ The subtitle of the zine, ‘A Cluster of Comics’, provides a wry meta-commentary on infertility as this visual and rhetorical representation of the woman’s pain is, like a cluster of cells, an embryo of sorts. Metaphorically, Knight conceives of an honest discourse that is unique and will grow. Phoebe Potts creates a similar page in which her heroine leaves the physician’s office vowing ‘we’ll try harder’ and thinking about ‘fertility foods! Yams! Pomegranates’.⁴⁴ In both cases the idea of will and causality puts the onus of the infertility on the woman and her efforts, not on random cell biology. Outside the world of fiction, the belief that fertility is simply a matter of putting in sufficient effort encourages infertile women to blame themselves, but also constitutes a refusal to accept. In *Healing the Infertile Family: Strengthening Your Relationship in the Search for Parenthood* (1997), Gay Becker devotes a whole chapter to the theme ‘trying’ and equates ‘trying harder’ with an attempt to gain control over ‘destiny’.⁴⁵

CONCLUSION

At the 2013 meeting of the American Society for Bioethics and Humanities, disability theorist Rosemarie Garland-Thomson argued that perhaps disability studies should take a page from deaf studies, where phrases such as ‘hearing loss’ are replaced with ‘deaf gain’, and emphasis on the opportunities associated with deaf culture.⁴⁶ If infertility is an illness, a disease, a



Fig. 3 'Failed'

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disability, is there then a way to talk about infertility gain? The simple answer resides of course in the phoenix myth or in the ancient Greek idea of anagnorisis, that you gain awareness and are reborn through suffering. The more nuanced answer lies in Frank's dyadic body and the idea that the

wounded have a responsibility to tell their stories to others in pain. Fleming describes wanting a baby you cannot have as ‘a feeling akin to heartbreak when you can’t breathe but for the sensation of loss’.⁴⁷ That feeling for me was almost outdistanced by my yearning to hear and tell stories that put the longing into words. I wanted permission to feel the anger and the ambivalence as well as the wonder and the hope. I needed stories for ‘the long haul’. And that is why I have written this one.

NOTES

1. Susan Sontag, *Illness as a Metaphor and AIDS and its Metaphors* (New York, 2001), p. 3.
2. Saul Spigel, ‘Infertility: Causes, Treatment, Insurance, and Disability Status’ (2005), Connecticut General Assembly Office of Legislative Research Report: <https://www.cga.ct.gov/2005/rpt/2005-R-0145.htm> Accessed 6 December 2016.
3. American Society for Reproductive Medicine, ‘Frequently Asked Questions about Infertility’: <https://www.asrm.org/awards/index.aspx?id=3012>. Accessed 6 December 2016.
4. Arthur Kleinman, *The Illness Narratives: Suffering, Healing, and the Human Condition* (New York, 1988), pp. 3–4.
5. Kleinman, *The Illness Narratives*, pp. 5–6.
6. Kleinman, *The Illness Narratives*, p. 28.
7. Lisa Loomer, *Expecting Isabel* (New York, 2005), p. 33; Kleinman, *The Illness Narratives*, p. 4.
8. Arthur W. Frank, *The Wounded Storyteller: Body, Illness, and Ethics* (Chicago, IL, and London, 1995), pp. xi–xiii.
9. Frank, *The Wounded Storyteller*, p. 2.
10. Frank, *The Wounded Storyteller*, p. 35.
11. Frank, *The Wounded Storyteller*, pp. xii–xiii.
12. Frank, *The Wounded Storyteller*, p. 3.
13. Frank, *The Wounded Storyteller*, p. 31.
14. Frank, *The Wounded Storyteller*, pp. 122–3, 135.
15. Paula Knight, *X-Utero: A Cluster of Comics* (2011–13), p. 3. For further details, see www.paulaknight.wordpress.com. Accessed 6 December 2016.
16. Frank, *The Wounded Storyteller*, p. 135.
17. Peggy Orenstein, *Waiting for Daisy: A Tale of Two Continents, Three Religions, Five Infertility Doctors, an Oscar, an Atomic Bomb, a Romantic Night, and One Woman’s Quest to Become a Mother* (New York, 2007), p. 223.
18. Christiane Northrup, ‘Psychological Factors Affecting Fertility’, Author Website: <http://www.drnorthrup.com/psychological-factors-affecting-fertility/>. Accessed 6 December 2016.
19. Northrup, ‘Psychological Factors Affecting Fertility’.
20. Orenstein, *Waiting for Daisy*, p. 225.
21. See Daniela Cutas’s chapter in this volume for further discussion of infertility as an experiential condition inseparable from the sufferer’s desire for full fertility.
22. Shorge Sato, ‘A Little Bit Disabled: Infertility and the Americans with Disabilities Act’, *Journal of Legislative and Public Policy*, 5:1 (2001), p. 189.

23. United States Department of Justice, 'Americans with Disabilities Act (ADA)', *Guide to Disability Rights Laws* (2009): <http://www.ada.gov/cguide.htm>. Accessed 6 December 2016.
24. Sato, 'A Little Bit Disabled', p. 205.
25. Frank, *The Wounded Storyteller*, p. 8.
26. Quoted in Jean W. Carter and Michael Carter, *Sweet Grapes: How to Stop Being Infertile and Start Living Again*, rev. edn (Indianapolis, IN, 1998), p. 16.
27. Lennard J. Davis, 'Constructing Normalcy', in Lennard J. Davis (ed.), *The Disability Studies Reader* (New York, 2010), p. 3.
28. Carter and Carter, *Sweet Grapes*, p. 15.
29. Orenstein, *Waiting for Daisy*, pp. 134–5.
30. Gay Becker, *Healing the Infertile Family: Strengthening Your Relationship in the Search for Parenthood* (Berkeley, CA, 1997), pp. 39–57.
31. United States Centers for Disease Control and Prevention, 'Births: Final Data for 2013', *National Vital Statistics Reports*, 64:1 (January 2015), p. 5: http://www.cdc.gov/nchs/data/nvsr/nvsr64/nvsr64_01.pdf. Accessed 6 December 2016.
32. Lerita M. Coleman Brown, 'Stigma: An Enigma Demystified', in Lennard J. Davis (ed.), *The Disability Studies Reader* (New York, 2010), p. 187.
33. Rosemarie Garland-Thomson, 'Disability Gain', Keynote Address, American Society for Bioethics and Humanities Conference, Atlanta, GA, 26 October 2013.
34. Anatole Broyard, *Intoxicated by My Illness: And Other Writings for Life and Death* (New York, 1992), p. 3.
35. Paula Knight, *Spooky Womb: A True-ish Uterine Tale* (2012), cover and p. 11. For further details, see www.paulaknight.wordpress.com. Accessed 6 December 2016.
36. Loomer, *Expecting Isabel*, p. 59.
37. Orenstein, *Waiting for Daisy*, pp. 225–6.
38. Sinéad Moriarty, 'About Me', Author Website: <http://www.sineadmoriarty.com/about-me/>. Accessed 6 December 2016.
39. Phoebe Potts, *Good Eggs: A Memoir* (New York, 2010), p. 239.
40. Potts, *Good Eggs*, p. 245.
41. Potts, *Good Eggs*, pp. 247–8.
42. Anne Taylor Fleming, *Motherhood Deferred: A Woman's Journey* (New York, 1994), p. 256.
43. Knight, *X-Utero*, p. 6.
44. Potts, *Good Eggs*, p. 94.
45. Becker, *Healing the Infertile Family*, p. 37.
46. Garland-Thomson, 'Disability Gain'.
47. Fleming, *Motherhood Deferred*, p. 13.

RESEARCH RESOURCES

Theoretical Works on Illness and Infertility

- Gay Becker, *Healing the Infertile Family: Strengthening Your Relationship in the Search for Parenthood* (Berkeley, CA: University of California Press, 1997).
- Jean W. Carter and Michael Carter, *Sweet Grapes: How to Stop Being Infertile and Start Living Again*, rev. edn (Indianapolis, IN: Perspectives Press, 1998)

- Anne Taylor Fleming, *Motherhood Deferred: A Woman's Journey* (New York: Ballantine, 1994).
- Arthur W. Frank, *The Wounded Storyteller: Body, Illness and Ethics* (Chicago, IL, and London: University of Chicago Press, 1995).
- Arthur L. Greil, Kathleen Slauson-Blevins, and Julia McQuillan, 'The Experience of Infertility: A Review of Recent Literature', *Sociology of Health and Illness*, 32.1 (2010), 140–62.
- Arthur Kleinman, *The Illness Narratives: Suffering, Healing, and the Human Condition* (New York: Basic Books, 1988).

Infertility, Illness and Literature

- Anatole Broyard, *Intoxicated by My Illness: And Other Writings of Life and Death* (New York: Ballantine, 1992).
- Pamela Butler and Jigna Desai, 'Manolos, Marriage, and Mantras: Chick-Lit Criticism and Transnational Feminism', *Meridians: Feminism, Race, Transnationalism*, 12.2 (2014), 1–31.
- Suzanne Ferriss and Mallory Young (eds), *Chick Lit: The New Woman's Fiction* (New York: Routledge, 2006).
- Paula Knight, *Spooky Womb: A True-ish Uterine Tale* (2012). See www.paulaknight.wordpress.com.
- Paula Knight, *X-Utero: A Cluster of Comics* (2011–13). See www.paulaknight.wordpress.com.
- Lisa Loomer, *Expecting Isabel* (New York: Dramatists Play Service, 2005).
- Peggy Orenstein, *Waiting for Daisy: A Tale of Two Continents, Three Religions, Five Infertility Doctors, An Oscar, an Atomic Bomb, a Romantic Night, and One Woman's Quest to Become a Mother* (New York: Bloomsbury, 2007).
- Phoebe Potts, *Good Eggs: A Memoir* (New York: Harper Collins, 2010).
- Susan Sontag, *Illness as a Metaphor and AIDS and its Metaphors* (New York: Picador, 2001).

Infertility and Disability

- American Society for Reproductive Medicine, 'Frequently Asked Questions about Infertility': <https://www.asrm.org/awards/index.aspx?id=3012>.
- Lerita M. Coleman Brown, 'Stigma: An Enigma Demystified', in Lennard J. Davis (ed.), *The Disability Studies Reader* (New York: Routledge, 2010), 179–92.
- Lennard J. Davis, 'Constructing Normalcy', in Lennard J. Davis (ed.), *The Disability Studies Reader* (New York: Routledge, 2010), 3–19.
- Rosemarie Garland-Thomson, 'Integrating Disability: Transforming Feminist Theory', in Kim Q. Hall (ed.), *Feminist Disability Studies* (Bloomington, IN: Indiana University Press, 2011), 13–47.
- Shorge Sato, 'A Little Bit Disabled: Infertility and the Americans with Disabilities Act', *Journal of Legislative and Public Policy*, 5:1 (2001), 189–223.

- Saul Spigel, 'Infertility: Causes, Treatment, Insurance, and Disability Status' (2005), Connecticut General Assembly Office of Legislative Research Report: <https://www.cga.ct.gov/2005/rpt/2005-R-0145.htm>.
- United States Centers for Disease Control and Prevention, *National Vital Statistics Reports*: <http://www.cdc.gov/nchs/products/nvsr.htm>.
- United States Department of Justice, 'Americans with Disabilities Act (ADA)', *Guide to Disability Rights Laws* (2009):<http://www.ada.gov/cguide.htm>.

Whose Fault is it Anyway? Plant Infertility in Antiquity

Laurence M.V. Totelin

INTRODUCTION

‘The cause of a man and a woman not generating when they have sexual intercourse with each other resides sometimes in both, sometimes in one or the other’: with these words, Pseudo-Aristotle opens a short treatise *On Sterility*.¹ The message is clear: both men and women can be infertile. The rest of the treatise, however, focuses strongly on the reasons why women are infertile: uterine malfunction, unhealthy menses, and other female fluxes. In fact, the author expounds his views on male infertility in one short sentence: ‘To know the causes of man’s [not generating], one must consider various signs; but the easiest would be to observe whether he generates when he has sex with other women’.² This test would certainly clarify whether infertility resides in the man or not, but it would do nothing to reveal the possible causes (*aitiai*) of male infertility.

Pseudo-Aristotle was not alone in seeing infertility as mostly a female problem. In this chapter, I start by reviewing some of the ancient literature that discusses the causes of human infertility. I focus on the treatises of the Hippocratic Corpus, the medical texts written – for the most part – in the fifth and fourth centuries BCE and attributed to Hippocrates, the famous physician from Cos. In particular, I discuss the text *Infertile Women*.³ We will see that the fertility – and infertility – of women was often compared to that of animals and that of the earth: a woman in the Greek and Roman world was a field which a farmer (the father) ploughed (had sexual intercourse with) and sowed with seed (children). Scholars have noted and studied such agricultural metaphors.⁴ Here I take the analysis further by examining how the question of plant

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infertility in antiquity can offer new insights into ancient perceptions of human infertility. In the second, and most important section of this chapter, I therefore study the ways in which Greek and Roman authors explained plant sterility. My most important source is Theophrastus' botanical works, *Enquiry into Plants* and *Causes of Plant Phaenomena* (fourth century BCE), but I will also refer to later texts in Latin.⁵ I will conclude by stressing the importance of intervention in both human and plant infertility: tending was the way to cure infertility when the situation was not intractable. That tending was usually done by a male human, but it required active involvement from the female, be it a woman or the earth.

HUMAN INFERTILITY IN THE ANCIENT WORLD

There was much debate in the Greek and Roman world over the question of human generation.⁶ What roles did women and men play in creating a new life? Male semen and female menses were easily observable, and scholars agreed that both were essential to the development of a child. Semen was a seed, as its Greek name (*sperma*) indicates; and menstrual blood, which was not usually evacuated during pregnancy, offered the material and nourishment necessary for an embryo's growth. However, it was much more difficult to ascertain whether women produced seed in generation. Some ancient thinkers argued that indeed they did. Among these were the authors of the Hippocratic treatises *Generation* and *Regimen*.⁷ Aristotle's view was more complicated. To him, both men and women produced a seed, but the female seed (menstrual blood) was not as 'perfect', as concocted, as male semen, and could not transmit the soul to an embryo. Therefore, in generation, the function of the male seed was to contribute 'form'; while that of the female seed was to contribute 'matter', the stuff needed for the development of the embryo/foetus. Some feminist scholars see Aristotelian generation theory as highly sexist: women *only* contribute inactive matter.⁸ Historians of philosophy however – some of whom are feminists themselves – show that the situation is much more complex, and that there is no such thing as 'passive matter' in Aristotelian thought.⁹ Galen, for his part, considered that both men and women produced seed, both essential in generation, although the female seed's role was 'ancillary' to that of the male.¹⁰

The ancients acknowledged that a man may suffer from impotence or experience difficulty in expelling seed, thus making him infertile. However, as noted by Rebecca Flemming, all treatments for infertility in the ancient world were directed at women's bodies.¹¹ It was the female body that was most often judged to be *aphoros*, unable to bear a child: her uterus did not offer the right conditions for an embryo to develop; her menstrual blood was either too sparse or too abundant.¹² The author of the Hippocratic treatise *Infertile Women* (the same author as that of *Generation*) lists the causes of female infertility in his first chapter. These causes include: a mouth of the uterus that has turned away from the vagina; a mouth of the uterus that is closed; a uterus that is slippery and smooth; ulcers in the uterus; retention of menstrual blood; a uterus that is

‘gaping’; unhealthy menses; heavy menstrual loss; and prolapse of the uterus. The catalogue is framed by the two following sentences:

Νυνὶ δὲ ἀποφανέω, δι’ ἧς αἰτίας ἄφοροι γυναῖκες τὸ πάμπαν, καὶ διότι οὐ τίκτουσι πρὶν ἰηθέωσιν . . .

Τοσαῦτα καὶ τοιαῦτα τῆσι γυναξίν ἐστι, δι’ ἃ οὐ τίκτουσι πρὶν ἂν ἰηθέωσι, καὶ δι’ ὅσα ἄφοροι γίνονται τὸ πάμπαν· ὥστε θαυμάζειν τὰς γυναῖκας οὐ γρη’ ὅτι εἰσὶν αἶ οὐ τίκτουσι πολλάκις.

Now I will show thoroughly the causes that lead women to be infertile (*aphoroi*), and why they do not give birth until they are healed [. . .]. Such are the causes why women do not become pregnant until they are healed, and why they become completely barren. Therefore there is no reason to wonder that women often are unable to be pregnant.¹³

The closing sentence is crucial, as it shows that infertility can – sometimes – be cured: it has natural causes, which can be addressed; it is not always an intractable situation.¹⁴ The treatise goes on to describe tests to determine whether or not a woman will be able to bear a child, as well as treatments against infertility. These treatments often involve ingredients that are sexually connoted. They also enjoin the woman to seek sexual encounter with her husband, as in the following example:

Ὅτε δὲ μέλλει ἤδη προσιέναι καλῶς καθάρσιος ἔχουσα, ὑοσκυάμιου φύλλα καὶ ρίζας ἀναξέσας ἐν ὕδατι, πυρήσθω τούτοις ὡς θερμοτάτοις ἐπὶ τρεῖς ἡμέρας ἐς νύκτας, καὶ λουσαμένη παρὰ τὸν ἄνδρα ἴτω. Μετὰ δὲ ταύτην τὴν πυρήσιν καὶ ἐλάφου αἰδοίου ὑποθμῆσαι, καὶ ὅταν ἴδῃς ἔχειν αἶον, τούτου ἐπ’ οἶνον λευκὸν κεκρημένον ἐπιξύων, ἐπὶ τρεῖς ἡμέρας διδόναί πίνειν, καὶ ὅταν ὠδίνῃ, διδόναί πίνειν, καὶ γὰρ ὠκυτόκιόν ἐστι τοῦτο.

When the woman has purified herself well and is about to go to her husband, boil leaves and roots of henbane in water, and let her foment herself with these as hot as possible for three days towards the evening, and after a bath, let her go to her husband. After this fomentation, also fumigate with the penis of a deer, and when you see that it is dry, scrape it over diluted white wine, and give to drink for three days.¹⁵

In this treatment, a fomentation and a fumigation prepare the woman for a fruitful sexual encounter with her husband, one which she has to initiate, as she will know when the right moment has come. The principle behind the use of scraped deer penis is quite clear: opposites are cures for opposites, an animal sexual organ will increase a woman’s fertility. The choice of a deer’s penis is not haphazard: the sexual potency of stags was renowned in antiquity.¹⁶

Other ‘sexual’ treatments recommended in *Infertile Women* involve plants that are full of seeds (gourds for instance) or animal dung, a product used in agriculture for the fertilization of fields.¹⁷ In *Infertile Women*, the Hippocratic author does not use agricultural metaphors, but in his other treatise *Generation/Nature of the Child/Diseases IV*, he indulges in complex botanical

analogies, clearly indicating that, to him, agricultural processes were good to think with when theorizing about generation.¹⁸ Processes involved in plant generation were more visible than those in human generation, or at least they were in plant generation involving seed (see below for other types of plant generation), and could therefore serve as a starting point for a reflection on human conception.

The Hippocratic author was not alone in drawing analogies between human and plant fertility. Metaphors grounded in that analogy are very common in Greek and Roman cultures. For instance, a bride's father in classical Athens made the following pledge: 'I pledge this woman to you for the purpose of the cultivation of legitimate children', clearly indicating that the role of marriage was to 'cultivate' children, as one would grain.¹⁹ Feminist classicist Susan G. Cole notes à propos this formula that:

[It] identified the male as the active partner in sexual intercourse and the woman as the passive field waiting to receive its seed – ideas natural in a language where verbs of sexual connection were used in the active voice only of the male. The agricultural metaphor reflects the asymmetrical relationship between husband and wife and makes it clear that a wife produced children for her husband's family. It was natural to define the male progenitor as sower in a language where *sperma* could refer to the seed of both plants and animals, and *gone*, "offspring," was used for children as well as for the fruit of the earth.²⁰

While there is no doubt that there was asymmetry in ancient societies, that these societies were patriarchal, and that the comparison of a woman with the earth in some ways objectifies her, I would question the notion of a 'passive field receiving its seed'.²¹ In fact, there was no such thing as a passive field in the ancient world. For ancient mythographers, the earth was a goddess, Ge or Gaia, who in her boundless fertility gave birth to numerous deities, and more importantly to Ouranos (Heaven), who was 'able to cover her on every side'.²² Philosophers, for their part, thought of the earth in naturalistic terms rather than in religious ones, but they still saw her as being very much active in plant generation, and in generation failures. I now turn more fully to discussions of plant infertility in the ancient world. The most common adjective to refer to infertile in the ancient world was *akarpōs*, unable to bear fruit, fruitless; but *aphoros*, which we have already encountered in relation to human generation, also occurs.²³

PLANT INFERTILITY AND THE ENVIRONMENT IN ANTIQUITY

In the fourth century BCE, the philosopher Theophrastus wrote two significant works on plants – *Enquiry into Plants* (abbreviated as *HP*) and *Causes of Plant Phaenomena* (abbreviated as *CP*) – which would serve as a basis for the study of plants until the Renaissance. At the beginning of *HP*, Theophrastus discusses possible ways of classifying plants. He settles on a classification into

four categories: trees, shrubs, undershrubs, and herbs.²⁴ That classification, however, could not be taken as absolute and definitive: every plant classification was merely a guide to thinking. In this context, the philosopher mentioned other possible classification of plants, including that into ‘fertile’ and ‘infertile’ ones:

Διὰ δὴ ταῦτα ὥσπερ λέγομεν οὐκ ἀκριβολογητέον τῷ ὄρω ἀλλὰ τῷ τύπῳ ληπτέον τοὺς ἀφορισμούς· ἐπεὶ καὶ τὰς διαιρέσεις ὁμοίως, οἷον ἡμέρων ἀγρίων, καρποφόρων ἀκάρπων, ἀνθοφόρων ἀνανθῶν, ἀειφύλλων φυλλοβόλων. Τὰ μὲν γὰρ ἄγρια καὶ ἡμερα παρὰ τὴν ἀγωγὴν εἶναι δοκεῖ· πᾶν γὰρ καὶ ἄγριον καὶ ἡμερόν φησιν Ἴππων γίνεσθαι τυγχάνον ἢ μὴ τυγχάνον θεραπείας. Ἄκαρπα δὲ καὶ κάρπια καὶ ἀνθοφόρα καὶ ἀνανθή παρὰ τοὺς τόπους καὶ τὸν ἀέρα τὸν περιέχοντα· τὸν αὐτὸν δὲ τρόπον καὶ φυλλοβόλα καὶ ἀείφυλλα.

For these reasons, as we say, one must not give too precise a definition; instead one must determine boundaries [between categories] in a general manner. For we must establish our distinctions in the same way as those between cultivated and wild, fertile and infertile, flowering and flowerless, evergreen and deciduous. For the difference between wild and cultivated seems to depend on cultivation, since, as Hippon notes, any plant may be either wild or domesticated, depending whether it receives care or not. And the distinctions between fruitless and fruitful and flowering and flowerless seems to depend on the location and the surrounding climate. And the same goes for the difference between deciduous and evergreen.²⁵

Here as elsewhere, Theophrastus stresses the importance of the environment and climate on the fertility of plants. Being fertile (literally: fruit-bearing, *karpophoros*) or infertile (literally: fruitless, *akarpōs*) is not an ontological quality of the plant, but rather one that is dependent on ecological circumstances. Let us look at these ecological factors in more detail.

The Greeks and the Romans were wine drinkers: diluted wine was a safer beverage than water. They knew that the grapes produced in one locality could differ greatly from those of the next; and that not all types of vine could thrive in all localities.²⁶ If planted in the ‘wrong’ soil, a vine could become barren, as Theophrastus expresses in the following passage:

Ἐν πλείστη δὲ ὡς εἰπεῖν διαφορᾷ τὰ τῶν ἀμπέλων ἐστίν· ὅσα γὰρ ἐστι γῆς εἶδη, τοσαυτὰ τινὲς φασὶ καὶ ἀμπέλων εἶναι. φυτευόμενα μὲν οὖν κατὰ φύσιν ἀγαθὰ γίνεσθαι παρὰ φύσιν δὲ ἄκαρπα. Ταῦτα μὲν οὖν ὥσπερ κοινὰ πάντων.

The greatest difference [between kinds of plants], one may say, is that between the kinds of vines. For, as some say, there are as many types of vines as there are types of soil. If they are planted according to their nature, they grow well; but if they are planted against their nature, they become infertile. These comments apply in some ways to all kinds of plants.²⁷

When the nature (*phusis*) of a tree and that of the soil are in accord, fertility results. That phenomenon could be observed for many plants both within the

Greek world (or regions of the Greek world) and at a global level. For instance, Theophrastus observes that in Elea (north-west of Greece), centaury grows fertile on hills; flowers in plains but does not bear fruits; and is completely infertile in deep valleys.²⁸ On a larger geographical scale, the philosopher notes that plants transplanted over a long distance often become infertile. For instance, he writes that:

Ὠσαύτως δὲ καὶ ὅπου τὰ κάρπιμα ἄκαρπα γίνεται, καθάπερ τὸ πέρσιον τὸ ἐξ Αἰγύπτου καὶ ὁ φοῖνιξ ἐν τῇ Ἑλλάδι καὶ εἰ δὴ τις κομίσειε τὴν ἐν Κρήτῃ λεγομένην αἰγειρον. ἔνιοι δὲ φασὶ καὶ τὴν ὄην εἶναι εἰς ἄλεινον ἐλθῆ σφοδρὰ τόπον ἄκαρπον γίνεσθαι. . . . εἴπερ μὴδ' ὅλως ἔνια φύεσθαι θέλει μεταβάλλοντα τοὺς τόπους.

The same occurs when fruit-bearing plants become infertile, for instance the perseae when taken out of Egypt, the date palm when planted in Greece, or if anyone should transplant the tree that is called 'poplar' in Crete. And some also say that the sorb becomes infertile if it reaches a very hot place. For it is cold by nature . . . Indeed some plants absolutely refuse to grow when moved.²⁹

Well before the time of Theophrastus, the Greeks had attempted to transplant plants that they had encountered in their travels and conquests. With the conquests of Alexander the Great (who died in 323 BCE), these attempts multiplied. Indeed, the king conquered a territory that stretched from Macedonia to the valley of the Indus, and included Egypt. In his expeditions, he was accompanied by scholars who observed the flora and fauna of the regions they crossed.³⁰ In possession of this knowledge, old and new, Theophrastus was well aware that fruitful trees in their country of origin could become barren when transplanted, and often repeated the examples of the perseae (*Mimusops laurifolia* Friis, according to Amigues) and the date palm.³¹ To Theophrastus, plants refused to grow (*mēde thelei* in the passage above) when they found a new location unsuitable; 'location was more important than cultivation and care'.³²

Several centuries after Theophrastus, Pliny the Elder also examined the issue of infertility in transplanted trees, repeating some of his predecessor's examples and anthropomorphizing them in the process:

Fastidit balsamum alibi nasci, nata Assyria malus alibi ferre, nec non et palma ubique nasci aut nata parere vel, cum promisit etiam ostenditque, educare, tamquam invita pepererit [. . .]. Illud maxime mirum, ipsas plerumque arbores exorari, ut vivant atque tramigrent, aliquid et a solo impetrari, ut alienas alat advenasque nutriat, caelum nullo modo flecti.

The balm tree despises the very idea of growing elsewhere; and a fruit tree born in Assyria will not bear elsewhere; and similarly the palm tree will not grow everywhere, or even if it does grow, it will not bear, and when it has made a promise and a show of bearing fruit, it does as if it had given birth against its will [. . .]. What is most surprising is that, although the trees can sometimes be persuaded to live and to migrate, and on occasions will be granted

by the soil the request to feed foreigners and nourish immigrants, the climate is never bent.³³

Pliny's transplanted trees are similar to recalcitrant slaves, who refuse to thrive when taken from their land of origin – the vocabulary in this passage is that usually applied to human slaves.³⁴ By contrast to these obstinate plants, the earth is willing to nourish foreigners.

In the ancient world, then, the environment (the climate and the soil) had a role to play in plant fertility. That role, however, was not straightforward: plants, it seems, could actively refuse to bear fruit when planted in the wrong soil. In order to understand better the role of the earth in plant fertility, we must now dwell further on ancient notions of plant infertility (*akarpiā*), plant generation, and in particular the roles of male and female principles in that process.

PLANT GENERATION AND FERTILITY IN ANTIQUITY

So far, I have translated the adjective '*akarpōs*' as 'infertile' – literally the word means 'fruit-less' or 'seed-less'. In our modern understanding of plant reproduction, 'infertile' and 'fruitless' are more or less synonymous: without seed, the fruit of a tree, plant reproduction is not possible. The seed is the product of vegetable sexual union, which is dependent on both female and male reproductive organs: pistils and stamens. These organs can in some cases be found on the same plant individual, in which case the reproduction is said to be monoecious; in other cases – often in trees – the sexual organs are found on different plant individuals, in which case the reproduction is said to be dioecious. In order for fertilization to occur, pollen must be carried from the male organs to the female ones. Pollinators, animals such as bees, other insects and some birds, play an important role in enabling such fertilization.

The ancients knew that the fruit/seed of plants would often develop into a new generation, but in some cases they were not able to observe plant seed (because it is not visible to the naked eye). Neither did they understand the process of pollination (although they had observed it in some cases – see below): they could not witness vegetable sexual union. In addition, they had also observed that many plants could be propagated through slips, which requires no union between plants; and through grafting, which does require a form of union between plants. Finally, they argued that some plants could grow spontaneously. Their conception of plant generation (a word that is more accurate than our 'reproduction') was therefore much broader than the modern understanding of sexual reproduction.³⁵ Plant generation then was in many ways much more complex than human generation. Put simply, it was conceivable in antiquity that a fruitless plant could generate, but that generation would not occur through seed. Thus, Theophrastus noted that 'they say that plants that appear fruitless (*akarpā*) can generate, as in the cases of the elm and

willow'.³⁶ The philosopher did not agree with his unnamed sources ('they'): he argued that the elm and the willow produced tiny seeds; but he did not deny that generation could occur in other ways than through seed.³⁷

Now, it was customary in the ancient world to refer to some plants as 'male' and to others as 'female': male and female oak, alder, cypress, and so on.³⁸ Theophrastus observed that, in general, the 'male' plants were infertile, while the 'female' ones were fertile:

Πάντων δέ, ὡσπερ ἐλέχθη, τῶν δένδρων ὡς καθ' ἕκαστον γένος λαβεῖν διαφοραὶ πλείους εἰσίν. ἢ μὲν κοινῇ πᾶσιν, ἢ διαροῦσι τὸ θῆλυ καὶ τὸ ἄρρεν, ὧν τὸ μὲν καρποφόρον τὸ δὲ ἄκαρπον ἐπὶ τινῶν. ἐν οἷς δὲ ἄμφω καρποφόρα τὸ θῆλυ καλλικαρπότερον καὶ πολυκαρπότερον. πλὴν ὅσοι ταῦτα καλοῦσιν ἄρρενα, καλοῦσι γὰρ τινες.

When taking, as has been said, all trees each according to its kind, there are many differences. But common to all of them is that by which they distinguish the male and the female, the latter being fruit bearing, and the former barren in some kinds. In those kinds in which both are fruit bearing, the female has better and more abundant fruits; however some call these the male trees; for some thus call them.³⁹

Like all ancient botanical classifications, that into male-fruitless and female-fruitful was not absolute. In some cases, both male and female trees bore fruit, but the female bore more or better fruits than the male one. In other cases, the male tree was more fruitful than the female one, as in the cases of the cypress and cornelian cherry.⁴⁰ Apparently, the Egyptians called 'male' trees that bore fruits, and 'female' those that did not, thus reversing the Greek dichotomy.⁴¹

How can one explain this confusing state of affairs? Theophrastus (and his followers) did not create the distinction between male and female plants: he inherited this classification from his sources, and more particularly from the woodmen (*hulotomoi*).⁴² These were men who lived from cutting and chopping wood. The trees whose wood was easier to work, softer, and paler, they called 'female'; the trees whose wood was harder, knottier, and darker, on the other hand, they called 'male'.⁴³ In ancient thought, female animals (and in particular women) were seen as softer than hard men: their softness made them particularly suited to leisurely work within the household.⁴⁴ The woodmen, when referring to trees as male and female, were therefore following ancient stereotypes that associated the female with softness and the male with hardness. Now, this difference in wood between male and female plants also often corresponded to one in fertility, but to the woodmen this was not particularly important.

The traditional distinction between 'male' and 'female' plants, then, had more to do with appearance (feminine or masculine) than with generation. In fact, ancient male and female plants did not engage in sexual intercourse, with one prominent exception: that of the date palm. Greek and Roman authors were fascinated by the ways in which farmers in the Middle East enabled the

fructification of the date palm by shaking the spathes of the ‘male’ trees over those of the ‘female’ ones.⁴⁵ They described the process in terms of a sexual union. Later authors anthropomorphized their description, depicting the female trees deprived of male company as stricken with love-sickness. Modern readers will recognize in these accounts a description of dioecious plant reproduction, where the pollen is carried from a male tree to a female one. Empirically, the ancients had discovered this process in the case of the date palm, but they never developed a theory of pollination as a result of their observations. The sexual intercourse between male and female palm trees was a unique and exceptional case: other male and female plants of the same species did not engage in such unions.⁴⁶

How exactly did plants generate if they did not engage in sexual intercourse? That question might not have bothered woodmen and other people living from plant cultivation, but it certainly did concern natural philosophers. They came to the conclusion that plant generation did not depend on ‘male’ and ‘female’ individuals, but rather on ‘male’ and ‘female’ principles. Thus, Aristotle argued that these principles were mingled together in the same individual:

Ἐν μὲν οὖν τοῖς ζώοις πᾶσι τοῖς πορευτικοῖς κεχώρισται τὸ θῆλυ τοῦ ἄρρενος, καὶ ἔστιν ἕτερον ζῶον θῆλυ καὶ ἕτερον ἄρρεν [...] Ἐν δὲ τοῖς φυτοῖς μεμιγμέναι αὐται αἱ δυνάμεις εἰσὶ, καὶ οὐ κεχώρισται τὸ θῆλυ τοῦ ἄρρενος. διὸ καὶ γεννᾷ αὐτὰ ἐξ αὐτῶν καὶ προῖεται οὐ γονὴν ἀλλὰ κῆμα τὰ καλούμενα σπέρματα.

In all animals that move about, male and female are separate: one animal is female and the other is male, even though they are of the same species [...]. But in plants, these faculties are mixed together; the female is not separate from the male. For that reason, plants generate out of themselves, and produce a foetation rather than semen – what they call seeds.⁴⁷

This theory, however, could not explain why the environment had such an impact on the growth of plants and their faculty to bear fruit. Theophrastus therefore suggested that the earth was the female principle in plant generation.⁴⁸ It could be ‘in heat’ as animals were:

Αεὶ γὰρ δεῖ φυτεύειν καὶ σπείρειν εἰς ὀργῶσαν τὴν γῆν· οὕτω γὰρ καὶ ἡ βλάστησις καλλίστη καθάπερ τοῖς ζώοις ὅταν εἰς βουλομένην πέσῃ τὸ σπέρμα τὴν ὑστέραν. Ὀργᾶ δ’ ὅταν ἔνικμος ἦ καὶ θερμὴ καὶ τὰ τοῦ ἀέρος ἔχη σύμμετρα.

One must always plant and sow into the earth when it is ready to bear. For then the bud will be at its best, just as in animals when the seed enters a desiring womb. The earth is ready to bear when it is humid and warm and when the weather is temperate.⁴⁹

The verb *orgaō* can be translated as ‘ready to bear’ in this context, but it had sexual undertones; it could evoke wantonness and physical passion. This notion of the wanton earth is found in numerous ancient texts. For instance, Pliny the

Elder writes that ‘a violent desire for sexual intercourse is not unique to animals; indeed sexual desire is much greater in the earth and all vegetables [than in animals]’;⁵⁰ and Columella sings poetically of the reciprocal passion the lettuce and the earth feel for each other.⁵¹ That passion is incestuous, as the earth is at the same time the mother of plants and their sexual partner. Whatever the exact nature of that relationship between the earth and plants in generation, it requires both partners’ willingness – the earth is not a passive partner in plant generation.

To sum up, ancient notions of plant generation are completely different from modern ones. Some plants – sometimes referred to as ‘male’ – bore less seed than others, but that did not mean that they could not generate in other ways, for instance through slips. In any case of plant generation, however, the earth was required to play an active role. With this better understanding of plant generation, and the respective role of plants and earth in the process, we can discuss the impact of wilderness and cultivation on plant (in)fertility.

WILDERNESS AND CULTIVATION

The ancients observed that the cultivation status of a plant had an impact on its fertility. They argued that a plant that grew wild was less able to bear fruit than its domesticated counterpart. Or to be more precise, a wild plant was able to bear fruit, but it could not bring that fruit to full concoction (maturation): its fruit would be inedible to humans. To the modern perception, these wild fruit trees are not at all infertile; but to the ancients, failure to produce useful fruit for humans equalled barrenness.

Theophrastus explained that there are two causes of ‘infertility’ in wild trees. First, wild trees produce too many fruits, which means that they are unable to concoct them all properly. Second, these trees are denser and drier: they use the nourishment from the earth on building up their body rather than on producing perfect fruit.⁵² The philosopher concluded that:

Ἀπλῶς δ’ οὐ τὰ ισχυρότερα καὶ τροφιμώτερα καθάπερ οὐδ’ ἐπὶ τῶν ζώων, ἀλλ’ ἑτέρα τις καθ’ ἑαυτὴν πρὸς καρπογονίαν ἰσχὺς καὶ δύναμις. μανὸν γὰρ καὶ εὐδίωτον καὶ ὑγρὸν εἶναι δεῖ τὸ καρποτοκῆσον, ἢ δὲ πυκνότης ἐναντίον ὥσπερ καὶ ἐπὶ τῶν γυναικῶν καὶ ἐπὶ τῶν ἄλλων ζώων. Ὅ καὶ ἡ γεωργία βούλεται ποιεῖν ἀφαιροῦσά τε τὰ περιττὰ καὶ τροφὴν παρέχουσα καὶ εὖεῖλα καὶ εὐπνοα ποιοῦσα.

Simply put, the stronger [plants] are not the best at rearing the young, neither is this the case among animals; but the strength and power used in fruit production is distinct and separate [from strength narrowly defined]. For the tree that bears fruit must be loose in texture, porous and wet, as is the case among women and other animals. And cultivation aims at this, namely removing superfluous [parts], offering nourishment, and providing sunny and well-ventilated growing conditions.⁵³

Theophrastus showed particular interest in two types of ‘infertile’ wild plants: the wild fig and the wild vine. The latter was called the ‘mad’ vine or

the ‘vine that has gone goaty’.⁵⁴ These two names give us an interesting insight into the perceived causes of infertility in the ancient world. The ‘mad’ vine suffers from a mental illness that prevents it from bearing fruit, even though it can produce flowers and clusters of unripe grapes. The ‘vine that has gone goaty’, on the other hand, is believed to have suffered from the influence of a goat, an animal whose spittle alone could damage plants.⁵⁵

The name of the wild fig also evoked goats in Latin (*caprificus*: the goat’s fig), but not in Greek (*erinos*). The wild fig could not concoct its own fruits to maturity, but it played an important role in helping the domesticated fig to mature its fruits, in a process now called caprification. Indeed, cultivators hung branches of the wild fig carrying immature fruits on domesticated fig trees. The fruits of the wild fig contained insects that entered into the fruits of the domesticated fig and ‘ventilated’ them, thus allowing them to mature fully.⁵⁶ This ventilation helped rid the fruits of excess *pneuma* (wind or fluid).⁵⁷ It was this superfluous *pneuma* that made the domesticated fig tree temporarily infertile, that is, unable to carry fruits to maturity. The wild fig, for its part, remained ‘infertile’ in the ancient understanding of the term; that is, it did not bear edible fruits.

Cultivated trees, then, were more fertile than wild ones. Cultivation, however, was not without risks to the fertility of plants. It too could lead to barrenness, especially – and once again – if the wrong soil was chosen. Plants grown in rich soil could grow excessive leafage and fail to produce fruit. Thus, according to Theophrastus, almond trees planted in too rich a soil ‘grow over-luxuriant (*exhubrisasai*) on account of the rich feeding, and fail to bear fruit’.⁵⁸ Theophrastus explained that plants with a tendency to luxuriance produced too much fluid, which they could concoct into fruit. The solution was to prune such plants:

Τὰς δ’ ἐν τοῖς ἐφύδροις ἢ ὅσα τῶν γενῶν ὑβριστικά τοῦ ἥρος ὅπως διεσκεδασμένον τοῦ ὕγρου καὶ τιμηθείσης ἐν ὥρᾳ τοῦτ’ ἀπορρυῆ. Διὰ γὰρ τὸ πλῆθος οὐ πεττούσας τοῦθ’ ὑβρίζειν ἄλλως καὶ ἐκκληματοῦσθαι.

[They recommend pruning vines] in wet regions, or the types that tend to luxuriance (*hubristika*) in spring, so that the fluid may be dispersed and flow away at the time of the pruning. For it is on account of this abundance of fluid that the vines are unable to concoct it and grow over-luxuriant (*hubrizein*) in various ways, in particular running to branch.⁵⁹

The Greek words used in the previous passages to refer to plant luxuriance all have the same root (*hubr-*), which alludes to acts of *hubris*, acts that violate the order of society or nature. Ann Micheline, who has studied the notion of *hubris* in ancient texts about plants, noted that there is a connection between ‘hybristic plants’ and excessive nourishment: ‘instead of bearing, they react to abundant nurture by wasting themselves on leaf production’.⁶⁰ Pruning offered a simple solution to the issue of *hubris* in plants. Interestingly, as noted by Micheline, the Greek verb *kolouō*, to prune, is etymologically linked

to the verb *kolazō*, to punish.⁶¹ Like a judge who punished crimes of *hubris*, the farmer punished his trees for over-luxuriance. In addition to pruning, ancient farmers used manure to promote fertility in plants; they also created more complex recipes, some of which are preserved in Cato's *On Agriculture* (third century BCE).⁶²

Farming, then, was a process that had much in common with education, either of children or of slaves – the two categories are often conflated in ancient thought. The vocabulary of education indeed sometimes appears in discussions of ancient plants and farming.⁶³ In this education process, the master made sure plants did not consume too much food, and he punished disobedient behaviour. That master also had to understand the complex relationship between plants and the earth, and determine which location would best suit a particular plant. In this conception, the farmer's work involved much responsibility – ultimately, he was responsible for the failure of his trees/children.

Some ancient authors, however, argued that the farmer's task was limited by the diminishing fertility of the earth. The Epicurean poet Lucretius (first century BCE), in his *On the Nature of Things*, describes the various ages of the earth, each inferior to the preceding one. In the current age, the earth is exhausted like a woman who has borne too many children:

*Iamque adeo fracta est aetas effetaque tellus
vix animalia parva creat, quae cuncta creavit
saecula deditque ferarum ingentia corpora partu. [...]
praeterea nitidas fruges vinetaque laeta
sponte sua primum mortalibus ipsa creavit,
ipsa dedit dulcis fetus et pabula laeta;
quae nunc vix nostro grandescunt aucta labore.*

Even now that age is broken and the exhausted earth
Hardly produces small animals, she who created all generations
And gave us huge bodies of wild beasts through birth [...]
Besides, the bright corn and the delightful vineyards,
Of her own accord, for mortals, she first created;
She herself gave the sweet fruit and the pleasant pasturage,
Which now hardly grow, when strengthened by our toil.⁶⁴

Columella severely criticized Lucretius' pessimistic account of the evolution of the earth. In the very first paragraph of his *On Agriculture*, he wrote:

*Quod neque fas sit existimare rerum naturam, quam primus ille mundi genitor
perpetua fecunditate donavit, quasi quodam morbo sterilitate affectam.*

For it is not acceptable to think that the nature of things, to whom the creator of the world himself gave constant fertility, is afflicted with sterility as though with some illness.⁶⁵

Although Columella did not name Lucretius, his reference to the 'nature of things' (*natura rerum*) clearly pointed to the Epicurean poet. In the second

book of *On Agriculture*, Columella further criticized the notion of an infertile earth:

Falso credidit parentem omnium terram, sicut muliebrem sexum aetate anili iam confectam, prognerandis esse fetibus inhabilem. Quod ipse quoque confiterer, si in totum nullae fruges provenirent. Nam et hominis tum demum declaratur sterile senium, non cum desinit mulier trigeminos aut geminos parere, sed cum omnino nullum conceptum edere valet.

[Tremelius] wrongly believed that the earth, parent of all things, like the female sex now diminished in old age, is unable to generate fruit. That I would acknowledge, if no fruits whatsoever were produced. For the old age of a human being is declared sterile, not when a woman ceases to give birth to triplets or twins, but only when she is no longer able to bring forth any offspring at all.⁶⁶

Columella did not deny that the earth was like a woman, but rather criticized the idea that her fertility had diminished significantly. She might no longer routinely bear ‘triplets and twins’, but she was still producing much. For Columella, if crops failed, it was not the fault of the earth, but that of the farmer, who did not have the knowledge and skills required to make her fructify:

Non igitur fatigatione, quemadmodum plurimi crediderunt, nec senio, sed nostra scilicet inertia minus benigne nobis arva respondent. Licet enim maiorem fructum percipere, si frequenti et tempestiva et modica stercoratione terra refoveatur.

It is not, therefore, because of fatigue, as so many have thought, nor because of old age, but because of our laziness that the cultivated land responds to us less favourably. For it is possible to get better returns, if the earth is warmed up again by frequent, timely, and moderate use of manure.⁶⁷

Intelligent use of fertilizers, then, could solve any issues of infertility in the earth. It was the responsibility of the farmer to understand the complex art of manuring. If the earth did not bear, he was ultimately to blame.

CONCLUSION

When reading ancient treatises on sterility, it is easy to believe that the ancients placed the blame for infertility on women. It is tempting to read analogies between women and fields in a very negative manner: women are passive fields who merely await fertilization. In this chapter, I have argued that a close reading of ancient texts on plants can help us refine that view.

To the ancients, an infertile plant (*akarpos*) could at times produce fruits/seeds, but those were not perfect enough for human consumption. Some plants were by nature less fertile, less able to bear fruit, than others. In general, however, fertility resided in the relationship between the earth and the plant, sometimes with the intervention of the farmer, rather than in

the plant itself. In anthropomorphizing terms, ancient authors described the earth as a female principle that made it possible for plants to bear fruit; and they compared plants to children or slaves in need of education. In these complex analogies, the farmer – a man – was responsible for fertilizing the earth; knowing what plants grew best in each location; and training plants to become productive. If he failed in that task, he could be accused of laziness and bad management.

I would argue that the same applied in human reproduction: the husband was responsible for the fructification of his family. He had to educate his wife, prepare her for her bearing role. He had to transform her from her wild state, where she could not bear children, to maturity, to a domesticated one, but to avoid over-nourishment, which would equally lead to infertility. At times, this process of domesticating/taming required the use of complex pharmacological preparations, the purpose of which was to fertilize a temporarily infertile womb. That is not to say, however, that the wife was entirely passive in this process – quite the contrary. Like the earth, she had to welcome the seed in her womb; she had to accept her fertilizing treatment and determine the moment when she would have a fertile sexual encounter with her husband.

Ancient authors sometimes acknowledged that a man could be the cause of infertility in a couple, but, as scholars have noted, they never indicate treatments for male infertility – it was the female body that was the locus of treatment. It is perhaps here that the botanical analogy can help the most. Some infertile plants could produce seed, but they could not carry that seed/fruit to maturity. If we take this analogy to its logical conclusion, we could say that a human man was by nature infertile: he could not carry a child to maturity – let us remember that the most common Greek word to describe animal infertility is *aphoros*, that which cannot carry. If a man could produce semen (and inability to produce any semen is a relatively rare problem), there was no real reason why his body would be the object of pharmacological treatment for fertility – he was unable to carry anyway. Instead, he had to concentrate his efforts on finding the right partner (a fertile earth), and making her prosper, regulating his sexual activity in the process.

In sum, ancient conceptions of generation are deeply asymmetrical. A man/farmer was master over his wife/earth, children/plants. The task of master, however, was not a simple one: ultimately man could be blamed for the failure of his farm/family to flourish, even though he could not himself carry children.

NOTES

1. [Aristotle], *Enquiry into Animals* 10.1, 633b13–14. Unless stated otherwise, all translations are mine. This treatise is preserved as the tenth book of Aristotle's *Enquiry into Animals*: David M. Balme and Allan Gotthelf, *Aristotle. History of Animals. Books VII-X. Edited and Translated by*

- D.M. Balme. Prepared for Publication by A. Gottbelf* (Cambridge, MA, and London, 1991), pp. 476–539. Scholars are not all in agreement over the authorship of this book. Philip van der Eijk considers it to be a short medical Aristotelian treatise *On Sterility*; while Lesley Dean-Jones argues that only the two final chapters are Aristotelian. Philip J. van der Eijk, ‘*On Sterility* (‘*HA X*’), a Medical Work by Aristotle?’, *Classical Quarterly*, 49:2 (1999); Lesley Dean-Jones, ‘Clinical Gynecology and Aristotle’s Biology: The Composition of *HA X*’, *Apeiron*, 45:2 (2012).
2. *Enquiry into Animals* 10.5, 636b11–13.
 3. Paul Potter, *Hippocrates. Volume X. Edited and Translated by P. Potter* (Cambridge, MA, and London, 2012), pp. 327–95. See Elizabeth Craik, *The ‘Hippocratic’ Corpus: Content and Context* (London, 2015), pp. 162–4.
 4. See Page DuBois, *Sowing the Body: Psychoanalysis and Ancient Representations of Women* (Chicago, IL, 1988), pp. 67–81; Ann E. Hanson, ‘Conception, Gestation, and the Origin of Female Nature in the *Corpus Hippocraticum*’, *Helios*, 19 (1992), pp. 36–7; Helen King, ‘Sowing the Field: Greek and Roman Sexology’, in Roy Porter and Mikulas Teich (eds), *Sexual Knowledge, Sexual Science: The History of Attitudes to Sexuality* (Cambridge, 1994), pp. 38–9.
 5. Arthur F. Hort, *Theophrastus. Enquiry into Plants and Minor Works on Odours and Weather Signs*, 2 vols (Cambridge, MA, and London, 1916–1926). For an introduction to this work and bibliography, see Gavin Hardy and Laurence M.V. Totelin, *Ancient Botany* (London, 2016), pp. 8–10.
 6. The work by Lesky remains fundamental: Erna Lesky, *Die Zeugungs- und Vererbungslehre der Antike und ihr Nachwirken* (Mainz Wiesbaden, 1951), pp. 127–9. One will find a convenient summary in Véronique Dasen, ‘Becoming Human: From the Embryo to the Newborn Child’, in Judith Evans Grubbs, Tim Parkin and Roslynne Bell (eds), *The Oxford Handbook of Childhood and Education in the Classical World* (Oxford, 2013), pp. 41–2.
 7. Hippocratic Corpus, *Regimen* 1.27–31 (4.264–272 Jones); *Generation* 6 (10.14–16 Potter). See Iain M. Lonie, *The Hippocratic Treatises On Generation, On the Nature of the Child, Diseases IV: A Commentary* (Berlin, 1981), pp. 124–32; Hanson, ‘Conception, Gestation’, pp. 41–2; Helen King, *Hippocrates’ Woman: Reading the Female Body in Ancient Greece* (London, 1998), pp. 8–9.
 8. See for instance Eva Keuls, *The Reign of the Phallus: Sexual Politics in Ancient Athens*, 2nd edn (Berkeley, CA, 1993), pp. 144–6; Lesley A. Dean-Jones, *Women’s Bodies in Classical Greek Science* (Oxford, 1994), p. 177; Susan G. Cole, *Landscapes, Gender, and Ritual Space: The Ancient Greek Experience* (Berkeley, CA, 2004), p. 165.
 9. See in particular Robert Mayhew, *The Female in Aristotle’s Biology: Reason or Rationalization* (Chicago, IL, 2010), pp. 41–3. On whether Aristotle’s biology was ‘sexist’, see also Sophia M. Connell, ‘Aristotle and Galen on Sex Difference and Reproduction: A New Approach to an Ancient Rivalry’, *Studies in History and Philosophy of Science Part A*, 31:3 (2000); Devin M. Henry, ‘How Sexist is Aristotle’s Developmental Biology?’, *Phronesis*, 52:3 (2007).
 10. See Rebecca Flemming, *Medicine and the Making of Roman Women: Gender, Nature, and Authority from Celsus to Galen* (Oxford, 2000), p. 298.

11. See for example Hippocratic Corpus, *Aphorisms* 5.62 (4.176 Jones); *Airs, Waters and Places* 21 (1.124 Jones); Lucretius, *On the Nature of Things* 4.1240 (see below for more detail). See Rebecca Flemming, 'The Invention of Infertility in the Classical Greek World: Medicine, Divinity, and Gender', *Bulletin of the History of Medicine*, 87 (2013), pp. 571, 589.
12. The word 'atokos' (without child) is sometimes used too, although more rarely. See Flemming, 'Invention of Infertility', p. 576.
13. Hippocratic Corpus, *Infertile Women* 213 (10.330 and 338 Potter).
14. See Flemming, 'Invention of Infertility', p. 573.
15. Hippocratic Corpus, *Infertile Women* 224 (10.360 Potter).
16. On the symbolism of the ingredients in this recipe, see Danielle Gourevitch, 'Fumigation et fomentation gynécologiques', in Ivan Garofalo et al (eds), *Aspetti della terapia nel Corpus Hippocraticum: Atti del IXe Colloque International Hippocratique: Pisa, 25-29 Settembre 1996* (Florence, 1999), p. 210; Vincent Barras, 'La Naissance et ses recettes en médecine antique', in Véronique Dasen (ed.), *Naissance et petite enfance dans l'antiquité. Actes du colloque de Fribourg, 28 Novembre-1er Décembre 2001* (Fribourg and Göttingen, 2004), p. 101; Laurence M.V. Totelin, *Hippocratic Recipes: Oral and Written Transmission of Pharmacological Knowledge in Fifth- and Fourth-Century Greece* (Leiden, 2009), pp. 200-1.
17. See Laurence M.V. Totelin, 'Sex and Vegetables in the Hippocratic Gynaecological Treatises', *Studies in History and Philosophy of Science Part C: Studies in History and Philosophy of Biological and Biomedical Sciences*, 38:3 (2007); Totelin, *Hippocratic Recipes*, pp. 199-214. On the use of dung in ancient gynaecology, see also Heinrich von Staden, 'Women and Dirt', *Helios*, 19 (1992), pp. 15-16; Ann Ellis Hanson, 'Talking Recipes in the Gynaecological Texts of the Hippocratic Corpus', in Maria Wyke (ed.), *Parchments of Gender: Deciphering the Body in Antiquity* (Oxford, 1998), p. 89.
18. See Iain M. Lonie, 'On the Botanical Excursus in *De Natura Pueri* 22-27', *Hermes*, 97:4 (1969).
19. The formula appears several times in the plays of the comedian Menander: *Dyskolos* 842-844; *Perikeiromene* 1013-1014; *Samia* 897-898.
20. Cole, *Landscapes*, pp. 153-4.
21. For objectification, see King, 'Sowing the Field', p. 38.
22. Hesiod, *Theogony* 126-127; See Nicole Loraux, *Born of the Earth. Translated from the French by Selina Stewart* (Ithaca, NY, and London, 2000), p. 110.
23. For a use of *aphoros*, see for example Theophrastus, *Causes of Plant Phaenomena* 1.17.10 (in relation to figs). See Flemming, 'Invention of Infertility', p. 577.
24. Theophrastus, *HP* 1.3.1.
25. Theophrastus, *HP* 1.3.5.
26. See Andrew Dalby, *Food in the Ancient World from A to Z* (London, 2003), pp. 150-3.
27. Theophrastus, *HP* 2.5.7.
28. Theophrastus, *HP* 3.3.6.
29. Theophrastus, *HP* 2.2.10.
30. For an introduction to botanical observations carried out during the rule of Alexander, see Suzanne Amigues, 'L'expédition d'Anaxicrate en Arabie occidentale', *Topoi Orient-Occident*, 6 (1996).

31. Theophrastus, *HP* 2.2.8 (date palm); 3.3.5 (persea and date palm); 4.1.5 (date palm and sycamore).
32. Theophrastus, *HP* 2.2.8.
33. Pliny, *Natural History* 16.135–136. See Hardy and Totelin, *Ancient Botany*, p. 172 with same translation.
34. See Ida Östenberg, *Staging the World: Spoils, Captives and Representations in the Roman Triumphal Procession* (Oxford, 2009), pp. 184–8
35. See Hardy and Totelin, *Ancient Botany*, p. 127.
36. Theophrastus, *HP* 3.1.2.
37. See also Theophrastus, *HP* 2.2.10 (black poplar; elm); 3.3.4 (willow, black poplar and elm); *CP* 1.1.4 (willow, elder, white and black poplar); 1.3.5 (black and white poplar); 1.5.1 (willow, elm and thyme).
38. See Georg Wöhrle, *Theophrasts Methode in seinen botanischen Schriften* (Amsterdam, 1985), pp. 53–62; C.G. Tortzen, ‘Male and Female in Peripatetic Botany’, *Classica et mediaevalia*, 42 (1991); Moshe Negbi, ‘Male and Female in Theophrastus’ Botanical Works’, *Journal of the History of Biology*, 28 (1995); Lin Foxhall, ‘Natural Sex: The Attribution of Sex and Gender to Plants in Ancient Greece’, in Lin Foxhall and J. Salmon (eds), *Thinking Men: Masculinity and its Self-Representation in the Classical Tradition* (London, 1998); M. Bretin-Chabrol and C. Leduc, ‘La botanique antique et la problématique du genre’, *Clio. Histoire, femmes et sociétés*, 68:1 (2009).
39. Theophrastus, *HP* 3.8.1. See Hardy and Totelin, *Ancient Botany*, p. 131 (with same translation).
40. Theophrastus, *HP* 5.4.1.
41. See Diodorus, *Historical Library* 1.80.4; Pliny, *Natural History* 16.111.
42. See Foxhall, ‘Natural Sex’, p. 68.
43. See Theophrastus, *HP* 1.8.2; 3.9.3; 5.4.1; *CP* 1.16.6.
44. The literature on this topic is large. See in particular King, *Hippocrates’ Woman*, p. 29; Mayhew, *Female in Aristotle’s Biology*, pp. 98–9.
45. Theophrastus, *HP* 2.8.4; Pliny, *Natural History* 13.34–35; Achille Tatius, *Clitophon and Leucippe* 1.17; Basil of Caesarea, *Homelies on the Hexaemeron* 5.47 Ammianus Marcellinus, *History* 24.3.12–14; *Geoponika* 10.4. See also Herodotus, *The Histories* 1.193. See Laura Georgi, ‘Pollination Ecology of the Date Palm and Fig Tree: Herodotus 1.193.4–5’, *Classical Philology*, 77:3 (1982); Tortzen, ‘Male and Female’, p. 92; Negbi, ‘Male and Female’, pp. 320–3.
46. In some cases, the ancients described the process of grafting (where a scion is introduced into a rootstalk) in sexual terms. These cases, however, are rather complex and are beyond the scope of this chapter. See Hardy and Totelin, *Ancient Botany*, pp. 137–8.
47. Aristotle, *Generation of Animals* 1.23, 730b32–731a4. See Hardy and Totelin, *Ancient Botany*, p. 129 (same translation).
48. See especially *CP* 4.4.10.
49. Theophrastus, *CP* 3.2.6.
50. Pliny, *Natural History* 17.134.
51. Columella, *On Agriculture* 10.194–199.
52. Theophrastus, *CP* 1.15.3; 2.10.1.
53. Theophrastus, *CP* 1.15.4.

54. ‘Mad vines’: see for instance Theophrastus, *CP* 1.18.4; ‘goaty vines’: see for example Aristotle, *Generation of Animals* 1.18, 725b34; Theophrastus, *CP* 1.5.5.
55. According to Varro, goats were never sacrificed to Minerva, because that animal caused too much damage to the goddess’s sacred tree, the olive: *On Agriculture* 1.2.19–20.
56. Theophrastus, *CP* 2.9.3–6.
57. To a modern botanist, the process of caprification is one of dioecious reproduction, where insects carry pollen from male individuals (caprifigs) to female ones (domesticated figs).
58. Theophrastus, *CP* 2.16.8.
59. Theophrastus, *CP* 3.15.4.
60. Ann Michelini, ‘Hybris and Plants’, *Harvard Studies in Classical Philology*, 82 (1978), 37–8. Being too fat was also considered a cause of infertility in women: see for example Hippocratic Corpus, *Aphorisms* 5.46 (4.168 Jones); Aristotle, *Generation of Animals* 1.18, 726a3–6; 2.7, 746b26–9.
61. Michelini, ‘Hybris’, p. 43.
62. See for instance Cato, *On Agriculture* 93.
63. See for example Pseudo-Aristotle, *Problems* 20.12, 924a1–23; Theophrastus, *CP* 3.7.4.
64. Lucretius, *On the Nature of Things* 2.1150–1160. Note that Lucretius calls the fruit of the earth ‘*fetus*’, a word that could equally refer to animals and plants.
65. Columella, *On Agriculture* 1, preface 1.
66. Columella, *On Agriculture* 2.1.2.
67. Columella, *On Agriculture* 2.1.7.

RESEARCH RESOURCES

Primary Sources

Published Primary Sources

- Harrison B. Ash, *Lucius Junius Moderatus Columella. On Agriculture I-IV* (Cambridge, MA, and London: Harvard University Press, 1941).
- David M. Balme and Allan Gotthelf, *Aristotle. History of Animals. Books VII-X* (Cambridge, MA, and London: Harvard University Press, 1991).
- Benedict Einarson and George K. K. Link, *Theophrastus. De causis plantarum*, 3 vols (Cambridge, MA, and London: Harvard University Press, 1976–1990).
- William D. Hooper and Harrison B. Ash, *Marcus Porcius Cato. On Agriculture* (Cambridge, MA, and London: Harvard University Press, 1935).
- Arthur F. Hort, *Theophrastus. Enquiry into Plants and Minor Works on Odours and Weather Signs*, 2 vols (Cambridge, MA, and London: Harvard University Press, 1916–1926).
- Paul Potter, *Hippocrates. Volume X* (Cambridge, MA, and London: Harvard University Press, 2012).
- Harris Rackham, *Pliny. Natural History. Books XII-XVI* (Cambridge, MA, and London: Harvard University Press, 1945).
- W.H.D. Rouse, *Lucretius. De rerum natura* (Cambridge, MA, and London: Harvard University Press, 1937).

Secondary Sources

On Human Infertility in the Ancient World and its Treatment

- Susan Guettel Cole, *Landscapes, Gender, and Ritual Space: The Ancient Greek Experience* (Berkeley, CA: University of California Press, 2004), 146–77.
- Lesley A. Dean-Jones, ‘Clinical Gynecology and Aristotle’s Biology: The Composition of HA X’, *Apeiron*, 45.2 (2012), 180–99.
- Rebecca Flemming, ‘The Invention of Infertility in the Classical Greek World: Medicine, Divinity, and Gender’, *Bulletin of the History of Medicine*, 87 (2013), 565–90.
- Philip van der Eijk, ‘On Sterility (‘HA X’), a Medical Work by Aristotle?’, *Classical Quarterly*, 49 (1999), 490–502.
- Laurence M.V. Totelin, *Hippocratic Recipes: Oral and Written Transmission of Pharmacological Knowledge in Fifth-and Fourth-Century Greece* (Leiden: Brill, 2009), 197–224.

On the Female Body in Antiquity, and its Comparison to a Field

- Lesley A. Dean-Jones, *Women’s Bodies in Classical Greek Science* (Oxford: Clarendon, 1994).
- Page DuBois, *Sowing the Body: Psychoanalysis and Ancient Representations of Women* (Chicago, IL: University of Chicago Press, 1988).
- Rebecca Flemming, *Medicine and the Making of Roman Women: Gender, Nature, and Authority from Celsus to Galen* (Oxford: Oxford University Press, 2000).
- Ann E. Hanson, ‘Conception, Gestation, and the Origin of Female Nature in the *Corpus Hippocraticum*’, *Helios*, 19 (1992), 31–71.
- Helen King, ‘Sowing the Field: Greek and Roman Sexology’, in Roy Porter and Mikulas Teich (eds), *Sexual Knowledge, Sexual Science: The History of Attitudes to Sexuality* (Cambridge: Cambridge University Press, 1994), 29–46.
- Helen King, *Hippocrates’ Woman: Reading the Female Body in Ancient Greece* (London: Routledge, 1998).
- Heinrich von Staden, ‘Women and Dirt’, *Helios*, 19 (1992), 7–30.

On Ancient Botany, Fertility and Plants

- Suzanne Amigues, *Études de botanique antique* (Paris: Bocard, 2002).
- Marine Bretin-Chabrol and Claudine Leduc, ‘La botanique antique et la problématique du genre’, *Clio. Histoire, femmes et sociétés*, 68.1 (2009), 205–223.
- Gavin Hardy and Laurence M.V. Totelin, *Ancient Botany* (London: Routledge, 2016).
- Moshe Negbi, ‘Male and Female in Theophrastus’ Botanical Works’, *Journal of the History of Biology*, 28 (1995), 317–32.
- Lin Foxhall, ‘Natural Sex: The Attribution of Sex and Gender to Plants in Ancient Greece’, in Lin Foxhall and J. Salmon (eds), *Thinking Men: Masculinity and its Self-Representation in the Classical Tradition* (London: Psychology Press, 1998), 57–70.
- Iain M. Lonie, ‘On the Botanical Excursus in *De Natura Pueri* 22–27’, *Hermes*, 97.4 (1969), 391–411.
- C.G. Tortzen, ‘Male and Female in Peripatetic Botany’, *Classica et mediaevalia*, 42 (1991), 81–110.

From ‘Fructification’ to ‘Insemination’: Nomenclature and the Practice of Artificial Insemination

Bridget Gurtler

INTRODUCTION

Since at least the eighteenth century, physicians, scientists, and patients have experimented with the idea of achieving pregnancy by intervening in the act of sex ‘artificially’. As they have done so, they have debated the scientific principles of reproduction, the boundaries of practice in the emerging medical specialties of gynaecology and urology, the significance of heredity, and the meanings of marriage and parenthood. This chapter explores the early history of artificial insemination (AI) between 1860 and 1950 in North America, Britain, and France. It adopts an unusual perspective in tracing this history through the lens of nomenclature, from ‘artificial fructification’ to ‘artificial insemination’, and combines quantitative data on the prevalence of particular terminologies with sources in literature, biomedicine, natural philosophy, and the popular press to ask: What is in a name? In other words, how can language (biomedical and lay) be used as a window into shifting debates over what this technology of conception meant to scientists, physicians, and society?

Artificial insemination, by whatever name, has historically been characterized by secrecy, silence, and the suppression of records.¹ The shame of infertility and fears about custody, adultery, and medical liability meant that for most of the history of the practice, physicians consciously destroyed records of inseminations and sperm donations. Until very recently, parents of children conceived via artificial insemination contributed to this culture of silence. As one North American couple put it when speaking of donor insemination

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in the late twentieth century: ‘From the minute she was born, we never mentioned it to each other. We won’t tell her – or our friends and family – because there’s no way she can find that father. It is our secret: It will go with us to the grave’.² The strong trend towards secrecy and silence perhaps explains why so few histories have directly tackled the topic of artificial insemination, although there is a growing body of anthropological and sociological literature on more contemporary uses of artificial insemination and kinship. This chapter aims to fill some of these gaps in historical knowledge.

Analysis of nomenclature can be a useful methodological tool to interrogate historical sources and to build a greater understanding of the social and cultural contexts which governed attitudes towards infertility in past times and places. In this quest, new digital humanities tools can be invaluable in enabling scholars to analyse the content of textual sources within the context of broader terminological shifts revealed by quantitative analysis. Google Ngram Viewer provides a unique way to explore the frequency of words used in millions of texts across a time span of more than 200 years (see Figs. 1, 2 and 3). The Ngram Viewer searches Google Books for sources printed between 1800 and 2012, and charts the frequency of word or phrase. This allows scholars to broadly visualize shifts in the use of ‘artificial insemination’ and related terms across two centuries. These big data tools are far from perfect. They merely show how often a word is used, not how a word is being deployed or interpreted, and regardless of the size of the data set it may not provide a representative sample. (For example, Google Books represents only 4 per cent of publications ever published, and the *kinds* of works available depend on Google’s initial digitization selection criteria). Furthermore, Ngram cannot differentiate between acronyms, like the use of AI for artificial insemination and its use for artificial intelligence; and, of course, it cannot tell us why

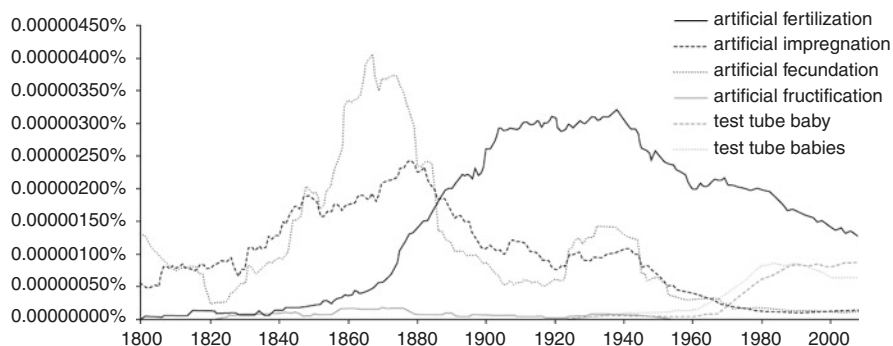


Fig. 1 Ngram of Incidence of Terms *Test Tube Baby/Babies, Artificial Fertilization/Impregnation/Fecundation/Fructification*, 1800–2008]. (Source: Ngram Culturomics Search: <http://books.google.com/ngrams> [Accessed 6 December 2016]. For the purposes of reproduction in this volume, the results of these Ngram searches have been adapted into black-and-white line illustrations by Kirsty Harding.)

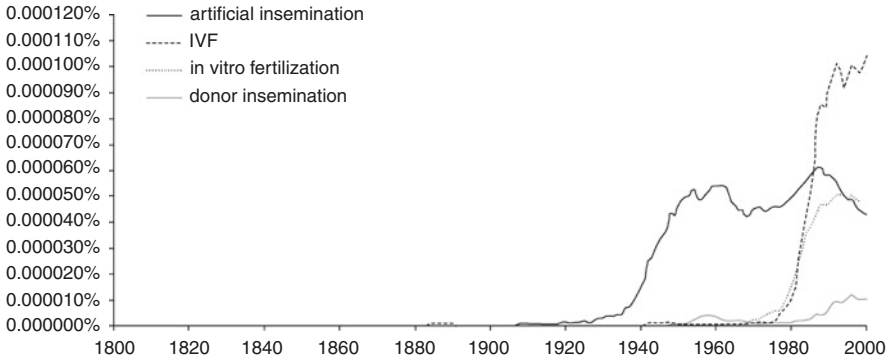


Fig. 2 Ngram of Incidence of Terms *In Vitro Fertilization*, *IVF*, *Artificial Insemination*, and *Donor Insemination*, 1800–2008]. (Source: Ngram Culturomics Search: <http://books.google.com/ngrams> [Accessed 6 December 2016]. For the purposes of reproduction in this volume, the results of these Ngram searches have been adapted into black-and-white line illustrations by Kirsty Harding.)

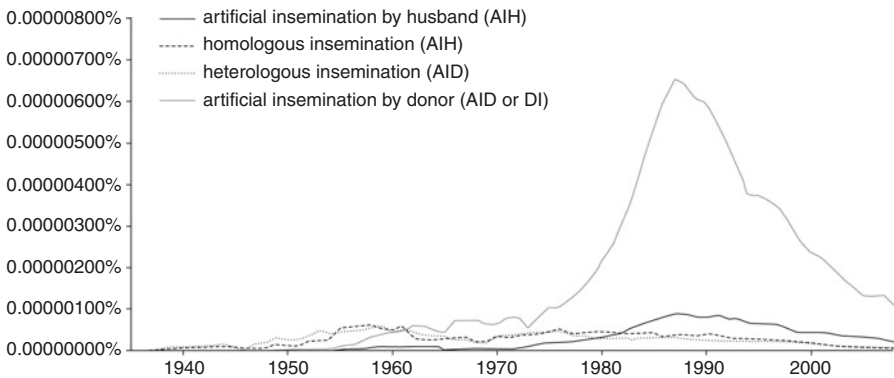


Fig. 3 Ngram of Incidence of Terms *AID*, *AIH*, *Heterologous* and *Homologous Insemination*, 1935–2008]. (Source: Ngram Culturomics Search: <http://books.google.com/ngrams> [Accessed 6 December 2016]. For the purposes of reproduction in this volume, the results of these Ngram searches have been adapted into black-and-white line illustrations by Kirsty Harding.)

changes in terminology occur.³ Nevertheless, Ngram is able to demonstrate a rough trend across a large corpus of literature very well. In this chapter, I use it in close conversation with a wide range of sources including scientific and medical journals, textbooks, and papers as well as newspapers, film, radio, popular journals, and personal letters in order to investigate the *how* of these terms.

This chapter traces shifts in the nomenclature deployed in debates about artificial insemination as the technology was increasingly employed as a treatment for infertility from the mid-nineteenth century onwards. These terminological shifts reveal the changing nature of medical debates about the practice and their relation to broader social concerns about gender, the family, and reproduction. The chapter begins by analysing the messiness of the gendered and scientific politics embedded in the naming of the procedure in nineteenth-century France and North America, when scientists deployed the terms ‘artificial fructification’, ‘artificial fertilization’, ‘artificial fecundation’, and ‘artificial impregnation’. Then it turns to the unexpected material relationships and meanings that underlay the rise of a popular terminology of ‘test tube babies’ in the early twentieth century. The final section returns to biomedical nomenclature and examines how the scientific study of sperm and increasing use of donor sperm in the procedure together led to the stabilization of the nomenclature around the term ‘artificial insemination’ (by husband and by donor) at mid-century. Ultimately, the chapter aims to demonstrate that while the actual act of human artificial insemination changed little over the course of its early history, the contextual factors in which it was named, defined, understood, used, and produced underwent radical changes.⁴ From ‘artificial fructification’ to the more modern definition and practice of ‘artificial insemination’, the cultural and biomedical politics of naming were integrally bound to the movement of knowledge between scientific and lay audiences, shifting definitions of (un)reproductive bodies, and moral judgements on the appropriate social context of reproduction.

J. MARION SIMS AND ‘ARTIFICIAL FRUCTIFICATION’ IN RECONSTRUCTION-ERA AMERICA

In the nineteenth century the practice of artificial insemination was called by many names, ranging from ‘artificial fecundation’ or ‘artificial fructification’ to ‘uterine injection’. The first documented use of ‘artificial fructification’ in North America occurred after the Civil War (1861–65) as fertility became bound up in national reconstruction. As some women sought higher education and careers outside the home, physicians and social reformers worried about the ‘degeneracy of American womanhood’ and the prospect of an increase in sterility, and sought new means by which to remedy the perceived problem. The foundation of the American Gynecological Society in 1876 further encouraged the medicalization of infertility. At this pivotal moment in the evolution of the profession, one of the most (in)famous representatives of gynaecology and its interventionist ethos was Dr James Marion Sims (1813–83).

Sims was a controversial figure who is remembered today both as the so-called ‘father of gynaecology’ and as a physician who perfected his surgical techniques on enslaved women. However, he was also considered by later

practitioners of artificial insemination as the scientific forefather of the practice in the USA.⁵ In his landmark book *Clinical Notes on Uterine Surgery, with Special Reference to the Management of the Sterile Condition* (1866), Sims admitted to performing 55 'artificial fructifications' on six patients at his renowned Woman's Hospital in New York City. Many physicians at the time saw his methods as the epitome of rational scientific practice.⁶ Indeed, Sims represented a new era of 'scientific medicine' that shifted medicine away from individual case studies towards experimental approaches to solve medical problems. Sims kept meticulous accounts of both his singular successful 'artificial fructification' (pregnancy had been achieved, although the patient later miscarried) and his many failures, as well as the various physiological reactions to his diverse methods. Importantly, he also defined the symptoms (the physiological indications) that would require a 'uterine injection'.

The nomenclature of 'uterine injection' points towards the organ being treated – the uterus – as well as who was considered a patient – the woman. The procedure was not yet a therapy for impaired male reproductive health, as it would become in subsequent years. Indeed, most physicians rejected the notion of infertility in males. This terminology also reflects the transformation of long-held beliefs about the systemic pathology of infertility towards identifying local causes of disease. Emphasis on the uterus within the therapeutic nomenclature shows how infertility was no longer perceived as a problem that encompassed the whole body; rather it had a particular cause at the site of the dysfunction (the uterus). Sims prescribed uterine injections to conquer the 'mechanical obstructions that prevent the passage of semen to the cavity of the uterus' by leaping over the barrier of the cervix and 'throwing the fructifying agent right into the cavity of the uterus'.⁷

The word 'fructification' also reveals a focus on the female reproductive body and its ability to be fruitful. The use of fruitfulness to describe becoming pregnant reflects the lingering ideas of an older epistemology of *generation* not yet drowned out by the new language of 'reproduction' that dominated medical discourse by the twentieth century.⁸ The persistence of 'fructification' in the nomenclature of artificial insemination thus marks the relatively slow transition between the ideas of ovists (those who believed the female reproductive cell contains the entire organism) focused on 'generation' to more characteristic nineteenth-century views of shared heredity from both parents. All of the definitions that Sims employed – from making fruitful to making pregnant – were part of the understanding of 'fecundation' by 1870.⁹ But, when 'fructification' is paired with its oft-used companion term 'fertilization' other relationships emerge, most importantly its associations with reproductive definitions borrowed from plant biology and horticulture. 'Fertilization' and 'fructification' were both used in reference to the reproduction of plants as well as the process of applying nutrients to them (to fertilize). Such terminological borrowing across domains confirms the argument that artificial insemination, symbolically if not practically, moved between infertility treatment and industrialized agriculture – that it 'inhabit[ed] a terrain between the farm and the clinic'.¹⁰

The language, and indeed the objects, associated with ‘uterine injection’ crossed not only to the farm but also into industrial manufacturing. Sims regularly attempted new gynaecological procedures and invented and patented new instruments to do so, including the Sims speculum, Sims cannula, and the Sims Syringe for Mechanical Impregnation.¹¹ These experiments and inventions secured him both profit and professional acclaim, although they were often fraught with problems regarding patient consent and autonomy. We need to view Sims’s claim to be the first to attempt ‘artificial fructification’ with success within the context of these investigations into women’s reproductive functions.

In his case reports, like many other contemporary physicians, Sims often depicted his female patients as problematic individuals and as bodies to be conquered. Sims showed little concern for his patients’ comfort. He tried many variations of the fructification procedure before finally deciding to limit the drops of semen he injected into the uterus after many women developed ‘uterine colic’ (painful cramps, disease, or infection). According to Sims, the childless women who requested the procedure did so because they were ‘too timid’ to submit to the new ‘standard’ surgical operations for uterine obstructions that enlarged the cervical os (the external opening of the uterus). Instead, the women ‘accepted the uncertain alternative of uterine injection’.¹² It seems that well into the nineteenth century, it was common for female patients to choose this method as an alternative to surgery. For example, in 1880 Paul F. Mundé (1846–1902), Professor of Gynaecology at Dartmouth Medical College, argued that ‘this manœuvre’ should be tried only when the patient refused other procedures to correct obstacles to the uterus or malpositioning of the reproductive organs (such as dilations, incisions, straightening and pessaries) and ‘we are at our wits’ end to devise some means to gratify the patient’s desire for maternity’.¹³

Sims’s method was widely publicized and recommended in medical and gynaecological textbooks.¹⁴ He envisioned that future knowledge about how and when conception occurred (Sims and his contemporaries believed that ovulation happened during menstruation and that women were most fertile in the week after their period) would enable ‘mechanical fertilization’ to become ‘more exact’ and successful.¹⁵ Indeed, with the advent of new knowledge from embryology and endocrinology as well as new technologies of testing for ovulation that occurred in the early twentieth century, artificial insemination would become more widely adopted in America. However, in France the therapy became a site for social and medical concern, as well as hope, well before the intricacies of reproduction were better understood.

‘BABY FACTORIES’ AND ‘ARTIFICIAL FECUNDATION’ IN NINETEENTH-CENTURY FRANCE

From 1865 to 1900, at least 14 texts on *fécondation artificielle* were published in France. Nevertheless, the first significant public dialogue about the technology emerged relatively late in the century in the 1880s. The catalyst for intense

public debate on artificial fecundation was the research of the physician Joseph Gérard (1831–1914) on the technique, aided by an English language edition of his work aimed at a popular audience.¹⁶ Gérard claimed that one in five sterile couples could be helped by the technology. The illustrations and descriptions in his *New Causes of Infertility in Both Sexes: Artificial Fecundation as the Ultimate Treatment* (1891) demonstrate gender norms and perceptions of the political importance of the family in contemporary French medicine, as well as the fears 'artificial fecundation' sparked in late nineteenth-century French society.

In this book, Gérard aimed to use 'the colloquial style' in order to put 'science within the mental reach of all, by the use of plain words and metaphors' as well as 'fantastic designs'.¹⁷ The well-known artist José Roy provided charming illustrations intended to deliver scientific and anatomical information in a less shocking manner than standard medical drawings. For example, the text begins with a general discussion on the 'laws of fecundation', discussing how Mother Nature provides sperm with a steeplechase in order to select the one with the best 'vigour and health' to unite with the egg. As one can see, some sperm fall off the racecourse (Fig. 4) while others, like bouquets at the florist shop, are chosen by Mother Nature for their handsome faces (Fig. 5).

Gérard's book provided a broad aetiology of the conditions and diseases that produced infertility. Obesity, constitutional weakness, masturbation, homosexual desires, and the deleterious effects of modern life were all blamed for

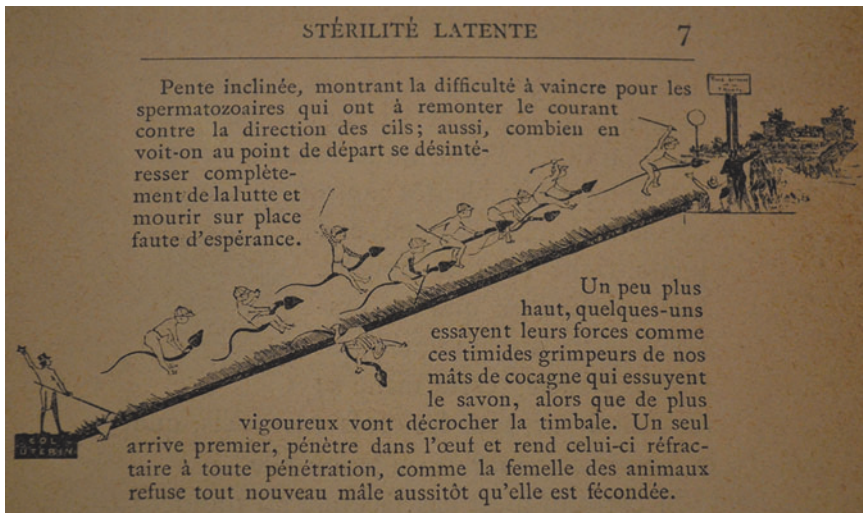


Fig. 4 Sperm falling off the racecourse. Joseph Gérard, *Nouvelles causes de stérilité dans les deux sexes: Fécondation artificielle comme moyen ultime de traitement* (Paris, 1888), p. 296. Illustration by José Roy

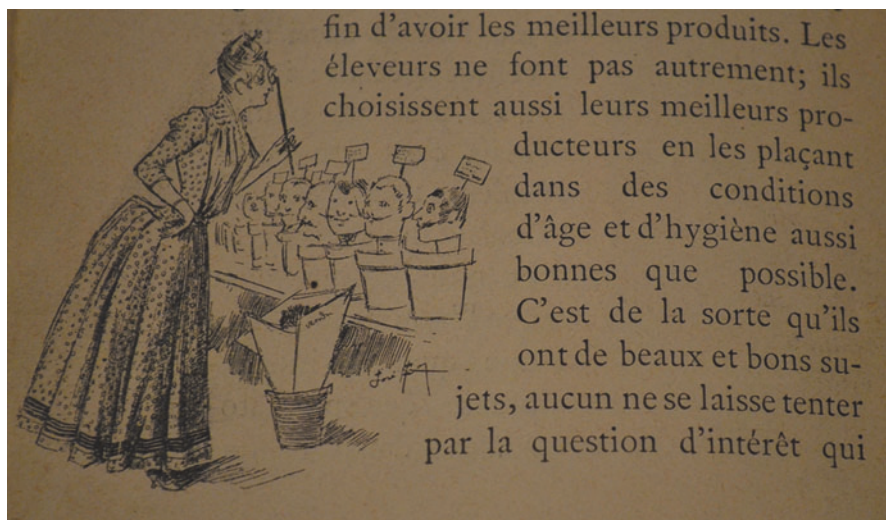


Fig. 5 Mother Nature chooses sperm. Joseph Gérard, *Nouvelles causes de stérilité dans les deux sexes: Fécondation artificielle comme moyen ultime de traitement* (Paris, 1888), p. 296. Illustration by José Roy

decreasing couples' ability to conceive. He argued, for instance, that female factory workers spent too long standing and this caused their uteruses to fall, and that pornography, liquor consumption, prostitution, and venereal disease disrupted the equilibrium of French men and women. As historians like Sean Quinlan have discussed, the medical community at large believed that the events of the Franco-Prussian War (1870–71) and the Paris Commune (1870) had disturbed nervous sensibilities and resulted in degeneracy and infertility. In the prevailing French cosmology of disease, human bodies were thought to be regulated by a host of physiological functions, including those of experience and sensation. Thus, nerves determined the health, nature, and aetiology of diseases.¹⁸ It was in this context of structural and bodily upheaval that artificial fecundation became a hotly contested tool in the war against failing French fertility.

Contemporaries did not receive Gérard's treatise on *fécondation artificielle* well, believing that increasing popular knowledge would 'open up the procedure to abuse by charlatans or those in search of debauchery'.¹⁹ Physicians and newspaper columnists argued that the relatively simple concept and procedure of artificial fecundation could too easily be misappropriated, and cited various examples of inappropriate users. These included couples not under medical care, medical charlatans, and above all women not under male supervision. Although some physicians supported the procedure as a means to 'perpetuate the species and to provide families with joys they could not have experienced without it', these voices were in the minority.²⁰ Faculty members of the

Académie Impériale de Médecine declared that 'official sanction given to such a question [artificial fecundation] might have the most disastrous consequences for the family, society and the State'.²¹

Newspapers covered these debates with interest, wondering, under such sensationalist headlines as *Les fabriques d'enfants* ('Baby Factories'), if women more attached to their syringes than to their male friends would still require dowries or coming-out parties.²² The technology was seen as an affront to French fatherhood. As journalist Edmond Pelletier spat out, 'this suburban Esculapus (Gérard) has just invented a means to remove the *pater* from paternity!'²³ Anxieties about medical respectability and male vulnerability demonstrate how debates on artificial insemination were deeply intertwined with wider cultural concerns about social order and the family. In the late nineteenth century, France possessed the lowest birth rates in the industrialized world. Heated debates erupted between pronatalists and proponents of the emerging feminist movement who endorsed female autonomy through birth control and attention to female sexual satisfaction.²⁴ Awareness of population decline also drove fears of racial degeneration which influenced both the expansion of welfare services and the growth of the eugenics movement.²⁵ These anxieties permeated the language of medical diagnosis and dominated social and political discourse. In Gérard's words, 'without family nothing is stable in the social relations or in the State'.²⁶ The stakes of sterility were high and medical attempts to tackle the problem must be seen as part of the profession's broader strategies to protect the family's 'health, its reproductive capacity and its ability to promote hierarchy and stability'.²⁷

A close reading of the etymology of the terms 'artificial fecundation' and 'artificial fertilization' reveals three further areas of concern: the biology of conception; changing gender roles; and the politics of medical professionalism. The term 'fertilization' focused on the meeting of egg and sperm (or potentially pollen and ovary) and, in a broader sense, the ability to make someone or something more fertile (for instance, the application of fertilizer to plants). In the eighteenth century the terms 'fertilization' and 'fecundation' had many meanings in plant and animal breeding and continued to do so in the nineteenth century. However, at this point 'fertilization' also began to encompass broader discussions among demographers and medical hygienists about a decline in the 'will' to reproduce, as well as concerns about degeneration. In France, epigenetic theories explained the decline in male births as the result of stunted or failed fertilization because of decreased motility and vigour of sperm, weak testicles, effeminacy, and the general failure of French masculinity.²⁸

The term 'artificial' variously denoted 'man-made', unnatural, or even artful or cunning. These multiple meanings of 'artificial' melded in medical and lay understandings of what it meant to assist reproduction. For example, the man-made nature of the syringe as a replacement for marriage and sexual relationships with men, and the implied 'unnaturalness' of 'artificial fecundation' when compared to the sexual act, caused much consternation.²⁹ However,

paradoxically, artificiality also symbolized progress in both western Europe and the USA. In the late nineteenth century, mass production enabled middle-class consumers to acquire a much larger number of standardized objects in their homes and lives. The esoteric range of newly available ‘artificial’ products encompassed everything from artificial teeth, legs, and incubators for fowl to artificial butter. ‘Artificial’ breeding drove the agricultural revolution in late nineteenth and early twentieth-century America.³⁰ In medicine, there was a boom in new ‘artificial’ products due to an unprecedented rise in experimentation and public intervention into private procreative behaviour. These included new surgical treatments for infertility, mechanical devices to support the uterus, and the manufacture of condoms, cervical caps, and diaphragms (as well as the increased circulation of knowledge about non-mechanical birth control methods such as coitus interruptus, douching, and abortion).³¹

Consequently, the ‘artificiality’ of artificial fecundation in nineteenth-century industrialized societies was part of the broader infiltration of new mechanically and industrially produced objects into social lives. Physicians such as Gérard promoted ‘artificial’ interventions into private life through the invention and production of new gynaecological apparatuses to assist those practising artificial fecundation, including new types of syringes and portable fecundation stirrups. Using portable stirrups, science literally entered the bedroom with the physician, so that the insemination procedure could be performed post-coitus by attaching the stirrups to the bed (Figs. 6 and 7).³² However, when mass production crossed the line into mass *reproduction*, social critics wondered about the boundaries of commercialization in the industrialized world. Were wealthy families now able to purchase parenthood as a commodity? Images like those found in Gérard’s work, in which babies were delivered in boxes by postmen with price tags attached, perhaps stimulated concerns that physicians might profit from commodifying conception. Gérard admitted that many persons believed that physicians could ‘*manufacture* infants of all kinds’.³³ His protestations that he had no intention of creating a ‘monopoly’ of artificial fecundation attest to the prevalence of fears about commodification.³⁴ As these tangled threads suggest, like other artificial goods, ‘artificial fecundation’ embodied beliefs in progress as well as concerns about what such advancements meant for families and the social order.

‘TEST TUBE BABIES’ AND THE IMPACT OF LAY LANGUAGE

Technical terms like ‘artificial impregnation’ changed over time, and as they did so slight variations in nomenclature often denoted large-scale societal, scientific, or theoretical shifts. This section examines how ideas about artificiality that resided in the nascent technical language of assisted reproduction during the nineteenth century emerged within everyday language in the early decades of the twentieth century. Adele Clark has argued that the power and currency of ordinary (lay) language on ideas and practices can often exceed the impact of the more technical language of science and medicine.³⁵ Analysis of the origins

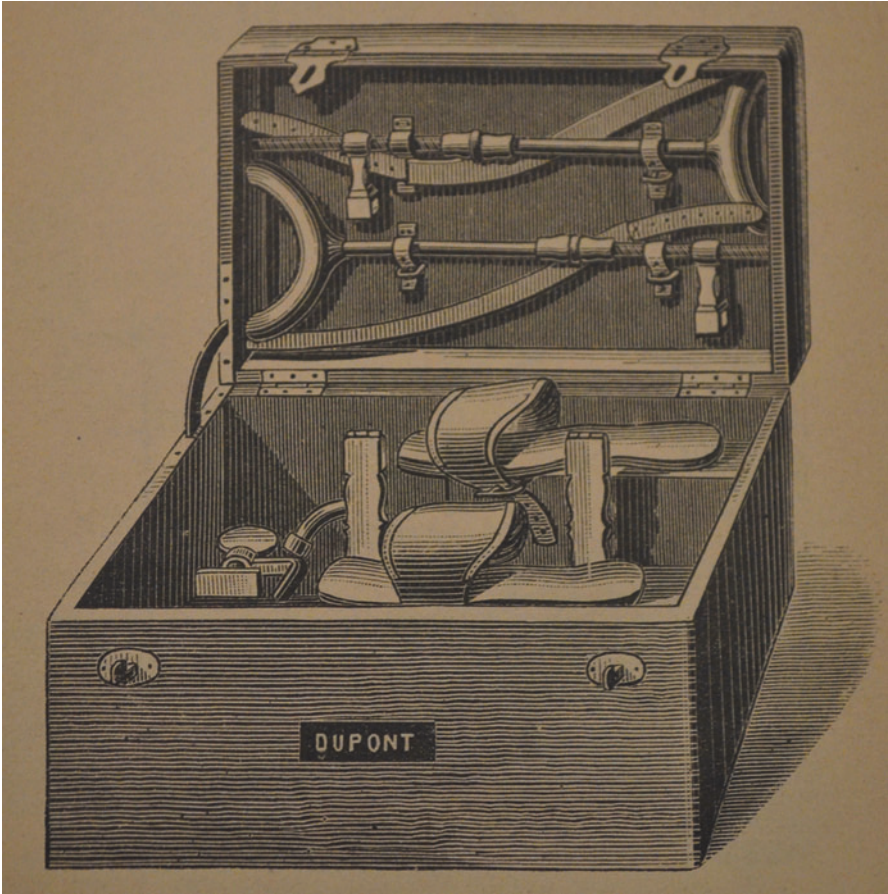


Fig. 6 Dupont Portable Stirrup. Joseph Gérard, *Nouvelles causes de stérilité dans les deux sexes: Fécondation artificielle comme moyen ultime de traitement* (Paris, 1888), pp. 387–8

and mutations of the term ‘test tube baby’ demonstrates this movement, and shows one of the ways in which ideas and practices of artificial insemination were transformed.

As illustrated in Fig.2 above, the term ‘test tube baby’ was used from at least 1900 onwards, although its use increased rapidly leading up to the birth of the first baby conceived through in vitro fertilization (IVF) in 1978. A recognizably modern concept of test tube babies, however, is usually thought of as originating with Aldous Huxley’s *Brave New World* (1932), a dystopian novel which opens in a ‘hatchery and conditioning centre’ where sperm, ova, and eventually embryos and babies are stored and grown within the confines of glass tubes to create specific classes of humanity. Harking back to the imaginary

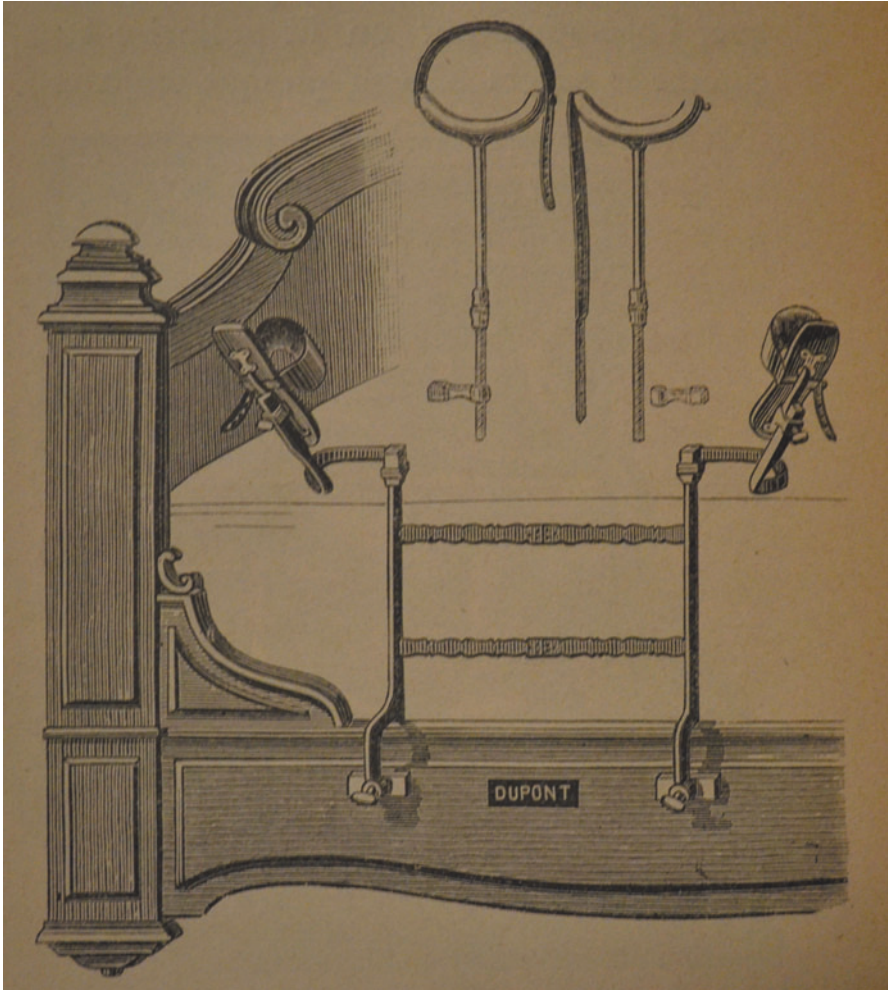


Fig. 7 Dupont Portable Stirrup seen *in situ* – Attached to Patient’s Bed. Joseph Gérard, *Nouvelles causes de stérilité dans les deux sexes: Fécondation artificielle comme moyen ultime de traitement* (Paris, 1888), pp. 387–8

‘baby factories’ which caused such concern in late nineteenth-century French society, Huxley’s invention of the ‘hatchery’ critiqued the separation of sex from reproduction and the hedonism and consumerist mass culture of the interwar period. *Brave New World* also reflected the interwar fascination with science and eugenics. By the interwar era the ‘test tube baby’ had emerged as a cohesive idea and the term was being used to describe conception via artificial insemination. In 1934, the German émigré gynaecologist Hermann Rohleder (1866–1934) noted that children born from artificial impregnation were

'commonly referred to as Test Tube Babies in English-speaking countries'.³⁶ The term also abounded in lay newspapers, journals, and magazines, whether in salacious stories such as '13 Babies in New York Have Test Tube as Father!' or more sober explorations such as 'Test-Tube Babies, A Medico-Legal Discussion.'³⁷ However, the association between test tubes and assisted reproduction significantly predated such headlines. Alternative origins and understandings of 'test tube' reproduction emerge if we trace references to the tubular object itself.

One of the earliest linkages of the term 'test tube' to artificial insemination occurred when Brooklyn physician Eliza Mosher (1846–1928) led a discussion on sterility at the Women's Medical Society of New York State's annual meeting in Buffalo in 1912. Mosher instructed her audience on a 'field peculiarly adapted to women in medicine': the history, results, and practice of 'Artificial Impregnation'. To her it had 'long seemed not only a proper procedure, but one offering results far-reaching and of the greatest importance'. She provided a detailed description of her technique, which reveals not only the potential origin of the term 'test tube' in relation to assisted reproduction (a heated helper for sperm within the vagina) but also the technical and social manoeuvres that occurred within the physician's office space:

My own technic is as follows: I give careful instructions to my patient regarding the aseptic collection of the seminal fluid [...]. A sterile well-covered receptacle [...] [is] placed in readiness in my office dressing room. My patient meets her husband there and brings me the seminal fluid in a warm bath to maintain its temperature. I place her on the operating table [...] and] the semen is carefully instilled into the uterine cavity [...]. [Then] a 'test tube' containing very warm water and closed with a cork, is inserted into the vagina a couple of inches to promote by heat the activity of the spermatozoa.³⁸

This practice presents a radically different vision from the 'test tube babies' of later years, in which the test tube is a receptacle for creating life *externally* to the human body. Instead, this early example suggests that test tubes became linked to artificial insemination because they played an important role in the *internal* process of insemination.

Other physicians used the test tube as a collection device, albeit one more intimately in contact with female and male bodies. In 1920, the famed American gynaecologist Robert L. Dickinson (1861–1950) explained that men were given a sterile test tube, dry and corked, to 'secure a friction specimen' an hour before an impregnation procedure. He further suggested that women could use the test tube as a collection device, inserted into the vagina directly after coitus, in cases where 'a man avers that he is desirous of having children but refuses to take the steps necessary to prove that the fault is not his'.³⁹ By using the test tube as an internal collection device physicians could check the man's sperm count, perform inseminations, and

awkwardly put the sexual act back into a process that, in many ways, was meant to replace it.

Not all physicians approved of using ‘test tube babies’ to refer to children born as a result of the practice of artificial insemination. For instance, Dr Samuel Meaker noted that ‘a quantity of most unfortunate publicity has been given by the lay press to the subject of artificial insemination, under the ridiculous caption of “test-tube babies”. I call this publicity unfortunate, because it is inevitably destined to raise among childless people false hopes which are doomed to disappointment’.⁴⁰ In Meaker’s eyes, then, use of the term ‘test tube baby’ was symbolic of the belief the public held in the efficacy of science. The phrase also caused confusion as to what sort of intervention was being practised. He went on to say:

The lay press, with its characteristic preference for sensationalism rather than accuracy, confuses the two [practices of artificial impregnation]. They are, as a matter of fact, entirely separate. The first is the value of artificial insemination simply as a therapeutic measure in sterility. The second is the propriety of artificially introducing semen from an alien donor into the wives of hopelessly sterile husbands or into unmarried women.⁴¹

The term ‘test tube babies’ did not differentiate between the use of a husband’s versus a donor’s sperm; it was a catch-all phrase that stood for any intervention into conception. For Meaker and other physicians, this lack of specificity meant that artificial impregnation opened up dangerous hopes, fears, and confusion. Nevertheless, the phrase ‘test tube baby’ has continued to be inextricably tied to artificial insemination and subsequent assisted reproductive technologies.

These early uses of test tubes in artificial impregnation hint at a different etymology for ‘Test Tube Babies’ than simply the fictional *Brave New World* or the more recent therapy of IVF. They remind us that the domains between lay language and biomedical practices were permeable. Although it is impossible to know whether patients or the public were explicitly referring to the uses of test tubes in early artificial impregnation practices, the two became firmly linked symbolically. As symbols of medical science and everyday laboratory practices the test tube was a locus for both the public’s fears about artificially intervening in reproduction and its hopes that science might offer new solutions to problems of reproduction.

TERMINOLOGICAL CONSENSUS: DEFINING CONCEPTION, INSEMINATION, AND THE AMERICAN FAMILY

The shift from ‘artificial fructification’ and ‘fecundation’ to ‘artificial insemination’ was part of the movement within twentieth-century scientific discourses to more closely define abstract biological processes.⁴² Put differently, it was meant to help combat the confusion that Meaker found so problematic.

This section traces changing uses of the terminology of 'artificial insemination' through interwar scientific studies in urology to postwar concerns about the practice of donor insemination. Through nomenclature we can see an important shift in the diagnostic focus onto male bodies, as reproductive specialists transformed definitions of (in)fertility and made semen the focus of the technique (in contrast, for example, to Sims's earlier emphasis on the uterus). At the same time, physicians continued to debate both the role of the practice and the name of the procedure. Was artificial insemination a simulation of 'nature' or a scientific improvement on it? Should the name describe the tools used in the process or the process itself? Was it important that the name reflect the eventual result – pregnancy? While practitioners bitterly argued all sides, the nomenclature of 'artificial insemination' was finally consolidated by a shift in practice – the use of sperm from anonymous donors. Once clinical practice tended towards the use of donor sperm the nomenclature came to emphasize semen *and* marriage. 'Artificial insemination using husband's sperm' (AIH) and 'artificial insemination using donor sperm' (AID) came to dominate medical diction for much of the twentieth century.

A survey of *Reader's Digest* (which tracks over 60 popular women's, science, and general interest magazines) for the period 1905–45 suggests that the terms 'artificial impregnation', 'artificial fecundation', and 'artificial fertilization' continued to be used in common parlance until at least the 1930s, when 'artificial insemination' became the most prominent term employed.⁴³ The term 'artificial insemination' had gained purchase much earlier in the medical literature. By 1890, 'artificial fecundation' began to be cross-referenced to 'artificial insemination'.⁴⁴ In the late nineteenth and early twentieth centuries, 'insemination' gradually surpassed 'fertilization' and 'fecundation' and this shift indicates changes in the medical and symbolic function of the procedure. By the dawn of the twentieth century, a new public health movement argued for public education about the perils of venereal disease (particularly for women and children within marriage) and explored experimental therapies to combat resulting fertility issues. As Anne Hanley shows in her contribution to this volume, venereal disease came to be understood as the leading cause of sterility in the early twentieth century. The effects on women were well studied but urologists discovered that in men, gonorrhoea caused decreased or absence of sperm production.⁴⁵ With male bodies as their subjects, it is not surprising that urologists saw semen as a mode of disease transmission and a vehicle for infection. This perspective led to a new focus on the study of spermatozoa, with special attention devoted to the effects of disease on reproductive outcomes. These investigations coincided with early urological discussions of artificial impregnation, which began to be published in specialist journals around 1915.⁴⁶

At around the same time, the USA entered the First World War and controlling venereal disease became an important part of the US war effort. Urologists went to Europe with the American Expeditionary Forces to provide medical care and manage the sexual health of the army. As a result of the war,

urologists not only had more access to male bodies but funding for research into the biochemistry and physiology of sperm increased. This research led to a transition in the classification of spermatozoa. Nineteenth-century gynaecologists who performed artificial insemination, like Gérard and Sims, had attempted to check sperm under a microscope before proceeding with an insemination. But their estimations of the potential of sperm to be effective in conception relied on rough classifications like *weak*, *average*, and *excellent*. After the First World War, urologists were able to move towards a more systematic definition of normal/abnormal sperm and semen.⁴⁷ Gerald Moench's 1929 publication on the structure of sperm in humans was the landmark in the field, pioneering the enumeration of sperm per cubic centimetre (cc) and new analyses of the shape (morphology), movement, and appropriate thickness (viscosity) of semen samples. As urologists clarified the role of spermatozoa in sterility, physicians attempted to employ artificial insemination in more directed ways: to both concentrate samples displaying low sperm count (oligospermia) and to substitute a donor's sperm for that of a husband suffering from azoospermia (absence of sperm).

These changes in the diagnosis of sterility and in the practice of artificial insemination instigated debates over nomenclature that eventually led to consensus around the terminology of artificial insemination by husband (AIH) and by donor (AID). These debates incorporated rhetorical battles about heredity, fears of 'race suicide', and the dire effects of the influx of immigrant hordes to US shores, but above all centred on the status of the American family. Other terms emerged briefly but never gained traction. Nevertheless, the terms left by the wayside tell us much about the medico-political context of early twentieth-century uses of artificial insemination.

Some physicians suggested that 'artificial cross-insemination' was the most appropriate term to explain the kind of 'cross pollination' that occurred when donor sperm was used.⁴⁸ Others concluded that 'X-insemination' was apt because it could denote an unknown person as donor (the X equating to 'unknown'). As well as highlighting the unknown or private nature of donation, X- or cross-insemination was also employed as a designation for cross-breeding for eugenic improvement.⁴⁹ The term 'insemination by foreign donor' was debated, but rejected on the grounds that 'foreign' might seem to imply a foreign-born donor – a disturbing prospect for some physicians, with Italian and Chinese men singled out as especially undesirable. The phrase 'non-marital or extra-marital artificial insemination' seemed 'less dubious' than 'foreign donor' because 'insemination by foreign donor' could refer to the standard ideal patient (a married woman who used donor sperm) but could also encompass a meaning in which an unmarried woman used the practice.⁵⁰ In 1954, Dr Wendy Stewart advocated using 'exogamous artificial insemination' when donor sperm was used, and 'endogamous artificial insemination' when a husband's semen was used. In other words, she perceived endogamy (the practice of marrying within one's class, or religion, or ethnic group) as synonymous with reproducing within marriage.

The particular concerns of different specialties also influenced terminological choices. In one of the most important urological articles on insemination, published in 1949, urologists M.L. Brodny and D. Rosen drew on their wartime experiences with blood transfusion (the transfer of fluids across multiple bodies) to argue that the term 'trans-semination' should be used instead of 'insemination'. They also objected strongly to the term 'heterologous insemination' on the basis that it could be taken to mean non-human semen.⁵¹ Even as late as the 1950s, the nomenclature around artificial insemination continued to evolve and to be contested. Some physicians endorsed classifications that were less concerned with *whom* the sperm came from than whether it was acquired inside or outside the woman's body. 'Insemination *ab extra*' could denote semen collected outside the body and introduced by a syringe or tampon into the body; 'insemination *ab intra*', also referred to as 'assisted insemination', indicated a particular method of insemination in which semen deposited in the genital tract during sex was extracted post-coitus and helped along to 'higher' regions using an instrument.⁵²

Even though the debates continued, disagreement had diminished considerably by the late 1940s. From this point, in the North American literature terminology began to coalesce around two pairs of terms that focused on the marital status of the couple – artificial insemination using the husband's or donor sperm (AIH and AID), and heterologous and homologous insemination. 'Homologous' (being of the same kind) indicated a traditional biological family in which the child was genetically related to both parents. 'Heterologous' ('being of a different kind') meant that the act of insemination occurred outside the marital context, and the child was not biologically related to both husband and wife. Until about 1960 these latter terms actively competed, and were even used interchangeably, with the abbreviations AIH and AID (see Fig. 3 above).⁵³ The biomedical classification attached to husbands and donors became highlighted in medical nomenclature during a period when the *New York Times* and *Chicago Tribune* splashed across their front pages the first divorce and custody cases entering the state courts about the status of children born using donated sperm, and endlessly debated the meaning of motherhood and fatherhood in these families.⁵⁴ This final consolidation of the vocabulary of AIH and AID reveals that in postwar US society, the status of marriage and the meaning of family were perceived as the most important aspects of the procedure.

CONCLUSION

In the decades following the end of the Second World War, the umbrella term 'artificial insemination' became accepted as the most common name for this form of assisted conception. Nineteenth-century discussions about treating female infertility with the new mechanical wonders of the industrial age, 'artificial fructification' and 'artificial fecundation', had gradually transformed to describe the treatment of a new diagnosis of male sterility by urologists using 'artificial insemination' by donor or husband. The same period also saw the dawn of the new lay terminology, adapted from the medical sphere, of 'test tube babies',

reflecting the unsettled place of assisted reproduction in the public imagination and a wide range of uses for test tubes in insemination attempts.

Exploring nomenclature and other controversies between reproductive scientists, practising physicians, and the public over a long span of time offers a unique perspective on continuities within the history of assisted reproduction – from social concerns about the implications for masculinity when sex is removed from reproduction, and the perceived artificiality of this separation, to the unchanged nature of the basic act of injecting sperm via a syringe to aid in conception. It also reveals discontinuities, as in the increased acceptance of the use of donor sperm in order to safeguard the family. Indeed, the tensions between artificial and natural reproduction have been a site of debate across generations, from early twentieth-century religious discussions about the artificiality of birth control right up to twenty-first-century hopes and fears about so-called ‘artificial sperm’ (sperm artificially produced in a laboratory using embryonic stem cells). As this chapter has demonstrated, the evolution of the nomenclature of ‘artificial insemination’ reflected such tensions as well as complex shifts in medical knowledge about reproductive bodies.⁵⁵

NOTES

1. The secrecy attending artificial insemination is further discussed in Gayle Davis’s and Hayley Andrews’s chapters in this volume. Historians of abortion and adoption have also noted and explored the difficulties of recovering historical sources of hidden, stigmatized, and illegal social and medical practices. Work in the history of adoption has traced how medical authorities, the state, and gender interacted to produce families whose origins were secret. The importance of secrecy in adoption effectively sealed adoption case records to historians, similarly to how the need to protect sperm donor anonymity and the ideal of the biogenetic family has effaced insemination records. For further discussion of these issues, see E. Wayne Carp, *Family Matters: Secrecy and Disclosure in the History of Adoption* (Cambridge, MA, 1998); Leslie Reagan, *When Abortion Was a Crime: Women, Medicine, and Law in the United States, 1867–1973* (Berkeley, CA, 1997).
2. Anne Taylor Fleming, ‘New Frontiers in Conception: Medical Breakthroughs and Moral Dilemmas’, *New York Times*, 49 (20 July 1980).
3. Dan Cohen, ‘Initial Thoughts on the Google Books Ngram Viewer and Datasets’: <http://www.dancohen.org/2010/12/19/initial-thoughts-on-the-google-books-ngram-viewer-and-datasets/>. Accessed 6 December 2016; Tim Schwartz, ‘Culturomics: Periodicals Gauge Culture’s Pulse’, *Science*, 332: 6025 (2011).
4. For other scholarship which analyses nomenclature and language in order to understand wider historical, political, and cultural contexts, see Keith Wailoo, *Drawing Blood: Technology and Disease Identity in Twentieth-Century America* (Baltimore, MD, 1999); Londa Schiebinger, ‘Skeletons in the Closet: The First Illustrations of the Female Skeleton in Eighteenth-Century Anatomy’, *Representations*, 14 (1986); Adele Clarke, *Disciplining Reproduction: Modernity, American Life Sciences, and the Problems of Sex* (Berkeley, CA, 1998); and

- Alexandra Stern, *Eugenic Nation: Faults and Frontiers of Better Breeding in Modern America* (Berkeley, CA, 2005).
5. Hermann Rohleder, *Test Tube Babies: A History of the Artificial Impregnation of Human Beings* (New York, 1934), p. 34. For more on the history of J. Marion Sims and issues of consent in medicine during slavery, see Todd Lee Savitt, *Medicine and Slavery: The Diseases and Health Care of Blacks in Antebellum Virginia* (Urbana, IL, 2002); Durrenda Ojanuga, 'The Medical Ethics of the "Father of Gynaecology", Dr J Marion Sims', *Journal of Medical Ethics*, 19 (1993); and David A. Richardson, 'Ethics in Gynecologic Surgical Innovation', *American Journal of Obstetrics and Gynecology*, 170:1 (1994).
 6. *The Medical Times and Gazette* (1866), pp.125–126.
 7. James Marion Sims, *Clinical Notes on Uterine Surgery: With Special Reference to the Management of the Sterile Condition* (New York, 1867), p. 193.
 8. On the replacement of expressions of generation with 'reproduction' from around 1850, see Barbara Duden, *The Woman Beneath the Skin: A Doctor's Patients in Eighteenth-Century Germany* (Cambridge, MA, 1991), p. 20.
 9. See Joseph Thomas, *A Comprehensive Medical Dictionary* (Philadelphia, PN, 1870), p. 273.
 10. Sarah Wilmot, 'Between the Farm and the Clinic: Agriculture and Reproductive Technology in the Twentieth Century', *Studies in History and Philosophy of Science Part C: Studies in History and Philosophy of Biological and Biomedical Sciences*, 38:2 (2007), p. 310.
 11. Paul Mundé, *Minor Surgical Gynecology: A Manual of Uterine Diagnosis and the Lesser Technicalities of Gynecological Practice: For the Use of the Advanced Student and General Practitioner* (New York, 1880), p. 367.
 12. Sims, *Clinical Notes on Uterine Surgery*, p. 366.
 13. Mundé, *Minor Surgical Gynecology*, p. 367.
 14. Mundé, *Minor Surgical Gynecology*, p. 367.
 15. Sims, *Clinical Notes on Uterine Surgery*, p. 370; Augustus K. Gardner, *On the Causes and Curative Treatment of Sterility, with a Preliminary Statement of the Physiology of Generation* (New York, 1856).
 16. Joseph Gérard, *Nouvelles causes de stérilité dans les deux sexes: Fécondation artificielle comme moyen ultime de traitement*. (Paris, 1888); Joseph Gérard, *Causes and Treatment of Sterility in Both Sexes: Fecundation by Artificial Methods*, trans. C.E. Warren (Boston, MA, 1891).
 17. Gérard, *Causes and Treatment of Sterility in Both Sexes*, Preamble.
 18. Sean Quinlan, *The Great Nation in Decline: Sex, Modernity and Health Crises in Revolutionary France c.1750–1850* (Aldershot, 2007), p. 11.
 19. Michael Finn, 'Female Sterilization and Artificial Insemination at the French Fin de Siècle: Facts and Fictions', *Journal of the History of Sexuality*, 18:1 (2009), p. 41.
 20. Philippe Marechal, 'Propos du docteur: La fecondation artificielle', *L'Écho de Paris*, 11 August 1885.
 21. *Chronique médicale*, 5 (1898), pp. 65–71.
 22. Félix Dehaut, *De la Fécondation artificielle dans l'espèce humaine comme moyen de remédier à certaines causes de stérilité chez l'homme et chez la femme* (Paris, 1865).
 23. Edmond Pelletier, 'Les fabriques d'enfants', *L'Écho de Paris*, 6 August 1885.
 24. Peter Gay, *The Bourgeois Experience: Victoria to Freud. Volume I: Education of the Senses* (New York and Oxford, 1984), p. 188; Angus McLaren, *Sexuality and*

- Social Order: The Debate Over the Fertility of Women and Workers in France, 1770–1920* (New York and London, 1983), pp. 59–62.
25. Robert A. Nye, *Crime, Madness, and Politics in Modern France: The Medical Concept of National Decline* (Princeton, NJ, 1984); Robert A. Nye, *Masculinity and Male Codes of Honor in Modern France* (Oxford, 1993), p. 217; Karen Offen, 'Depopulation, Nationalism, and Feminism in Fin-de-Siècle France', *American Historical Review*, 89 (1984); Joshua Cole, *The Power of Large Numbers: Population, Politics, and Gender in Nineteenth-Century France* (Ithaca, NY, 2000).
 26. Gérard, *Causes and Treatment of Sterility in Both Sexes*, 436.
 27. Martha Hildreth, 'Doctors and Families in France 1880–1930: The Cultural Reconstruction of Medicine', in Ann Elizabeth Fowler La Berge and Mordechai Feingold (eds), *French Medical Culture in the Nineteenth Century* (Amsterdam, 1994), p. 189.
 28. Robert A. Nye, 'Honor, Impotence, and Male Sexuality in Nineteenth-Century French Medicine', *French Historical Studies*, 16:1 (Spring 1989), pp. 48–9.
 29. Finn, 'Female Sterilization and Artificial Insemination at the French Fin de Siècle', p. 41.
 30. Philip Scranton and Susan R. Schrepfer (eds), *Industrializing Organisms: Introducing Evolutionary History* (New York and London, 2004).
 31. Elaine Tyler May, *Barren in the Promised Land: Childless Americans and the Pursuit of Happiness* (Cambridge, MA, 1997), pp. 43–59.
 32. Gérard, *Causes and Treatment of Sterility in Both Sexes*, pp. 388–9.
 33. Gérard, *Causes and Treatment of Sterility in Both Sexes*, p. 408. My emphasis.
 34. Gérard, *Causes and Treatment of Sterility in Both Sexes*, p. 405.
 35. Adele Clarke, *Disciplining Reproduction: Modernity, American Life Sciences, and the Problem of Sex* (Berkeley and Los Angeles, CA, 1998).
 36. Hermann Rohleder, *Test Tube Babies: A History of the Artificial Impregnation of Human Beings* (New York, 1934), p. xvi.
 37. '13 Babies in N. Y. Have Test Tube as Father', *Chicago Daily Tribune*, 1 May 1934; 'Test-Tube Babies, A Medico-Legal Discussion', *Scientific American* (January 1937).
 38. Elizabeth Mosher, 'Instrumental Impregnation', *Woman's Medical Journal*, 22 (1912), p. 223.
 39. Robert L. Dickinson, 'Artificial Impregnation', *American Journal of Obstetrics and Gynecology*, 1 (1920), pp. 255–61.
 40. Samuel Raynor Meaker, 'Correspondence: Two Questions Respecting Artificial Insemination', *New England Journal of Medicine*, 210:19 (1934), p. 1037.
 41. Meaker, 'Correspondence'.
 42. See Duden, *The Woman Beneath the Skin*; Ludmilla Jordanova, 'Interrogating the Concept of Reproduction in the Eighteenth Century', in Faye D. Ginsberg and Rayna Rapp (eds), *Conceiving the New World Order: The Global Stratification of Reproduction* (Berkeley and Los Angeles, CA, 1995), pp. 369–86.
 43. Compiled by author using the subscription-only research database *Readers' Guide to Periodical Literature*.
 44. John Billings (ed.), *The National Medical Dictionary*, Vol. I (Philadelphia, PN, 1890).
 45. Margaret Marsh and Wanda Ronner, *The Empty Cradle: Infertility in America From Colonial Times to the Present* (Baltimore, MD, 1996), p. 90.

46. For instance, Anon., 'Miscellaneous Abstracts: Artificial Impregnation', *American Journal of Urology and Sexology*, 11 (1915), p. 296; W.E.D. Stokes, 'Animal and Human Impregnation', *American Journal of Urology and Sexology*, 13 (1917), p. 472.
47. G.L. Moench and Helen Holt, 'Microdissection Studies on Human Spermatozoa', *Biological Bulletin*, 56:4 (1929), p. 267; Samuel Rayner Meaker, *Human Sterility: Causation, Diagnosis, and Treatment: A Practical Manual of Clinical Procedure* (Baltimore, MD, 1934).
48. Grant S. Beardsley, 'Artificial Cross Insemination', *Western Journal of Surgery, Obstetrics and Gynecology*, 48 (1940), p. 94; Frances I. Seymour, 'Eugenics in Practice: Cross Artificial Insemination', *Marriage Hygiene*, 3 (1936).
49. Seymour, 'Eugenics in Practice'.
50. 'Editorial: X-Insemination', *Western Journal of Surgery, Obstetrics and Gynecology*, 53 (1945), p. 209.
51. M.L. Brodny and D. Rosen, 'The Urologist and Artificial Insemination', *Journal of Urology*, 61:5 (May 1949), pp. 960–6.
52. A.M. Schellen, *Artificial Insemination in the Human* (Amsterdam, 1957), p. 3.
53. S.J. Behrman and Yoshiaki Sawada, 'Heterologous and Homologous Inseminations with Human Semen Frozen and Stored in a Liquid-Nitrogen Refrigerator', *Fertility and Sterility*, 17:4 (1966), p. 459.
54. See 'Synthetic Baby Gives Divorce to Ex-Soldier', *Chicago Daily Tribune*, 10 February 1945; 'Artificial Bastards?', *Time*, 45 (26 February 1945), p. 58; 'Soldier to Accuse Wife of Adultery in "Test Tube" Divorce', *Chicago Daily Tribune*, 21 August 1945; 'Mother Wins Divorce: Parent of "Test-Tube" Son, 5, Gets Decree in Chicago', *New York Times*, 19 January 1955.
55. The terminology has continued to evolve since the postwar era. The current use of terms such as intrauterine insemination (IUI), intravaginal insemination (IVI), and intracervical insemination (ICI) reflects highly specialized medical knowledge and the technical placement of sperm inside a woman's body.

RESEARCH RESOURCES

Primary Sources

- Joseph Gérard, *Nouvelles causes de stérilité dans les deux sexes: Fécondation artificielle comme moyen ultime de traitement* (Paris: C. Marpon & E. Flammarion, 1888).
- Samuel Rayner Meaker, *Human Sterility: Causation, Diagnosis, and Treatment: A Practical Manual of Clinical Procedure* (Baltimore, MD: Williams & Wilkins Co., 1934).
- Hermann Rohleder, *Test Tube Babies: A History of the Artificial Impregnation of Human Beings* (New York: Panurge Press, 1934).
- A.M. Schellen, *Artificial Insemination in the Human* (Amsterdam: Elsevier, 1957).

Secondary Sources

- 'From the Farm to the Clinic': Special Issue on Assisted Reproduction, *Studies in History and Philosophy of Biological and Biomedical Sciences*, 38:2 (June 2007).
- Adele Clarke, *Disciplining Reproduction: Modernity, American Life Sciences, and the Problems of Sex* (Berkeley, CA: University of California Press, 1998).

- Cynthia Daniels, *Exposing Men: The Science and Politics of Male Reproduction* (Oxford and New York: Oxford University Press, 2006).
- Cynthia Daniels, 'Procreative Compounds: Popular Eugenics, Artificial Insemination and the Rise of the American Sperm Banking Industry', *Journal of Social History*, 38:1 (2004), 5–27.
- Michael Finn, 'Female Sterilization and Artificial Insemination at the French Fin de Siècle: Facts and Fictions', *Journal of the History of Sexuality*, 18:1 (2009), 26–43.
- Sarah Franklin, *Embodied Progress: A Cultural Account of Assisted Reproduction* (London and New York: Routledge, 1997).
- Ludmilla Jordanova, *Sexual Visions: Images of Gender in Science and Medicine between the Eighteenth and Twentieth Centuries* (Milwaukee, WI: University of California, 1993).
- Laura Mamo, *Queering Reproduction: Achieving Pregnancy in the Age of Technoscience* (Durham, NC: Duke University Press, 2007).
- Margaret Marsh and Wanda Ronner, *The Empty Cradle: Infertility in America from Colonial Times to the Present* (Baltimore, MD: Johns Hopkins University Press, 1996).
- Elaine Tyler May, *Barren in the Promised Land: Childless Americans and the Pursuit of Happiness* (Cambridge, MA: Harvard University Press, 1997).
- Martin Richards, 'Artificial Insemination and Eugenics: Celibate Motherhood, Eutelegensis and Germinal Choice', *Studies in History and Philosophy of Biological and Biomedical Sciences*, 39:2 (2008), 211–21.
- Alexandra Stern, *Eugenic Nation: Faults and Frontiers of Better Breeding in Modern America* (Berkeley and Los Angeles, CA: University of California Press, 2005).
- Kara W. Swanson, *Banking on the Body: The Market in Blood, Milk, and Sperm in Modern America* (Cambridge, MA: Harvard University Press, 2014).

Silences: Coping with Infertility in Nineteenth-Century Germany

Christina Benninghaus

INTRODUCTION

Experiences of infertility are hard to recover. Nineteenth-century women and men who encountered reproductive difficulties left little trace in the historical record. Even those who wrote diaries and autobiographies rarely dwelt on their childlessness. But why? Was infertility a taboo – a topic which could not be broached? Or is reticence regarding infertility better understood as a reaction to stigmatization and as a coping strategy?

In this chapter, I explore the silence which surrounded infertility. I work from the assumption that communication is composed of discourses and silences, both of which are shaped by expectations, norms, and scripts.¹ But while discourses can be reconstructed and analysed, silences pose special epistemological problems. Rather than studying them, historians might find themselves replicating silences as they are ingrained in historical sources and archives. Regarding infertility, historians have been slow to take up the topic, possibly echoing the reticence of past subjects.

For the purpose of this chapter, I analyse letters, diaries, and autobiographies by people who encountered reproductive difficulties as well as fictional texts which dealt with unintended childlessness. Exploring silences, I find myself in a paradoxical situation: I need texts to reconstruct silences and to understand their meanings – texts which describe silences, texts which tug at the seams of silences, texts which break silences.

As such sources are rare and hard to find, this chapter cannot draw on a comprehensive text corpus that would allow systematic comparisons according to gender, class, or chronology. Instead, the sources used here are best

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understood as serendipitously encountered islands emerging from a sea of silence. There are, however, interesting resonances between these texts which point to an underlying understanding of infertility as a social stigma, to gender differences in dealing with infertility, and to a long-term shift in perceptions of childlessness.² That these sources are heavily biased with regard to the socio-cultural background of their authors is not surprising but mirrors contemporary power relations.

PERPETUATING SILENCES, REPRODUCING STIGMA? A NOTE ON METHODOLOGY

Reproductive difficulties are not new, but in histories of the family, reproduction and sexuality, and gender, unintended childlessness is rarely mentioned. Somehow, the topic has been slow to capture the attention of historians. Why? According to Michel-Rolph Trouillot,

silences enter the process of historical production at four crucial moments: the moment of fact creation (the making of *sources*); the moment of fact assembly (the making of *archives*), the moment of fact retrieval (the making of *narratives*); and the moment of retrospective significance (the making of *history* in the final instance).³

Apart from historical situations in which succession to a throne was in question, infertility is usually not considered relevant to grand historical *narratives*. But it also does not fit easily into narratives advanced by gender and cultural historians. Unsurprisingly, given their own struggles to question gender stereotypes, the medicalization of reproduction and the glorification of motherhood, feminist historians have been more interested in analysing histories of birth control and abortion, and pregnancy and childbirth, than in reconstructing past experiences of infertility. Their choices resonate with the political agendas of historical actors. While shrinking or already low birth rates were often considered dangerous, infertility was usually not conceived of as a public health problem.⁴ Historians looking for the emergence of the ‘preventive self’ or the ever-growing importance of biopolitics will find infertility an unwieldy issue.⁵

Regarding the *archive*, it seems plausible to assume that childless men and women often lacked devoted inheritors who would preserve and possibly also publish their private papers. But the silences surrounding infertility were not only created or prolonged by historians and archivists, they seem to originate at the level of *source production*. Doing research for what became a path-breaking study on the history of infertility, Margaret Marsh and Wanda Ronner noted the ‘extraordinary reticence of late nineteenth-century Americans when they were unable to have children’. Despite searching intensively among memoirs and papers of nineteenth-century women, they were able to dig up only a handful of texts in which women spoke about their experiences of infertility. According to Marsh and Ronner, this could not ‘be accounted for simply by

reference to Victorian sensibilities. The freely shared confidences between sisters and mothers and daughters about their hopes and fears in pregnancy, or between brothers about their wives' confinements [...] had no parallel among the infertile'.⁶

How might this reticence be explained? While frustrating to the historian, it would have made sense to the historical subjects themselves. It would have served a purpose, if not several. In recent years, historians have become increasingly interested in studying silences. In her book on *Family Secrets*, Deborah Cohen has shown that secrets and silences could be beneficial. They helped Victorian bourgeois families to live with 'deviant' behaviour like homosexuality or misfortunes like childlessness or disability. A firm belief in the virtue of secret-keeping shielded the private realm from scrutiny, thereby creating manoeuvring space for deviation and its tacit acceptance while also strengthening family bonds.⁷ Like Cohen, Aleida Assmann has pointed to the capacity of reticence to integrate communities, from the family to the nation. To temporarily avoid certain all-too-painful topics can help to overcome trauma on the individual and the collective level. But silence can also be oppressive, shielding aggressors instead of victims.⁸

Silences are not always accepted, secrets not necessarily kept; both are also negotiated, as boundaries between what can be said and what cannot, and to whom, when and under which circumstances, are imposed and as they shift. 'Sexuality' as understood in the nineteenth century would be a case in point, as Kate Fisher has argued in a recent article. As the knowledge about sexuality was constructed as both important and hard to obtain, to negotiate the boundary between ignorance and knowledge was an important way of speaking about sexuality.⁹

To assume that silences are meaningful parts of communication processes and deserve historical attention does not solve the empirical problem of how to study and interpret them. Sociological, ethnological, and psychological studies on infertility indicate that there are many sociocultural settings in which people encountering reproductive difficulties prefer to remain silent.¹⁰ In today's Western societies infertility constitutes a potentially 'hidden stigma', as childlessness can be presented as voluntary. In developing countries and especially in pronatalist developed societies like Israel, by contrast, few people have the possibility of effectively concealing reproductive difficulties. When interviewing Israeli women, Larissa Remennick found that many of her informants tried to hide their involuntary childlessness by presenting themselves as merely postponing pregnancy. Some women were very reserved and 'preferred to conceal their true story from everyone including the parents on both sides'.¹¹ Many childless women increasingly narrow their circle of communication, avoiding close emotional ties and situations in which they will encounter many children and/or pregnant women, a behaviour dubbed 'strategic avoidance'. Irish couples have been shown to resort to reticence in an attempt to avoid 'painful conversations and unwelcome advice, criticism, or questions'. They choose isolation rather than confrontation. In keeping their experiences and feelings

to themselves, they participate in a culture which regards reproduction and fertility as normal and infertility and voluntary childlessness as deviation. Silence, hence, has a double-edged quality: it shields from scrutiny and stigmatization but also helps to perpetuate the ‘myth of fertility as a universal experience’.¹²

Silence can even prevail between spouses. A recent study on African-American women encountering reproductive difficulties showed that virtually all respondents mentioned ‘silence and isolation as defining features of their relationships with other people’.¹³ Many apparently also refrained from talking about their emotions regarding childlessness with their partner. According to the authors, several explanations might be offered including the wish not to exacerbate feelings of shame and failure, the belief that talking would be of little practical use, and a specific culture of silence which encourages African-American women to value privacy and self-reliance.

As psychological studies indicate, not disclosing experiences of infertility might, in fact, be beneficial to the concerned individuals. Measuring distress in involuntarily childless men and women, some researchers concluded that women’s tendency to disclose their feelings more freely than men might actually be a disadvantage in coping with infertility. Although this might appear counter-intuitive, speaking about experiences of infertility can apparently aggravate feelings of failure and despair.¹⁴ Men and women still seem to follow different emotional scripts, as a study on couples unsuccessfully treated for infertility at a UK National Health Service hospital suggests, with women blaming partners for not sharing their grief and sorrow and men feeling obliged to ‘be strong for her’.¹⁵

Studies on experiences of infertility both in developed and developing societies indicate that to avoid speaking about one’s feelings is a common coping strategy, often shielding couples from hurtful remarks or nosy enquiries. But reticence with regard to infertility also helps to uphold social expectations of universal fertility. Explicit resistance to such expectations is apparently rare and reserved to those commanding considerable social, economic, and cultural capital.¹⁶

DELINEATING SILENCES

Was infertility a topic avoided in nineteenth-century communication? At first sight, the opposite might appear to be true. Biblical stories and folk tales, which portrayed the childless as desperate, were part of the collective imagination, prayers for the childless were included in widely circulated prayer books, and reproductive difficulties were mentioned in health advice literature. With about 5% of all marriages remaining childless, infertility was also highly visible in everyday life. So how could it have been silenced?

Couples unable to reproduce did not meet social expectations. ‘Quickly, tell me: has a May flower blossomed from this spring time love?’, Friederike Brun asked her close friend Caroline von Humboldt in 1815 soon after Caroline’s

daughter Adelheid had married at the very tender age of 14.¹⁷ As Caroline duly reported, the young girl was not pregnant. She would, indeed, never get pregnant during the 40 years of her marriage. But while the childless could not hide their infertility, they did not necessarily want to disclose assumed causes, feelings, and strategies. Judging from diaries, autobiographies, and letters, as well as from literary representations, infertile men and women in Germany, like their US contemporaries, often resented and avoided talking about their difficulties in conceiving. Biographers are left to wonder what people made of their childlessness.

To give three examples: the Prussian politician Ernst Ludwig von Gerlach (1795–1877) was married for 29 years. His biographer notes: ‘It must have pained Gerlach that his marriage remained childless, since he saw the “father” as an earthly image of God – but he never mentions it even in his most intimate writings, his letters and diaries’.¹⁸ Bärbel Meurer based her biography of Marianne Weber (1870–1954) on thousands of pages of family correspondence and on Marianne’s autobiographical writings. As is well known, the marriage of Max and Marianne Weber was childless. But why? The biographer thinks that if the childlessness had been intended, this would have been communicated to Helene Weber, Max’s mother, as Marianne and Helene were very close.¹⁹ But as in the case of Gerlach, the biographer can only speculate because Marianne refrained from commenting on reproduction. With regard to the writer Marie von Ebner-Eschenbach (1830–1916), married in 1848, researchers have noted that her extensive diaries do not reveal what she thought about her childlessness. Literary critics disagree on whether her novels, in which maternal characters are prominent, can be read as testimony to her own feelings. As one author argues: ‘The fact that her marriage was not blessed with children – for reasons which were never openly explained – must have left her unfulfilled in view of her boundless love of children – readily gleaned and richly documented in her fiction’.²⁰ Again, biographers are forced to speculate. But because posthumous papers are never complete, the silence might be one of the *archive* and not a reflection of practices of communication.

To explore this issue, I propose to turn to fictional representations of infertility. Though not particularly common, they indicate that those encountering reproductive difficulties might have tended to refrain from talking about their feelings and desires.²¹ In literary texts of the late nineteenth and early twentieth centuries, reticence in speaking about infertility is represented as clearly gendered. In Thomas Mann’s (1875–1955) 1901 novel *Buddenbrooks* but also in other literary texts, we encounter men who engage in inner monologues concerning the infertility of their marriage but who refrain from talking about their feelings and thoughts to their wives.²²

Communication between spouses, or a lack thereof, is also at issue in Clara Viebig’s (1860–1952) bestselling novel *The Son of His Mother* (1906), one of the few German novels in which childlessness takes centre stage.²³ The main

characters, Paul and Käte Schlieben, a well-to-do couple from Berlin, both desire children, but try to hide their feelings.

No doubt he sighed and knit his brow in unguarded moments when he sat at his desk in his office, but especially when he passed through the villages in the Brandenburg March on the rides he took in the more distant environs of Berlin [...] and saw swarms of little flaxen-haired children romping on the sandy roads. However, he did not let his wife perceive that he missed something, for he loved her.²⁴

Käte does not succeed in controlling her feelings in the same manner. Returning from his office, Paul finds her ‘sweet face stained with tears, her delicate complexion marred by constant weeping. And her mouth only forced itself to smile, and in her beautiful brown eyes there lurked a certain melancholy’.²⁵

Käte is profoundly unhappy, missing the company of children, their tenderness and the diversion they would bring to her everyday life. She also fears the loneliness of a childless old age. Spending long afternoons all by herself in their beautiful house, she becomes increasingly depressed. She avoids situations which would remind her of what she is missing: ‘She persistently turned her eyes away from the announcement of births in the newspapers with a certain shrinking, and, if her glance happened once in a while to fall on one in which happy parents notified the birth of a son, she put the paper aside hastily’. She stops making the little children’s garments for which she had been ‘quite famous’. Lying on her couch, she even stops her ears so as not to hear the joyful cries of children playing outside on the promenade.²⁶

As Käte becomes increasingly nervous and melancholic, the couple decide to travel. Their voyage to Greece and Egypt, the Scottish Highlands and Norway leads to a certain reversal of gender roles. While Käte finds great pleasure in painting and starts to think of her works as a kind of legacy, Paul cannot quite adjust to a leisured life. Now, it is his turn to question the purpose of a childless life:

Why does a man marry? Only to have children, heirs of his body, of his blood. Children to whom he can pass on the wishes and hopes that are in him and also the achievements; children who are descended from him like shoots from a tree, children who enable a man to live eternally.²⁷

Paul sighs but does not share his thoughts with his wife. Even while they are travelling, they try not to talk about their childlessness.

As the story advances, this silence is broken. In a succession of scenes, tension builds up as Paul and Käte can no longer contain their feelings. First, Paul – frustrated by watching Käte doting on two children – loses his imperceptible countenance: ‘the words escaped from his lips although he had not

intended saying them, drawn from him by a bitterness that he could not master any longer'.²⁸ On a second occasion, Käte is devastated because her hopes of being pregnant have been destroyed. Reminded of the tender love and high hopes with which they had entered marriage, she starts to cry. But Paul is unable to comfort her:

So that was it – the same thing again? Confound it. He who as a rule was so temperate stamped his foot violently. Anger, shame, and a certain feeling of pain drove the blood to his head. There he stood now in that lonely place with his wife in his arms weeping most pitifully, whilst he himself was deserving of much pity in his own opinion.²⁹

In the third scene, it is again Käte who breaks the silence. The couple have encountered a little boy and Käte is determined to adopt him. The conversation takes place late at night:

He noticed that she had something on her mind, which she would like to tell him but which she had hardly the courage to say. So he asked her.

Then she had confessed it to him, hesitatingly, shyly, and yet with so much passion that it terrified him. It was the child of which she had been thinking the whole time, of which she always must think – oh, if only she had it. She would have it, must have it [. . .]. She had become more and more agitated in the darkness of the night, uninterrupted by a single word from him, by any movement – he had lain quite quietly, almost as though the surprise had paralysed him, although it could not really be called a surprise any more. What was her whole life? She had said. A constant longing. All the love he showered on her could not replace the one thing: a child, a child.³⁰

As Käte breaks the silence, Paul feels threatened. He is overwhelmed by feelings of anger and shame, he is 'paralysed' and 'terrified'. Although he is perfectly aware that Käte longs for children, he is still taken by surprise. Flabbergasted, he is manipulated into accepting an adoption which, as the reader will soon come to understand, is morally wrong and will have disastrous consequences. The little boy, wrested from his mother, cannot flourish in a dramatically altered environment. Käte's hopes that he will become her son are flawed, because he will always stay 'the son of his mother'. A healthy baby, he grows into an uncontrollable, alienated, and morally corrupt teenager. Dying aged 19, he leaves his parents burdened with guilt and regrets. Addressing the pains of infertility, the reader might learn, can have devastating consequences.

A comparable moment of breaking the silence is described in Adalbert Stifter's (1805–68) *The Wanderer in the Forest* (1847). Corona and Georg are a loving couple and lead a rather solitary life. While Georg needs to travel – he is an architect – Corona avoids leaving their home. Her only company is a childless widow. Despite their solitude, on the whole the couple are very happy.

There was only one thing lacking to make their happiness complete: they had no children. They had been married for three years, and although they would only dare to talk about the sorrow this caused them when completely alone with each other, the widow, with a woman's intuition, sensed it, and never tired of telling them about people who had been married for so and so many years, without being blessed with children, who suddenly did have them, and often enough, several.³¹

In the early years of their marriage, the couple 'dare' to speak about their childlessness, if only in private. The widow, doubly qualified because of her own childlessness and her love for Corona, offers support and consolation. Most of the time, however, Georg's and Corona's feelings are only betrayed by the glances they cast at other people's children. Twelve years into their marriage, which has lost much of its initial sparkle and intimacy, they attend a private ball, a highly unusual occasion in Corona's secluded life. There Corona witnesses the pleasure which other people, both men and women, derive from their children. Some days later, she decides to break the silence. She visits Georg in his study with the intention of proposing a divorce. According to her, their marriage, though happy, is meaningless as they cannot have children. Just like Paul Schlieben, Georg is flabbergasted and does not know how to reply. He responds, 'Corona, I don't know how to answer. I wasn't expecting this. I've never even thought about it. What will people say?', and 'Corona, my wife [. . .] – I don't know what to say – what you're saying is so strange. This isn't how it is, it really isn't'. And later, 'just one more thing, Corona, and then we'll drop the subject'.³² Georg cannot muster the courage and energy to resist Corona's idea and agrees to divorce, a decision he will come to regret deeply. Although he has children in his second marriage and, later, takes pleasure in caring for the child of strangers, he ends up lonely and ashamed of himself, knowing that he has allowed himself to be cut off from the woman who should have been his lifelong companion. Just as in Viebig's *The Son of His Mother*, the conversation between Georg and Corona marks a turning point. It interrupts a normality stabilized by silence in which confrontations between spouses had been successfully avoided. Silence and 'strategic avoidance' had been preconditions for enduring childlessness.

I do not want to suggest that fictional representations of conversations should be read like protocols of real exchanges. But it seems remarkable that authors tended to rely on inner monologues when exploring feelings associated with infertility. Conversations about childlessness between spouses are presented as highly unusual, functioning as narrative turning points. Regarding female styles of communication, however, representations are somewhat different. In several of the novels, we find examples of female support and/or interference. The character of the childless widow, who tries to comfort Corona, has already been mentioned. In Thomas Mann's *Buddenbrooks*, while Thomas Buddenbrook muses about the childlessness of his marriage

and fears that his wife might not be interested in children, his mother intervenes and talks to the family doctor, who orders a trip to a spa.³³

A similar situation is described in Theodor Fontane's (1819–98) *Irrungen, Wirrungen* (1888). When the marriage of Botho and Käte von Rienäcker remains childless for almost two years, mother and mother-in-law intervene. They 'had incessantly urged that a specialist should be consulted by whose advice, after a gynaecological examination (which, by the way, proved very expensive), a four weeks' stay at Schlangenbad health resort was pronounced indispensable and was accordingly decided upon'.³⁴ Likewise, in Hans von Hoffensthal's (1877–1914) novel *Lori Graff* (1909), the mother-in-law interferes. She nudges Lori because of her childlessness, insinuating that their infertility cannot possibly be caused by her son. Lori remains silent, thereby hiding the fact that her husband has infected her with gonorrhoea which has rendered her sterile.³⁵

Fictional representations of infertility indicate that the topic was not taboo. It could be broached if necessary. They also suggest that talking about infertility was difficult and usually avoided for a variety of reasons. Reticence could help the infertile to cope with a situation not of their own making, it could shelter spouses from overwhelming emotions, from sadness, guilt and shame, and thereby stabilize relationships. It could also mask indifference, a point I will return to later. Gender differences were certainly presented as substantial when it came to dealing with infertility. Women appear as less capable of disguising their feelings and more likely to receive some form of support from their families. This resonates not only with the sociological and psychological studies already mentioned in this chapter, but also with historical analysis based on personal papers, like those I will turn to next.

DISCLOSURE, COMFORT, AND SUPPORT

Support offered by family and friends in face-to-face communication is beyond the grasp of the historian. We will never know how many Coronas there were, who could count on the support of other childless women. In some cases, however, letters served as a substitute for direct interaction.

The family correspondence of Mathilde, Bavarian princess and future Grand Duchess of Hesse, and her brother Otto, King of Greece, is a case in point. Coming from a very large family, both remained childless, which for reigning couples was often considered disastrous as the lack of heirs could result in political instability.³⁶ In their letters, the siblings exchanged experiences and reflected on coping strategies.

Mathilde, to give an example, told Otto about an argument with her husband in which she had asked for confirmation that their childlessness was not his fault.³⁷ Mathilde also shared her relief when their nephew Prince Ludwig, a long-awaited heir to the House of Wittelsbach, was born in 1845.

Likewise, Otto used their correspondence to muse over his difficulties in accepting the childlessness of his marriage:

I trust that the Almighty will bring about what is best. I believe that we should not fill our lives with bitterness by demanding the satisfaction of all our desires, but we should concentrate on all the good things we have received. However, just like everyone else, I find this easier said than done.³⁸

But even in a supportive relationship, those affected by a stigmatizing condition still need to make decisions about when to speak, what to disclose, and when to keep silent. A close reading of an intimate correspondence can show what such micro-politics of communication could look like.

The letters explored here were written by a young woman from Göttingen, Wilhelmine Heyne-Heeren (1778–1861), daughter of a famous classicist. Aged only 17, she married the historian Arnold Hermann Ludwig Heeren (1760–1842), who was 18 years her senior. It was a marriage of convenience and the couple remained childless. Between 1794 and 1803, Wilhelmine wrote 19 long and very personal letters to a close friend, Marianne Bürger (1778–1862). Marianne, daughter of poet Gottfried August Bürger (1747–94), had left Göttingen after her father died in abject poverty. She went to live with relatives and never got married. She kept Wilhelmine's letters, which were only published 50 years after her death.³⁹ Her own letters do not seem to have survived.

Wilhelmine's letters contain lively descriptions of her everyday life as a young girl, during the time of her engagement and the first years of her marriage. Wilhelmine and Marianne belonged to a cultural milieu for which letters were extremely important, not only for the exchange of information but also as a medium of emotional and moral education. Letters were meant to imitate oral communication and authors were expected to convey their emotions and experiences as candidly and directly as possible.⁴⁰

The first letter to mention childlessness was written about 21 months after the wedding. Wilhelmine confided that she was 'foolish enough to wish that the eternal silence of our home was interrupted by the burbling of a child'.⁴¹ A year later, in March 1799, Wilhelmine's wish for a child had become more poignant. But she still seemed to accept her fate, and to be waiting to become pregnant. Another year later, she wrote:

I can hardly bring myself to tell you about the one thing I still miss, because you'll laugh at me. But I'll take the risk anyway, since I shan't actually see you laughing. So, that one thing is – children. Don't make fun of me; I'm quite serious. Silly I may be, but I assure you, I spend hours together crying about it. As if that would help! I don't know, I feel so useless in this world. I can please myself in everything, no sacrifices are asked of me, but I'm still sometimes unfair enough to grumble about my fate, and forget, because of this one thing that's lacking, all the other countless blessings that God has showered upon me. Really, dear Marianne,

can there be anyone whose life has been happier than mine up to now? I can visit my parents and my brothers and sisters every day, I am loved by them and love them in turn. I am the wife of a good and virtuous husband, I live in the town where I was born among friends and acquaintances – who else can claim to enjoy so many advantages? And I have never known any true misfortune. But there it is, I still sometimes grumble that I haven't been granted this final happiness. You have very good grounds for scolding me about this, and in my more reasonable moments, I scold myself. But just the same, I shan't burden you any longer with all this, and will do my best to banish these thoughts from my mind.⁴²

During the first years of her marriage, Wilhelmine's wish for a child seems to have been rather moderate. She was still a young girl herself, worried about her new responsibilities, but also enjoying dances, plays, and outings. She was also well aware that many women died in childbirth, that caring for young children could be exhausting, and that many children died at a young age. In her letters, she mentions a mutual friend, Isabella Schulz, who lost her first two children when they were still babies.⁴³ But as time went by, she started to long for a child. Increasingly her life appeared to be boring and empty. She complained that her home was too quiet and that she felt incarcerated, especially in wintertime.⁴⁴

Wilhelmine's letters show how her feelings concerning the childlessness of her marriage evolved. Gradually she came to realize that this was not just a passing phase. Because a mutual friend, Julie Schlegel, had adopted the child of a stranger – a highly unusual and socially rather unacceptable course of action – Marianne and Wilhelmine also engaged in a conversation about adoption. But Wilhelmine ruled this out as an option. It appeared too *romanhaft*, too much like the kind of action taken in a novel, to her.⁴⁵

As for King Otto, religion provided an important source of consolation for Wilhelmine. To cope with her childlessness, Wilhelmine appropriated religious arguments. One of her letters closely follows the script proposed by contemporary prayer books like Johann Friedrich Stark's *Daily Hand-Book in Good and Evil Days*, first published in 1727 but reprinted throughout the eighteenth and nineteenth centuries. It included a chapter on 'Admonition and comfort for the barren'.⁴⁶ According to the meditations, prayers and hymns from this book, those encountering reproductive difficulties should accept their fate. They should not be 'less contented with God' but should always remember that he was 'their gracious God, that he loves them, and is favourably inclined towards them'.⁴⁷ To this purpose, they had to remind themselves of their good fortune with regard to other aspects of life. 'Barrenness', they were told, was 'no index of the wrath of God'. Childless couples should not 'murmur against God'. Instead, they were expected to accept their fate:

Oh my God I will not murmur!
Do according to thy will;
I will bear whate'er thy wisdom
Shall require me to fulfil
[. . .] Yes, whatever thou requires,

Let it be as thou desirest,
 Let me be subdued and meek
 Only hear thy wisdom speak.⁴⁸

According to Stark's *Daily Hand-Book*, fostering the desire for a child and praying too fervently could be dangerous, because God might give a child in anger. The message was clear: 'pious married couples must [. . .] abstain from all murmurs and impatience'.⁴⁹ Quiet acceptance was to be reached.

In her letters, Wilhelmine underlined time and again that she tried to be patient and to avoid 'murmuring'. But it was difficult to accept the infertility of her marriage. Almost five years after the wedding, she described how she tried to remind herself that only God could know what was best for her:

And when such thoughts have helped a little, and I fancy myself to have quite overcome my desire, all it takes is a visit to one of my acquaintances. They all have children and when I see how they fuss over them, well, then all my resignation is lost again and I need to start all over again.⁵⁰

While Wilhelmine could rely on religious scripts when reflecting on her experiences of infertility, and while she received emotional support from her friend Marianne, she did not confide in her husband. In the letter just quoted, she complained:

And the worst of it is that on top of everything else I have to conceal my feelings, because not for the life of me would I want my husband to be aware of them. Have men any sense of this kind of thing? They pore over their books, their heads are full of other things, and they spend their leisure time in each other's company. But a poor woman, who is almost always left alone with her thoughts – like me! We keep ourselves busy with needlework, and our unoccupied minds are left to brood.⁵¹

In communication with God and with her husband, feelings had to be controlled – 'murmuring' was to be avoided. But on closer examination, even the communication between Wilhelmine and Marianne was not entirely open-hearted. Wilhelmine did not mention whether she had sought any medical help or whether there were sexual difficulties. Instead of trying to express her thoughts and feelings in more detail, she resorted to presenting normative religious ideas. And on several occasions she denied the possibility of true understanding by another. She suggested that Marianne might laugh at her and would be unable to understand, and she claimed that her friend could not console her because she could not tell her anything 'that I have not told myself a hundred times already'. Furthermore, the topic of childlessness was only broached because Marianne found a way of addressing it without putting her question into words. Instead, she apparently embellished her letters with little drawings of things related to childcare and a question mark.

The intimate correspondences of Wilhelmine and Marianne, who were both Protestant, and Otto and Mathilde, both Catholic, point to the importance of Christian belief as a resource for enduring infertility and for resisting stigmatization. Religious texts explicitly encouraged the childless to regard themselves as different, yet untainted: 'How many trees, which adorn the garden though they bear no fruit, are still favourites there! So also barren married couples are the well beloved children of God, none the less that in fruitfulness they are surpassed by others.'⁵²

Quietly accepting one's childlessness could be represented as a proof of piety. Disclosure to 'sympathetic others' was feasible. Wilhelmine could rely on Marianne, while she apparently did not disclose her feelings to her husband, perhaps out of consideration for his feelings or because she did not want to challenge the stability of her marriage. In her letters to Marianne, she does not mention talking to her mother or other family members. While breaking the silence, her letters to a good friend far removed from home might have helped her to sustain her reticence in everyday life.

AUTOBIOGRAPHICAL REPRESENTATIONS OF CHILDLESSNESS

It is not surprising that childlessness is not a common topic in nineteenth-century autobiographies. Why would an autobiographer draw attention to his or her shortcomings? If the genre did not command sharing information about one's private life – and memoirs focusing on the professional life of the writer did not – then statements about childlessness were not necessary. However, if the topic was also avoided in a more personal autobiography, this silence could signal resistance to stigmatization: a testimony to an identity unaffected by childlessness. Bertha von Suttner (1843–1914), famous writer and peace activist, avoided the topic in her memoir but decided to include an explanation for this silence. Writing at a time when some bourgeois couples would have regarded voluntary childlessness as an option, von Suttner, married in 1876, described her matrimony as exceptionally happy. She assumed that others had pitied them because of their childlessness:

The blessing of children is, indeed, regarded as the highest happiness; but I have never expressed in these memoirs one single word of regret for this lack, nor have we, either of us, ever complained of it. Possibly, if we had known that good fortune, we should not have been able to comprehend how such a deprivation can be borne without pain; but it is a fact, our childlessness never cost us a sigh. I explain this in this way: not only did we find perfect satisfaction in each other, but that need of living for the future which lies at the basis of the desire to have offspring and to work and provide for them was satisfied in our case by our vocation, which also was striving for the future, and which delighted in something still in its infancy, but growing and flourishing. Besides, we had our literary activity, and it is well known and recognized in popular language that authorship is a kind of paternity.⁵³

Von Suttner explicitly rejected the idea that parenthood was a unique experience without which happiness in a marriage and in life more generally was impossible. Her fame and social and economic capital put her in a position in which she could resist social expectations which at the time of writing were losing some of their uniformity.⁵⁴

Some autobiographers had other reasons for sharing experiences of childlessness with their future readers. According to stigma theory, a ‘stigmatized individual is likely to use his stigma for “secondary gains,” as an excuse for ill success that has come his way for other reasons’. Second, stigmatized persons might ‘present the signs of their stigmatized failing as signs of another attribute, one that is less significantly a stigma’.⁵⁵ Do these explanations fit autobiographical representations of childlessness? The following examples probe this question.

In her autobiography, published in 1911, Adelheid Sturm (1838–1911) represented the first years of her marriage as a very difficult and, more specifically, ‘empty’ time. She appears to have been very bored by her childless everyday life and, after trying to fill her days with typically female tasks, she finally started to write for a local newspaper. When her national enthusiasm mounted during the Franco-Prussian War of 1870–71, she was especially productive. While she claimed that she was not particularly proud of the many articles she published pseudonymously, she could not help but acknowledge that, in itself, writing was highly rewarding, and that after a while it became something of a compulsion for her. She explained: ‘I had the time, of course, because, alas, we had no children, and only those can provide a middle-class housewife with a truly fulfilling occupation – provided that she has a servant for the heavier domestic work.’⁵⁶

Adelheid Sturm pointed to the childlessness of her marriage to justify her journalistic writing. Other autobiographers had to explain much more substantial violations of bourgeois norms. Famous historian Georg Gottfried Gervinus (1805–71) described the childlessness of his marriage as the only ‘dark point’ of his life. In his autobiography, only to be published posthumously after his wife’s death, he admitted grave forms of moral misconduct which he explained by pointing to the thwarting of his professional, political, and private aims, especially to his unfulfilled desire to father children.⁵⁷ It seems likely that his moral ‘confusion and aberration’ had been noticed and hence could not be skipped in an autobiography which claimed to reveal the truth about its author’s life. Gervinus might have been referring to his infatuation with his young ward, Helene Fallenstein. In his correspondence with her family, Gervinus had also pointed to his childlessness as a justification for his special interest in Helene, and had pleaded with her family not to begrudge him this ‘single little sheep’ from their large flock.⁵⁸

While Gervinus only hinted at sexual misdemeanours, businessman Albert Jaffé (1859–1918), publishing his memoir in 1914, testified to an extramarital affair. His candour was made easier by using a pseudonym. Jaffé described how he and his wife had longed for children and how he had rejected an adoption. With the consent of his wife, or so he claimed, he eventually pursued

an extramarital affair with a young woman in London with the sole aim of producing a child that he and his wife could raise – a project which due to moral qualms he apparently gave up again very quickly.⁵⁹

The most extensive nineteenth-century autobiographical representation of an infertile marriage, at least that I am aware of, was written by Henriette Obermüller-Venedey (1817–93).⁶⁰ An active participant in the 1848 revolution, Henriette was part of a milieu which challenged traditional notions of gender and respectability. A democrat, raised by her father to defy religious and worldly authorities, she joined her first husband on the barricades and was prosecuted for high treason. After the death of Gustav Obermüller in 1853, she married Jakob Venedey (1805–71), a long-time friend. He was a politician and writer, who in 1848 had been a member of the national assembly. They had two sons.

Henriette wrote her autobiography in the winter of 1870–71 during the Franco-Prussian war, but stopped writing when her second husband suddenly died in February 1871. The autobiography, addressed to Henriette's sons, was probably not meant for publication. Its structure, wording and content – most importantly a strict adherence to chronology, a lack of summarizing passages, and contradictory representations of individual friends and family members – indicate that the text closely followed diaries which Henriette must have kept during her first marriage. Thematically, the autobiography devotes very little room to childhood and youth. An unhappy love affair and the developments that led to her first marriage with her cousin Gustav in 1837, and especially the misery of this marriage, are explored in detail. The political developments of 1848–49, and especially the persecution of her first husband and herself, are also very important themes and are often represented in conjunction with recollections of personal conflicts.

Regarding the representation of infertility, there are certain parallels to other examples already mentioned. Like Wilhelmine Heyne-Heeren, Henriette was at first not particularly concerned about her childlessness. However, during the fourth year of her marriage, her yearning for a child became more urgent. At the time, the couple was living in Le Havre. Isolated from family and friends, Henriette was very homesick and, eventually, became very ill:

Barely recovered, only just hoping to become a mother, the greatest joy for any young woman, and especially for me, because I still carried an incurable wound in my heart, because I had enough misfortune at Le Havre already, because I had never stopped to be homesick – but that highest joy was again destroyed as it had rested on an illusion. From then on there was no happiness left for me, and Gustav too, seeing how deeply it affected me, was more distressed than ever.⁶¹

At this point, 25-year-old Henriette did not only want a child. Still suffering from her unhappy love for a young nobleman, feeling lonely and homesick, and enduring an unhappy marriage with a possibly unfaithful husband, she needed

a child as a source of joy and purpose in life. And Henriette was prepared to go a long way to reach her aim:

I bought books, I talked to women's doctors, I decided to do everything they told me to. I saw the midwife, I was told this and that, I heard that there was a recipe, but that it might kill me. I wouldn't have minded, if only I could have become a mother, if only I could have borne Gustav a child, I was so certain that it was my fault.⁶²

But Henriette's determination was to no avail. The couple remained childless. In 1845, they returned to Germany. Apparently they had made enough money to live off the interest and to set up a business dealing with wine.

Henriette enjoyed being back home and close to her parents and siblings. But just like Paul Schlieben in *The Son of His Mother*, Gustav found it difficult to adjust to a leisured life. While Paul, living in the age of neurasthenia, became 'nervous', Gustav developed 'whims', or, more specifically, a capricious longing for a child. According to Henriette's description, he started an affair with their extremely young and orphaned domestic servant. Apparently, he was prepared to offer the girl 1,000 gulden if she would bear his child. Henriette proposed divorce but Gustav claimed that he truly loved her and only pursued the affair because he wanted a child.⁶³

Henriette herself was also considering an affair. She was deeply in love with a younger man, Karl Langsdorff, a mutual friend. According to her autobiography, she contemplated having a sexual relationship with him and initiated meetings that would have allowed them to have intercourse. However, Langsdorff, though always stressing how much he loved her, did not want to get involved. Apparently, Gustav even went so far as to endorse their relationship. While in jail, he wrote Henriette a letter in which he encouraged her to have sex with Langsdorff so that she would get pregnant. He envisaged a future in which the couple would raise Langsdorff's child or in which they would emigrate to America and live together as a threesome. Apparently, Langsdorff was not interested.⁶⁴

Henriette and Gustav did not hide their feelings, nor could they support each other. In retrospect, Henriette described Gustav as 'imperious': 'He was used to getting his own way, and when after ten years he still had no children, he became ill and melancholic, always longing to become a father. He started to torture himself and me, and from then on, I suffered unspeakably'.⁶⁵ During this period, the couple considered strategies including extramarital affairs and divorce. Adoption is not mentioned.

Why would Henriette include such private and embarrassing information in her autobiography? The text indicates that the love affairs of both partners were known to their families and, probably, also to the local community. It seems likely that Henriette could not skip these episodes without undermining her autobiography's claim to authenticity. Like the above-mentioned Albert Jaffé, like Adelheid Sturm and Georg Gottfried Gervinus, Henriette Obermüller-

Venedey pointed to her yearning for a child to justify her deviant behaviour, especially her willingness to not only contemplate but actively pursue an extramarital affair:

A child, a child, who would call me mother, in whose embrace I would forget all grief, for whom I would live and die, whom I would bear for Gustav, through whom I would make Gustav happy, and for whom he would want to live. This was my only thought [. . .] Let no one who hasn't known the sorrow of a loving but childless wife lecture or condemn me.⁶⁶

CONCLUSION

In nineteenth-century Western Europe, infertility could not be hidden, as couples were expected to reproduce. But despite this visibility, experiences of infertility have rarely been studied by social and cultural historians. With the exception of reigning families for whom reproduction was not a private affair, the experiences of those who encountered reproductive difficulties do not seem to have left many traces within the historical records or our historical narratives. In this chapter, I have argued that there is a causal relationship between these absences: that historians have reproduced silences present already in the sources, which themselves testify to the stigmatization of childlessness.

In his influential study on stigma, Erving Goffman has suggested that certain forms of behaviour can often be observed in interactions between people who can consider and present themselves as normal and those who do not meet usual expectations. Stigmatized individuals often seem to refrain from situations in which they need to interact with those considered normal. In conversation, they avoid drawing attention to their otherness. Likewise, those who are not stigmatized might avoid possibly embarrassing situations and conversation topics. Literary texts and ego-documents, quoted in this chapter, in which the childless hide their feelings, suggest that such acts of avoidance were also part of nineteenth-century strategies of dealing with infertility.

Childless couples did not necessarily share their thoughts and feelings regarding infertility, a behaviour also reported in some sociological and psychological studies on infertility. In a social situation in which divorce was not an option and medical treatment for infertility was limited, not talking about one's feelings could be a way of avoiding conflict and of lightening the burden of infertility. According to Viebig, Paul Schlieben did not talk about his feelings because he loved his wife. Gustav Obermüller, by contrast, could not contain his wishes, a behaviour which his wife described as 'tormenting'.

Silence could have other meanings as well. Religion certainly encouraged quiet acceptance of one's fate, including childlessness. Hence reticence could also signal piety. The case of Bertha von Suttner suggests that – especially towards the beginning of the twentieth century – it could also express an indifference which challenged the contemporary glorification of motherhood.

To the dismay of fictional Thomas Buddenbrook, his wife ‘treated the subject [of their prolonged childlessness] with sovereign indifference which came very near to being repugnance.’⁶⁷ And Marianne Weber, whose biographer I quoted earlier in this chapter, remembered rejecting an expression of pity after the sudden death of Max Weber in 1920: ‘Somebody sighs: “You are alone – no mother, no siblings, no children.” I reject this sympathy: “She who was this man’s companion, does not need anybody”’.⁶⁸

If silence was the default mode of reacting to infertility, there were different reasons why infertile women and men might break the silence. First, there were situations in which pragmatic decisions, like consulting a doctor or arranging an adoption, had to be taken. Second, there was consolation to be gained from those sympathetic to the childless couple, especially from those who had experienced reproductive difficulties themselves. There is some evidence that mothers and mothers-in-law were in a privileged position which they could use to nag and nudge or to sympathize and comfort, but, compared to many contemporary cultures studied by ethnographers, their influence and involvement were presumably limited. Third, there were situations in which childlessness could be used as an explanation for unhappiness in a marriage and as an excuse for indecent forms of conduct. Here a less significant stigma – unfortunate infertility – was used to explain much more stigmatizing, morally problematic forms of behaviour.

Experiences of infertility are hard to reconstruct as they were often silenced. There are obvious limits to what a historian or biographer may know with regard to individuals who decided not to expose their feelings (or indeed the vast majority who have not left any personal accounts). The silence itself, however, reflects a shared cultural attitude to infertility. It was a topic better avoided, an aspect of social reality that was hard to address not only because feelings might be hurt but because fundamental questions were at stake: the meaning of life, the meaning of marriage. To talk about infertility could have devastating consequences; it could destroy stable marriages and lead to divorce or problematic adoptions. It could also uncover practices usually hidden from view – extramarital affairs which were potentially devastating equivalents to later practices like sperm donation and surrogate motherhood. The silence we encounter in the sources – though frustrating for the historian – was in itself an important aspect of coping with infertility. It points to both the agency of couples, their resilience, and ingenuity in dealing with childlessness, on the one hand, and the social expectations which stigmatized infertility on the other.

NOTES

1. On silences as part of communication, see Alois Hahn ‘Rede- und Schweigeverbote’, *Kölner Zeitschrift für Soziologie und Sozialpsychologie*, 43:1 (1991); Alois Hahn ‘Schweigen, Verschweigen, Wegschauen und Verhüllen’, in Aleida Assmann and Jan Assmann (eds), *Schweigen. Archäologie der literarischen Kommunikation XI* (München, 2013).

2. Almost all of the sources used for this chapter were originally written in German. Translations are by Howard Nelson and myself unless otherwise stated. Unfortunately, the German term ‘schweigen’ – usually meaning to consciously refrain from speaking – which is almost constantly used in the German sources, has no direct equivalent in English. I wish to thank Dagmar Günther and Jürgen Schlumbohm for pointing me to relevant materials. I would love to hear from readers who know of other examples of nineteenth-century diaries, correspondence, and autobiographies or literary texts dealing with infertility. Many thanks to Sandra Mass, Tracey Loughran, and Gayle Davis, who provided extremely useful comments on earlier drafts of this chapter, and to Howard Nelson for his generous help and encouragement.
3. Michel-Rolph Trouillot, *Silencing the Past: Power and the Production of History* (Boston, MA, 2013), pp. 26–7.
4. Population discourses have been widely studied. In Germany, public anxiety regarding depopulation only emerged shortly before the First World War. In the ensuing debates, voluntary childlessness was castigated, but infertility was not given much consideration. See Christina Benninghaus, “‘No, Thank You, Mr Stork!’: Voluntary Childlessness in Weimar and Contemporary Germany”, *Studies in the Maternal*, 6:1 (2014): <http://doi.org/10.16995/sim.8>. Accessed 6 December 2016.
5. On the reluctance to turn infertility into a political issue see Naomi Pfeffer, *The Stork and the Syringe: A Political History of Reproductive Medicine* (Cambridge 1993), chapter 1; on the grand narrative of biopolitics, see Edward Ross Dickinson, ‘Biopolitics, Fascism, Democracy: Some Reflections on Our Discourse About “Modernity”’, *Central European History*, 37:1 (2004); on the preventive self, see Ulrich Bröckling, ‘Vorbeugen ist besser [...] Zur Soziologie der Prävention’, *Behemoth. A Journal on Civilisation*, 1:1 (2009).
6. Margaret Marsh and Wanda Ronner, *The Empty Cradle: Infertility in America from Colonial Times to the Present* (Baltimore, MD, 1996), p. 99. See also endnote 58, p. 286.
7. Deborah Cohen, *Family Secrets: Living with Shame from the Victorians to the Present Day* (London, 2013), p. xv.
8. Aleida Assmann, ‘Formen des Schweigens’, in Aleida Assmann and Jan Assmann (eds), *Schweigen. Archäologie der literarischen Kommunikation XI* (München, 2013).
9. Kate Fisher, ‘Knowledge and Ignorance’, in Nick Hopwood, Rebecca Flemming and Lauren Kassell (eds), *Reproduction from Antiquity to the Present Day* (Cambridge, forthcoming).
10. I cannot possibly do justice to the fast growing literature on infertility and new reproductive technologies produced in the social sciences. See, however, Arthur L. Greil, Kathleen Slauson-Blevins, and Julia McQuillan, ‘The Experience of Infertility: A Review of Recent Literature’, *Sociology of Health and Illness*, 32:1 (2010).
11. Larissa Remennick, ‘Childless in the Land of Imperative Motherhood: Stigma and Coping Among Infertile Israeli Women’, *Sex Roles*, 43:11/12 (2000), p. 830.
12. Jill Allison, ‘Conceiving Silence: Infertility as Discursive Contradiction in Ireland’, *Medical Anthropology Quarterly*, 25:1 (2011), p. 17.

13. Rosario Ceballo, Erin T. Graham and Jamie Hart, 'Silent and Infertile: An Intersectional Analysis of the Experiences of Socioeconomically Diverse African American Women With Infertility', *Psychology of Women Quarterly*, 39:4 (2015), p. 503.
14. Pauline Slade et al., 'The Relationship between Perceived Stigma, Disclosure Patterns, Support and Distress in New Attendees at an Infertility Clinic', *Human Reproduction*, 22:8 (2007).
15. Karen Throsby and Rosalind Gill, "'It's different for men": Masculinity and IVF', *Men and Masculinities*, 6:1 (2004), p. 345.
16. On the relationship of stigma and silence in developing countries and especially on sociocultural differences in coping strategies, see Papreen Nahar and Sjaak van der Geest, 'How Women in Bangladesh Confront the Stigma of Childlessness: Agency, Resilience, and Resistance', *Medical Anthropology*, 38:3 (2014).
17. Letter from Friederike Brun, 22 May 1815. Quoted in Ilse Foerst-Crato, *Frauen zur Goethezeit. Ein Briefwechsel: Caroline von Humboldt – Friederike Brun* (Düsseldorf, 1995), p. 125. Health and reproduction were central themes of this correspondence.
18. Hans-Christof Kraus, *Ernst Ludwig von Gerlach: politisches Denken und Handeln eines preussischen Altkonservativen* (Göttingen, 1994), p. 330.
19. Bärbel Meurer, *Marianne Weber. Leben und Werk* (Tübingen, 2010), p. 89.
20. Carl Steiner, *Of Reason and Love: The Life and Works of Marie von Ebner-Eschenbach* (Riverside, CA, 1994). Susanne Kord (ed.), *Letzte Chancen: Vier Einakter von Marie von Ebner-Eschenbach* (Cambridge, 2005), p. 7 criticizes Steiner and others for assuming that Ebner-Eschenbach suffered because of her childlessness.
21. Many historians refer to literary texts and use them for illustrative purposes. But the potential of literary texts as historical sources is rarely explored more systematically. For a nuanced discussion of the historical value of literary texts, see Martina Winkler, 'Vom Nutzen und Nachteil literarischer Quellen für Historiker', in Martin Schulze Wessel (ed.), *Digitales Handbuch zur Geschichte und Kultur Russlands und Osteuropas* (München, 2009), No. 21.
22. Thomas Mann, *Buddenbrooks. The Decline of a Family*, trans. Alfred A. Knopf (Exeter, 1924) [1901], p. 298. See also Theodor Fontane, *Trials and Tribulations. A Berlin Novel*, trans. from the 14th edition by Catherine Royce (New York, 1917), p. 111; Ignát Herrmann, 'Childless', in Marie Busch (ed.), *Selected Czech Tales*, trans. Marie Busch and Otto Pick (Oxford, 1925) 1908], p. 104; Hugo Salus, *Trostbüchlein für Kinderlose [Consolation for the Childless]* (Berlin, 1909), pp. 11–19.
23. Clara Viebig, *Son of His Mother*, trans. H. Raahauge (London, 1913). On the author, the novel and its contemporary reception, see Christina Benninghaus, 'Brennende Sehnsüchte, heimliche Ängste – Kinderlosigkeit, Vererbung und Adoption im naturalistischen Roman um 1900', *zeitenblicke*, 7:3 (2008): http://www.zeitenblicke.de/2008/3/benninghaus/index_html. Accessed 6 December 2016.
24. Viebig, *Son of His Mother*, p. 5.
25. Viebig, *Son of His Mother*, p. 11.
26. Viebig, *Son of His Mother*, pp. 6–8.
27. Viebig, *Son of His Mother*, p. 6.
28. Viebig, *Son of His Mother*, p. 10.

29. Viebig, *Son of His Mother*, p. 22.
30. Viebig, *Son of His Mother*, pp. 31–2.
31. Adalbert Stifter, ‘Der Waldgänger’, in Johann Grafen Mailáth (ed.), *Iris. Deutscher Almanach für 1847* (Pesth 1847), p. 83.
32. Stifter, ‘Der Waldgänger’, p. 99.
33. Mann, *Buddenbrooks*, p. 298.
34. Fontane, *Trials and Tribulations*, p. 111.
35. Hans von Hoffensthal *Lori Graff* (Berlin, 1909), p. 261. The novel was meant to inform readers, especially young girls and their parents, about the dangers of venereal disease.
36. See Penny Roberts’s chapter in this volume for further discussion of this issue.
37. Letter from Mathilde of Hesse to Otto, King of Greece, 8 May 1849, quoted in Barbara Beck, *Mathilde Großherzogin von Hessen und bei Rhein, geb. Prinzessin von Bayern (1813–1862). Mittlerin zwischen München und Darmstadt* (Darmstadt, 1993), p. 251.
38. Letter from Otto, King of Greece, to Mathilde of Hesse, 14 February 1843. Quoted in Beck, *Mathilde*, p. 140.
39. Mathilde Eckardt (ed.), *Briefe aus alter Zeit. Wilhelmine Heyne-Heeren an Marianne Friederike Bürger 1794–1803* (Hannover, 1913).
40. For more information on the social milieu in which Wilhelmine and Marianne were raised, see Birgit Panke-Kochinke, *Göttinger Professorenfamilien. Strukturmerkmale weiblichen Lebenszusammenhangs im 18. und 19. Jahrhundert* (Pfaffenweiler, 1993); Eckart Kleßmann, *Universitätsmamsellen. Fünf aufgeklärte Frauen zwischen Rokoko, Revolution und Romantik* (Frankfurt a.M., 2008). On the importance of correspondence within this milieu, see Robert Vellusig, ‘Aufklärung und Briefkultur. Wie das Herz sprechen lernt, wenn es zu schreiben beginnt’, *Das Achtzehnte Jahrhundert*, 35:2 (2011), p. 15; Rainer Baasner (ed), *Briefkultur im 19. Jahrhundert* (Tübingen, 1999).
41. Eckardt, *Briefe*, p. 45.
42. Eckardt, *Briefe*, pp. 63–4.
43. Eckardt, *Briefe*, pp. 32, 51.
44. Eckardt, *Briefe*, p. 49.
45. Eckardt, *Briefe*, p. 71.
46. Johann Friedrich Stark, *Tägliches Gebet-Büchlein, das ist Aufmunterungen, Gebete und Gesänge für Schwangere, Gebärende und Sechswöchmerinnen. Morgen- und Abend-Gebete, Trost- und Erquickungs-Andachten samt Gesängen; (...) Für Unfruchtbare, Erinnerung, Trost, Gebete und Gesänge (...) als den fünften und sechsten Theil des täglichen Handbuchs* (Stuttgart, 1846), p. 116. The first edition was published in 1727 and only had four parts: For the Healthy, the Sorrowful, the Ill and the Dying. In 1731, parts for pregnant women and for the infertile were added. The quotation is taken from the US translation: John Frederick Stark, *J.F. Stark’s Daily Hand-Book for Days of Rejoicing and of Sorrow* (Philadelphia, PA, 1879). During the eighteenth and nineteenth centuries, the book went through countless editions. In Germany, it was the most widely used Protestant prayer book. See *Realencyclopädie für protestantische Theologie und Kirche*, 3rd edn, Vol. 18 (Leipzig, 1906), p. 350. See also Ulrike Gleixner, *Pietismus und Bürgertum. Eine historische Anthropologie der Frömmigkeit* (Göttingen, 2005), pp. 280ff.
47. Stark, *Daily Hand-Book*, p. 105.

48. Stark, *Daily Hand-Book*, pp. 112–13.
49. Stark, *Daily Hand-Book*, p. 102.
50. Eckardt, *Briefe*, p. 71.
51. Eckardt, *Briefe*, pp. 70–71.
52. Stark, *Daily Hand-Book*, p. 105.
53. Bertha von Suttner, *Memoirs: Records of an Eventful Life*, Volume 2, authorized translation [no translator named] (Boston, MA, 1910), pp. 19–20.
54. On shifts in attitudes towards voluntary childlessness see Benninghaus, “No Thank You, Mr Stork!”.
55. Erving Goffman, *Stigma: Notes on the Management of Spoiled Identity* (New York, 1963), pp. 10, 94.
56. Adelheid Sturm, *Lebens-Erinnerungen einer Professorenfrau* (Breslau, 1901), pp. 39–40.
57. Georg Gottfried Gervinus, *G. G. Gervinus Leben. Von ihm selbst. 1860* (Leipzig, 1893), pp. 325–6.
58. Letter to Hermann Baumgarten from 31 December 1860, quoted in Christian Jansen, ‘Wahlverwandschaft und sexuelle Belästigung. Gefühle und Gerede in einer prominenten bürgerlichen Familie’, in Sandra Maß and Xenia von Tippelskirch (eds), *Faltenwürfe der Geschichte* (Frankfurt a.M., 2014), p. 90.
59. Kurt Hellmuth (pseudonym for Albert Jaffé), *Erinnerungen und Betrachtungen eines Siebzigjährigen* (Paris, 1914), p. 84.
60. For information on Henriette Obermüller-Venedey and an edition of her memoir and her diaries from later years, see Birgit Bublies-Godau, ‘*Dass die Frauen bessere Demokraten, geborene Demokraten seyen [...] Henriette Obermüller-Venedey, Tagebücher und Lebenserinnerungen, 1817–1871* (Karlsruhe, 1999).
61. Bublies-Godau, *Henriette Obermüller-Venedey*, p. 112.
62. Bublies-Godau, *Henriette Obermüller-Venedey*, p. 114.
63. Bublies-Godau, *Henriette Obermüller-Venedey*, pp. 118, 126.
64. Bublies-Godau, *Henriette Obermüller-Venedey*, pp. 134–35, 143.
65. Diary, 28 April 1856, in Bublies-Godau, *Henriette Obermüller-Venedey*, p. 25.
66. Bublies-Godau, *Henriette Obermüller-Venedey*, p. 134.
67. Mann, *Buddenbrooks*, p. 298.
68. Marianne Weber, *Lebenserinnerungen* (Bremen, 1948), p. 113.

RESEARCH RESOURCES

Primary Sources

- Birgit Bublies-Godau (ed.), ‘*Dass die Frauen bessere Demokraten, geborene Demokraten seyen . . .*’ *Henriette Obermüller-Venedey’s Tagebücher und Lebenserinnerungen 1817–1871* (Karlsruhe: Badenia, 1999).
- Mathilde Eckardt (ed.), *Briefe aus alter Zeit. Wilhelmine Heyne-Heeren an Marianne Friederike Bürger, 1794–1803 und ein Nachtrag* (Hannover: Ernst Geibel, 1913).
- Ilse Foerst-Crato (ed.), *Frauen zur Goethezeit. Ein Briefwechsel: Caroline von Humboldt, Friederike Brun* (Düsseldorf: Selbstverlag, 1975).
- Georg Gottfried Gervinus, *G. G. Gervinus Leben. Von ihm selbst. 1860* (Leipzig: Engelmann, 1893).

- Ignát Herrmann, 'Childless', in Marie Busch (ed.), *Selected Czech Tales*, trans. Marie Busch and Otto Pick (Oxford: Oxford University Press, 1925), 97–164.
- Hans von Hoffensthal *Lori Graff* (Berlin: Egon Fleischel und Co., 1909).
- John Frederick Stark, *J.F. Stark's Daily Hand-Book for Days of Rejoicing and of Sorrow* (Philadelphia, PA: Kohler, 1879).
- Adalbert Stifter, 'Der Waldgänger', in Johann Grafen Mailáth (ed.), *Iris. Deutscher Almanach für 1847* (Pesth: Heckenast, 1847), 1–112.
- Adelheid Sturm, *Lebens-Erinnerungen einer Professorenfrau* (Breslau: Fleischmann, 1901).
- C. Vann Woodward and Elisabeth Muhlenfeld (ed.), *The Private Mary Chesnut: The Unpublished Civil War Diaries* (Oxford: Oxford University Press, 1984).
- Clara Viebig, *The Son of His Mother. Authorised Translation by H. Raabauge* (London: Bodley Head, 1913).

Secondary Sources

- Jill Allison, 'Conceiving Silence: Infertility as Discursive Contradiction in Ireland', *Medical Anthropology Quarterly*, 25:1 (2011), 1–21.
- Barbara Beck, *Mathilde Großherzogin von Hessen und bei Rhein, geb. Prinzessin von Bayern (1813–1862). Mittlerin zwischen München und Darmstadt* (Darmstadt: Eduard Roether Verlag, 1993).
- Barbara Berg 'Listening to the Voices of the Infertile', in Joan C. Callahan (ed.), *Reproduction, Ethics, and the Law: Feminist Perspectives* (Bloomington: Indiana University Press, IN, 1995), 80–108.
- Christina Benninghaus, 'Brennende Sehnsüchte, heimliche Ängste – Kinderlosigkeit, Vererbung und Adoption im naturalistischen Roman um 1900', *Zeitenblicke*, 7:3 (2008): http://www.zeitenblicke.de/2008/3/benninghaus/index_html.
- Christina Benninghaus, "'No, Thank You, Mr Stork!": Voluntary Childlessness in Weimar and Contemporary Germany', *Studies in the Maternal*, 6:1 (2014): <http://doi.org/10.16995/sim.8>.
- Deborah Cohen, *Family Secrets: Living with Shame from the Victorians to the Present Day* (London: Viking, 2013).
- Erving Goffman, *Stigma: Notes on the Management of Spoiled Identity* (New York: Simon & Schuster, 1963).
- Arthur L. Greil, Kathleen Slauson-Blevins and Julia McQuillan, 'The Experience of Infertility: A Review of Recent Literature', *Sociology of Health and Illness*, 32:1 (2010), 140–62.
- Margaret Marsh and Wanda Ronner, *The Empty Cradle: Infertility in America from Colonial Times to the Present* (Baltimore, MD: Johns Hopkins University Press, 1996).
- Elaine Tyler May, *Barren in the Promised Land: Childless Americans and the Pursuit of Happiness* (Cambridge, MA: Harvard University Press, 1995).
- Papreen Nahar and Sjaak Van Der Geest, 'How Women in Bangladesh Confront the Stigma of Childlessness: Agency, Resilience, and Resistance', *Medical Anthropology*, 38:3 (2014), 381–98.
- Naomi Pfeffer, *The Stork and the Syringe: A Political History of Reproductive Medicine* (Cambridge: Polity Press, 1993).

- Larissa Remennick, 'Childless in the Land of Imperative Motherhood: Stigma and Coping Among Infertile Israeli Women', *Sex Roles*, 43:11/12 (2000), 821–41.
- Catherine Kohler Riessman, 'Stigma and Everyday Resistance Practices: Childless Women in South India', *Gender & Society*, 14:1 (2000), 111–35.
- Michel-Rolph Trouillot, *Silencing the Past: Power and the Production of History* (Boston, MA: Beacon Press, 1995).
- Martina Winkler, 'Vom Nutzen und Nachteil literarischer Quellen für Historiker', in Martin Schulze Wessel (ed.), *Digitales Handbuch zur Geschichte und Kultur Russlands und Osteuropas* (München: ViFaOst, 2009), No. 21.

Oral History and Women's Accounts of Infertility in Postwar England

Angela Davis

INTRODUCTION

[T]hings didn't happen. I had these miscarriages and one thing and another. And all this intervention and investigation. You know, I had to wait till science [...] caught my body up [...] like I said, they wanted to do a hysterectomy on me at 18.¹

As Bev's account indicates, the inability to have a baby could lead women to experience feelings of powerlessness when 'things didn't happen'; to unpleasant 'intervention and investigation' in the form of fertility treatments which, while sometimes successful, were slow to develop during the second half of the twentieth century; and to women's loss of autonomy to medical professionals who had the power to determine their reproductive choices. This chapter considers these three main themes through an analysis of women's narratives of infertility told during oral history interviews about their lives in post-1945 England. The use of oral history in the chapter therefore enables the experience of infertility to be explored, and provides a way to access women's first-hand accounts about a subject that has often remained hidden.

The women interviewed for this chapter were all mothers to at least one biological child. However, in telling their stories of how they became mothers, many women also spoke of the problems they encountered in achieving their desired family size, or their inability to do so. They rarely presented themselves as experiencing infertility, though, and downplayed the difficulties they had in conceiving their children, whether their first child or subsequent children. The chapter will argue that the concealment of infertility, particularly secondary infertility² and subfertility,³ within interviewees' accounts reflects how

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its importance to women's lives in postwar England has often gone unrecognized. It has been a hidden subject. The silence also indicates the difficulty in defining infertility and the confusion surrounding the subject.⁴ However, a close analysis of this group of oral history interviews reveals how fertility problems powerfully affected those women who experienced them.

METHODOLOGY

The chapter is based on an analysis of 15 interviews undertaken with women from Oxfordshire and Berkshire who were born between the 1910s and early 1960s as part of a wider project on motherhood in postwar Britain.⁵ The interviews were conducted by the author in the early 2000s. The interviewees lived in ten different locations in the counties (see Fig. 1): the villages of Benson and Ewelme in south Oxfordshire; the Wychwood villages in west Oxfordshire; the 24 square miles near Banbury in north Oxfordshire covered by the *Country Planning* (1944) survey;⁶ the market town of Thame which lies in the east of the county; Oxford city centre; the working-class suburbs of Cowley and Florence Park in east Oxford; the professional, middle-class suburbs of North Oxford and Summertown in north Oxford; and the Berkshire villages Crowthorne and Sandhurst.⁷

Interviewees were principally found through community groups, social clubs, and by women recommending other women to me. The sample was self-selecting in that all the women had volunteered to be interviewed, but the aim was to construct a sample that ranged in age from women in their late 50s to their 90s, and represented both middle and working classes⁸ and a variety of educational backgrounds (from minimum-age school leavers to graduates), to see how locality, education, and class influenced women's experiences. The interviews were semi-structured, following the method described by Penny Summerfield, in which a general thematic framework is employed, but there is space for the encounter to develop in unexpected directions depending on how interviewees respond to questions.⁹ They were typically about 90 minutes in duration, although some were shorter and others considerably longer. They were often accompanied by tea and biscuits, and sometimes with a break for refreshments. They usually took place in the interviewee's own home at a time of the interviewee's choosing. I had met many of the interviewees before the interview, and had spoken to almost all by telephone to arrange the meeting (in other cases the interview had been arranged through a third party). To enable informed consent I explained the aims of the research to potential respondents in advance of the interview. Interviewees were also given the chance to specify any restrictions they wished to make on their contributions.

This chapter analyses the experience of the Oxfordshire and Berkshire interviewees alongside evidence from Elizabeth Roberts's oral histories of women in twentieth-century Lancashire, which were conducted with Lucinda McCray Beier in the 1980s, and the correspondents to Mass Observation, a British social research organization founded in 1937. Mass Observation aimed

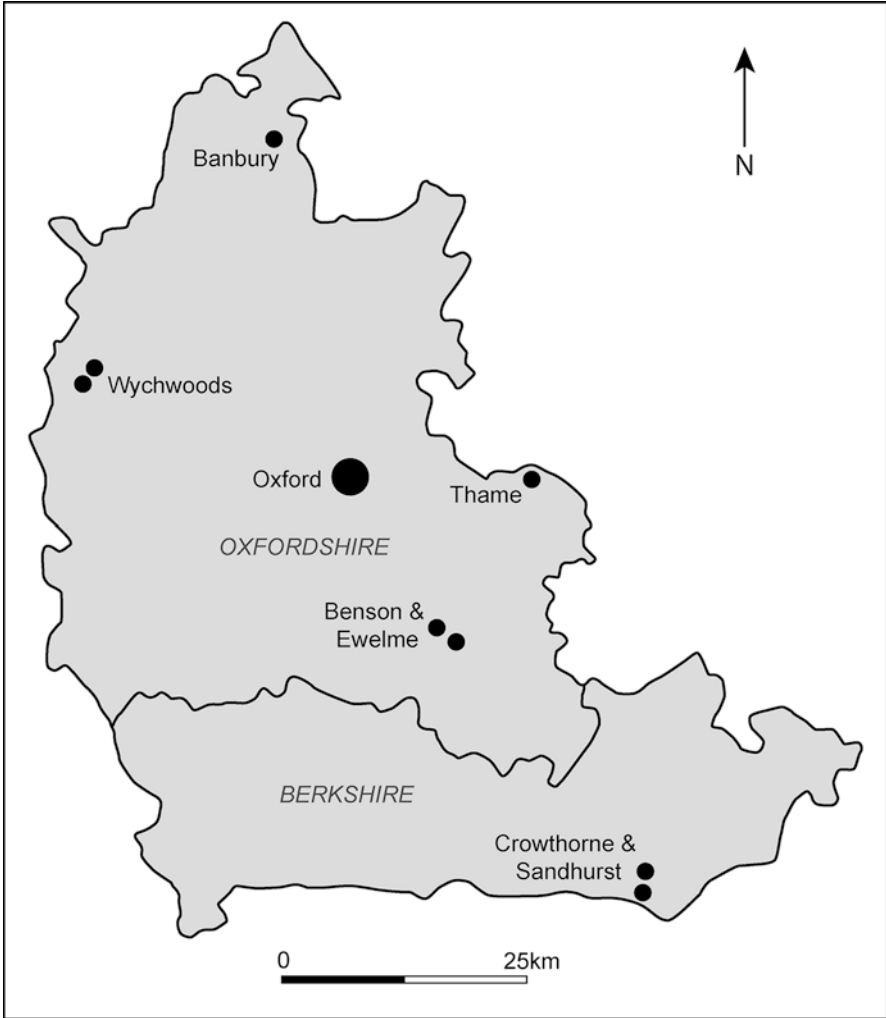


Fig.1 Oxfordshire and Berkshire. Courtesy of Kirsty Harding

to record everyday life in Britain through a panel of around 500 untrained volunteer observers who either maintained diaries or replied to open-ended questionnaires (known as directives). They also paid investigators to anonymously record people's conversation and behaviour at work, on the street and at various public occasions including public meetings and sporting and religious events. Their work ended in the mid-1960s but was revived in 1981.¹⁰

Reflecting upon what is special about oral history in an article entitled 'What makes oral history different' first published in 1979, Alessandro Portelli stated

that ‘the unique and precious element which oral sources force upon the historian and which no other sources possess in equal measure is the speaker’s subjectivity’.¹¹ Oral history offers an unparalleled way to access individual experiences of infertility. The subtleties in experience, diversity of responses, and unexpected findings which oral history reveals can challenge existing assumptions and traditional historical accounts of women’s reproductive lives. Oral history also brings many interpretive challenges, however, including the tension between self and public representation, the dynamics between interviewee and interviewer, the function of memory, and the playing out of the past–present relationship in interview narratives.¹²

There are further intricacies when interviewing respondents about intimate subjects such as sex and reproduction. As Sally Alexander has noted, ‘Sexual knowledge is difficult to historicise’.¹³ However, practitioners have challenged the assumption that sex and reproduction are subjects upon which people will not speak. In their exploration of sexual knowledge and practices among heterosexual couples in the first half of the twentieth century, Kate Fisher and Simon Szreter found that, despite the importance of privacy for their respondents, many were prepared to discuss sex, marriage, and intimacy.¹⁴ Fisher and Szreter also challenged the idea that the construction of interview narratives about sex broke a taboo. Instead they posit that, ‘in response to skilled interviewing, respondents chose what aspects of their life histories to reveal and discuss on their own terms, and for their own reasons’.¹⁵ The same was true for the accounts of their reproductive histories given by the women interviewed for this study.

An additional consideration for this chapter is the context of the project for which the testimonies were gathered. The primary purpose of the interviews was to record these women’s experiences of motherhood. The interviewees knew that motherhood was the focus of my research, which encouraged them to think about their lives in particular ways. While they were encouraged to discuss their reproductive histories in full, their feelings, attitudes and experiences as mothers rather than their journeys to motherhood were the central focus of the interview. This framing of the interviews around the theme of motherhood therefore shaped the stories of fertility and infertility that the women told. Their struggles to conceive were told within their context of being mothers and the voices of women who remained childless were excluded.

WOMEN’S REPRODUCTIVE LIVES IN POST-1945 BRITAIN

In mid-century Britain, parenthood was assumed to be the goal of adult men and women. A number of the correspondents to a 1943 Mass Observation Directive which asked ‘How important do you think children are to family life?’ answered that they thought children were essential.¹⁶ Marriage was linked with children in popular opinion, and being a wife with being a mother.¹⁷ A similar assumption was present in the testimonies of the Oxfordshire interviewees. Camilla married in 1960 and her daughter was ‘there on my first wedding

anniversary, she was a fortnight old'. She had two further children in 1963 and 1965. When asked if she had planned to have her children so quickly and close together, Camilla replied that she had just assumed when she married that children would follow. She stated: 'I mean obviously at the time if you got married you had children basically. This was the expectation. If you didn't it was either because you were pretty clever or you had a problem.'¹⁸ There was also the assumption that couples would have more than one child. Lynne was born in 1946 in Cardiff. She had one child born in 1973 in Canada where she was living for her husband's work but moved back to Oxford when her son was still a baby. She said, 'Whereas now I can imagine people might well think one child is fine and not sort of question it, I think there were a few other mums who sort of thought are you going to have another one, if not why not?'¹⁹

Yet by the middle decades of the twentieth century, a transformation in reproductive behaviour was occurring.²⁰ Birth control was both more accessible and reliable with the contraceptive pill, which had been introduced in late 1961, offering very high effectiveness under female control.²¹ In 1967, abortion was legalized and local authorities were empowered to provide family planning advice and contraceptives free of charge. As a result, men and women's plans surrounding their optimum family size were more often realized. Discussing historical interpretations of the fertility decline, Kate Fisher notes that 'The mass use of birth control is linked with the onset of "modern" ways of thinking such as the separation of sex from reproduction, the perception that the future can be controlled and planned, the reconfiguration of gender relationships along a companionate model, and the readjustment of gendered power relations within marriage.'²²

There were class and regional differences in attitudes towards family planning which influenced how men and women approached the subject. A number of Elizabeth Roberts's working-class Lancashire interviewees recalled how 'you just couldn't plan'.²³ In contrast, the largely middle-class correspondents to a Mass Observation Directive on the subject of family planning in 1944 replied that they did.²⁴ Many of the Oxfordshire and Berkshire interviewees revealed that they entered marriage with an ideal family size in mind, with two or three children being commonly desired, even if this did not always work in practice.²⁵ There were also differences in attitudes towards contraception. Kate Fisher discovered that couples in urban, industrial, working-class areas revealed a much higher dominance of withdrawal than middle-class suburban regions where condoms, caps, and pessaries were more often used. Nonetheless, she found that in all areas traditional methods of birth control – namely coitus interruptus, abstinence, and abortion – continued to be important alongside the rise of appliance methods.²⁶

Moreover many of the men and women in Kate Fisher's study felt that

'planning' was inappropriate and impossible because confusion still dominated their perception of reproduction. Conception was frequently presented as a highly complicated and contingent process, far from fully understood. It was

widely recognized that fertility varied among individuals, that while some were infertile or sub-fertile others were particularly prone to pregnancy.²⁷

Therefore reflecting upon the oral history testimonies she gathered from men and women about their reproductive lives in mid-century Britain, Fisher concluded:

[Interviewees] making contraceptive choices at the very end of the process of fertility transition [...] do not look like the products of a period of social change. Far from distancing their approach to family-building from that of their parents and their grandparents, they stressed the continuities. For them, as for previous generations, family size was deemed unpredictable, uncontrollable and contingent. Far from adopting a 'new' mentality towards conception, and seeking out and experimenting with new reproductive technologies, they saw little shift in consciousness between themselves and their parents.²⁸

This powerlessness in the control of fertility coupled with the strong ideology of domesticity and family that existed in Britain in the years after the Second World War meant that men and women who had difficulties in conceiving often found themselves and their experiences marginalized. Naomi Pfeffer has concluded that, 'throughout this period the investigation and treatment of infertility remained a hole-and-corner affair, infrequently and reluctantly exposed in public, and poorly served by the National Health Service'.²⁹ The remainder of this chapter will look at how women presented their experiences of infertility and subfertility in the light of the silence that surrounded the subject.

EXPRESSIONS OF POWERLESSNESS AND FATALISM

Expressions of powerlessness and fatalism dominated accounts of reproduction amongst the women interviewed. Both the generation of women who had their children in the decades immediately after the war and those who had children later in the century used fatalism to structure their stories. A Mass Observation study into family planning from 1944 found many women had fewer children than they wanted but took a fatalistic approach and did not seek medical advice. One 44-year-old woman reported that, 'I've only had one. It's just the way it's gone. I should have liked more. My girl keeps on saying when she marries she's going to have lots, because she was the only one. But there you are, you can't always help these things'.³⁰ Another respondent, also 44, said, 'It wasn't a question of wanting. I had my girl and I had one miss and that was all. I think that miss did something to me. Anyhow, I never had no more at all. I should have liked another myself, but there you are, it never come along and it's not likely to now'.³¹ Other respondents who had fewer children than they wanted talked of this being to do with luck, the will of God or nature.³² The authors of the Mass Observation study concluded:

It seems unlikely that those who make this sort of remark have taken medical advice, though no specific question was asked on the subject in the interviews. 'Well, we only had the one, and that's all there was to it'. 'Well, you don't know what you're allotted out'. These are the typical responses, suggesting that for many, if not most, working class women having no children seems just as much an uncontrollable act of providence as having too many children seems to others.³³

Mrs Owen was born in 1916 in Barrow in Lancashire. She had been a shop assistant but did not work after marriage and her husband was a driller's burner. They had their first and only child in 1940. After being badly torn during the birth, she initially did not want more children: 'At first I said to my husband, "We'll have no more." But later on we would have loved another one, but nothing happened'.³⁴ Mrs Whiteside, who was born in Lancaster in 1943, had her only child 20 years later in 1960 but had a similar experience. Only 17 when her first baby was born and already pregnant when she married, she recalled that 'everybody in the family was upset. And at first, after I had Kevin, I was a bit frightened of getting pregnant again being so young, and thinking you're going to have a houseful of babies. And then I never had any more after that. But it's not that I wouldn't have liked to have more. They just didn't turn up. Nature . . . it tricks you doesn't it? I've always loved babies, but you know I just never had any'.³⁵ Neither Mrs Owen nor Mrs Whiteside knew the reason why they could not conceive further children and, like the Mass Observation respondents, they accepted this as their fate rather than seeking medical advice.

Ruby was born in 1939 in Southampton but grew up in Benson in South Oxfordshire where she was still living when her own two children were born in 1972 and 1974. She and her husband had been trying to conceive ever since they were married in 1966, and Ruby said that by the time their daughter was born they had 'more or less given up'. She added 'it was a surprise when I found out I was pregnant with [my daughter] [. . .] and then [my son] just came along just like that' (22 months later).³⁶ Despite their problems conceiving, Ruby and her husband had not sought medical advice and she recalled them as taking a fatalistic attitude towards having children: 'I said if we can't have children, I'm not going into hospital to have all these tests done and things'.³⁷ Ruby worked in the local doctor's surgery and her experience of coming into contact with couples who did seek medical assistance encouraged her reluctance to do the same:

Working down there I mean you see what people are going through because they want children. They're desperate for children and what they've gone through, and that's not for me. If we can't do it the proper way, then I'm not going to go through what these people are putting themselves through. It's just one of those . . . and although [my husband] was sort of in homes and foster homes he wouldn't adopt, so I mean that would have been it we wouldn't have had children. But we did . . . so we were ok.³⁸

One reason women gave for not pursuing treatment was their age. Born in 1957, Cynthia grew up in Kettering. She worked as a clinical psychologist and lived in Oxfordshire. Her only daughter was born in 1993. When asked if she had wanted to have one child she replied, 'Oh no, I would have been happy – in fact I'm sorry only to have one really. I certainly would have liked to have had two, but given that I didn't actually, I was 36 I think when my daughter was born. There was a sense in which I'd left it too late then so, so I'm sorry to only have one really'.³⁹ Cynthia had sought medical advice before the birth of her first child. She and her husband had 'been trying for about 18 months and we'd actually been to the GP because I hadn't been able to conceive and so we'd gone through the sort of first level of, you know, fertility type discussion'.⁴⁰ However, after her first child was born, she did not attempt further treatment to increase her family. Alexa was born in 1952 in the USA. She had come to study in England and then remained in the country, getting a job at Oxford University. She said difficulty in establishing herself in her career meant she delayed motherhood. She was 37 before she secured a permanent job. While she did not have any problems conceiving her first child, born in 1993, and recalled that the pregnancy 'went really easily', by the time 'I began to think it would have been nice to have another one [...] I was really too old'.⁴¹ Women such as Cynthia and Alexa were resigned to the fact that while they might have wanted another child, their age meant it was unlikely and as such they chose not to pursue their wish for a child any further.⁴²

THE ROLE OF MEDICAL SCIENCE AND FERTILITY TREATMENT

Women's acceptance of their inability to achieve their desired family size and their reluctance to seek medical advice was not an irrational stance; there was little treatment available to them for most of the period covered by this chapter, and even from the late 1970s onwards, new assisted reproductive techniques such as IVF remained out of the reach of many. Infertility was not seen as a priority under the National Health Service and provision was limited. Naomi Pfeffer notes that 'The National Health Service gave gynaecologists no encouragement to improve services for the investigation and treatment of infertility'.⁴³ In consequence, the services offered were often inadequate. For example, Pfeffer explains how 'the low priority given to infertility by the National Health Service meant that few hospital pathology laboratories were competent in the evaluation of semen according to the accepted basic parameters'.⁴⁴ The Family Planning Association did recognize the suffering that couples with fertility problems faced, and Family Planning clinics tried to give advice to women who came to them. However, they were generally not able to treat women, who had to be sent to a general practitioner or an NHS hospital.⁴⁵ Private fertility clinics were also in existence but the costs involved meant they were beyond the reach of most people. Indeed, the knowledge that treatment was available, as well as the means to pay for it, would have been

influenced by class and region, with educated, metropolitan, middle-class women most able to access infertility services.

Furthermore, Pfeffer notes that even within such clinics, the success rates of treatment were low. She explains that by the 1950s British gynaecologists had 'rejected sex hormonal treatments as useless', concluded that 'there was no direct evidence that male infertility could be cured', and disparaged tests of cervical insemination 'on the grounds that as many patients of doctors who did not pay attention to "cervical hostility" became mothers as did those of doctors who were convinced of its central importance'.⁴⁶ She continues that there was 'disenchantment with tubal insufflation, hysterosalpingogram and other tests of tubal patency', and states that 'few gynaecologists would operate on the pelvis of an infertile woman unless the procedure was deemed necessary for reasons of health and not fertility'.⁴⁷ Mrs Peel, who was born in 1921 in Barrow, had first-hand experience of the limitations of fertility treatment at the time. Failing to conceive with her second husband, they consulted a specialist who decided that the husband was sterile, and they therefore adopted a child. Ten years later, Mrs Peel was again referred to a specialist for a hysterectomy only to discover the reason for her 'growth' was that she was seven months pregnant; she later gave birth to a healthy child.⁴⁸

The women's accounts examined here also demonstrate that those women who had received a medical explanation for their difficulties in conceiving found that there was little treatment offered. Eve was born in Wigan in 1927 and as a baby she had surgery for intussusception (a condition in which part of the intestine is folded into another section of the intestine), which then affected her ability to have children. She worked as a secretary before marriage and her husband was an accountant. She had two children in 1957 and 1960 but suffered from a series of miscarriages before her first child was born and a further miscarriage before her second child. She explained, 'I was 27 when I was married, my husband was 31, and we badly wanted a child but unfortunately I had an awful lot of miscarriages and as I was having the miscarriages my operation started to trouble me again and I was quite poorly'.⁴⁹ In consequence, she and her husband decided to limit their family size to two. Shirley was born in 1952 in Huddersfield. Her first child was born in 1978 and she adopted a second child in 1983. When asked whether she had always known that she wanted to have a family and how many children she wanted to have she replied, 'Yes, I think we would have certainly liked more than what we've got. Events conspired against us'.⁵⁰ While the couple had had no problems in conceiving their first son, complications during the birth left her unable to conceive further children. She explained, 'Well they advised me to wait at least two years before trying again and then [...] I miscarried. So in the end we decided a different tack and our daughter is adopted'.⁵¹

Medical advice led women to limit their families. Edna was born in Oxford in 1939 and had one child, also born in Oxford in 1966. Like Shirley, Edna had no problems in conceiving her first child but because she was rhesus negative she was warned about the risks of having another child.⁵² She explained,

‘Well they said it [my rhesus status] was rhesus negative, and if I had any more children, the blood might have to be changed. And it was something at that time, but these days it’s a lot different, isn’t it?’⁵³ Mental as well as physical ill health could limit family size. Vanessa was born in Oxford in 1950 and her only son was born in 1979. She and her husband lived in Woodstock, a town near Oxford. Vanessa was diagnosed with schizophrenia and had been advised against having children due to the potential risk to her health. However, her husband very much wanted to have children so she agreed to have a child. Vanessa said she became ‘quite ill again’ during pregnancy and they realized they could not have any more children.⁵⁴ For these women, treatments were not available to increase their family size.

The conflicting advice that women could receive from medical professionals, as well as the sometimes traumatic experiences they endured, meant it was not surprising that women who did seek medical help often did so reluctantly. Mrs Hunter was born in 1931 in Preston. She was a secretary before and after marriage and her husband was a teacher. Married seven years without conceiving, she eventually sought medical advice. In the early 1960s she went into hospital for an operation: ‘I had been married all those years but apparently my vagina wasn’t open properly. I had a flange of skin that they cut away.’⁵⁵ The couple had one child a year later, but no more.⁵⁶ Lorraine was born 20 years later in 1950 but she recalled similar hesitancy in seeking medical treatment. Lorraine had grown up in Wokingham in Berkshire and was still living in the area when her own three children were born in 1976, 1978, and 1983. She had married aged 21 after meeting her husband while still at school. When asked whether she had always wanted to have children she answered:

Having children wasn’t something I was desperate about and we were married five years before we had [our first child] because it took us two years to have our first. I suppose that’s when I did get a little bit desperate, once it wasn’t happening. We were going for fertility treatment. And in fact I’d decided on, probably that we wouldn’t have them because the next step was fertility drugs. I wasn’t prepared to go down that route then because there were so many problems in the early seventies with that [. . .] if I wasn’t meant to have them naturally I wasn’t meant to have them.⁵⁷

On the day that Lorraine was going to undergo surgery she found out she was pregnant: ‘I can remember we were at the Royal Berks that day because I was supposed to go in to have my tubes all blown through or whatever they were going to do to them because they thought they were blocked and they did a pregnancy test’.⁵⁸ In her account Lorraine indicates that she took a fatalistic attitude towards having children: ‘if I wasn’t meant to have them naturally I wasn’t meant to have them’. However, she had also tried to intervene by going to the doctor and demonstrated agency in choosing which types of treatment she was prepared to undergo and which she was not. The accounts of women such as Lorraine therefore reflect the ambivalence they felt about receiving treatment, even if it proved successful.

Bev, whose words opened this chapter, was born in 1954 in Feltham. She had met her husband aged 14 and they were married when she was 24. She worked as a teacher and the couple lived in Berkshire. Bev had suffered from a series of 17 miscarriages before her two children were born in 1987 and 1990 at St Peter's Hospital in Chertsey. She explained: 'I had a lot of miscarriages. I couldn't get pregnant'. She added that in both of the pregnancies which resulted in the births of her daughters she had originally been carrying twins but had miscarried one of the foetuses.⁵⁹ Bev thought she was 'dependent on science'. Unlike her daughters who could choose when to have children, Bev said she 'didn't feel like I had much choice'.⁶⁰ She explained: 'You know, I had to wait till science had improved before I could . . . you know before scans were invented before Louise Brown,⁶¹ you know and all that sort of know-how came along [. . .] I didn't really have the choice when I wanted to have children. But I am grateful for science'.⁶² Bev's story indicates that, even if women trusted in science rather than chance alone, bearing a child was still something over which they felt they had little power. Bev was 'dependent' on reproductive technology, she did not control it.

MEDICAL PROFESSIONALS AND MEDICAL POWER

The women's accounts also indicated that they felt medical professionals were in a position of authority over female patients and that they did not always use this power appropriately. Some interviewees explained that while they were happy with the medical treatment they received, they felt emotional care was lacking. When asked what the medical care she received during her treatment was like, Bev said that it was 'brutal' and 'unfeeling'. She expanded her answer stating: 'You wanted to know what was happening, you had to ask. They were happy to give it if you asked but, it wasn't sit down, tea, sympathy and hold your hand and explain everything, if you see what I mean'.⁶³ Sandra's first pregnancy ended in miscarriage, and she also had difficulties in carrying her second child. Recalling her treatment she said, 'It was the summer of 1976 and it was very, very hot. I was pregnant and I started to bleed, and my GP was very good and said "Right, you'd best start having some hormone injections so that you don't lose it"'.⁶⁴ However, when she had an ultrasound scan, they found the baby had not grown as expected. She explained that the doctors 'at one stage said the baby might have brain damage. It was on my visit to the antenatal clinic and they said that to me, "We want you to come in . . . on Monday. The baby might have brain damage because it's not growing". I was told that by myself. I drove myself home. My husband was away. It was ghastly'.⁶⁵ When asked whether she thought the staff were unsympathetic, Sandra replied, 'I think there was an arrogance from the doctor. I made a complaint and [. . .] said, "You can't do this to us. You've got to stop this sort of frightening people, especially when they are by themselves"'.⁶⁶

Penny was born in 1927 in Lancashire. She had three children, in 1955, 1957, and 1964. Two episodes in which she was the victim of medical

incompetence shaped Penny's account of her reproductive history. First was her initial encounter with reproductive health services as a teenager, which left her with a torn cervix. She explained, 'I had dreadful dysmenorrhoea [...] and I went in to the Women's Hospital I think I was fourteen, I was certainly the youngest patient, that was in Liverpool [...] and it was terribly primitive in those days and they tore the cervix and that was why I lost those babies, and they didn't realize, it took them years and years to realize that was what I had'.⁶⁷ Penny had three miscarriages before her first daughter was born seven weeks prematurely, and recalling her feelings at this time she told me that, 'I was desperate for a child'.⁶⁸ Penny had to spend weeks in hospital before the birth of her first two children, who were both born prematurely, to try and prevent a further miscarriage. When she was pregnant again a new technique was offered to her, cervical cerclage (or cervical stitch), a treatment for cervical incompetence or insufficiency (when the cervix starts to shorten and open too early during a pregnancy, causing either a late miscarriage or preterm birth). She explained: 'I don't know whether you've heard of this but they [...] tie the neck of the cervix up'.⁶⁹ In order to receive this treatment, Penny chose to be privately treated by the Professor of Obstetrics and Gynaecology at Oxford University:

And he explained about this new technique and what a success this was going to be. And I think it was 18 weeks that they put these sutures in, well I had been going to him regularly for antenatal checkups and I went to one [...] and he was in a hurry and just fitting me in, and of course I was a private patient and he examined me and he estimated the length of the pregnancy [...] and then he said, 'oh it's all going very nicely, in a couple of weeks' time when you're 18 weeks pregnant we'll do this [stitch].' And I was saying to him, 'But I'm 18 weeks now!' [Bangs fist on table]. He didn't take any notice. Within a week I had lost the baby. I was furious, I could have sued him, but what's the point?⁷⁰

Penny believed that she miscarried because the cervical stitch was not put in at the correct time and that if her doctor had listened to her about the dates of her pregnancy this would not have occurred.

Bobbie was born in 1921 in Wales but grew up in Milton-under-Wychwood. She also raised her own family in the village after marrying her husband, whom she had met doing war work. Bobbie's two surviving children were born in 1955 and 1959 when she was aged 34 and 38 respectively. As well as problems trying to conceive, Bobbie's first baby, a son, died shortly after birth. She described the experience:

I finished work when I was six months pregnant but then two weeks after my feet and legs started to swell and of course I had to go to the doctors and I was in and out of the old Radcliffe [...] they went to start me off because they said the toxemia was spreading and they did what was a stretch and sweep – and I was violently sick the whole of the way through that pregnancy, morning noon and

night, it didn't matter when – and anyway they started me off with this stretch and sweep and I came to and there was just a sea of white masks all round me and they said, 'We're afraid we've got to do a caesarean', [inaudible], and they had to ring my husband for permission because you see I wasn't coming to [consciousness], so that was it I had a caesarean, and as I say he died three days afterwards, which was very sad and most upsetting for me.⁷¹

Bobbie said that she then received conflicting advice about whether to try for another baby. Her GP advised her against it, telling her 'you've had the worst pregnancy I've ever known in a woman, so you leave well alone'; but her consultant said, 'I ought to go ahead as I had such difficulty in starting a baby'.⁷² Bobbie followed her consultant's recommendation and 'fell in three months with [my first daughter] so she was born a year after she was born, so yeah I had to have another caesarean, I had to go in a fortnight before time and they did the operation and then when I had [my second daughter] I had to have the same'.⁷³ Bobbie then explained that after her second daughter was born 'we had to sign papers for me to, not to have any more children because I'd had three caesareans'. She added that 'I would have liked to have had a son of course but it wasn't to be.'⁷⁴ Bobbie was not critical of the medical staff who attended her, but in her account it is they, rather than she, who had the final say over her fertility.

CONCLUSION

This study of mothers' accounts of their reproductive lives has demonstrated that while secondary infertility and subfertility were hidden problems for many women in Britain in the second half of the twentieth century, they were experienced as significant and had powerful effects on women's lives. The testimonies of the women discussed above reveal that they did not have the family size they desired either because they had trouble conceiving first or subsequent children or because they had to limit their family for medical reasons. However, their experiences of subfertility remained largely concealed within their narratives because, as they were biological mothers, they did not fit the stereotypical images of infertility – of the 'barren' woman or childless couple. Nonetheless, when closely analysing women's stories of motherhood it becomes clear that fertility problems were not unusual. This study therefore supports Roberts's findings in Lancashire where she concluded that her respondents 'had more to say about low fertility than infertility'.⁷⁵

The interviews also reveal that women throughout the second half of the twentieth century took a fatalistic approach to secondary infertility and subfertility. While medical advice was sought by couples who were slow to conceive, women recalled ambivalent feelings about seeking help. In part this can be explained by the fact they thought that treatments were unpleasant and medical staff were uncaring. In addition, and not without justification, they believed that even if a medical explanation were found for their

inability to conceive, little could be done about it. Indeed, whether or not they sought medical treatment, many women took a resigned or fatalistic stance towards their fertility because it was something over which they had so little control. Both women who could be said to have achieved their desired family size and those who did not told their stories in similar ways, and it is their powerlessness and helplessness that resonates throughout their narratives.

NOTES

1. Bev, CR10, p. 8. See endnote 7 for a full explanation of codes used to identify interviewees.
2. World Health Organization, 'Infertility Definitions and Terminology', 2016: <http://www.who.int/reproductivehealth/topics/infertility/definitions/en/>. Accessed 6 December 2016.
3. C. Gnoth, E. Godehardt, P. Frank-Herrmann, K. Friol, J. Tigges and G. Freundl, 'Definition and Prevalence of Subfertility and Infertility', *Human Reproduction*, 20:5 (2005), p. 1144.
4. J.D.F. Habbema, J. Collins, H. Leridon, J.L.H. Evers, B. Lunenfeld and E.R. teVelde, 'Towards Less Confusing Terminology in Reproductive Medicine: A Proposal', *Human Reproduction*, 19:7 (2004).
5. This research originates from two principal projects: first, my doctoral thesis, which was entitled 'Motherhood in Oxfordshire, c. 1945–1970: A Study of Attitudes, Experiences and Ideals'; and second, a follow-up study conducted as a Leverhulme Early Career Fellow entitled 'Motherhood, c. 1970–1990: An Oral History'. They were published as Angela Davis, *Modern Motherhood: Women and Family in England, c. 1945–2000* (Manchester, 2012).
6. The Agricultural Economics Research Institute Oxford, *Country Planning: A Study of Rural Problems* (London, 1944).
7. To preserve the anonymity of the interviewees, pseudonyms have been used. Interviewees are referenced by identifying codes. The codes are formed of the first two letters of the locality from which the interviewee came and an identifying number: BA = 24 square miles of north Oxfordshire near Banbury covered by the 1944 Country Planning survey; BE = Benson; CO = Cowley and Florence Park; CR = Crowthorne; EW = Ewelme; OX = Oxford city centre; SA = Sandhurst; NO = North Oxford and Summertown; TH = Thame; WY = Wychwood villages. In addition, a group of graduates from Somerville College, University of Oxford were interviewed and are referenced by the code SO. Recordings and transcripts are held by the author.
8. Interviewees were asked to give their class of origin.
9. Penny Summerfield, *Reconstructing Women's Wartime Lives* (Manchester, 1998), pp. 1–42.
10. Elizabeth Roberts' Working Class Oral History Archive is held at Lancaster University. The Mass Observation collection is held at the University of Sussex.
11. Alessandro Portelli, 'What Makes Oral History Different', in R. Perks and A. Thomson (eds), *The Oral History Reader* (London, 2006).
12. Katie Wright and Julie McLeod, 'Public Memories and Private Meanings: Representing the "Happy Childhood" Narrative in Oral Histories of

- Adolescence and Schooling in Australia, 1930s–1950s', *Oral History Forum d'histoire orale*, 32 (2012), pp. 16–17.
13. Sally Alexander, 'The Mysteries and Secrets of Women's Bodies: Sexual Knowledge in the First Half of the Twentieth Century', in Mica Nava and Alan O'Shea (eds), *Modern Times: Reflections on a Century of English Modernity* (London, 1996), p. 171.
 14. Simon Szreter and Kate Fisher, *Sex before the Sexual Revolution: Intimate Lives in England 1918–1963* (Cambridge, 2010), p. 3.
 15. Szreter and Fisher, *Sex before the Sexual Revolution*, p. 3.
 16. Mass Observation Archive, University of Sussex (hereafter MOA), DR 3133, DR 3305, DR 1346, DR 3306, DR 163 5, DR 338 7, DR 2873, DR 3399, DR 1289, DR 3471, DR 2892, DR 2254, replies to November 1943 Directive.
 17. Eliot Slater and Moya Woodside, *Patterns of Marriage* (London, 1951), p. 118; Josephine Klein, *Samples from English Cultures* (London, 1965), p. 154; Ferdynand Zweig, *Women's Life and Labour* (London, 1952), pp. 27–8; Geoffrey Gorer, *Exploring English Character* (London: Cresset Press, 1955), p. 138 and p. 161.
 18. Camilla, SO6, p. 14.
 19. Lynne, OX14, p. 5.
 20. Richard A. Easterlin and Eileen M. Crimmins, *The Fertility Revolution: A Supply-Demand Analysis* (Chicago and London, 1985), p. 3; Wally Seccombe, 'Starting to Stop: Working-Class Fertility Decline in Britain', *Past and Present*, 126 (1990), pp. 153, 156; Etienne van de Walle, 'Fertility Transition, Conscious Choice and Numeracy', *Demography*, 29 (1992), p. 489; Lucinda McCray Beier, "'We Were Green as Grass": Learning about Sex and Reproduction in Three Working-Class Lancashire Communities, 1900–1970', *Social History of Medicine*, 16 (2003), p. 475.
 21. Hera Cook, *The Long Sexual Revolution* (Oxford, 2004), pp. 268, 272.
 22. Kate Fisher, *Birth Control, Sex, and Marriage in Britain 1918–1960* (Oxford, 2006), p. 2.
 23. Elizabeth Roberts' Working Class Oral History Archive, Lancaster University (hereafter ERA), Mrs J. 1. B., p. 11; also Mrs A. 4. L., p. 43; Mrs T. 2. L., p. 86; Mrs W. 4. L., p. 25; Mr and Mrs K. 2. P., p. 115.
 24. MOA, DR 3371, DR 3535, DR 2884, DR 3410, replies to March 1944 Directive.
 25. Davis, *Modern Motherhood*, pp. 182–3.
 26. Fisher, *Birth Control, Sex, and Marriage in Britain*, pp. 127–30.
 27. Fisher, *Birth Control, Sex and Marriage in Britain*, p. 87.
 28. Fisher, *Birth Control, Sex, and Marriage in Britain*, p. 4.
 29. Naomi Pfeffer, *The Stork and the Syringe: A Political History of Reproductive Medicine* (Cambridge, 1993), p. 111.
 30. MOA, FR 2182 'The Reluctant Stork/Empty Quivers', November 1944.
 31. MOA, FR 2182 'The Reluctant Stork/Empty Quivers', November 1944.
 32. MOA, FR 2182 'The Reluctant Stork/Empty Quivers', November 1944.
 33. MOA, FR 2182 'The Reluctant Stork/Empty Quivers', November 1944.
 34. ERA, Mrs O. 1. B., p. 25.
 35. ERA, Mrs W. 5. L., pp. 60–1.
 36. Ruby, BE5, p. 6.
 37. Ruby, BE5, pp. 8–9

38. Ruby, BE5, pp. 8–9
39. Cynthia, WY12, p. 6.
40. Cynthia, WY12, p. 6.
41. Alexa, SO13, p. 4.
42. Fanny, who was born in 1929, was 37 when her first child was born. Although she did not have any trouble conceiving her first baby, or a second born the following year, she recalled that her doctor said she was lucky not to have had any problems. Fanny, OX4, p. 7.
43. Pfeffer, *The Stork and the Syringe*, p. 139.
44. Pfeffer, *The Stork and the Syringe*, p. 127.
45. Pfeffer, *The Stork and the Syringe*, p. 140.
46. Pfeffer, *The Stork and the Syringe*, pp. 134–5.
47. Pfeffer, *The Stork and the Syringe*, pp. 134–5.
48. ERA, Mrs P. 6. B., p. 62.
49. Eve, CO8, p. 2.
50. Shirley SA10, p. 3.
51. Shirley SA10, p. 8.
52. A rhesus negative woman pregnant with a rhesus positive baby is at risk of developing antibodies against the rhesus antigens if any of the baby's blood enters her bloodstream. In subsequent pregnancies, the antibodies can attack the baby's red blood cells, potentially leading to anaemia and jaundice in the baby.
53. Edna, OX13, p. 4.
54. Vanessa, BA13, pp. 7–8.
55. ERA, Mrs H. 3. P., p. 89.
56. ERA, Mrs H. 3. P., p. 89.
57. Lorraine, SA6, p. 4.
58. Lorraine, SA6, p. 4.
59. Bev, CR10, p. 8.
60. Bev, CR10, p. 8.
61. Louise Brown, the world's first baby born by IVF, was born on 25 July 1978 at the Oldham General Hospital in Manchester. Her mother Lesley had failed to conceive over a nine-year period due to her bilateral fallopian tube obstruction, and had been referred to Patrick Steptoe (1913–88), who had developed the technique of laparoscopy, in 1976. A single oocyte was aspirated from one of Lesley's ovaries during laparoscopy, fertilization in vitro was performed, and a few days later the developing embryo was transferred into Lesley's uterus. Eric Jauniaux and Botros Rizk, 'Introduction', in Eric Jauniaux and Botros Rizk (eds), *Pregnancy After Assisted Reproductive Technology* (Cambridge, 2012), pp. 6–7.
62. Bev CR10, p. 8.
63. Bev CR10, pp. 9–10.
64. Sandra, EW13, pp. 4–5
65. Sandra, EW13, pp. 4–5
66. Sandra, EW13, pp. 4–5
67. Penny, CO7, p. 10.
68. Penny, CO7, p. 9.
69. Penny, CO7, p. 10.
70. Penny, CO7, p. 10.
71. Bobbie, WY7, p. 7.

72. Bobbie, WY7, p. 7.
73. Bobbie, WY7, p. 7.
74. Bobbie, WY7, pp. 7–8.
75. Elizabeth Roberts, *Women and Families: An Oral History, 1940–1970* (Oxford, 1995), pp. 81–2.

RESEARCH RESOURCES

Primary Sources

Archival Sources

Elizabeth Roberts' Working Class Oral History Archive, Lancaster University.
Mass Observation Archive, University of Sussex.

Published Primary Sources

The Agricultural Economics Research Institute Oxford, *Country Planning: A Study of Rural Problems* (London: Oxford University Press, 1944).
Geoffrey Gorer, *Exploring English Character* (London: Cresset Press, 1955).
Josephine Klein, *Samples from English Cultures* (London: Routledge and Kegan Paul, 1965).
John Macfarlane Mogey, *Family and Neighbourhood: Two Studies in Oxford* (Oxford: Oxford University Press, 1956).
Eliot Slater and Moya Woodside, *Patterns of Marriage* (London: Cassell, 1951).
Ferdynand Zweig, *Women's Life and Labour* (London: Gollancz, 1952).

Secondary Sources

Sally Alexander, 'The Mysteries and Secrets of Women's Bodies: Sexual Knowledge in the First Half of the Twentieth Century', in Mica Nava and Alan O'Shea (eds), *Modern Times: Reflections on a Century of English Modernity* (London: Routledge, 1996), 161–75.
Lucinda Macray Beier, '"We Were Green as Grass": Learning about Sex and Reproduction in Three Working-Class Lancashire Communities, 1900–1970', *Social History of Medicine*, 16 (2003), 461–80.
Hera Cook, *The Long Sexual Revolution* (Oxford: Oxford University Press, 2004).
Angela Davis, *Modern Motherhood: Women and Family in England, c. 1945–2000* (Manchester: Manchester University Press, 2012).
Carol Dyhouse, 'Towards a "Feminine" Curriculum for English Schoolgirls: The Demands of an Ideology', *Women's Studies International Quarterly*, 1 (1978), 291–311.
Richard A. Easterlin and Eileen M. Crimmins, *The Fertility Revolution: A Supply-Demand Analysis* (Chicago, IL and London: University of Chicago Press, 1985).
Katherine Field, 'Children of the Nation?: A Study of the Health and Well-being of Oxfordshire Children, 1891–1939', DPhil dissertation, University of Oxford, 2001.
Kate Fisher, '"She Was Quite Satisfied with the Arrangements I Made": Gender and Birth Control in Britain 1910–1950', *Past and Present*, 169 (2000), 161–93.

- Kate Fisher, *Birth Control, Sex, and Marriage in Britain 1918–1960* (Oxford: Oxford University Press, 2006).
- Eric Jauniaux and Botros Rizk (eds), *Pregnancy After Assisted Reproductive Technology* (Cambridge: Cambridge University Press, 2012).
- Alessandro Portelli, 'What Makes Oral History Different', in R. Perks and A. Thomson (eds), *The Oral History Reader* (London: Routledge, 2006), 32–42.
- Denise Riley, *War in the Nursery: Theories of Child and Mother* (London: Virago, 1983).
- Elizabeth Roberts, *Women and Families: An Oral History, 1940–1970* (Oxford: Blackwell, 1995).
- Wally Seccombe, 'Starting to Stop: Working-Class Fertility Decline in Britain', *Past and Present*, 126 (1990), 151–88.
- Penny Summerfield, *Reconstructing Women's Wartime Lives* (Manchester: Manchester University Press, 1998).
- Simon Szreter and Kate Fisher, *Sex before the Sexual Revolution: Intimate Lives in England 1918–1963* (Cambridge: Cambridge University Press, 2010).
- Etienne van de Walle, 'Fertility Transition, Conscious Choice and Numeracy', *Demography*, 29 (1992), 487–502.
- Katie Wright and Julie McLeod, 'Public Memories and Private Meanings: Representing the "Happy Childhood" Narrative in Oral Histories of Adolescence and Schooling in Australia, 1930s–1950s', *Oral History Forum d'histoire orale*, 32 (2012), 1–19.

PART II

The Body Politic and the Infertile Body

Introduction: The Body Politic and the Infertile Body

Tracey Loughran and Gayle Davis

When you conduct a search on the website of online retailer Amazon, a gallery beneath the search result reveals what ‘Customers Who Bought This Item Also Bought’. If you search Amazon for an infertility memoir, you are likely to find that other customers also bought the following products: guides to IVF treatment; ovulation and pregnancy test kits; iron supplements and ‘conception tablets’; and ‘fertility-friendly’ vaginal lubricant (‘Does not harm sperm or interfere with fertilisation and embryo development’, ‘PH balanced to match fertile cervical mucus’, ‘Contains the plant sugar, arabinogalactan, for antioxidant support of sperm’).¹

This parade of brightly coloured products is, on the one hand, heart-breaking: it is all too easy to imagine the individual stories behind these virtual shopping-baskets of hope and despair. On the other hand, it is also a salutary reminder that although within contemporary Western culture media narratives consistently portray infertility in individualized terms as a personal tragedy, it is a condition which is always enmeshed in wider political, economic, and social questions, debates and circuits. In using an algorithm to identify the purchases of other customers who bought the same item, Amazon simultaneously helps infertile consumers to locate goods desired for their own quest for reproductive health, and silently integrates their choices into its marketing tools. This is late capitalism operating at maximum efficiency: monitoring individuals’ most

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intimate desires, and repackaging this information to keep the wheels of consumerism whirring.

The insidious involvement of global corporations in intimate life is a relatively new development, but it would be difficult, if not impossible, to pinpoint any time in history when infertility has been viewed as a purely private affair.² Since ancient times, the reproductive health of a people, whether their capacity to go forth and multiply, or their ability to limit births, has been an important index of its political health. The fertile body continues to be used as a symbol of national power, and the infertile body as one of failure and vulnerability.³ Western societies are commonly highly pronatalist, meaning that they are characterized by ‘an ideology that incorporates beliefs, attitudes and actions that, implicitly or explicitly, support parenthood and encourage fertility’.⁴ In Israel, the country with the highest rate of intervention via assisted reproductive technologies (ARTs) in the world, reproduction is defined as a national responsibility because there is a belief that ‘the Israeli–Palestine conflict will be resolved, at least in part, by the collective reproduction of Israeli-Jews to counter the higher reproduction rate of Palestinians’.⁵ In countries with rigid and formal policies of population control, the state can intervene at virtually every stage of the reproductive process. Under the ‘one-child’ policy in China, which began to be phased out in 2015, prior authorization for planned pregnancies was required in many jurisdictions. It was therefore ‘often strategically necessary to become pregnant with split-second timing: birth control in this case actually means minute control of when there will be a birth, and “family planning” is no euphemism’.⁶

High-level machinations of power, whether on the part of national rulers or supranational corporations, contribute to determining the experience of infertility in multifarious ways. In the developing world, states and non-governmental organizations (NGOs) concerned with overpopulation often focus exclusively on measures to limit and control population despite strong pronatalist beliefs among citizens. When infertility is unacknowledged by the state or other authorities, sufferers often find it difficult and expensive to access remedies (biomedical or traditional).⁷ Meanwhile, in the nineteenth-century Western world, the medicalization of infertility turned sufferers into patients, and in the twenty-first century the unholy combination of free market capitalism, neoliberalism, globalization, and a proliferation of new reproductive technologies has turned these same patients into consumers.⁸

This section, then, explores the many different ways in which infertile bodies have been situated as objects of political concern in past and present societies. It examines the intersections between medical and cultural constructions of infertile bodies, political understandings of population and the health of the state, and the development and provision of techniques for investigating, managing, and curing infertility. In focusing on infertile bodies as political objects, it adopts a wide-ranging definition of the political as forms of power

operating in public life and involving authority and government. This definition incorporates but extends beyond the formal structures of political power, and therefore illustrates the complex power relations within which infertile people are caught, or in which they operate (as will be seen, in the current global context, infertile individuals may be simultaneously victims, agents, and abusers).

The section opens with Penny Roberts's exploration of the metaphorical and literal role of sterility during the crisis of the French Wars of Religion (1562–98). Since ancient times, the metaphor of the body politic has been used to illustrate ideal state–society relations. In the early modern period, political theorists began to use this metaphor to emphasize the artificiality of the political community, as a construct maintained through deliberate action.⁹ Sixteenth-century French authors drew on this rhetoric as they made comparisons between the political order and corporeal harmony, and often used images of the kingdom as ‘an ailing body in need of succour’ as a metaphor for the state of the monarchy.¹⁰ Yet as Roberts shows, the crisis of the Valois monarchy in this period stemmed from literal rather than metaphorical infertility, as successive rulers took increasingly desperate measures to secure the future of the dynasty. Their inability to provide legitimate heirs at a time of civil strife not only caused a succession crisis, but also undermined their authority and the stability of the kingdom.

Sarah Toulalan's chapter takes us across the Channel to examine medical discourses on thin bodies and infertility in early modern England. It shifts our focus from the level of dynastic politics to the management of individual bodies. Toulalan shows how at all stages of the reproductive process, the authors of medical and midwifery texts expressed concern about bodies that were too thin, from pre-conception (menstruation), through sexual intercourse and conception, to pregnancy and childbirth. In the humoral model of the body, bodies starved of nourishment could not produce good seed, and an excess of hot, dry humours in the womb would prevent conception. She argues that such concerns should be understood in the context of contemporary perceptions of fertility and the desire for successful reproduction to ensure a strong and healthy nation. As such, these discourses on too-thin bodies can be viewed as having a ‘disciplinary and regulatory function’ in their attempts to enforce behaviour that would secure economic, political, and social stability.

The theme of discipline and regulation is picked up in Fabrice Cahen's chapter on efforts to establish policies for the treatment of reproductive disorders in early twentieth-century France. In common with many other European states, the strength of pronatalist and eugenic discourses meant that states and medical authorities tended to neglect the infertile, or to implicitly stigmatize the condition as most likely resulting from induced abortion or venereal disease. Cahen traces the history of reproductive medicine in France from the isolated efforts of early pioneers to ambitious mid-twentieth-century plans for a large-scale public system of infertility

care, which ultimately foundered on lack of political and financial commitment to such an initiative. He demonstrates how political concerns about the health of the population and the stability of the family shaped medical approaches to infertility throughout this period. The chapter concludes by suggesting that although the failure of reform efforts can be partially attributed to contradictions between the aims of different authorities involved in formulating health and demographic policies, it may also reflect patient preference for private treatment. As this suggests, while we must always be alert to how public agencies can determine citizens' capacities for certain kinds of action, we should never assume that the influence flows in only one direction.

Hayley Andrew's chapter, which explores the role of the popular media in articulating the relationship between marriage, the family, and reproductive technology in late 1950s Britain, also emphasizes the multidirectional interactions of different institutions and authorities in the modern period. Andrew uses the sensational *MacLennan v. MacLennan* divorce case of 1958 as a jumping-off point to examine how the popular media shaped public opinion on the controversial issue of artificial insemination. She argues that media reporting on artificial insemination in the wake of this case not only reflected prevalent anxieties about family stability, but also actively framed new narratives of what it meant to have a 'test-tube baby'. In doing so, the popular media pushed against public opinion on the issue of artificial insemination by donor (AID) and contributed to redefining the heteronormative family. This nuanced consideration of the different forces influencing moral norms further demonstrates the historical contingency of cultural attitudes to infertility, and how these attitudes are subject to wider concepts of ideal gender behaviour and family life.

Finally, Daniel Grey's chapter surveys the social context of infertility in contemporary India, paying particular attention to the historical antecedents of the modern fertility industry. India has recently been described as 'the global champion in providing commercial ART'. The reproductive tourism industry is worth \$2.3 billion, and surrogacy alone generates approximately \$400 million annually – though the Surrogacy (Regulation) Bill (a diluted version of the Assisted Reproductive Technology [Regulation] Bill which was under discussion from 2007 to 2015), which may ban foreigners from seeking surrogacy in India, will have severe effects on this side of the business.¹¹ Yet while this side of India's contemporary reproductive landscape is well known, the history of approaches to infertility and reproductive technology *within* India is still virtually uncharted – perhaps a further indication of the same Western-centric bias that perpetuates stratified reproduction?¹² Grey's chapter, which examines population policies, reproductive medicine, and cultural and religious attitudes towards infertility, performs an important role in shifting historical focus back to Indian ideas, beliefs, and voices.

In their edited collection on contemporary studies of infertility around the globe, Frank van Balen and Marcia Inhorn emphasize the importance of examining the relationship between ‘top down’ and ‘bottom up’ perspectives of infertility in ‘nation-states where fertility regulation is part of national political discourse and policy making’.¹³ This section aims to provide a historical perspective on some of the same issues. Analysing the diffuse exercise of power and how different political forms have affected perceptions and experiences of infertility helps us to understand the extent and the boundaries of infertile individuals’ capacities for action, and their abilities to enact positive change. Some threads seem constant through time. In terms of power relations, states continue to hold more power than citizens, doctors than patients, men than women, rich than poor, white than non-white people. Likewise, attitudes to infertility are still inseparable from broader debates on population and the family, partly because these are perceived as essential to the success of the state or nation.

Yet if the infertile have often been ignored, stigmatized, or subjected to regulatory procedures, then the justifications for these negative attitudes have also changed over time, as conceptions of the bodily economy have altered, as different actors have assumed more power within the state, and as the form and power of the state itself has fluctuated. Within these moments of change, infertile women and men have seized the opportunities open to them to change their position: they have gone on pilgrimages, offered prayers and supplications; they have sought out medical help when states refused to provide it; they have made their voices heard in newspapers, magazines, and government enquiries; they have resisted and denied the stigmatizing labels imposed on them. These actions have been easier for some to take than others, but when we are considering the formation of the body politic and of political bodies, we might do well to remember that in an era before ARTs, reproductive tourism, and the patient as consumer, a rebellious body could render even the mightiest in the land powerless. Henry VIII could bend the law to his will, divorce or behead wives who displeased him, wage war on France, defy the Pope and declare himself Supreme Head on earth of the Church of England. But he could not guarantee the succession to the throne.

NOTES

1. Quotations from product description for Pre-Seed Vaginal Lubricant on Amazon.co.uk: https://www.amazon.co.uk/Pre-Seed-Vaginal-Lubricant-Multi-Applicators/dp/B001G7QNKM/ref=sr_1_2_a_it?ie=UTF8&qid=1465477731&sr=8-2&keywords=pre-Seed+vaginal+lubricant. The list of items here was obtained from searches for Peggy Orenstein, *Waiting for Daisy: The*

- True Story of One Couple's Quest to Have a Baby* (2008), and Anne-Marie Scully, *Motherhoodwinked: An Infertility Memoir* (2014): https://www.amazon.co.uk/Waiting-Daisy-Story-Couples-Quest/dp/0747594295/ref=sr_1_1?s=books&ie=UTF8&qid=1465479702&sr=1-1&keywords=searching+for+daisy+orenstein and https://www.amazon.co.uk/Motherhoodwinked-Infertility-Memoir-Anne-Marie-Scully/dp/1494291169/ref=sr_1_1?s=books&ie=UTF8&qid=1465479295&sr=1-1&keywords=infertility+memoir. All websites accessed 6 December 2016.
2. For a more extended discussion of infertility as a public/private affair, see Maureen McNeil, 'Reproductive Technologies: A New Terrain for the Sociology of Technology', in Maureen McNeil, Ian Varcoe, and Steven Yearley (eds), *The New Reproductive Technologies* (Basingstoke, 1990), pp. 9–10.
 3. See Colleen A. Hynes, "'A song for every child I might have had": Infertility and Maternal Loss in Contemporary Irish Poetry', in Irene Gilsean Nordin (ed.), *The Body and Desire in Contemporary Irish Poetry* (Dublin, 2006), pp. 150–7.
 4. Miriam Ulrich and Ann Weatherall, 'Motherhood and Infertility: Viewing Motherhood through the Lens of Infertility', *Feminism & Psychology*, 10:3 (2000), p. 323; Stephanie Rich, Ann Taket, Melissa Graham, and Julia Shelley, "'Unnatural", "Unwomanly", "Uncreditable" and "Undervalued": The Significance of Being a Childless Woman in Australian Society', *Gender Issues*, 28 (2011), p. 228.
 5. Alisa Von Hagel and Daniela Mansbach, 'The Regulation of Exploitation', *International Feminist Journal of Politics*, 18:2 (2016), pp. 4–5.
 6. Judith Farquhar, 'Objects, Processes, and Female Infertility in Chinese Medicine', *Medical Anthropology Quarterly*, 5:4 (1991), p. 375.
 7. Frank van Balen and Marcia C. Inhorn, 'Introduction. Interpreting Infertility: A View from the Social Sciences', in Marcia C. Inhorn and Frank van Balen (ed.), *Infertility Around the Globe: New Thinking on Childlessness, Gender, and Reproductive Technologies* (Berkeley, Los Angeles, CA, and London, 2002), p. 7.
 8. See Naomi Pfeffer, *The Stork and the Syringe: A Political History of Reproductive Medicine* (Cambridge, 1993), p. 28 for a discussion of how the language of consumerism infiltrated representations of involuntary childlessness in the late twentieth century.
 9. Claire Ramussen and Michael Brown, 'The Body Politic as Spatial Metaphor', *Citizenship Studies*, 9:5 (2006), pp. 472, 475.
 10. Penny Roberts, 'The Kingdom's Two Bodies? Corporeal Rhetoric and Royal Authority During the Religious Wars', *French History*, 21:2 (2007), pp. 149–50.
 11. Raywat Deonandan, 'Recent Trends in Reproductive Tourism and International Surrogacy: Ethical Considerations and Challenges for Policy', *Risk Management and Healthcare Policy*, 8 (2015), p. 111; 'India Introduces Legislation to Ban Surrogacy Tourism', *International Medical Travel Journal*, 7 December 2015: <http://www.imtj.com/news/india-introduces-legislation-ban-surrogacy-tourism/>. Accessed 10 June 2016; Teena Thacker, 'Assisted Reproductive Technology Bill Will Focus Only on Surrogacy', *The Asian Age*, 6

May 2016: <http://www.asianage.com/india/assisted-reproductive-technology-bill-will-focus-only-surrogacy-863>. Accessed 6 December 2016.

12. For discussion of the concept of stratified reproduction, see this volume's Introduction.
13. Van Balen and Inhorn, 'Introduction. Interpreting Infertility', p. 7.

Sterility and Sovereignty: The Succession Crisis of the Late Valois Monarchy

Penny Roberts

INTRODUCTION

No issue was of greater concern to sixteenth-century monarchs than securing their dynastic inheritance through the legitimate birth of a healthy male child. This consideration dominated policy to such an extent that it could result in the repudiation of wives, the annulment of marriages, and, most notoriously in the case of Tudor England, religious schism following the rejection of papal authority. This chapter explores the interrelationship of concepts of sterility and sovereignty in social and political responses to perceived failures of fertility among the Valois kings of France in the late sixteenth century, with special focus on Henry III (r. 1574–89). This examination demonstrates that perceptions of political legitimacy were closely tied to public demonstrations of the capacity for reproduction. The chapter first outlines how and why the stability of the succession became such a fraught issue in the tense religious and political context of late sixteenth-century France, places the fertility problems faced by Henry III and his wife Louise de Vaudémont-Lorraine against the background of those experienced by earlier Valois princes, and considers the relation between bodily and political weakness in contemporary discourse. The second half of the chapter discusses the different ways in which Henry and Louise attempted to boost their fertility, places their health-seeking behaviour in the context of contemporary religious and medical practice, and demonstrates how Henry III's lack of popularity was not only inseparable from his apparent failures both as the putative father of a family and the actual father of the nation, but eventually contributed to his murder.

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Important themes emerge from this discussion of the political resonance of sterility during the era of the late Valois monarchy, including the relation of religion to medicine in attempts to regulate reproductive behaviour, and the complexly gendered nature of blame and responsibility for the inability to reproduce. With hindsight, it is clear that the ability of monarchs to reproduce successfully was greatly hampered by intermarriage within a restricted gene pool in combination with the high infant mortality of the period. For contemporaries, the causes and effects were much less clear. They focused, in particular, on the operation of divine providence; the birth of an heir was seen as a sign of God's blessing on the monarch and the dynasty and so, conversely, the failure to reproduce served as an indication of divine disapproval. Yet, at the same time, contemporary medical manuals and treatises recognized that practical measures could be taken to encourage conception, successful gestation, and a healthy birth. Several of these manuals were written specifically with royal reproduction in mind and, along with traditional recourse to supplication to God and his saints and close attention to astrological charts, were keenly embraced by monarchs as well as their spouses and advisers in the hope of a successful outcome. As Henry III and his wife sought medical, religious, and astrological help to produce an heir, they drew on established methods for great houses to secure the succession.

Within discourses on sterility, it was common to focus on women as primarily responsible for progeniture. This reflected the gender politics of the age. French kings customarily took mistresses who, along with their children, often played a very public role at court, demonstrating the monarch's sexual prowess and reproductive potential in a way that was simply denied to queens. In practice, however, the production of illegitimate children did not displace blame from unpopular male monarchs whose principal duty was to produce legitimate male heirs to secure the future stability of the kingdom. After all, a wife's sterility could easily be interpreted as punishment for her husband's sins. Equally, the customary portrayal of the French king as 'father of the people' problematized this relationship when the monarch in question struggled to fulfil the paternal role expected of him.¹ The familial and political contexts were thus inextricably entwined in considerations concerning the fertility of the monarchy. A sterile sovereign engendered a sterile nation, beset by uncertainty and anxiety and, in the case of France during its religious wars (1562–98), laid waste by civil strife. There was an urgent need, therefore, to find a successful remedy for royal infertility and its destabilizing consequences.

FERTILITY, POLITICAL FERMENT AND RELIGIOUS CRISIS FROM HENRY II TO CHARLES IX

Even today, the most routine admission to hospital of a member of the British royal family causes a frenzy of excitement in the media. This is especially heightened in the case of a royal birth, as witnessed on the arrival in 2013 of

Prince George, son of the Duke and Duchess of Cambridge and third in line to the throne. So, too, in past centuries, the ill health or otherwise of the monarch and his or her heir was scrutinized, both by those close to the sovereign (whether due to fears or hopes regarding their own position) and the public at large, to whom rumours (well-founded or otherwise) soon spread. In the later decades of the sixteenth century, the health and ability to govern of the Valois kings of France were ceaselessly debated. The sons of Henry II (r. 1547–59) came to the throne young and inexperienced and at a time of grave domestic crisis. The death of Henry II in a jousting accident in 1559 had precipitated the descent into civil war occasioned by the struggle of the French Protestant (or Huguenot) minority for recognition of the right to worship. The Crown pursued a policy of toleration towards the Huguenots, but was bitterly opposed in this aim by the Catholic League, an organization formed in 1576 to defend Catholicism and to erode the power of the French Protestant nobility. Between 1562 and 1598, open armed conflict between the faiths erupted periodically. The weakness of the Valois monarchy in the face of opposition from various groups among its subjects of both faiths was exacerbated by the chronic ill health of successive kings and, above all, by their inability to produce a legitimate heir. This at least would have stabilized the issue of the succession which was to beset their reigns (Fig. 1).

Yet, on closer inspection, the story of supposed Valois sterility in the later years of the sixteenth century is rather more complex than is often recognized by historians. Unfortunately, there does not survive the same kind of detail about the sexual health of the Valois princes as for their later Bourbon successor Louis XIII (r. 1610–43), whose physician, Jean Héroard (1551–1628), kept a meticulous daily journal.² However, it is clear that from the late fifteenth century onwards, many monarchs faced difficulties in securing the succession. Louis XII (r. 1498–1515), cousin of the previous king Charles VIII (r. 1483–98), married first the sister and then the widow of Charles and, finally, the sister of Henry VIII of England (r. 1509–47). All three marriages ended without surviving male issue. Although Charles and Louis fathered four children each with the same woman – their queen, Anne of Brittany (1477–1514) – only two girls survived.³ These daughters were important in allowing both kings to make political capital out of dynastic marriages, but by the Salic law a woman could not rule in France, so daughters were not considered in the matter of succession.⁴ Even in countries where women were able to succeed, such as England and Castile, the prospect of their rule was not greeted with any enthusiasm. Their supposed physical and mental shortcomings meant that they were seen as neither suited to wield authority nor to pursue war, the mainstays of monarchy.

When kings did manage to produce sons, there was no guarantee that these children would survive to adulthood. Francis I (r. 1515–47) had seven legitimate children, including three sons. Only two of these children survived to adulthood sufficiently long to have their own children, including the surviving son, Henry II (r. 1547–59). As second son, Henry had not been expected to inherit the throne, only becoming heir on the sudden death of his older

Genealogy of the Late Valois/Early Bourbon Kings of France

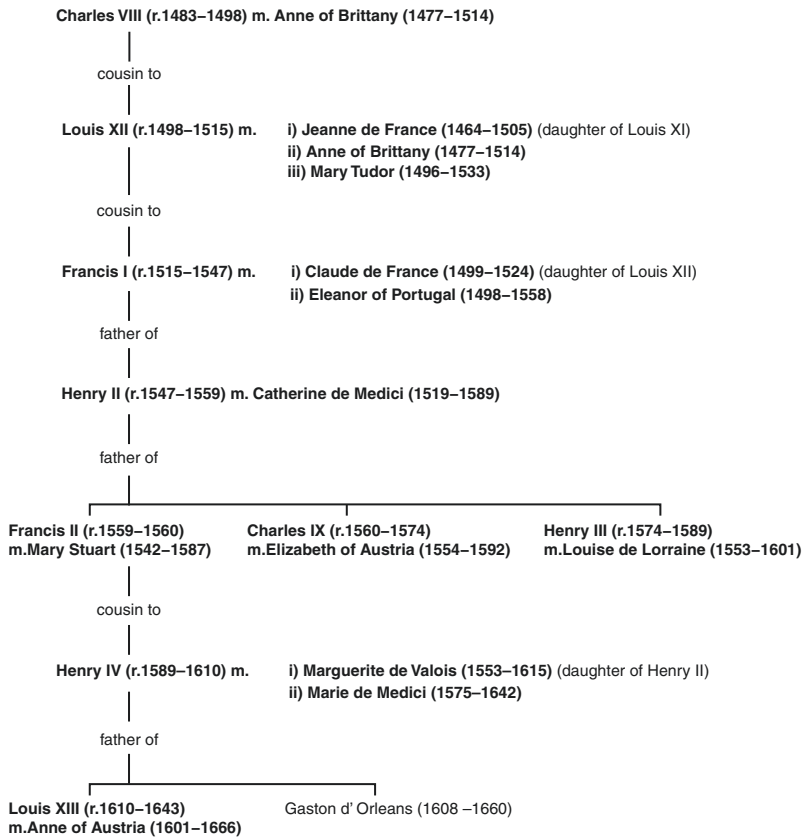


Fig. 1 Genealogy of the Late Valois/Early Bourbon Kings of France. Courtesy of Kirsty Harding

brother in 1536. Three years earlier, he had been married to the Pope's Florentine niece, Catherine de' Medici (1519–89), when they were both aged just 14. The first decade of Henry and Catherine's marriage was childless, accompanied by the constant risk that Henry might repudiate his spouse, especially once his own fertility was proven by his fathering of an illegitimate child. In 1544, however, following medical ministrations (including, it is said, a dose of myrrh pills for her and a penis operation for Henry), the advice of her lady-in-waiting, and even the support of Henry's long-term mistress, Diane de Poitiers (1499–1566), Catherine gave birth to the future Francis II.⁵ Nine further children followed in quick succession over the next 12 years. Of these, four boys and three girls survived to adulthood. This was, for the times, an excellent outcome, but was not sufficient to secure the future of the dynasty.

While three of these children would have children of their own, the rest would remain without issue. Most importantly, none of the sons fathered legitimate male offspring.

The ability (or inability) of Catherine's sons to reproduce was to prove crucial for the survival of the Valois dynasty. The virility and potency of the monarch had to be proven through *successful* procreation – that is, the fathering of legitimate sons. The later Valois kings failed to meet this challenge, with disastrous consequences for their dynasty and, arguably, the kingdom.⁶ The first of Henry and Catherine's sons, Francis II (r. 1559–60), succeeded to the throne aged just 15. He died the following year, before his fertility could properly be put to the test, but it is believed that his testicles had not yet dropped and that he was physically incapable of consummating his marriage to the equally youthful Mary, Queen of Scots (1542–87).⁷ Francis II's brothers, who succeeded him as king, proved little healthier. Due to a combination of physiological weakness and genetic predisposition, made worse, it is said, by an excessive lifestyle and bad medical care, they equally struggled to produce heirs.⁸ In this, they were no different from their near contemporaries, the Tudors, 40% of whose marriages, it has been calculated, remained barren.⁹ However, while Tudor kings desperately sought to produce legitimate male heirs, women could succeed to the throne in England, and so arguably the issue of succession never generated quite such dire political consequences for monarchs as it did in France.

Francis II's successor, his 10-year-old brother Charles IX (r. 1560–74), was another sickly youth. He did not have a legitimate child until 1572, only two years before his death at the age of just 23. Crucially, this was a daughter, who could not therefore be considered for the succession, and who anyway died aged 5.¹⁰ In 1573, Charles also fathered an illegitimate son with his long-term mistress Marie Touchet (1549–1638), but this son had no legitimate claim to the Crown while Charles had surviving brothers. In 1574, Charles's younger brother succeeded to the throne as Henry III (r. 1574–89), and it was now his turn to attempt to secure the succession for the Valois. Just two days after he was crowned he made clear his intentions by marrying Louise de Vaudémont-Lorraine (1553–1601).

Being in their early 20s, Henry and Louise were both young enough and old enough for successful reproduction. However, this did not follow. The remainder of this chapter examines the political, religious, and medical contexts of the couple's attempts to produce heirs, and the political consequences of their failure to do so. As with Henry's predecessors, behind this ultimate sterility lies a complicated story of reproductive tribulations, and the judgement of sterility is itself further dependent on definitions of infertility tied to concepts of legitimacy and illegitimacy. It is believed that Louise may have had a miscarriage in 1576, although Mark Hansen claims that Henry had been rendered 'hopelessly infertile' by his debauched youth and subsequent affliction with venereal disease.¹¹ Yet it is evident that Henry, like most French monarchs, fathered a number of illegitimate offspring, although he was more discreet

about this than most.¹² This uncharacteristic discretion about his reproductive capacity is said to have been, rather touchingly, for the sake of sparing his wife's feelings. Arguably, it would cost Henry dear. It is only in the sense, then, of not having produced a legitimate male heir that Henry might be termed 'sterile': and this is a primarily political definition of fertility, which should make us think again about how these crucial terms were conceptualized in times and places very different from our own.

RELIGION, MEDICINE, AND ROYAL FERTILITY

The attempts of Henry and Louise to produce issue took place in a fraught political context, in which the health of the royal body carried both literal and metaphorical significance. It should not be at all surprising that in the pre-modern era, when the stability of the kingdom was dependent on the effectiveness of the monarch, and when the suggestion of bodily weakness hinted at an incapacity to rule which might make way for faction and potential regime change, the health of the monarch was of primary concern. Even so, the apocryphal tale recounted below should make us pause for thought. At the end of the year 1559, a few months into the reign of Francis II, a Protestant chronicle recorded that

a false rumour spread, from who knows where, of a commission that had been sent to certain people to go and take the most good-looking and healthy children that they could find, aged four to six years, so that the king could bathe in their blood. Even though the idea was found completely ridiculous [...] nevertheless it spread to more than twenty leagues around the court, such that it was piteous to see coming and going mothers and fathers, hiding and enclosing their children here and there where they thought they would be safe.¹³

Further enquiries revealed that several people had reportedly been going from village to village, visiting houses and writing down the number, age and names of any children found there. When one of the team was captured, he claimed that he was following the orders of the Cardinal of Lorraine, of the powerful Catholic House of Guise, 'so that many believed that the rumour had been spread by the Guise family, despairing of the king's life and wishing to make him odious to the people, so that they could seize the crown for themselves'. The Cardinal had in turn blamed the Protestants, the chronicle claimed, increasing the King's hatred of them and his wish to find the means to exterminate them all.

This account shows how the well-being of a sixteenth-century monarch was seen as a significant determinant of the well-being of the state, and how these perceptions were easily related to ideas about parenthood and care of children. Robust good health suggested the all-important ability of the ruler to procreate and produce an equally healthy heir who could carry on the dynastic line, provide stability, and see off pretenders like the Guise. Yet for all their social

advantages, the ruling houses of early modern Europe, including the Valois, struggled to fulfil this duty. The episode reported in this chronicle took place in the context of real concerns about the health of the King. Francis II, a notoriously sickly youth, had been precipitately elevated to the throne upon the sudden death of his father, Henry II. Commentators often remarked on the afflictions which he had suffered from since childhood. In the winter of 1559, he had been advised by his doctors to retreat to the healthier air of the royal estates at Blois. This move prompted the wild rumour recounted here, which evoked both the biblical Massacre of the Innocents and an ancient belief that bathing in the blood of children would cure disease or restore youthfulness.¹⁴ It is hard to know from this distance how much credibility or traction such stories had with the primarily rural population. However, the anxiety which the rule of a young king brought, coinciding as it did in this case with fears of a descent into civil war as a result of religious division and tensions between noble factions, was real. Everyone looked to the Crown to provide stability which could best be assured through the securing of the dynastic succession.

Whatever the regime, and no matter how secure the monarch, the need for a healthy heir turned any sign of a longed-for royal pregnancy into an obsession. At a time of great uncertainties around the mystery of conception and its correct diagnosis, a combination of immense pressure and hope caused the frequent reporting of what often turned out to be phantom royal pregnancies.¹⁵ Miscarriages, whether real or imagined, were commonly declared, too; although distressing, they were seen as an indication that at least conception had taken place, with the hope of better success to follow. Even when a royal pregnancy was brought to full term, childbirth was notoriously fraught with danger. Obstetrical intervention was often heavy-handed, and infant mortality throughout society was high. It is commonly estimated that only a quarter of children reached adulthood, and that half died before their fifth birthday.¹⁶ Thus, even one healthy male child was deemed insufficient to ensure the bloodline; two or more were required. In this sense, reproductive anxieties might be quelled for a time but never completely assuaged. Infertility, however, was the greatest fear and threat of all. The political import of these fears is reflected in broad definitions of sterility, which often included those who were childless but had suffered multiple miscarriages, and was sometimes even applied to those who only gave birth to girls.¹⁷

There was no shortage of advice at this time for high-ranking prospective parents regarding the best circumstances and strategies for encouraging conception and treating infertility. Lianne McTavish has calculated that between 1550 and 1730, no fewer than 23 French obstetrical treatises were published. These often began with discussions of how best to conceive, how to promote fertility, and how to avoid sterility, with quite repetitive suggestions for appropriate diets and warnings about associated illnesses which could hamper conception.¹⁸ The general consensus was that women were most often to blame for infertility due to their weaker constitutions and the sensitivity of the womb. Even when this imbalance of responsibility was questioned, it was assumed

that, since motherhood was the primary function of women, they most feared remaining childless. As a result, many treatises were directed specifically at women, with titles such as Jean Liebault's *Three Books Dealing with the Infirmities and Illnesses of Women* (1582), and Louis de Serres's *Treatise on the Nature, Causes, Signs and Remedies concerning Failures to Conceive, and Sterility among Women* (1625).¹⁹ These authors did sometimes dispute assumptions that women were solely responsible for fertility. For example, de Serres argued that men and women were equally responsible for reproduction, and both needed treatment to ensure that 'sterility, the first monster of Nature, is vigorously attacked and defeated'.²⁰ It was also believed that the size of the penis influenced how effectively semen was delivered to the womb.²¹

Most of these medical authors wrote with the afflictions of the aristocracy and royal family in mind.²² The Valois family's own doctor, the famed physician Ambroise Paré (c. 1510–90), published an important treatise on reproduction, *De la generation de l'homme, recueilli des anciens et modernes*, in 1573.²³ He explored in considerable detail the best conditions for procreation and how to tell if conception had occurred, including physical changes and mood swings.²⁴ The causes of abortion were discussed extensively, including crucially the need for moderation in diet and physical activity.²⁵ Paré's section 'On the sterility or fecundity of women' emphasized physical impediments and menstrual irregularities.²⁶ Overall, Paré reinforced the importance of appearance, diet, and activity. A few decades later Louise Bourgeois (1563–1636), the midwife who attended Henry IV's (r. 1589–1610) second wife, Marie de' Medici, published her *Diverse Observations on the Sterility, Maternal Loss, Fecundity, Lying-in and Illnesses of Women and New-born Infants* (1609). Like Paré and other writers of the period, she promoted the humoral or Galenic view of the need for a well-balanced constitution in order to bring about conception, as well as the importance of healthy blood flow, which could be affected by emotions such as anger and fear.²⁷ She upheld the idea that women were often to blame for sterility, but also believed that their difficulties were more easily remedied through purgation and administration of particular substances and foodstuffs, such as rhubarb.²⁸ She considered menstrual problems and conditions of the cervix which might cause false symptoms of pregnancy, including 'moles' (fleshy masses), and the true signs of pregnancy, including cravings. She further considered why women lost babies, including the adverse effects both of a cold or overheated womb, as well as bad diet.²⁹ The extensive discussion of indicators of pregnancy, and the distinction between 'true' and 'false' signs, reflects contemporary ambiguity about knowing when a woman was with child. Most experts agreed that absolute certainty could only be established once the baby had moved or 'quicken'd'.³⁰

Would-be parents turned to medical treatises for advice, but they also relied on the first-hand experience of family and friends. Unfortunately, such oral discussions were seldom recorded. Correspondence can help us to 'fill in the gaps' here. The correspondence between Catherine de' Medici and her eldest daughter Elisabeth, who lived in Spain from 1559 until her death in childbirth

in 1568 at the age of 23, provides insights into how issues of reproduction were discussed, and how reproductive knowledge was dispersed at the French and Spanish courts of the sixteenth century. As Susan Broomhall has pointed out, the consort's body and health were also 'heavily surveilled', and were perceived to have political consequences 'for the fertility and future of the whole country', especially in the realm of reproduction.³¹ It is fortuitous, then, that what would normally have been intimate conversations between mother and daughter had to be written down. These letters reveal the extent to which Elisabeth's reproductive health was heavily scrutinized by both her own ladies-in-waiting and her mother. In particular, all were concerned with the regularity of her menstrual cycle and what this meant for her childbearing capacity. Elisabeth was married at the age of just 13, and experienced at least three miscarriages as well as two live births during her reign as Queen of Spain. She did not produce a healthy child until 1566. This provided her mother with ample opportunity to pass on tips and recipes to aid conception, which Catherine claimed that she had herself found useful. She advised hot baths and light exercise, and a dietary regime designed to preserve Elisabeth's correct humoral balance. In all of this, Catherine and others reflected the current advice of the day as contained in contemporary medical treatises, but also drew on first-hand knowledge and experience.³² Henry and Louise had access to a similar range and type of guidance about fertility, but in their case, the stakes of the failure to reproduce were much higher.

HENRY III'S QUEST FOR FERTILITY

The political impact of Henry III's apparent sterility most shaped the fortunes of the Valois dynasty, and ultimately led to its demise. The trials and tribulations of Henry and Louise's efforts to conceive were played out on a very public stage. Interspersed with reportage of duels, wars, assassinations, executions, strange portents in the sky, floods, earthquakes, and the scandalous doings of the court, the satirical Parisian diarist Pierre de L'Estoile (1546–1611) recorded each new development in the couple's quest for fertility. In January 1579, nearly five years after their marriage took place, L'Estoile first recorded and mocked the couple's efforts under the telling heading of 'Superstitions'. He reported that they had been to their summer residence at Ollainville to take the waters, bathe, and purge themselves, and had then proceeded to celebrate the feast of Candlemas at Notre Dame de Chartres, taking two 'undershirts' from the shrine of Our Lady. These were, in fact, not garments but medals depicting the chemise of the Virgin kept at Chartres, which were said to be beneficial for overcoming infertility. Then, L'Estoile tells us, the King 'returned to Paris to sleep with his wife, in the hope of making her with child, by the grace of God and of his shirts!'³³ For all L'Estoile's mockery, there was an established tradition of monarchs visiting shrines to seek divine assistance in producing male progeny. In 1516, after fathering two daughters, the sexually promiscuous and paternally productive Francis I had walked to the

shrine of St Martin of Tours to pray for a son.³⁴ The significant difference for contemporaries was that Francis's prayers appeared to have been answered, whereas Henry's were not.

L'Estoile depicted Henry III as something of a hypochondriac, obsessively seeking out cures for his everyday afflictions, including gallstones, by giving alms and saying prayers in Parisian churches, as well as by establishing oratories. In addition, his paranoia was said to have made him suspicious that his younger brother and heir Francis, the Duke of Anjou (1555–84), wanted to do away with him. Yet, it is clear that Henry, like his brothers, did indeed suffer from poor health. In September 1579, he had a severe ear infection which made him fear for his life, since that was what had killed his eldest brother Francis. His doctors too despaired as his condition worsened – all but one, L'Estoile mischievously tells us, who disapprovingly diagnosed its cause as due to overindulgent days and wild nights.³⁵ On his recovery, Henry, accompanied by Louise, went once again to Ollainville and Notre Dame de Chartres to make offerings, as he had vowed to do during his illness. The following year, major outbreaks of whooping cough and plague carried off tens of thousands in the capital and infected the court, including Henry himself.³⁶ These health concerns further undermined any claims about Henry's future virility. In the later years of his reign, commentators often remarked both on the King's ill health and how he appeared to be prematurely aged. Neither of these attributes boded well for his procreative chances.³⁷

As already observed, Henry and Louise employed diverse methods in the attempt to boost their fertility, including taking the waters, religious observance and offerings, and seeking astrological guidance. It was not until the seventeenth century that the fashion for frequenting spas, in the pursuit of remedies for all sorts of conditions, including sterility, really took off. However, royal bathing was already in vogue when Henry and Louise sought out the curative and generative powers of taking the waters (for further discussion of the perceived medical benefits of this activity, see Sophie Vasset's chapter in this volume). As well as visiting springs, Henry took to bathing in the sea off Dieppe, a practice which he advocated for his young wife in 1576, having heard that salt water might aid conception.³⁸ Alongside these quasi-medicinal approaches, Henry also sought astrological guidance regarding his childless state.³⁹ In this period, astrological study was viewed as a respectable intellectual pursuit and, through Renaissance philosophy, was closely integrated with medical practice.⁴⁰ Catherine de' Medici displayed a keen interest in astrology and famously commissioned birth charts to discover what the future held for her sons.⁴¹ The apothecary and prophet whom Catherine patronized, Michel de Nostredame (1503–66) – better known as Nostradamus – was only the most well-known, and certainly not the most distinguished, astrological practitioner. Contemporaries made regular use of astrology to identify suitable partners and to determine the best timing for a happy and fruitful marriage. Astral influence on the body and procreation were widely accepted.⁴² Thus, sixteenth-century people could choose from varied resources to address their medical complaints, including infertility, and Henry III had recourse to them all.

At least in terms of public display, religious devotions retained the most prominent place in the royal couple's activities, although they increasingly undertook them separately rather than together. In September 1580, on the advice of both her doctors and those of her husband, Queen Louise went to the baths at Bourbon-Lancy. L'Estoile reports that:

in the hope of soon after having children, observing exactly in addition the regime ordered by them to this effect, but it was of no use, no more than the pilgrimages which were held to be of such great virtue, which the king her husband and she had so well carried out, even to Notre Dame de Chartres.⁴³

The clear implication is that providence was against the royal couple. In November, on the Queen's return, a general procession and mass were organized in Paris, attended by the court and municipal authorities, with prayers to God, the Virgin and all the saints in Paradise 'to give issue to them who could succeed to the throne of France', that is, boys.⁴⁴ In this way, the royal family simultaneously spread the responsibility for resolving the monarch's infertility, and underlined that this was a public issue.

Over the next two years, the King's recurring illness led him to go on retreat first to Saint-Germain-en-Laye (from January–March 1581), and then to Fontainebleau (in 1582). Both times, he left Louise behind at the royal residence at Chenonceau.⁴⁵ This frequent physical separation reflected increasingly strained relations between the royal couple that would hardly have helped their chances of conception. This distancing was further reinforced by them taking separate entourages to Notre Dame de Chartres on their pilgrimage in January 1582, recorded by L'Estoile under the heading of 'Devotions of the king and queen to have children'. Once again seeking divine intercession, this time Henry and Louise included in their devotions an offering of silver gilt, so that all the churches of the kingdom should say daily prayers on their behalf. This act spread the burden for their infertility beyond Paris, to the whole kingdom. It also reflected an intensification of Henry and Louise's efforts. In June, they were back at Chartres again, this time donating a silver lamp and paying the money to ensure that it was kept lit day and night.⁴⁶ In September, they once again took the waters together at Bourbon-Lancy. Despite Catherine de' Medici's fervent expressions of hope that God would soon bless them with the gift of children, they returned to Bourbon-Lancy, still childless, the following year.⁴⁷ In November, another general procession was commanded, this time with the relics of Sainte Geneviève, patron saint of Paris, and those of the Sainte Chapelle, attended by the King and Queen, the Queen Mother and the King's sister Marguerite, as well as *parlementaires* and several city dignitaries. L'Estoile described this as a 'solemn conclusion to the year-long paradises' Henry had 'ordered built and decorated in all the parish churches, notably in Paris, for the sake of providing issue and heirs for the royal couple which he singularly desired'.⁴⁸

Their efforts did not stop here, as the couple continued to seek resolutions both separately and together. In January 1583, Louise undertook devotions on her own once again, this time to Notre Dame de Liesse, ‘where she pleaded with Our Lady to intercede for her, as she had done for others, to have issue and become pregnant with a son’.⁴⁹ It is notable that the gender of the child was explicitly declared this time. In April, increasing their acts of piety, both she and the King walked on foot from Paris to Chartres and then to Cléry, to pray, make offerings and seek intercession, returning after two weeks tired and footsore. In June, it was rumoured that the Queen was pregnant, perhaps reflecting popular optimism that these acts of piety would work. This may also have prompted Henry to support the trip of his favourite, the Duke of Joyeuse, to Rome that month, where he passed by the shrine of Loreto to offer a present in the royal couple’s name and to fulfil a vow which the King had made to the Virgin regarding the Queen’s health.⁵⁰ However, all this was to no avail, and the pilgrimage to Chartres and Cléry was repeated by the King, along with 47 penitent brothers, the following year.⁵¹ The death from consumption of the King’s brother and heir in June 1584, at the age of just 29, reinforced the desperation of the dynasty’s quest. No more is heard from L’Estoile on the couple’s efforts after this point, although the Queen reputedly continued her visits until 1586. Meanwhile, Henry seems instead to have become absorbed in his penitential devotions, going once again on foot to Chartres with 60 others in March 1586.⁵²

For her part, Catherine de’ Medici continued to hope and pray for a grandchild; in December 1584, she cited her own long road to conception as a cause for her continuing optimism.⁵³ It is highly likely that she had informally recommended the remedies so fervently promoted in her correspondence with Elisabeth. Two years later, underlining the political importance of such an outcome, she asserted that there could be ‘no greater remedy for all our misfortunes’ than the birth of a son to the royal couple.⁵⁴ This was not to be. After his brother’s death, Henry ruled for another five years, with no legitimate heir at the time of his death. Ironically, in view of his fairly constant ill health and paranoia about it, he brought about his own demise. He was stabbed by the monk Jacques Clément in 1589, in revenge for ordering the assassination of the Guise brothers the previous Christmas. He was just 37. This was the end of the Valois dynasty, and the beginning of a period of renewed religious conflict and civil war.

DEVIANCY, DIABOLISM, AND DIVINE DISPLEASURE

In France, as Katherine Crawford neatly puts it, ‘the king’s sexual abilities permeated the political order’.⁵⁵ Over time, Henry III’s infertility became closely, even inextricably, associated with his other failings. This is evident in the memoir of the provincial Catholic priest Claude Haton (1534–1605), another source unfavourable to Henry. Haton recounts the reception of the King’s wishes for ‘all the French people to pray to God for him and for

the Queen his wife' so that they might be granted 'a male child as legitimate heir to the Crown and kingdom of France after their deaths' in the province of Champagne in December 1581.⁵⁶ According to Haton, the King had informed the Pope of his command to his archbishops and bishops to exhort all the clergy to undertake processions and prayers, and for a litany to be sung pleading with God to grant Henry a son. However, the people refused, 'the most devout' feeling in their hearts that they could not in all conscience participate, but would rather see the King's entire lineage die out in view of his bad governance, which was worse than that of an infidel or heretic king. Nevertheless, their priests exhorted them that they had to obey their princes, whether they fulfilled their duties to keep them in peace and tranquillity or not.

A few months later, in February 1582, Haton further reported that, 'having taken the usual route which nature teaches to married people for having children, that is through the enjoyment of each other's bodies', the King and Queen 'had recourse to God and to the Virgin' by undertaking their pilgrimage to Notre Dame de Chartres.⁵⁷ As earlier requested, prayers and processions for the royal couple were held on Sundays and feast-days in the provinces, but because the King had made himself so hated through his exactions on the people and the sale of offices, they were 'more inclined to curse than to pray for him'. Once again, Haton claimed that many would have preferred to see the extermination of Henry and his line, fearing that his tyranny would be continued by his offspring. Such popular opposition at this juncture is remarkable; although Anjou was still alive, the future of the succession was nevertheless uncertain. The Pope supported Henry III's efforts with the declaration of a jubilee for all those who took part in the designated devotions, including the pardon of sins. Haton welcomed this, but also observed that the burdensome exactions continued, with the creation of a new tax-collector for his locality in May.⁵⁸

Henry's undoubted unpopularity was further reinforced by his failure to produce an heir. In turn, this failure fed into the legend of his perverse sexual proclivities, and was seen as a punishment for this deviancy. These proclivities were believed to involve both 'unnaturally' close relationships with the young male *mignons* (favourites) of his court, who blinded, fleeced, and declawed or emasculated him, and a predilection for deflowering nuns. All of this L'Estoile recorded, as well as the King's peculiar obsession with collecting little lapdogs, a passion he shared with his wife; their surrogate children, it might be surmised.⁵⁹ As the Catholic League grew in strength after Anjou's death, and the vitriol against the childless Henry increased, rumours abounded that he could only beget devils and monsters, which fed on his reputation for sorcery and diabolism. His flamboyant acts of piety were seen to be a cynical cover for these acts. Rarely can the body of a sovereign prince have been subject to such critical scrutiny and fevered speculation.⁶⁰ National anxiety culminated in the caricature of Henry III as a hermaphrodite prince of indeterminate sex, dubious morality, and suspect piety, who regularly transgressed gender boundaries in his dress and actions. He was viewed as a destabilizing force in the body politic whose activities and policies threatened to ruin the realm.⁶¹

There can be little doubt that if Henry had been able to produce a legitimate heir, it would have been harder to make such accusations stick. The people were bound to ask why the King and Queen's elaborate and repeated prayers had failed to solicit divine favour, despite their increasingly intense and extravagant public displays of devotion and appeals for popular support – support so reluctantly given. The couple's sterility could all too easily be interpreted as a sign of divine displeasure and punishment for sin, both individual and collective. Thus, it ultimately contributed to the justification for rebellion by the Catholic League against the Crown, as well as the act of regicide against Henry himself. For the French people, as for the Valois kings, sterility was always both a religious and a political matter.

CONCLUSION

The inability to provide a legitimate heir at a time of civil strife not only caused a succession crisis, but also undermined both the King's authority and the stability of the kingdom. A change of dynasty was also a moment of uncertainty and anxiety for the people, and the pressure to secure the succession by producing an heir to continue the dynastic line was intense. The Valois line had come to an end, but the same pressures which Henry III and his predecessors had laboured under continued to shape French politics. Next in line to the throne after Anjou's death was the Huguenot leader Henry of Navarre, of the House of Bourbon. Navarre had fought against, but also negotiated peace with, the Crown during the French religious wars. He was Henry III's cousin and brother-in-law, having married his sister Marguerite in August 1572. This marriage was an important precipitating factor in the infamous St Bartholomew's Day Massacre in Paris, which resulted in the slaughter of thousands of his coreligionists and further civil conflict. Navarre's Protestant religion was the principal bar to general acceptance of his claim to rule as Henry IV (r. 1589–1610) after Henry III's death, but this was removed by his ostentatiously public conversion to Catholicism in 1593. He was also assisted by the reputation he had carefully cultivated for being a strong and virile individual, a man of action. Yet this belies his own protracted struggle to produce a legitimate heir and thus to secure his dynasty's future.

Although Henry of Navarre overshadowed his predecessors in his displays of hyper-masculinity and womanizing, he and his wife Marguerite of Valois (1553–1615) never had any children. Indeed, they did not see each other after the first ten years or so of their marriage, which in 1599 was annulled by the Pope on the grounds of consanguinity, although they were later reconciled.⁶² Crucially, Henry already had two sons with his chief mistress Gabrielle d'Estrées (1573–99), whom he had planned to marry after the annulment, thus legitimizing their offspring. However, before he could do so, Gabrielle died following complications in childbirth (probably eclampsia). Henry had to seek a suitable new wife and, of course, mother for the sons he still hoped to produce. In 1600, he married Marie de' Medici (1575–1642), who was almost half his age (he was 47, she 25). In 1601 she did her duty by giving birth to an heir, the future Louis

XIII, and later produced a spare, Gaston d'Orléans (1608–60). She was to have four more children, two of whom married ruling monarchs (Philip IV of Spain and Charles I of England). Thus, the future of the Bourbon dynasty was assured by a distant cousin of Catherine de' Medici, who had struggled so hard and unsuccessfully to assure and secure the succession of her sons. Nevertheless, and perhaps in recognition of such uncertainties, Henry IV's court and household were notable for their very public inclusion and elevation of his illegitimate children, even those who came along after his legitimate offspring were born.

Like his predecessor, Henry IV was killed at the hands of an assassin in 1610. Unlike Henry III, he died with his legacy secured. Yet his example also shows what a waiting game achieving this security could prove to be. It took Henry nearly 30 years from when he was first married, and 12 years as a reigning monarch, to produce a legitimate heir. By this time he was 48. By contrast, the last kings of the Valois dynasty had neither time nor providence on their side. In England, too, the Tudor line had failed as Henry VIII's heirs were unable to reproduce despite his drastic actions to secure the dynasty's future. The refusal of Queen Elizabeth I (r. 1558–1603) to marry resulted in 1603 in the succession of James Stuart (r. 1603–25) to the English throne. Mary, Queen of Scots, the mother of James VI of Scotland and I of England, had been executed for treason for allegedly plotting the Queen's downfall in an effort to succeed to the throne of England herself. From the perspective of the decline and fall of dynasties, Mary's reproductive capacities therefore ultimately trumped Elizabeth's political manoeuvring. Had Francis II not died so soon after their marriage and his accession to the French throne, Mary's fecundity might even have secured the future of the Valois dynasty. Thus, on both sides of the Channel, the vagaries of royal fortunes were shaped by reproductive ability and contemporary sociopolitical definitions of infertility as rehearsed in medical manuals and by satirical commentators. The dynastic outcomes determined by these issues underlined the importance of the monarch's fertility for everyone; it was a matter 'of public interest' that 'connected royal generation with the status of the realm'.⁶³ Royal infertility was ultimately, therefore, a political issue with widespread ramifications for both Crown and nation.

NOTES

1. Penny Roberts, 'The Kingdom's Two Bodies? Corporeal Rhetoric and Royal Authority during the Religious Wars', *French History*, 21 (2007), p. 149 and n. 10.
2. Eudore Soulié and Edouard de Barthélemy (eds), *Journal de Jean Héroard sur l'enfance et la jeunesse de Louis XIII (1601–1628)*, 2 vols (Paris, 1868).
3. Susan Broomhall, *Women's Medical Work in Early Modern France* (Manchester, 2004), pp. 188–9.
4. Claude's sister Renée was married to the Duke of Ferrara, and Francis I's sister Marguerite to the King of Navarre. Coincidentally, both would be key supporters of the French Protestant movement.

5. Mark Hansen, *The Royal Facts of Life: Biology and Politics in Sixteenth-Century Europe* (London, 1980), p. 108; Robert Knecht, *Catherine de' Medici* (London and New York, 1998), p. 30; on Diane de Poitiers's role, see Broomhall, *Women's Medical Work*, pp. 192–3.
6. In a typically colourful and judgemental statement, in his study of the biological shortcomings of the monarchs of the sixteenth century, Mark Hansen describes the Valois kings as 'an abomination' and claims that 'their undeniable strangeness served to confirm Catherine's unnatural road to maternity': Hansen, *Royal Facts of Life*, pp. 85, 109.
7. Hansen, *Royal Facts of Life*, p. 112.
8. Hansen, *Royal Facts of Life*, p. 278.
9. Hansen, *Royal Facts of Life*, p. 2.
10. Hansen, *Royal Facts of Life*, pp. 115–16, also supports the view that Charles IX was mentally unstable, describing him, rather sensationally, as 'deranged' and 'truly warped'.
11. Hansen, *Royal Facts of Life*, pp. 122–3, 203.
12. Robert Knecht, *Hero or Tyrant? Henry III, King of France, 1574–89* (Farnham, 2014), pp. 137–9.
13. For this and the following quotation, see Guilielmus Baum and Eduardus Cunitz (eds.), *Histoire Ecclésiastique des églises réformées au royaume de France*, reprint of 3-volume Paris edn of 1883–89 (Nieuwkoop, 1974), vol. 1, p. 279.
14. Legend claimed that the seventeenth-century serial killer Countess Elizabeth Báthory of Hungary bathed in her young victims' blood so as to retain her own youth.
15. Cathy McClive, 'The Hidden Truths of the Belly: The Uncertainties of Pregnancy in Early Modern Europe', *Social History of Medicine*, 15 (2002).
16. For a discussion of infant and child mortality rates in early modern Europe, see Mary Lindemann, *Medicine and Society in Early Modern Europe* (Cambridge, 2010), pp. 23–6.
17. Valerie Worth-Stylianou (ed.), *Pregnancy and Birth in Early Modern France: Treatises by Caring Physicians and Surgeons (1581–1625)* [François Rousset, Jean Liebault, Jacques Guillemeau, Jacques Duval and Louis de Serres] (Toronto, 2013), pp. xxiii and 296 (from de Serres).
18. Lianne McTavish, *Childbirth and the Display of Authority in Early Modern France* (Aldershot, 2005), pp. 31–2; Worth-Stylianou (ed.), *Pregnancy and Birth in Early Modern France*.
19. Jean Liebault, *Trois Livres appartenant aux infirmités et maladies des femmes* (Paris, 1582) and Louis de Serres, *Discours de la Nature, causes, signes, & curation des empeschemens de la conception, & de la Sterilité des femmes* (Lyon, 1625), both discussed in Worth-Stylianou (ed.), *Pregnancy and Birth in Early Modern France*.
20. de Serres, *Discours de la Nature*, in Worth-Stylianou (ed.), *Pregnancy and Birth in Early Modern France*, pp. 324–5, 304.
21. Katherine Crawford, *The Sexual Culture of the French Renaissance* (Cambridge, 2010), p. 184, discusses the contrast between medical texts, which promoted the idea that a penis neither too small nor too large was best for procreation, and contemporary poetry which advocated, in Crawford's phrase, 'bigger is better'.
22. Worth-Stylianou (ed.), *Pregnancy and Birth in Early Modern France*, p. 347.

23. Joseph-François Malgaigne (ed.), Ambroise Paré, *Oeuvres Complètes* (Geneva, 1970), vol. 2, 18th bk, *De la generation de l'homme, recueilli des anciens et modernes*, pp. 633–741.
24. Paré, *Oeuvres Complètes*, chapters 1–2, 4–5, pp. 633–44.
25. Paré, *Oeuvres Complètes*, chapter 37, pp. 713–16.
26. Paré, *Oeuvres Complètes*, chapter 44, ‘De la sterilité ou fecondité des femmes’, pp. 733–5.
27. Louise Bourgeois, *Observations diverses sur la sterilité perte de fruct foecundité accouchements et Maladies des femmes et enfants nouveaux naiz*, in Wendy Perkins, *Midwifery and Medicine in Early Modern France: Louise Bourgeois* (Exeter, 1996), pp. 31, 37–9, 41–5.
28. Bourgeois, *Observations diverses*. See chapter 1, ‘Pourquoy plusieurs femmes ne peuvent porter enfans’, pp. 1–4. Rhubarb was generally seen as medicinally beneficial at this time, as mentioned in the journal of Pierre de L’Estoile: see Madeleine Lazard and Gilbert Schrenck (eds), Pierre de L’Estoile, *Registre-Journal du règne de Henri III*, 6 vols (Geneva, 1992–2003) [hereafter L’Estoile, *Registre-Journal*], vol. 3, pp. 102–3 (June 1580).
29. Bourgeois, *Observations diverses*, chapter 1, pp. 5–10, and chapters 2 and 3.
30. McClive, ‘Hidden Truths of the Belly’.
31. Broomhall, *Women’s Medical Work*, p. 215.
32. For a fuller discussion of this, see Broomhall, *Women’s Medical Work*, pp. 214–29; Susan Broomhall, ‘“Women’s Little Secrets”: Defining the Boundaries of Reproduction in Sixteenth-Century France’, *Social History of Medicine*, 15 (2002); compare to the discussion of this and later royal correspondence on this topic in Cathy McClive, *Menstruation and Procreation in Early Modern France* (Farnham, 2015), pp. 116–20, and Brian Sandberg, ‘“All the Many and Varied Remedies and Secrets”: Sexual Practices and Reproductive Knowledge in the Renaissance’, *Early Modern Women: An Interdisciplinary Journal*, 5 (2010).
33. L’Estoile, *Registre-Journal*, vol. 3, p. 22.
34. Crawford, *Sexual Culture*, pp. 200–1; and also on Henry III’s protracted efforts in this regard, pp. 227–8.
35. L’Estoile, *Registre-Journal*, vol. 3, pp. 46–8. Hansen, *Royal Facts of Life*, p. 120, also comments on Henry’s ‘additional twist of perversion’.
36. L’Estoile, *Registre-Journal*, vol. 3, pp. 69–70, 102–6.
37. Knecht, *Hero or Tyrant?*, pp. 120–2; David Potter, ‘Kingship in the Wars of Religion: The Reputation of Henri III of France’, *European History Quarterly*, 25 (1995), p. 493.
38. Crawford, *Sexual Culture*, p. 218; L’Estoile, *Registre-Journal*, vol. 2, p. 202.
39. Crawford, *Sexual Culture*, pp. 228, 212.
40. On its role, see Brendan Dooley (ed.), *A Companion to Astrology in the Renaissance* (Leiden and Boston, MA, 2014).
41. Knecht, *Catherine de’ Medici*, pp. 220–1.
42. Crawford, *Sexual Culture*, pp. 14–15.
43. L’Estoile, *Registre-Journal*, vol. 3, pp. 109–10 and notes 83 and 91.
44. L’ Estoile, *Registre-Journal*, vol. 3, p. 114.
45. L’ Estoile, *Registre-Journal*, vol. 3, p. 135 and n. 1; vol. 4, p. 19 (April 1582). See also Hector de La Ferrière and Baguenault de Puchesse (eds), *Lettres de Catherine des Médicis*, 10 vols (Paris, 1880–1943) [hereafter *LCM*], vol. 7, p. 341, n. 1.
46. L’ Estoile, *Registre-Journal*, vol. 4, pp. 12, 19, 26.

47. *LCM*, vol. 8, p. 55 and n. 63; see also her letters of 25 June 1583, p. 108, 9 September 1583, p. 142, and 19 October 1584, p. 224, making reference to how well the royal couple looked, which made her hopeful of a future pregnancy.
48. L'Estoile, *Registre-Journal*, vol. 4, pp. 47–8.
49. L'Estoile, *Registre-Journal*, vol. 4, pp. 65, 88 and n. 50.
50. L'Estoile, *Registre-Journal*, vol. 4, p. 93 and n. 58.
51. L'Estoile, *Registre-Journal*, vol. 4, pp. 134–5.
52. L'Estoile, *Registre-Journal*, vol. 5, p. 182.
53. *LCM*, vol. 8, p. 228.
54. *LCM*, vol. 9, 4 December 1586, p. 108.
55. Crawford, *Sexual Culture*, p. 197.
56. Laurent Bourquin (ed.), *Mémoires de Claude Haton*, 4 vols (Paris, 2001–07), vol. 4, pp. 444–5.
57. *Mémoires de Claude Haton*, vol. 4, pp. 476–8.
58. *Mémoires de Claude Haton*, vol. 4, pp. 476–8.
59. L'Estoile, *Registre-Journal*, vol. 2, pp. 206–7 (November 1575), on dogs; vol. 3, pp. 117–18 (November 1580), on nuns; vol. 4, pp. 45–6 (1582), on *mignons*.
60. See especially Keith Cameron, *Henry III: A Maligned or Malignant King?* (Exeter, 1978).
61. Kathleen Long, *Hermaphrodites in Renaissance Europe* (London, 2006), pp. 189–213; Michael Wintroub, 'Words, Deeds and a Womanly King', *French Historical Studies*, 28 (2005); Roberts, 'The Kingdom's Two Bodies?', pp. 150, 153.
62. On Henry IV's public display of masculinity, see Katherine Crawford, 'The Politics of Promiscuity: Masculinity and Heroic Representation at the Court of Henry IV', *French Historical Studies*, 26 (2003).
63. Crawford, *Sexual Culture*, p. 248.

RESEARCH RESOURCES

Primary Sources

- Guilielmus Baum and Eduardus Cunitz (eds.), *Histoire Ecclésiastique des églises réformées au royaume de France*, reprint of 3-volume Paris edn of 1883–1889 (B de Graaf: Nieuwkoop, 1974).
- Laurent Bourquin (ed.), *Mémoires de Claude Haton*, 4 vols (Éditions du Comité des Travaux historiques et scientifiques: Paris, 2001–2007).
- Hector de La Ferrière and Baguenault de Puchesse (eds.), *Lettres de Catherine des Médicis*, 10 vols (Imprimerie Nationale: Paris, 1880–1943).
- Madeleine Lazard and Gilbert Schrenck (eds.), Pierre de L'Estoile, *Registre-Journal du règne de Henri III*, 6 vols (Droz: Geneva, 1992–2003).
- Joseph-François Malgaigne (ed.), Ambroise Paré, *Oeuvres Complètes* (Slatkine: Geneva, 1970).
- David Potter (ed.), *The French Wars of Religion: Selected Documents* (Palgrave Macmillan: Basingstoke and New York, 1997).
- Eudore Soulié and Edouard de Barthélemy (eds.), *Journal de Jean Héroard sur l'enfance et la jeunesse de Louis XIII (1601–1628)*, 2 vols (Librairie de Firmin Didot: Paris, 1868).

Valerie Worth-Stylianou (ed.), *Pregnancy and Birth in Early Modern France: Treatises by Caring Physicians and Surgeons (1581–1625)* [François Rousset, Jean Liebault, Jacques Guillemeau, Jacques Duval and Louis de Serres] (Centre for Reformation and Renaissance Studies: Toronto, 2013).

Secondary Sources

- Susan Broomhall, “Women’s Little Secrets”: Defining the Boundaries of Reproduction in Sixteenth-Century France’, *Social History of Medicine*, 15 (2002), 1–15.
- Susan Broomhall, *Women’s Medical Work in Early Modern France* (Manchester University Press: Manchester, 2004).
- Katherine Crawford, ‘The Politics of Promiscuity: Masculinity and Heroic Representation at the Court of Henry IV’, *French Historical Studies*, 26 (2003), 225–52.
- Katherine Crawford, *The Sexual Culture of the French Renaissance* (Cambridge University Press: Cambridge, 2010).
- Mark Hansen, *The Royal Facts of Life: Biology and Politics in Sixteenth-Century Europe* (Scarecrow Press: London, 1980).
- Mack P. Holt, *The French Wars of Religion, 1562–1629* (Cambridge University Press: Cambridge, 2005).
- Kathleen Long, *Hermaphrodites in Renaissance Europe* (Ashgate: London, 2006).
- Robert Knecht, *Catherine de’ Medici* (Longman: London and New York, 1998).
- Robert Knecht, *The French Civil Wars, 1562–1598* (Routledge: London and New York, 2000).
- Robert Knecht, *Hero or Tyrant? Henry III, King of France, 1574–89* (Ashgate: Farnham, 2014).
- Cathy McClive, ‘The Hidden Truths of the Belly: The Uncertainties of Pregnancy in Early Modern Europe’, *Social History of Medicine*, 15 (2002), 209–227.
- Cathy McClive, *Menstruation and Procreation in Early Modern France* (Ashgate: Farnham, 2015).
- Lianne McTavish, *Childbirth and the Display of Authority in Early Modern France* (Routledge: Aldershot, 2005).
- David Potter, ‘Kingship in the Wars of Religion: The Reputation of Henry III of France’, *European History Quarterly*, 25 (1995), 485–528.
- Penny Roberts, ‘The Kingdom’s Two Bodies? Corporeal Rhetoric and Royal Authority during the Religious Wars’, *French History*, 21 (2007), 147–64.
- Penny Roberts, *Peace and Authority during the French Religious Wars, c.1560–1600* (Palgrave Macmillan: Basingstoke and New York, 2013).
- Brian Sandberg, “All the Many and Varied Remedies and Secrets”: Sexual Practices and Reproductive Knowledge in the Renaissance’, *Early Modern Women: An Interdisciplinary Journal*, 5 (2010), 235–42.

‘If slenderesse be the cause of unfruitfulnesse;
you must nourish and fatten the body’:
Thin Bodies and Infertility in Early
Modern England

Sarah Toulalan

INTRODUCTION

Fertility and successful reproduction were significant concerns for both men and women in early modern England.¹ The ability to conceive, maintain a pregnancy, and give birth to a live, healthy child were important to women as failure negated their primary social and gender role as wives and mothers.² But infertility (including miscarriage) was not only problematic for women, it also challenged a man’s attainment of patriarchal manhood that was bound up with his ability to father children and establish his position as head of a household.³ For the married couple, their growing family demonstrated to their birth families, and to the wider community, that theirs was a successful union with a strong foundation of mutual regard that brought satisfaction to both partners. More broadly, as shown in Penny Roberts’s chapter in this volume, the generative success of man and wife was the foundation of early modern social stability as it ensured the continuation of family bloodlines, the security of titles, property and wealth through inheritance, and

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Note on spelling: in quotations from primary sources typographical differences have been modernized (e.g., ‘u’ for ‘v’, ‘j’ for ‘i’, ‘s’ for long ‘f’).

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the economic and military aims of the nation by producing and maintaining a population sufficient to support them. At a time when mortality was high, particularly infant mortality, the promotion of fertility, and the availability of treatments for infertility, continued to be of relevance to early modern people, even though the authors of medical and midwifery books were drawing upon much earlier classical ideas and texts (see Cristina Santos Pinheiro's chapter for further discussion of the use of ancient texts in early modern medical publications). Publications printed in vernacular languages from the sixteenth century recirculated the same ideas, often repeating words, phrases, and entire paragraphs verbatim, as well as debating and incorporating newer theories, in a shared European culture of medical knowledge and innovation.

In early modern medical writing about reproduction, or generation in contemporary terms, one of the causes of infertility invariably identified was body size, whether too fat or too thin. This chapter will focus on thin bodies and infertility; I have discussed reproductive problems from too much fat elsewhere.⁴ Ideas about the likely infertility of bodies that were very thin were derived from ancient classical models of reproduction but nevertheless resonated in early modern society, especially as diseases that might cause sickness and wasting were prevalent, and the poor might struggle to achieve an adequate diet. While there was considerable stability in these ideas, some changes can be identified in the eighteenth century. These reflect new theories about conception, foetal nutrition in utero and causes of miscarriage, how birth is initiated, and emergent eighteenth-century anxieties about masturbation.

Historians have explained concerns about fertility by examining the demographic context and anxieties about underpopulation.⁵ A combination of high mortality from disease and war, including the English Civil Wars (1642–51) and European conflicts, emigration to the New World, and the late age of marriage which limited marital fertility, meant that previous steady growth in population from the late sixteenth century reversed: by the mid-seventeenth century the population had fallen by around 6%.⁶ Renewed population growth from the early eighteenth century was due to couples marrying at a younger age, thereby extending their reproductive potential.⁷ Nevertheless, infant mortality remained high and life expectancy low, fuelling persistent anxieties about fertility and perceptions of the need to promote reproductive health for the prosperity and well-being of the nation.⁸ Scholars have therefore also paid attention to barriers to fertility, especially deliberate attempts to control it through contraception and abortion.⁹ Recognition of the importance of contemporary religious ideas about the purpose of marriage for procreation and the development of women's history influenced investigations into women's lives and experiences, especially their roles in family life and as bearers of children.¹⁰ The particular experiences of pregnancy and childbirth, legitimately within marriage and as unmarried mothers, have consequently been thoroughly explored.¹¹ Laura Gowing has also remarked upon the significance of pregnancy and childbearing to women's lives: it conferred status within their communities through knowledge of sex and reproduction. Such knowledge

allowed women a role in official proceedings, such as confirming pregnancy in a condemned woman, or the signs of violence or virginity in trials for rape.¹² As historians began to examine ideas about masculinity, the importance of virility and paternity to early modern concepts of manhood was noted, and how impaired fertility could negatively affect reputation and social standing.¹³ The social consequences of infertility and childlessness have thus more recently come to the fore, and Jennifer Evans has thoroughly explored how men and women were concerned to remedy infertility or enhance fertility.¹⁴ However, while Evans and others have mentioned that slenderness was thought to cause infertility at this time, there has not been any close examination of how it was understood to interfere with generation, nor of what it might reveal about changing reproductive knowledge.¹⁵

Studies of wasting and self-starvation in this period have also not paid any attention to its relationship with fertility or infertility. This bodily phenomenon has been examined almost exclusively in the context of its relationship to religious piety and sainthood, including as an early modern manifestation of anorexia nervosa.¹⁶ However, as I shall show, there was no indication that early modern medical writers perceived infertility from too little body fat as a problem of self-imposed starvation. It was rather an affliction that followed from sickness, including the sickness of pregnancy, or from an insufficient diet through circumstances not choice, except in the case of a spare diet that was part of the prescribed remedy for a particular illness. Those who wrote about this subject paid most attention to women because they were thought not only unable to conceive but also likely to suffer miscarriage if they did nevertheless become pregnant. Men, too, though, were understood to be infertile if too thin, as their lack of flesh indicated a constitution that was inimical to the production of fertile seed. Emaciation was debilitating and so also affected virility, preventing successful engagement in sexual intercourse. Modern medical research into eating disorders has confirmed an adverse effect on the fertility of very thin bodies, both male and female, now categorized as anorexic: menstruation ceases and libido decreases, although a woman might continue to ovulate and therefore become pregnant. But, as early modern authors also remarked, there is more risk of miscarriage.¹⁷ Although based upon different understandings about physiology and reproduction, and therefore about why such bodies might be infertile, the basic remedy for infertility from emaciation was based upon the same principle then as now: nourish the body to regain flesh and hence fertility.

Through the close investigation of such specific reproductive issues we can detect important changes in theories and understandings about the processes of generation that moved medicine away from the classical humoral models upon which it had hitherto been based. The shifts in thinking about thin bodies and infertility that took place between the sixteenth and eighteenth centuries reveal a number of these small but significant changes: they reflect new theories about conception (that women produce eggs from ovaries), about foetal nutrition in utero (that emaciated women did not starve the foetus leading to

miscarriage), and, linked to this, about the causes of miscarriage (that overstraining through coughing and vomiting did not cause miscarriage by breaking the ‘cotilidons’ but rather by causing the womb to open), about the agency of the foetus in precipitating birth (that it was passive rather than active), and contemporary anxieties about sexual incontinence which now began to focus upon a specific type of sexual behaviour (masturbation).

TOO THIN BODIES AND GENERATIVE DYSFUNCTION

Women’s bodies were scrutinized for the signs of pregnancy, if unmarried for the signs of their incontinency, and, if married, for the signs of infertility should they not quickly become pregnant.¹⁸ It was anticipated that bodies considered to be too thin might be infertile in several ways, and the very thin appearance of the body was therefore indicative of its reproductive dysfunction. Lisa Wynne Smith has remarked how the very thin appearance of a woman revealed both her nature and one aspect of her likely infertility: ‘Les femmes chaudes et sèches, reconnaissables à leur tein coloré, leur maigreur, leur manque d’appétit et leur tempérament colérique, risquaient de brûler la semence’ [Hot and dry women, recognizable by their high colour, their leanness, their lack of appetite and their choleric temperament, were at risk of burning the seed].¹⁹ Queen Mary Tudor’s (1516–58) body, described as ‘very thin’ by the Venetian Ambassador in 1554, and as ‘pale and emaciated’ in 1557, was perhaps interpreted in this way.²⁰

Early modern medical authors understood fat to be an essential substance in the body whose functions included cushioning the bones and other internal parts for comfort, lubricating joints to keep them supple, providing nourishment in times of famine, keeping the body warm, and improving its appearance by filling it out so that it might be ‘plump, equall, soft, white and beautifull’.²¹ The quantity of fat in the body was determined by its humoral constitution and thus also varied by sex as the more hot and dry constitution associated with men meant that they ‘naturally’ had less fat than their colder and moister sisters. Bodies were also more lean at different stages of life as old bodies, constitutionally more cold and dry, were usually characterized by leanness (and understood as infertile or subfertile).²² It was understood therefore that some bodies ‘naturally are thus spare & lene’, and so more thin than others, at the same time as it was recognized that wasting occurred due to lack of sufficient nourishment or diseases such as consumption and cancer.²³ While especially fat and thin bodies were both categorized as deformities of magnitude, excessive thinness was not generally written about as negatively as fatness because it was usually attributed to causes beyond a person’s control: poverty and illness, or a ‘natural’ disposition to extreme slenderness.²⁴

In early modern England there was not yet any systematic or widely accepted measurement of bodies that categorized them in varying degrees of body size or weight, although in the early seventeenth century at least

one physician had created a weighing chair.²⁵ Pat Rogers has observed that before 1750 people did not generally weigh themselves, but this did not mean that people were unaware of changes to their weight or body size: in the early eighteenth century, English physician George Cheyne (1671–1743) was very conscious of variations in his weight, and a vogue for weighing oneself developed among the upper classes at the end of the century.²⁶ Early modern medical authors referred to bodies they judged too thin in a variety of ways, describing them as having ‘Leanness of all the parts’²⁷ or ‘too much Leanness’,²⁸ as ‘very lean’,²⁹ suffering ‘emaciation’³⁰ or ‘extream leanness of the whol body’,³¹ as both ‘leane and slender’³² or ‘very spare and lean’.³³ Sometimes the too-thin body was explicitly linked to illness showing that this body type was perceived as indicative of ill health: as one author in the late eighteenth century described, ‘very lean, and never but look extremely ill’.³⁴ Bodies that were slender were judged to have become too thin when fat was absent ‘in those parts which should be fleshy and are not’.³⁵ Although too little body fat was not yet accurately measured or quantified, a too-thin body could be visually distinguished from one that was ‘naturally small’ and ‘not out of order’ because it could be judged ‘so lean, that it is ugly to be beheld’.³⁶ The appearance of such a body included ‘when the Thighs and Arms are withered, the Cheeks fallen, the Shoulders blades stick out, and the Belly shrunk in’.³⁷

Swiss physician Felix Plater (1536–1614) included excessive slenderness as a type of deformity, detected particularly in women’s bodies when the breasts were so adversely affected by absence of fat that they lost their shape and firmness, and hence their beauty and desirability: ‘Hitherto is referred the thin-ness of Womens breasts which is a Deformity not when they are little, for that is accounted an ornament, but when they are lank and hang down this in young Women especially is accounted unseemly’.³⁸ Old women’s breasts were perceived as more ‘naturally’ lacking the round plumpness of youthful beauty as they became colder and drier with age, leading to loss of flesh, wrinkles, and the ravaging of appearance, but young women were expected to have breasts that were firm, round and smooth.³⁹ Lorenz Heister’s (1683–1758) *Anatomy* described beautiful breasts as having ‘a moderate Bigness, a due Distance, a tender and white Skin, a Substance somewhat hard, not flabby or pendulous, and a rosy Nipple’.⁴⁰ The ideal, beautiful female body at this time was defined as ‘curvaceous’ and ‘soft’ with a moderate plumpness rather than thin.⁴¹ The too-thin body was thus perceived as ugly but it was also functionally debilitated because the lack of flesh ‘causeth weakness’ and was associated with ill health.⁴² Functional debilitation applied not only to everyday activities and occupations but also to reproduction as it impaired fertility.

The body might become too thin through an insufficient diet, usually brought about by poverty, or through illness that caused wasting, including consumption and cancers where the flesh was thought to be ‘eaten’ by the voracious disease.⁴³ Swiss physician Jean Prévost (1585–1631) in *Medicaments*

for the Poor, translated from the original Latin and expanded by Nicholas Culpeper (1616–1954), set out how:

Natural Magnitude, is made faulty, either by excess or defect, when it is augmented beyond its proportion, or els diminished. The kinds of Magnitude diminished are reckoned to be, Defect of Nourishment, or Leanness of all the parts, and Marasmus, or a Consumption of the whole Body, following a Hectick Fever, or wasting away [. . .].⁴⁴

Some sixteenth and seventeenth-century authors also noted that wasting could be caused by witchcraft, where sufferers were ‘tortured with lingring consumptions’, but this is not mentioned in medical texts in relation to emaciation affecting fertility, perhaps because wasting caused by witchcraft was more usually mentioned in the context of children’s illnesses.⁴⁵ Such references disappear from eighteenth-century works, reflecting the decline in witchcraft belief.⁴⁶

In the humoral model of the body prevalent at this time, the balance of the four humours – blood, yellow and black bile, and phlegm – which corresponded to the four qualities of hot, dry, cold, and wet, and by analogy to four stages of life (infancy, youth, maturity, and old age), determined one’s individual constitution and hence appearance. Excessive thinness, like too much fat, was brought about by humoral disequilibrium. Bodies became very thin as a result of too much heat which melted away flesh, or cold and dry humours, as in old age, which diminished the blood so that there was insufficient available to nourish the flesh. The understanding that fat was made from blood did not change from the sixteenth century to the eighteenth. Thomas Vicary (c.1490–1561) wrote that, ‘The flesh is a consimiler member, simple [. . .] and is ingendred of blood’.⁴⁷ Physicians and anatomists in the eighteenth century continued to note that fat was ‘a fine oily substance’⁴⁸ which was separated from the blood ‘by the *Adipose Glands*’,⁴⁹ although it was noted that ‘the organ which separates it from the mass of blood [. . .] is not as yet sufficiently known’.⁵⁰ Although there was some discussion in early medical books as to whether fat should be understood as hot or cold in nature, as its composition might change from solid to liquid depending on whether it was cold or hot, the general consensus was that it should be categorized as cold, as it was congealed in the body from ‘the coldness of the Membranes, from whence it gets its white color’.⁵¹ A hot constitution thus reduced fat, diminishing the flesh, producing a very lean body.

The humoral model also underpinned early modern understandings of the processes of reproduction and hence of what caused dysfunction. Heat was essential for successful reproduction. An increase in heat as children grew towards adolescence precipitated the bodily changes of puberty, allowing it to produce the materials for conception: seed and menstrual blood. Raised heat also generated sexual feelings prompting desire and the urge for sexual congress, while the friction of sexual intercourse further increased heat to cause

orgasm and the release of seed for conception. Consequently, too little heat or too much could be inimical to successful reproduction, causing infertility in both men and women: as Robert Barret (dates unknown) observed at the end of the seventeenth century, ‘Tis the moderate and temperate constitution that is bless’d with many Children’.⁵² Very thin bodies were likely to suffer infertility by reason of too much heat which made them very lean and consumed the generative materials, either destroying them altogether or making them defective. Too much heat also generated excessive sexual desire, leading to over-indulgence of the sexual appetite that also negatively affected fertility.

CONCEPTION AND THE SUBSTANCES OF GENERATION

For conception to succeed, and for a couple to be fertile, the materials of conception – seed and menstrual blood – had to be produced in both sufficient quantity and quality. But that alone was not enough to secure fertility: a woman’s womb must also provide the right environment to enable conception, and for the resultant foetus to be securely embedded and nurtured to grow and gain strength for a successful birth at full term. The section on miscarriage later in this chapter will examine what might go wrong during gestation if the too-thin woman did, against expectations, succeed in conceiving; this section will elucidate why very lean men and women were understood to face difficulties in conceiving in the first place.

As we have seen, bodies were understood to be very thin because too hot and dry, so that body fat melted, leaving little flesh to cushion the bones and fill out the body. Such bodies therefore appeared gaunt and, in extreme emaciation, skeletal. Too much heat also affected production of the generative materials in both contemporary models of generation, Aristotelian and Galenic-Hippocratic. Thus, in the early sixteenth century, German physician Eucharius Röesslin (c. 1470–1526) noted, in words that were repeated and paraphrased by others in the following two centuries, ‘when over much heate or dryeth in the matrice is cause of the hynderaunce of conception [. . .] manye tymes they that are in this case are verye spare and leane in all theyr bodye havynge also but small quantite of flowres’.⁵³ Here, Röesslin spoke only about women, mentioning the state of the womb (‘matrice’) and menstruation (‘flowres’), but this constitutional imbalance affecting fertility also affected men. In the Aristotelian model of reproduction where only men contributed seed, men were understood to have defective or insufficient seed, while women would have insufficient menstrual blood to contribute matter to the foetus and, after conception, to nourish it in the womb. In the Galenic-Hippocratic model in which women also contributed seed, albeit a weaker, thinner and less perfect seed, the overheated constitution impacted on both seed-production and menstrual blood to impair fertility. In both models male seed was valorized as the principal generative material that acted upon female matter to spark new life, forming and shaping the foetus. Medical and midwifery texts repeated these ancient classical models of reproduction throughout the sixteenth and

seventeenth centuries. They also continued to circulate in the eighteenth century alongside new works that incorporated later seventeenth-century theories about egg-producing ovaries in women and the observation of ‘animalcules’ in male seed developed through investigations by William Harvey (1578–1657), Reinier de Graaf (1641–73), Marcello Malpighi (1628–94), Antonie van Leeuwenhoek (1632–1723), and others.⁵⁴ However, these new theories did not have any substantial impact on ideas about fertility or infertility and were incorporated into the earlier models.

Because both fat and seed were understood to be made from blood, bodies that were too thin were thought to have too little blood available to produce either body fat or seed – and the body would prioritize its own well-being, taking what it needed rather than allowing its scarce resources to be used for seed-production. English medical writer William Salmon (1644–1713), for example, repeated these long-held ideas in midwifery books attributed to Aristotle and Nicholas Culpeper published at the beginning of the eighteenth century:

Also a Man may be Barren, by reason of the defect of Seed; as, First, If he cast forth no Seed at all; or less in substance than is needful. Or, Secondly, If the Seed be vitious, or unfit for Generation; as on the one side, it happens in Bodies that are gross and fat, the Matter of it being defective; and on the other side too much Leanness, or continual Wasting or Consumption of the Body, destroys the Seed; Nature turning all the Matter and Substance thereof into Nutriment of the Body.⁵⁵

I have argued elsewhere that bodies whose fertility was impaired because they were ‘gross and fat’ were judged negatively as they were generally perceived to have become so through unrestrained appetites and idleness. Diversion of blood to augment fat, making it unavailable for production of generative materials, meant that fat bodies could be regarded as inherently selfish and disruptive, resisting conformity to gender and class expectations.⁵⁶ Although very thin bodies were also understood to do the same thing, authors were less judgemental when the cause was illness or insufficient diet because these were usually beyond the control of the affected person, and could not be rectified until recovered from illness or the diet could be improved. Emaciation from self-imposed starvation does not yet seem to have been regarded as a problem in relation to infertility and will be considered in the section on miscarriage.

Male seed might be ‘vitious, or unfit for Generation’ if it was too hot as Röesslin observed in the early sixteenth century: ‘Lykewyse maye there be defecte and lacke in the man as yf the seade be over hote the which the woman shall feale as it were burning hote’.⁵⁷ Authors paid less attention to women’s seed, focusing instead on the nature of the womb and menstruation. Comments on the destruction of seed in women by the overheated womb do not always make it clear whether this includes their own seed. When Robert Barret wrote that ‘if the Womb be too dry and hot, for then the Seed is burnt up and exhal’d’, the previous sentences clarify that he was referring only to

male seed ejaculated into the female body.⁵⁸ Earlier in the seventeenth century, German physician and professor of medicine Daniel Sennert (1572–1637) wrote of women afflicted by ‘*dry Distemper of the Womb*’ that ‘They void little Seed’, but when discussing the ‘*hot Distemper of the Womb*’, he mentioned only men. He wrote that ‘Heat of the Womb is necessary for Conception: but if it be too much, it nourisheth not the Seed of the man, but disperseth its heat, and hinders the Conception’.⁵⁹ Hot and dry, hence very thin, bodies thus prevented conception by producing insufficient or defective (too hot) seed, and, in women, the overheated womb destroyed male seed following orgasm and ejaculation during intercourse.

Notwithstanding new discoveries and theories about reproduction, these humoral ideas continued in European medicine into the eighteenth century. French professor of medicine Jean Astruc (1684–1766) also listed as a cause of sterility, ‘Obstructions of the Body of the *Uterus*, such as proceed from an over-hot or otherwise vicious Temperament’.⁶⁰ Astruc, like other eighteenth-century authors, simply modified his explanation, altering general discussion of seed to more specific discussion of animalcules and ova: ‘The excessive Heat of the *Uterus*, whereby the *Animalcula* are destroyed before the *Ovum* descends into the *Matrix* to be impregnated by one of them’.⁶¹ Just as little attention was earlier paid to female seed, it is not specified whether the burning heat of the womb also affected the ovum. This may be because if the male seed was destroyed before it could fuse with the ovum (or, in earlier formulations, with the female seed and/or menstrual blood), then what happened to the female generative matter was irrelevant as no conception could occur without the male active agent: as Astruc noted, ‘Tho’ all the preceding Conditions are to be met with in a Woman; yet if the seminal Animals, one at least, be not alive and sufficiently active, no Conception will ensue’.⁶² Remedies for infertility from this cause, as in preceding centuries, continued to list ingredients that would oppose heat and dryness with their cooling and moistening properties. Just as Philip Barrough (fl. 1590) in the late sixteenth century had advised consuming ‘such things as do coole & moisten: as these herbs be, letuse, mallowes, gourdes, purslaine, & orach’, so Astruc recommended ‘cooling Broths of Veal and Pullet, [...] Asses Milk, cold or acidulous mineral Waters’.⁶³ Remedies also included those to be applied externally to the reproductive parts in oils and ointments or as cooling baths. Barrough thus suggested that ‘you must applie to the loynes and about the privities such thinges as do coole, as juyce of nightshade mixed with oyle of roses, which also being laid upon woll, may be put well into the matrice’. Similarly, for ‘A dry matrice’ the ‘bathes of sweete water’ might be supplemented with ‘annointings, & meates that do moisten’.⁶⁴

A very thin woman’s fertility was further impaired by the effect her paucity of fat had on her ability to produce the other essential matter of generation: menstrual blood. Both Aristotelian and Galenic-Hippocratic models of generation understood menstrual blood to play a part in conception and gestation. A regular, and sufficiently copious, menstrual flow, of a good red colour, was, at least partially, indicative of a woman’s fertility. Women, and their physicians,

therefore paid attention to the nature and regularity of menstruation from menarche to menopause.⁶⁵ Although there was some debate during the eighteenth century about the exact contribution of menstruation to reproduction, its importance to the process continued to be recognized. As early as 1703 English physician John Freind (1675–1728), in his influential treatise on menstruation, *Emmenologia*, questioned its material role in conception, remarking that menstrual blood was ‘not altogether *necessary* to conception’.⁶⁶ However, he did not completely dismiss its relevance, arguing that it helped ‘Women *Conceive the more easily*’ because it ‘opens the uterine Passages, that the *Semen* has a freer entrance into the Blood’.⁶⁷ Seventy years later, English physician John Ball (c. 1704–79) still understood menstruation as that ‘supply of blood which women ought to collect for the use and aliment of their offspring’, although this was questioned by others as the century drew to a close.⁶⁸

The fertility of overly slender women was understood to be harmed by their reduced or completely absent menstruation, or by its impaired quality as indicated by its colour and nature. Barrough wrote, in words that echoed Röesslin: ‘they that are leane and slender which be wasted with some continuall sicknes, they have no superfluous bloud in them’ to be evacuated as the menses.⁶⁹ Similarly, Peter Chamberlain (1601–83), around 80 years later, noted: ‘The third cause which hinders the *Termes*, is many times the vitiousness, and ill habit of the whole body, that it sends not bloud sufficient to the womb’. Chamberlain completed the sentence by further explaining, ‘the humour inclining to other parts of the body’.⁷⁰ Just as blood was diverted from producing seed to nourish the rest of the body when it was too thin, so, too, there was insufficient to produce menstrual blood. Whether the cause of such slenderness was ‘great and sharpe sicknesses’, ‘scarcitie of foode’,⁷¹ or ‘ill Dyet, or too much Exercise, as often it comes to pass in some Rustick women; whereby their temperament becomes so hot and dry’,⁷² the result was the same: suppression of menstruation causing infertility. This idea did not alter into the eighteenth century: John Freind echoed earlier authors when he wrote:

In those who either use slender Diet, or much Exercise, the Flux is terminated sooner; the *Plethora* being less in each of these, for the Blood is not accumulated in Persons who use spare Diet; and in those who use much Exercise it is wasted and dissipated thro’ the Pores. Hence *Country* Women, who labour hard, have the *Menses* more sparingly.⁷³

However, while rural labouring women were stereotypically understood to be more lean, and hence to have a less copious menstrual flow, than their more idle and plump city sisters, such women were regarded as having a healthy slenderness, and, consequently, to be more fertile and to give birth more easily.⁷⁴ Women who were considered unhealthily lean, though, would have an inadequate menstrual flow with altered properties that would impair their generative potential. Sennert, for example, wrote that a hot womb meant that a

woman would ‘have few Courses, yellow, or black, or burnt, or sharp’ and where the womb was dry, so ‘the Terms are few’.⁷⁵

Whereas authors recommended remedies composed of ingredients with opposite properties to cure the too-hot and dry womb or to promote seed production, the remedy for absence of menstruation in those who were too thin was a fattening diet: once the body was sufficiently filled out, blood would be available for generative purposes rather than to augment and nourish the flesh. Barrough advised: ‘Those which are not purged of their menstruis, through leanes of the bodie, whether it chaunce through sicknes, or any other meanes, you must first recreate, and refresh them, and restore the flesh of their bodies by a convenient diet, and by other medicines’.⁷⁶ Once a sufficient plumpness was achieved, menstruation should be restored: ‘And if they wexe fleshie, there is good hope, that the menstruis will burst out by their owne accorde’. However, if it was not, then it would be appropriate to use other remedies to bring them on: ‘which if they doe not come forth alone then you shall provoke them by potions, fomentes, and other medicines’.⁷⁷ In these circumstances the provocation of menstruation was clearly intended to restore fertility rather than as a covert abortifacient, as some historians have more recently acknowledged.⁷⁸ But the nature of the very thin body as hot and dry, whether caused by sickness, too much hard labour, or dietary insufficiency, was not ignored. Dietary advice included not only foods to fatten the body but also cooling and moistening ingredients to restore humoral balance. Supplementary treatments, such as cool bathing and the avoidance of purging which would further deplete the body, were also advised. Nicholas Fonteyn (or Fontanus; dates unknown) in the mid-seventeenth century, for example, advised, ‘If slendernesse be the cause of unfruitfulnesse; you must nourish and fatten the body with meats that yeild good juyce, and with moistning baths: and you must be carefull to avoid evacuations, and all other things, which weaken the strength, and exhaust the spirits’.⁷⁹ The remedy of good diet and fattening foods, though, was unavailable to those poor women who were emaciated and starving because unable to afford sufficient food. Neither could wasting from illness be remedied until after recovery; but if the disease was cancer or consumption then recovery, and a healthy plumpness, might not be possible. Moreover, those who were perceived as ‘naturally’ extremely slender might not be able to gain flesh and hence improve their fertility, as Röesslin had remarked in the early sixteenth century: ‘But suche women which naturally are thus spare & lene maye verve hardly be brought to a temperancye agayne & be made apte to conceive’.⁸⁰

FURTHER IMPEDIMENTS TO CONCEPTION: SEXUAL APPETITE AND BEHAVIOUR

Excessive thinness and its associated infertility might also be caused by sexual behaviour. Those of a hotter constitution were understood as more lustful, and hence more likely to indulge their sexual appetite. The excessive sexual activity

prompted by seeking to satisfy this overheated, immoderate appetite was thought to weaken and exhaust the body and to cause wasting, both of which affected fertility: seed was weakened and virility diminished, impeding intercourse. Male impotence was a significant concern throughout this period, not only because it threatened marital reproductive success, but also because it was a potential cause of marital infidelity. Such sexual and reproductive failure undermined social stability as it interrupted lines of inheritance, generated marital, familial and community strife, compromised contemporary notions of manhood, and prevented fulfilment of the maternal role.⁸¹ French surgeon Ambroise Paré (c. 1510–90), whose work on generation was drawn upon by English authors into the eighteenth century, asserted that for seed to be fertile ‘it must of necessity be copious in quantity, but in quality well concocted, moderately thicke, clammy, and puffed up with the abundance of spirits’, but that in ‘such as use the act of generation too often and immoderately’ these qualities were absent; their seed became ‘crude and waterish’ and therefore unfit for generation.⁸² English physician John Floyer (1649–1734) presented as an example to his readers a young gentleman who had deteriorated to ‘nothing but Skin and Bone’ through ‘Wine, Women and Watching’, that reduced him to ‘a meer *Skeleton*’, causing ‘a decay in *Virility*, tho’ he was a young Man not above 27 or 28 Years of Age’.⁸³ Such decayed virility included defective seed and the inability to complete the sexual act through depleted vitality. The idea that overheated, immoderately lustful, emaciated bodies destroyed seed did not change with the discovery of ‘animalcules’ in seed. Authors now referred to animalcules specifically rather than to seed in general: ‘It has been observ’d, that they [animalcules] are not found in those that are much addicted to Venery. This agrees with Experience, which teaches us, that those who are given to Women are barren’.⁸⁴ Although authors mostly discussed men in this context, the effect of an inordinate sexual appetite on women’s fertility was also discussed. Women were unlikely to conceive because their overheated wombs destroyed the seed so that it could not mix with female generative matter to form a conception: ‘Many women there are whose violent lust contracts a heat that destroys the Seed, and renders it incapable of coagulating, and mixing with the Bloud’.⁸⁵

Masturbation could be categorized as debauched behaviour and was thought to have a similar effect. Popular anti-masturbation texts published in the eighteenth century repeated similar warnings about the consequences of masturbation for fertility as authors in the previous two centuries had issued about the effects of excessive sexual intercourse. The anonymous author of the *Supplement To The Onania, Or the Heinous Sin of Self-Pollution* included a letter from a correspondent who wrote that ‘this abominable Practice caused me to look lean and thin’.⁸⁶ This wasting effect on the body applied to both men and women: their bodies became ‘enervated, consumed, drained, wasted, and worn out’ through ‘this detestable Habit of Self-Defilement’, causing ‘Impotency in one Sex, and Barrenness in the other’.⁸⁷ Scholars have argued that eighteenth-century anxieties about

masturbation and its potentially deleterious effects on reproduction were driven by the ‘belief that Europe’s population was declining’.⁸⁸ But concerns about the effects of emaciation on fertility, as we have seen, were long held; perhaps these new concerns about masturbation arose, at least partially, because it was perceived as yet another form of immoderate sexual behaviour that produced wasting and hence infertility. Such debilitation, though, was potentially temporary and might be remedied through diet – but the sufferer must cease the debauched behaviour causing it, whether excessive sexual intercourse or masturbation. Floyer cured the young man he treated, restoring him to a healthy plumpness, and as ‘his Flesh came on’ so was his virility regained.⁸⁹ Authors throughout these three centuries therefore advised, ‘let those that would be parents of many children use a mediocrity in the use of venery’, whether intercourse or masturbation.⁹⁰

MISCARRIAGE

Despite the many impediments to conception theorized as facing those who were very thin, particularly slender women nevertheless did become pregnant, as modern medical researchers have also observed. However, then as now, these pregnancies were perceived as more precarious, with a higher risk of miscarriage. Barrough observed, ‘women that be leane & slender do not conceive, or if they do conceive, they do suffer aborsion straight way’.⁹¹ This understanding, attributed to Hippocrates, that women suffering ‘extream leanness of the whol body’ would miscarry, was repeated into the eighteenth century.⁹² Röesslin defined miscarriage as ‘untymely byrth’; that is, when the child was born ‘before due season & before the frute be ripe’ because it was ‘by some chaunse dead in the mothers wombe’.⁹³ Röesslin attributed the second cause of miscarriage to the state of a woman’s body: if a woman was too fat or too thin she was more likely to miscarry for a number of reasons. At the end of the seventeenth century, the author of *Aristotle’s Manual of Choice Secrets* summed up this thinking about the ideal body for successful childbearing, remarking that miscarriage could occur ‘Sometimes from Leanness, and at other times from too much Fulness or Fatness, a Medium being the best for Women in Child-bearing’.⁹⁴ For a woman who was too thin, like women who were too fat, causes of miscarriage included the inability to sufficiently nourish the foetus in the womb and the breaking of the cotilidons, the veins and sinews that were thought to bind the foetus into the womb keeping it safely fastened there until birth. However, unlike women who were fat, those who were very thin were not generally held responsible for the state of their bodies and thus for their experience of miscarriage. Discussions about very thin women’s inability to nourish the growing foetus adequately therefore do not usually have the pejorative tones and negative comments that can be found in discussions of fat bodies; they are not generally blamed in this literature for failure to carry their child to term, despite some historians’ assertions that women were inevitably blamed.⁹⁵

Although many authors referred to ‘Long and great fasting’ causing excessive thinness leading to risk of miscarriage, there was no suggestion that this would be through choice: women who were very thin through starvation were not judged to have become so through self-starvation or self-imposed fasting, but through poverty, famine, or sickness.⁹⁶ When an author made reference to ‘voluntary’ starvation, the context suggests that this did not mean that women deliberately chose to restrict their food intake, but rather that their pregnant condition made them averse to eating. When Rivière wrote that miscarriage might be caused by ‘Defect of Humors fitting to Nourish’ which occurred when the mother’s body was ‘able to draw the Nourishment from the Child, as fasting, whether voluntary or forced’, he explained what he meant by ‘voluntary or forced’ in the following part of the sentence: ‘as when women with Child loath al kind of Meat, or vomit it up again’.⁹⁷ Thus, ‘voluntary’ fasting was not a deliberate, self-imposed, refusal to eat, but rather a rejection of food that was caused by the pregnancy itself.

The self-imposed fasting of extreme religious piety, sainthood, and prophecy does not seem to have been connected with the problem of excessive leanness in pregnancy that would endanger the growing foetus – nor to the difficulties that it would cause in conceiving already discussed. This may be explained by an inherent incompatibility between dedication to the religious life of Catholicism, which required virginity and chastity, and conventual confinement, and marriage with its expectation that children would soon follow.⁹⁸ While Protestant women were expected to be pious and chaste, they were also expected to marry and bear children.⁹⁹ Moreover, most examples of extreme piety and fasting in England (as on the Continent) were of girls or young women who were unmarried, often prepubescent or at the age at which they might begin to develop sexually, and who would not therefore be expected to become pregnant.¹⁰⁰ Miscarriage was thus discussed as a source of anxiety and a problem for married women who were expected to desire children.¹⁰¹ Those who provided advice about a woman’s care during pregnancy therefore assumed that women who would benefit from such advice were married. Consequently, childbearing women who were very thin were not usually regarded as having deliberately brought about this state of body themselves through deliberate abstention from food, but rather through their personal circumstances of poverty or illness, or of the pregnancy itself.

From the early sixteenth to the mid-eighteenth century those who wrote about pregnancy and its hazards asserted that women who had very thin bodies were simply unable to provide adequate nourishment in the womb to their developing foetus to enable its growth. Rivière’s reference to women who were extremely lean thus explained that ‘The Child is deprived of its nourishment, by the Mothers being famished’.¹⁰² Similarly, English apothecary William Drage (c. 1636–68) listed the first cause of death of a child in the womb as ‘Defect of Aliment’ caused by ‘the Womans small nourishment’.¹⁰³ As French *accoucheur* François Mauriceau (1637–1709) succinctly asserted, ‘much fasting, for want of food, hinders the Infant from acquiring its

perfection'.¹⁰⁴ Like fat bodies, very thin bodies were also thought to take nourishment away from the developing foetus to supply their own needs. Röesslin wrote, again citing Hippocrates (and the eleventh-century Persian physician Avicenna), that:

such as are very spare and leane and brought lowe evermore lyghtlye dothe aborte for because that as Avicenna wryteth: all the meate and fode the whiche they receive turneth to the fode noryshme[n]t and restauration of theyr owne bodyes and so is the conception destitute of fode wherfore necessarily it dyeth.¹⁰⁵

Chamberlain repeated this idea almost verbatim in the second half of the seventeenth century and John Maubray (1700–32), a Scottish physician practising in London, continued to observe in the early eighteenth century that ‘too great a *Gracility* or *Leanness* of the *Woman’s* Body [...] starves the *INFANT* for want of its *natural Requisites*’.¹⁰⁶ Lack of food from poverty might cause such thinness, but it was also occasioned by diseases which caused wasting, or sickness that meant food could not be kept down. Röesslin thus went on to list the causes as ‘over much famyne or hunger & also sharpe and farvent sycknesse maye be the cause hereof as the pestelence apostume in the breste the soden palsie the fallynge syckenes. &c’.¹⁰⁷ Furthermore, the remedy for an illness, such as ‘a thin diet in acute diseases’, might necessitate eating abstemiously, further compounding the problem.¹⁰⁸

If the foetus was already weakened by inadequate nourishment, it was at even greater risk if its mother suffered from other maladies implicated in miscarriage, such as ‘fluxes’ or vomiting. Anything that had a purgative effect on the body posed a threat to the foetus, as the expelling motions in the mother’s body could loosen the child’s hold in the womb, causing it to be ejected before it was ready for birth:

Also this maye come by reason of a continuall fluxe be it bloody or otherwyse and spetially yf the woman be weake and spare for by that meanes the conception is greatly weakened and perysshed. Item over much vomytynge may be cause of aborcement for by over much galpynge and reachynge upwards the cotilydons maye be broken and so the feature to perysse.¹⁰⁹

As it was understood that the cotilidons both ‘tyed and fastened’ the foetus into the womb and allowed ‘noryshment and fode’ to reach it, broken cotilidons precipitated miscarriage as the foetus died from starvation or from premature birth.¹¹⁰ The humoral constitution of very thin women posed a threat to their ability to maintain a pregnancy not only by diverting nourishment from the foetus to the mother’s own body, but also by impairment of the foetus’s support structures, which were likely to break because they were too dry. Maubray repeated these earlier ideas when he listed among the causes of miscarriage too much heat that ‘exhausts the *Humours* (that are naturally necessary) to the Prejudice and Loss of the *INFANT*’, and too much dryness

that ‘scorches and consumes the *Ligaments*, that they break’, so that the infant is again deprived of its nourishment and dies.¹¹¹ The remedy to prevent miscarriage was therefore to understand the woman’s constitution and restore it to an appropriate balance through the application of ‘*the REMEDIES of Contraries*’ so that ‘if it comes from too much LEANNESS, a convenient *Diet* and good *Regimen*, &c. will help to restore her’.¹¹² While authors from the sixteenth to the eighteenth centuries recommended restoration of health and strength for emaciated pregnant women through feeding with nourishing foods and drinks, they did not go so far as to acknowledge that this may not have been possible for the poor.

Authors therefore also expressed concern about illnesses that caused emaciation and which could potentially damage the cotilidons, particularly vomiting and coughing. English physician John Pechey (1654–1718) warned that ‘If the Woman be troubled with a violent Cough [. . .] this is apt to occasion miscarriage’.¹¹³ Fonteyn was more explicit and explained that the danger lay in the damage it could cause to the cotilidons: ‘a Cough befalling a woman with childe is a bad Symptome: seeing that by the least stretching, and shrinking the *Cotyledons* or vessells of the wombe, are many times loosned, yea sometimes burst asunder, and from thence comes abortivenesse’.¹¹⁴ Nevertheless, some authors prescribed purges, or vomits, during pregnancy, but cautioned that these should be ‘gentle Catharticks, as of Sena, rhubarb, Tamarinds, Myrobolans and the like’.¹¹⁵ Others, such as midwife Jane Sharp (1641–71), contradicted such advice because of the risk of miscarriage, firmly advising that ‘purging, especially in the first, or second, or about the last months, and vomiting is far worse’ than whatever it was intended to remedy, and should be avoided.¹¹⁶ Fonteyn, as we have seen, particularly counselled that it should be avoided in those who were slender.¹¹⁷ Vomiting continued to be considered potentially injurious into the later eighteenth century. William Smellie (1697–1763), while noting that vomiting during pregnancy was usual, also concluded that ‘if the straining is too great, it may endanger a miscarriage’.¹¹⁸ However, he provided a different explanation: miscarriage occurred because such straining would open the womb, prematurely birthing the infant. According to Smellie, miscarriage ‘may also be produced from every force that will stretch the neck and mouth of the womb; such as violent coughs, vomitings, costive strainings at stool, cathartics that bring on a superpurgation and tenesmus, together with frequent convulsions’.¹¹⁹ Causes of miscarriage thus remained the same but their effect on the pregnant body was now understood differently, with no further reference to breaking the cotilidons. This shift was, perhaps, prompted by debates about how the foetus was nourished in the womb and the proposition that it was fed through the umbilical vein only, and not via ‘*Cotyledons* (that is the mouths of the vessels ending in the womb through which the blood is conveyed into the womb from all parts of the body)’.¹²⁰ The idea that these vessels also tied the foetus into the womb was also no longer repeated except in publications that were reprints of earlier works.

A degree of agency was also ascribed to the foetus itself in bringing about its own abortion because of the mother's emaciation, but this idea was challenged in the later eighteenth century. The developing foetus, weakened through want of adequate nourishment, was thought to be at risk of miscarriage because it provoked the mother's body to expel it. Daniel Sennert explained: 'The expulsive faculty is first provoked by the Child being weak, either from evil Seed or being dead. The Child is weak for want of food, and from the mothers Diseases, either in her whole Body, or in the Womb'.¹²¹ This idea was repeated by Maubray in the first quarter of the eighteenth century when he noted that 'the *Expulsive Faculty* is irritated to EJECTION by several *Causes* of the *Constitution* of the *INFANT* itself, including 'ITS *Debility* and *Weakness*'.¹²² A number of authors further explained that the child miscarried because, despairing of nourishment from the mother, it sought it elsewhere. In a compilation of works entitled *The Compleat Midwife's Practice Enlarged*, published at the end of the seventeenth century, it was advised that women 'are to fast as little as may be; for abstinence, unless upon good occasion, renders the child sickly, and tender, and constrains it to be born before its time, to seek for nourishment'.¹²³ However, by the end of the eighteenth century, the idea that the foetus had a degree of agency and could determine when it left the womb, including to seek the nourishment of which it was deprived in the mother's body, was explicitly refuted by at least one author. Physician and man-midwife Thomas Denman (1733–1815) rejected these ancient ideas:

It was said by all the ancient writers, that a child was born by its own efforts, which it was incited to make by the necessity it felt of breathing cool air, for the purpose of moderating that heat which was generated by its long confinement in the *uterus*; or by the want of nourishment, the sources of which failed, or became depraved.¹²⁴

He concluded, 'There must then be some other principle of birth besides the efforts of the child, which in fact appears to be wholly passive'.¹²⁵ While Denman theorized that it was the action of the uterus, aided by the diaphragm and abdominal muscles that pushed the child out, there were still some who steered a midcourse between the two ideas and who argued for a conjunction of the action of the uterus and the efforts of the child.¹²⁶

While writers were often condemnatory of fat women whose overeating or consumption of too-rich foodstuffs brought obstruction of the cotilidons with bad humours, or swelling that caused them to break, their tone when discussing this cause of miscarriage in relation to very thin women was more neutral, or even indicated sympathy. In the mid-seventeenth century, Chamberlain repeated the words of Röesslin when he wrote that, while

overmuch want, poverty and hunger, is one principal cause of Abortion, its contrary is a greater, (though lesse to be pittied) to wit, overmuch

Drunkenness, Gluttony, excesse of Meats and Drinks, Surfetting, by which the Young is suffocated and strangled in the belly, the food corrupting for want of due digestion.¹²⁷

The bracketed comment noting that those who ate and drank to excess in pregnancy and so miscarried were 'lesse to be pittied' implies that those who lost their babies because emaciated through an insufficient diet *were* to be pitied because it was through no fault of their own.

Although many authors recognized that miscarriage 'is dangerous alwaies', they were perhaps more sympathetic to very thin women who suffered miscarriage, because it was thought even more dangerous for them to miscarry due to their weakened state.¹²⁸ It was not only the foetus that was affected by an inadequate diet: the pregnant woman too would be weakened, making it more difficult for her to maintain her pregnancy and to cope with the hard labour of childbirth. Maubray therefore observed of the pregnant woman's diet that, 'if *too little*, it is *starved*, and the *MOTHER* brought to a very low Condition of Life'.¹²⁹ Consequently, he went on to note, that 'LEAN and *tender Women* are much endanger'd in *ABORTION*, by Reason of their *Debility* and *Infirmity*'.¹³⁰ He thus reiterated earlier thinking which held that very thin women, like fat women, were at great risk if they miscarried: 'Women very lean or very fat, are more endangered by Miscarriage; the former, because of their weakness'.¹³¹ A woman's diet in pregnancy should therefore supply sufficient nourishment to ensure that neither developing foetus nor mother were weakened, precipitating miscarriage and potentially endangering the woman's own life.

In the later eighteenth century, however, these earlier understandings about very thin bodies taking nourishment from the foetus, hence causing miscarriage, were rejected, particularly in relation to the wasting caused by consumption. Scottish physician John Stedman (1712–91) wrote that rather than the mother's body taking nourishment from the foetus, it appeared to be the other way around:

After impregnation the foetus seems to be supplied with nourishment preferable to any part of the mother's body. Women, labouring under wasting diseases, particularly pulmonary consumptions, are frequently delivered of children, whose full and healthy appearance bears no proportion to the emaciated state of the mothers.¹³²

Although in the mid-1790s Denman continued to list insufficient or improper nourishment as a cause of foetal death, he also noted that those with 'very weak and reduced states of the body, particularly in consumptions' were no more likely to miscarry than others, 'yet a state more feeble and more irritable could with difficulty be pointed out'.¹³³ Denman concluded that a miscarriage occurs because there is something wrong with the foetus so that it 'can never come to perfection, and the sooner it is expelled the better'.¹³⁴ Nevertheless, those who

wrote on midwifery in the late eighteenth century, including Denman, continued to advise that ‘a want of food’ might cause miscarriage.¹³⁵ Others who advised women on antenatal care, like midwife Martha Mears (dates unknown), also continued to advise regulating diet to promote foetal survival, suggesting that these older ideas were very well established and difficult to dislodge.¹³⁶

CONCLUSION

Modern understanding of reproductive problems associated with anorexia nervosa confirms much of what was understood in the early modern world, albeit underpinned by an entirely different understanding of how bodies work and might become sexually and reproductively dysfunctional. Such concerns in the early modern world, though, did not stem from anxieties prompted by a perceived increase in self-imposed food restriction. Rather, they arose from the particular circumstances of perceived high mortality from a variety of causes including diseases, reduced population through emigration to the new world, and restricted fertility caused by late age of marriage. Contemporary valorization of marital procreation and the importance of inheritance, combined with concepts of femininity and masculinity in which successful maternity and paternity were prominent, further influenced perceptions of the need to promote fertility and to find remedies for infertility. Although early modern writers did not systematically categorize degrees of slenderness and potential variations in fertility depending on the extent of emaciation, they set out how excessive slenderness had a deleterious effect on generation from sex and conception through gestation. Although I have not discussed it in this chapter, excessive leanness was also understood to affect childbirth, with physicians and surgeons becoming particularly concerned about the size of the pelvis in the eighteenth century.

The medical sources referred to in this discussion represent only a sample of this considerable body of literature, but together they demonstrate the general consistency in thinking about this issue throughout these three centuries. They repeat ideas about emaciation and fertility originating in classical medicine, incorporate newer theories into the traditional humoral model, but also reveal some shifts in thinking about specific issues in the later eighteenth century. These changes included theorizing about foetal nourishment in the womb and the causes of miscarriage, and newer concerns about masturbation. Although identified as generatively dysfunctional by nature, or constitution, the causes of such dysfunction also included sickness or starvation from poverty or famine, and so those who wrote about infertility from emaciation did so in more sympathetic tones than when discussing infertility from obesity. Unless too poor to do so, such bodies could also more easily regain fertility by increasing food intake and other nourishment that would fatten the body. However, they could not restore a healthy plumpness that would reinstate fertility until they had recovered from whatever sickness was causing wasting, and there were some diseases from which it was recognized they might never recover.

Through examining early modern writing about very thin bodies and their generative potential we can gain further insight not only into changes over time in medical and scientific understanding of reproduction, but also about why attitudes towards specific body types may have been particularly negative and persistent. While infertility from great leanness of body was invariably discussed alongside that from too much fatness, attitudes were more sympathetic and pitying towards those who were very thin, because this state of body was generally understood as caused by circumstances beyond their control: illness or poverty and starvation. The exception was when wasting and infertility were caused by over-indulgence of the sexual appetite: regaining self-control, and hence fertility, was not only a medical but also a moral matter. Hence such medical narratives also had a disciplinary and regulatory function, intended to correct immoral behaviour and to ensure reproductive success, which would in turn secure economic, political, and social stability.

NOTES

1. Title quotation from Nicholas Fonteyn (or Fontanus), *The Womans Doctour: Or, An Exact and Distinct Explanation of all Such Diseases as are Peculiar to that Sex* (London, 1652), p. 137.
2. Laura Gowing, *Common Bodies: Women, Touch and Power in Seventeenth-Century England* (New Haven, CT, and London, 2003), p. 114.
3. Jennifer Evans, “‘They are called Imperfect men’: Male Infertility and Sexual Health in Early Modern England”, *Social History of Medicine*, 29:2 (2016); Anthony Fletcher, *Gender, Sex and Subordination in England 1500–1800* (New Haven, CT, and London, 1995); Elizabeth Foyster, *Manhood in Early Modern England, Honour, Sex and Marriage* (London and New York, 1999); Alexandra Shepard, *Meanings of Manhood in Early Modern England* (Oxford, 2003).
4. Sarah Toulalan, “‘Unfit for Generation’: Body Size and Reproduction”, in Raymond Stephanson and Darren N. Wagner (eds), *The Secrets of Generation: Reproduction in the Long Eighteenth Century* (Toronto, 2015); Sarah Toulalan, “‘To[o] much eating stifles the child’: Fat Bodies and Reproduction in Early Modern England”, *Historical Research*, 87:235 (2014).
5. Jennifer Evans, *Aphrodisiacs, Fertility and Medicine in Early Modern England* (Woodbridge, 2014); Roy Porter and Lesley Hall, *The Facts of Life: The Creation of Sexual Knowledge in Britain, 1650–1950* (New Haven, CT, 1995); Sarah Toulalan, “‘Elderly years cause a Total dispaire of Conception’: Old Age, Sex and Infertility in Early Modern England”, *Social History of Medicine*, 29:2 (2016).
6. E.A. Wrigley and R.S. Schofield, *The Population History of England 1541–1871: A Reconstruction* (London, 1981), pp. 161–2, 234–6.
7. Tim Hitchcock, *English Sexualities: 1700–1900* (Basingstoke, 1997), p. 26.
8. Karen Harvey, *Reading Sex in the Eighteenth Century: Bodies and Gender in English Erotic Culture* (Cambridge, 2004), pp. 141–5; Porter and Hall, *Facts of Life*, pp. 52–3.
9. Angus McLaren, *A History of Contraception: From Antiquity to the Present Day* (Oxford, 1990); Angus McLaren, *Reproductive Rituals: The Perception of*

- Fertility in England from the Sixteenth Century to the Nineteenth Century* (London, 1984).
10. Patricia Crawford and Sara Mendelson, *Women in Early Modern England 1550–1720* (Oxford, 1998); Patricia Crawford, ‘The Construction and Experience of Maternity in Seventeenth-Century England’, in Valerie Fildes (ed.), *Women as Mothers in Pre-Industrial England* (London and New York, 1990).
 11. Gowing, *Common Bodies*; Laura Gowing, ‘Secret Births and Infanticide in Seventeenth-Century England’, *Past & Present*, 156 (1997); Cathy McClive, ‘The Hidden Truths of the Belly: The Uncertainties of Pregnancy in Early Modern Europe’, *Social History of Medicine*, 15:2 (2002); Linda A. Pollock, ‘Embarking on a Rough Passage: The Experience of Pregnancy in Early-Modern Society’, in Fildes (ed.), *Women as Mothers*.
 12. Gowing, *Common Bodies*, pp. 42–7.
 13. Fletcher, *Gender, Sex and Subordination*; Foyster, *Manhood*; Angus McLaren, *Impotence: A Cultural History* (Chicago, IL, and London, 2007); Jeffrey Merrick, ‘Impotence in Court and at Court’, *Studies in Eighteenth-Century Culture*, 25 (1996); Janet C. Mueller, ‘Fallen Men: Representations of Male Impotence in Britain’, *Studies in Eighteenth-Century Culture*, 25 (1996).
 14. Helen Berry and Elizabeth Foyster, ‘Childless Men in Early Modern England’, in Helen Berry and Elizabeth Foyster (eds), *The Family in Early Modern England* (Cambridge, 2007); Evans, “‘They are called Imperfect men’”; Jennifer Evans, “‘It is caused of the womans part or of the mans part’”: The Role of Gender in the Diagnosis and Treatment of Sexual Dysfunction in Early Modern England’, *Women’s History Review*, 20:3 (2011), pp. 445–6.
 15. For example, Lisa Wynne Smith, ‘La Raillerie Des Femmes? Les femmes, la stérilité et la société en France à l’époque moderne’, in Cathy McClive et Nicole Pellegrin (eds), *Femmes en fleurs, femmes en corps: Sang, Santé, Sexualités du Moyen Âge aux Lumières* (Saint-Étienne, 2010), p. 211. I provide a broad overview in “‘Unfit for Generation’”.
 16. Rudolph Bell, *Holy Anorexia* (Chicago, IL, and London, 1985); Phyllis Mack, *Visionary Women: Ecstatic Prophecy in Seventeenth-Century England* (Berkeley, CA, 1992), especially pp. 7, 115; Walter Vandereycken and Ron Van Deth, ‘Miraculous Maids: Self-Starvation and Fasting Girls’, *History Today*, 43 (1993).
 17. For example, E.R. Hoffman, S.C. Zerwas, and C.M. Bulik, ‘Reproductive Issues in Anorexia Nervosa’, *Expert Review of Obstetrics & Gynecology*, 6:4 (2011).
 18. Gowing, *Common Bodies*, pp. 41–8, 71–3.
 19. Wynne Smith, ‘La Raillerie Des Femmes?’, p.211. My translation.
 20. Victor Cornelius Medvei, ‘The Illness and Death of Mary Tudor’, *Journal of the Royal Society of Medicine*, 80 (1987), pp. 768–9.
 21. Helkiah Crooke, *Microcosmographia: A Description of the Body of Man* (London, 1615), p. 74.
 22. Toulalan, “‘Elderly years’”.
 23. Eucharius Röesslin, *The Byrth of Mankynde newly translated out of Laten into Englysshe*, trans. Richard Jonas (London, 1540 [1513]), X.iii.f. Thomas Raynald reproduces the paragraph in his adapted translation: Thomas Raynald, *The Birth of Man-kinde; Otherwise Named The Womans Booke* (London, 1626), pp. 190–1.
 24. Felix Plater, *A Golden Practice of Physick* (London, 1662), p. 501. Abdiah Cole and Nicholas Culpeper are listed as authors on the title page of Plater’s earlier text, but Mary Rhinelandier McCarl credits them only with the translation: Mary

- Rhinelanders McCarl, 'Publishing the Works of Nicholas Culpeper, Astrological Herbalist and Translator of Latin Medical Works in 17th-Century London', *Canadian Bulletin of Medical History*, 13 (1996), p. 269.
25. Santorio Santorio (1561–1636). See Lois N. Magner, *A History of the Life Sciences* (New York, 1979), p. 132.
 26. Pat Rogers, 'Fat is a Fictional Issue: The Novel and the Rise of Weight-Watching', in E. Levy-Navarro (ed.) *Historicizing Fat in Anglo-American Culture* (Columbus, OH, 2010), pp. 23–4; fn 16, p. 37; Anita Guerrini, *Obesity and Depression in the Enlightenment: The Life and Times of George Cheyne* (Norman, OK, 2000); Hillel Schwartz, *Never Satisfied: A Cultural History of Diets, Fantasies and Fat* (New York and London, 1986), p. 17.
 27. Jean Prevotius, *Medicaments for the Poor; Or, Physick for the Common People... Translated into English, and Something added, By Nich. Culpeper* (London, 1656), p. 350.
 28. William Salmon, *Aristotle's Compleat and Experience'd Midwife* (London, 1700), p. 131.
 29. S.A.D. Tissot, *A Treatise On The Crime of Onan*, trans. from 3rd edn (London, 1766), p. 31.
 30. Tissot, *Treatise*, p. 200.
 31. Lazare Rivière (or Lazarus Riverius), *The Practice of Physick, Etc.*, trans. Nicholas Culpeper, Abdiah Cole and William Rowland (London, 1655 [1640]), p. 513.
 32. Philip Barrough, *The Methode of Phisicke, Conteyning the Causes, Signes, and Cures of Inward diseases in mans body from the head to the foote* (London, 1583), p. 145.
 33. Anon., *A Supplement to the Onania, Or the Heinous Sin of Self-Pollution, And all its frightful Consequences, in the two Sexes, consider'd, &c.* (London, 1724), p. 91.
 34. Tissot, *Treatise*, p. 31.
 35. Plater, *Golden Practice*, p. 501.
 36. Rogers, 'Fat is a Fictional Issue', pp. 23–4; Schwartz, *Never Satisfied*, p. 17; Plater, *Golden Practice*, pp. 501–2.
 37. Plater, *Golden Practice*, p. 501.
 38. Plater, *Golden Practice*, pp. 501–2.
 39. Toulalan, "Elderly years".
 40. Lorenz Heister, *A Compendium of Anatomy* (London, 1721; Latin edition 1717), pp. 166–7.
 41. Véronique Nahoum-Grappe, 'The Beautiful Woman', in Natalie Zemon Davis and Arlette Farge (eds), *A History of Women: Renaissance and Enlightenment Paradoxes* (Cambridge, MA, 1993), pp. 98–9; Mary Rogers, 'Beauty and Concepts of the Ideal', in Linda Kalof and William Bynum (eds), *A Cultural History of the Human Body in the Renaissance* (Oxford and New York, 2010); David M. Turner, 'The Body Beautiful', in C. Reeves (ed.), *A Cultural History of the Human Body in the Enlightenment* (Oxford and New York, 2010), pp. 120–2.
 42. Plater, *Golden Practice*, p. 501; Naomi Baker, *Plain Ugly: The Unattractive Body in Early Modern Culture* (Manchester, 2010), pp. 44–6.
 43. Alanna Skuse, 'Wombs, Worms and Wolves: Constructing Cancer in Early Modern England', *Social History of Medicine*, 27:4 (2014), especially pp. 641–4; Alanna Skuse, *Constructions of Cancer in Early Modern England: Ravenous Natures* (London, 2015).

44. Prevotius, *Medicaments*, pp. 350–1.
45. Alexander Roberts, *A Treatise of Witchcraft* (London, 1616), p. 17; Daniel Sennert, *Practical Physick: The Fourth Book In Three Parts... Also a Tractate of the Cure of Infants* (London, 1664), pp. 267–70.
46. G. Tourney, ‘The Physician and Witchcraft in Restoration England’, in Brian P. Levack (ed.), *Articles on Witchcraft, Magic and Demonology* (New York and London, 1992), vol. 6, p. 296.
47. Thomas Vicary, *A Profitable Treatise of the Anatomie of Mans Body* (London, 1577), Biv^r.
48. Andrew Fyfe (ed.), *A System of Anatomy and Physiology, with the Comparative Anatomy of Animals* (Edinburgh, 1791), p. 475.
49. James Drake, *Anthropologia Nova: Or, A New System of Anatomy*, 2nd edn, 2 vols (London, 1717), p. 19.
50. Fyfe, *System of Anatomy*, p. 473.
51. William Salmon, *Synopsis Medicinæ*, 2nd edn (London, 1681), pp. 946–7.
52. Robert Barret, *A Companion for Midwives, Child-Bearing Women, and Nurses* (London, 1699), p. 62.
53. Röesslin, *Byrth of Mankynde*, X.iii.^f; Raynald, *Birth of Man-kinde*, pp. 190–1.
54. Matthew Cobb, *The Egg and Sperm Race: The Seventeenth-Century Scientists Who Unravelled the Secrets of Sex, Life and Growth* (London, 2007), pp. 243–6.
55. Salmon, *Aristotle’s Compleat and Experience’d Midwife*, p. 131; *Culpepper’s Compleat and Experience’d Midwife* (London, 1718), p. 129, and fifth edition (1752), pp. 170–1.
56. Toulalan, “‘To[o] much eating’”.
57. Röesslin, *Byrth of Mankynde*, Xiir-Xiiv.
58. Barret, *Companion*, p. 62.
59. Sennert, *Practical Physick*, p. 26.
60. Jean Astruc, *A Treatise on all the Diseases Incident to Women* (London, 1743), p. 342.
61. Astruc, *Treatise*, p. 346.
62. Astruc, *Treatise*, p. 338.
63. Barrough, *Methode of Phisicke*, p. 159; Astruc, *Treatise*, p. 349.
64. Barrough, *Methode of Phisicke*, p. 159.
65. Susan Broomhall, “‘Women’s Little Secrets’: Defining the Boundaries of Reproductive Knowledge in Sixteenth-Century France’, *Social History of Medicine*, 15:1 (2002); Cathy McClive, ‘L’âge des fleurs: le passage de l’enfance à l’adolescence dans l’imaginaire médical du XVII^e siècle’, *Biblio*, 17 (2007); Cathy McClive, ‘Quand les fleurs s’arrêtent: la ménopause et l’imaginaire médical aux XVII^e et XVIII^e siècles’, in McClive and Pellegrin (eds), *Femmes en fleurs, femmes en corps*; Sara Read, *Menstruation and the Female Body in Early Modern England* (Basingstoke, 2013); Toulalan, “‘Elderly years’”.
66. John Freind, *Emmenologia*, trans. T. Dale (London, 1729 [1703]), p. 52.
67. Freind, *Emmenologia*, p. 52.
68. John Ball, *The Female Physician: Or, Every Woman Her Own Doctress* (London, 1770), p. 17. See John Aitken, *Principles of Anatomy and Physiology*, 2 vols (London, 1786), p. 148.
69. Barrough, *Methode of Phisicke*, p. 145.

70. Peter Chamberlain, *Dr. Chamberlain's Midwives Practice: Or, A Guide for Women In that High Concern of Conception, Breeding, and Nursing Children* (London, 1665), p. 228.
71. Barrough, *Methode of Phisicke*, p. 145.
72. Chamberlain, *Midwives Practice*, p. 228.
73. Freind, *Emmenologia*, p. 52.
74. Toulalan, "To[o] much eating", pp. 89–90.
75. Sennert, *Practical Physick*, pp. 22, 27.
76. Barrough, *Methode of Phisicke*, p. 147.
77. Barrough, *Methode of Phisicke*, p. 147.
78. Jennifer Evans, "Gentle Purges corrected with hot Spices, whether they work or not, do vehemently provoke Venery": Menstrual Provocation and Procreation in Early Modern England', *Social History of Medicine*, 25 (2012).
79. Fonteyn, *The Womans Doctour*, p. 137.
80. Röesslin, *Byrth of Mankynde*, X.iii.^r; Raynald, *Birth of Man-kinde*, pp. 190–1.
81. On manhood and paternity see Berry and Foyster, 'Childless Men' and Foyster, *Manhood*; on the importance of maternity see Gowing, *Common Bodies*, p. 114; on cuckolding and social disruption see Sarah Toulalan, *Imagining Sex: Pornography and Bodies in Seventeenth Century England* (Oxford, 2007), pp. 213–17; David Turner, *Fashioning Adultery: Gender, Sex and Civility in England, 1660–1740* (Cambridge, 2002), pp. 85–94.
82. Ambrose Paré, *Of the Generation of Man*, Book 24 in *The Workes of that famous Chirurgion Ambrose Parey*, trans. Thomas Johnson (London, 1634 [1573]), p. 931.
83. John Floyer, *ΨΥΧΡΟΛΟΥΣΙΑ (Psychrolousia): Or, The History Of Cold Bathing: Both Ancient and Modern*, 2nd edn (London, 1706), p. 184.
84. Anon., *Physical Essays on the Parts of the Human Body and Animal Oeconomy* (London, 1734), p. 137.
85. Anon., *Aristoteles Master-piece, Or The Secrets of Generation displayed in all the parts thereof* (London, 1684), p. 89.
86. Anon., *A Supplement to the Onania*, p. 140; Tissot, *Treatise*, p. 31.
87. Anon., *Of the Crime of Onan Or, The Hainous Vice of Self-Defilement with all its Dismal Consequences etc.* (London, 1724), pp. 14–15.
88. McLaren, *Impotence*, p. 84; Porter and Hall, *Facts of Life*, pp.52–3; Toulalan, *Imagining Sex*, pp. 62–4.
89. Floyer, *History Of Cold Bathing*, p. 184.
90. Paré, *Generation of Man*, p. 931.
91. Barrough, *Methode of Phisicke*, p. 157.
92. Rivière, *Practice of Physick*, p. 513.
93. Röesslin, *Byrth of Mankynde*, Li.^r.
94. Anon., *Aristotle's Manual of Choice Secrets, Shewing The Whole Mystery of Generation* (London, 1699), p. 62.
95. Wynne Smith, 'La Raillerie Des Femmes?', p. 208.
96. Paré, *Generation of Man*, 1691 edn, p. 560.
97. Rivière, *Practice of Physick*, p. 513.
98. Jeffrey R. Watt, 'The Impact of the Reformation and Counter-Reformation', in David I. Kertzer and Marzio Barbaglio (eds), *The History of the European Family, Volume One: Family Life in Early Modern Times 1500–1789* (New Haven, CT, and London, 2001), pp.125–54; Beatrice Gottlieb, *The Family in the Western*

- World from the Black Death to the Industrial Age* (New York and Oxford, 1993), especially chapters 3 and 6.
99. Anthony Fletcher, 'The Protestant Idea of Marriage', in Anthony Fletcher and Peter Roberts (eds), *Religion, Culture and Society in Early Modern Britain* (Cambridge, 1994).
 100. Bell, *Holy Anorexia*; Jürgen Beyer, 'A Lübeck Prophet in Local and Lutheran Context', in Bob Scribner and Trevor Johnson (eds), *Popular Religion in Germany and Central Europe, 1400–1800* (Basingstoke, 1996); Stephen Haliczer, *Between Exaltation and Infamy: Female Mystics in the Golden Age of Spain* (Oxford, 2002); Susan Hardman Moore, "'Such Perfecting of Praise out of the Mouth of a Babe": Sarah Wight as Child Prophet', in Diana Wood, *The Church and Childhood* (Oxford, 1994); Anne Jacobson Schutte, *Aspiring Saints: Pretense of Holiness, Inquisition, and Gender in the Republic of Venice, 1618–1750* (Baltimore, MD, and London, 2001); Vandereycken and Van Deth, 'Miraculous Maids'; Alexandra Walsham, "'Out of the Mouths of Babes and Sucklings": Prophecy, Puritanism, and Childhood in Elizabethan Suffolk', in Wood (ed.), *The Church and Childhood*, especially pp. 293–7.
 101. Jennifer Evans and Sara Read, "'before midnight she had miscarried": Women, Men, and Miscarriage in Early Modern England', *Journal of Family History*, 40:1 (2015).
 102. Rivière, *Practice of Physick*, p. 513.
 103. William Drage, *Physical Experiments* (London, 1668), p. 350.
 104. François Mauriceau, *The Diseases of Women with Child, and in Child-bed* (London, 1672 [1668]), p. 132.
 105. Röesslin, *Byrth of Mankynde*, L.ii; Raynald, *Birth of Man-kinde*, pp. 133–4.
 106. Chamberlain, *Midwives Practice*, p. 154; John Maubray, *The Female Physician, Containing all the Diseases Incident to that Sex, in Virgins, Wives, and Widows* (London, 1724), p. 119.
 107. Röesslin, *Byrth of Mankynde*, L.iii.
 108. Rivière, *Practice of Physick*, p. 513.
 109. Röesslin, *Byrth of Mankynde*, XLiii; Raynald, *Birth of Man-kinde*, pp. 134–5.
 110. Röesslin, *Byrth of Mankynde*, L.i^r-L.i^v; Raynald, *Birth of Man-kinde*, pp. 132–3.
 111. Maubray, *Female Physician*, p. 119
 112. Maubray, *Female Physician*, p. 130.
 113. John Pechey, *A General Treatise of the Diseases of Maids, Bigbellied Women, Child-bed-Women, and Widows, Together with the Best Methods of Preventing or Curing the same* (London, 1696), p. 100.
 114. Fonteyn, *Womans Doctour*, p. 169.
 115. Pechey, *General Treatise*, p. 112. See also Röesslin, *Byrth of Mankynde*, Mii^v; Raynald, *Birth of Man-kinde*, pp. 139–40.
 116. Jane Sharp, *The Midwife's Book, Or the whole Art of Midwifry Discovered* (London, 1671), pp. 175, 190.
 117. Fonteyn, *Womans Doctour*, p. 137.
 118. William Smellie, *A Treatise on the Theory and Practice of Midwifery*, 5th edn (Dublin, 1764 [1752–64]), p. 87.
 119. Smellie, *Treatise*, p. 108.
 120. See discussions in John Burton, *An Essay towards a Complete New System of Midwifry, Theoretical and Practical* (London, 1751), pp. 64–81, especially p. 80, and James Wolveridge, *Speculum Matricis; Or, the Expert Midwives Handmaid* (London, 1671), p. 104.

121. Sennert, *Practical Physick*, p. 172.
122. Maubray, *Female Physician*, p. 121.
123. John Pechey, *The Compleat Midwife's Practice Enlarged*, 5th edn (London, 1698), p. 63.
124. Thomas Denman, *An Introduction to the Practice of Midwifery*, 2 vols (London, 1795), vol. 1, p. 330.
125. Denman, *Introduction*, p. 331. Scottish physician John Aitken had earlier simply stated, 'The child is entirely passive during parturition': John Aitken, *Principles of Anatomy and Physiology*, 2 vols (London, 1786), p. 60.
126. Denman, *Introduction*, pp. 332–4.
127. Chamberlain, *Midwives Practice*, p. 156.
128. Sennert, *Practical Physick*, p. 173. On the dangers of miscarriage: Evans and Read, "before midnight".
129. Maubray, *Female Physician*, p. 122.
130. Maubray, *Female Physician*, p. 127.
131. Rivière, *Practice of Physick*, p. 514.
132. John Stedman, *Physiological Essays and Observations* (Edinburgh and London, 1769), p. 90.
133. Denman, *Introduction*, vol. 2, pp. 191, 319.
134. Denman, *Introduction*, vol. 2, pp. 191, 321.
135. Jean-Louis Baudelocque, *A System of Midwifery*, trans. John Heath, 3 vols (London, 1790 [1775]), p.466; Denman, *Introduction*, vol. 2, pp.191, 321.
136. Martha Mears, *The Pupil of Nature; or Candid Advice to the Fair Sex, on the Subjects of Pregnancy; Childbirth; the Diseases Incident to both etc.* (London, 1797), p. 70.

RESEARCH RESOURCES

Primary Sources

Sixteenth, seventeenth and eighteenth-century medical and midwifery books can be found in the British Library and in the Wellcome Trust Library on Euston Road, London. Many can be found online in Early English Books Online and in Eighteenth-Century Collections Online. The Wellcome Trust Library also has many manuscript receipt books. Useful edited collections include: Irma Taavitsainen and Paivi Pahta (eds), *Early Modern English Medical Texts: Corpus Description and Studies* (Amsterdam, 2010), a book and CD which is the second part of a three-part series covering medical writing 1375–1800; Pam Lieske (ed.), *Eighteenth-Century British Midwifery*, 4 vols (London, 2009).

Secondary Sources

Fertility and Contraception

Dorothy McLaren, 'Marital Fertility and Lactation 1570–1720', in Mary Prior (ed.), *Women in English Society 1500–1800* (London: Routledge, 1985), 22–53.

John M. Riddle, *Contraception and Abortion from the Ancient World to the Renaissance* (Cambridge, MA: Harvard University Press, 1992).

Robert V. Schnucker, 'Elizabethan Birth Control and Puritan Attitudes', *Journal of Interdisciplinary History*, 4 (1975), 655–67.

E.A. Wrigley, 'Family Limitation in Pre-Industrial England', *Economic History Review*, 2nd ser., XIX:1 (1966), 82–109.

Anorexia and Reproductive Dysfunction

Philip S. Mehler and Carrie Brown, 'Anorexia Nervosa – Medical Complications', *Journal of Eating Disorders*, 3:11 (2015), 1–8.

Madhusmita Misra and Anne Klibanski, 'Endocrine Consequences of Anorexia Nervosa', *The Lancet. Diabetes & Endocrinology*, 2:7 (July 2014), 581–92.

Fasting and Sainthood

Joan Jacobs Brumberg, *Fasting Girls: The History of Anorexia Nervosa* (New York: Vintage Books, 2000).

Caroline Walker Bynum, *Holy Feast and Holy Fast: The Religious Significance of Food to Medieval Women* (Berkeley, CA: University of California Press, 1987).

Alexandra Walsham, 'Miracles in Post-Reformation England', in Kate Cooper and Jeremy Gregory (eds), *Signs, Wonders, Miracles: Representations of Divine Power in the Life of the Church* (Woodbridge: Boydell Press, 2005), 273–306.

Diane Watt, *Secretaries of God: Women Prophets in Late Medieval and Early Modern England* (Cambridge: D.S. Brewer, 1997), especially 60–2.

The Early Modern Medical World and Publishing

Roger French and Andrew Wear (eds), *The Medical Revolution of the Seventeenth Century* (Cambridge: Cambridge University Press, 1989).

Elizabeth Lane Furdell, *Publishing and Medicine in Early Modern England* (Rochester: University of Rochester Press, NY, 2002).

Reproduction, Gynaecology and Obstetrics

Colin B. Atkinson and William P. Stoneman, "'These Gripping Greefes and Pinching Pangs": Attitudes to Childbirth in Thomas Bentley's *The Monument of Matrones* (1582)', *Sixteenth-Century Journal*, 21 (1990), 193–203.

Audrey Eccles, *Obstetrics and Gynaecology in Tudor and Stuart England* (London and Canberra: Croom Helm, 1982).

Monica H. Green, 'From "Diseases of Women" to "Secrets of Women": The Transformation of Gynecological Literature in the Later Middle Ages', *Journal of Medieval and Early Modern Studies*, 30:1 (2000), 5–39.

Maryanne Cline Horowitz, 'The "Science" of Embryology Before the Discovery of the Ovum', in Marilyn J. Boxer and Jean H. Quataert (eds), *Connecting Spheres: European Women in a Globalizing World 1500 to the Present* (New York and Oxford: Oxford University Press, 2000), 104–112.

Helen King, *Midwifery, Obstetrics and the Rise of Gynaecology: The Uses of a Sixteenth-Century Compendium* (Aldershot: Ashgate, 2007).

Adrian Wilson, *The Making of Man-Midwifery: Childbirth in England 1660–1770* (London: UCL Press, 1995).

Obstacles to the Establishment of a Policy to Combat Infertility in France, c. 1920–1950

Fabrice Cahen

INTRODUCTION

Infertility has lacked social visibility in modern France. This is evident in the lack of detailed historical research on the topic, which in turn doubtless reflects the scarcity of institutional or personal sources for the history of infertility. While historians have explored several different aspects of the history of procreation, from demography and population policies to gender and religion, the history of infertility often still has to be pieced together from scattered information in texts ostensibly on different topics.¹ Most existing publications tend to focus either on the first known experiments with artificial fertilization in the eighteenth century, or on the emergence of sperm banks in the second half of the twentieth century. There is also much sociological research on the development of assisted reproductive technologies in recent decades, especially their ethical aspects. This research has provided invaluable information about the genesis of these new procreative techniques and the moral debates they generated, especially the Artificial Insemination by Donor (AID) system institutionalized in France in 1973.² However, little is known about medical

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approaches to infertility *before* the 1970s, even though this context is vital to understanding contemporary practice.

This chapter attempts to remedy some of these gaps in our understanding by outlining the political, social, and medical contexts of attempts to combat infertility in France between 1920 and 1950. The first part of the chapter sets out the initial identification of involuntary childlessness as a ‘problem’ in the late nineteenth century, and then traces the collective mobilization of established hospital physicians and their attempts to manage and treat infertility. It then describes and analyses the creation of new infrastructures and the improvement in diagnostic capacities during the interwar years. It argues that the history of medical approaches to infertility in this period must be seen as part of the broader effort to encourage French people to turn to hospitals for help with reproductive dysfunction. Finally, it charts efforts to build a large-scale and general public system of medical treatments for infertility. Around the 1940s, the state seemed to begin to recognize and encourage endeavours to combat infertility, but, at best, these attempts achieved only partial success. The chapter ends by considering some of the historical causes and social consequences of the concentration of medical treatments for infertility in private hands throughout most of the twentieth century.

As this overview suggests, my focus in this chapter is on the material and institutional structures set up to treat reproductive disorders, rather than specific medical practices or the individual experience or social significance of involuntary childlessness. I am particularly concerned to analyse the development of medical approaches to involuntary childlessness in the context of an emerging centralized welfare state which attached particular importance to both the health of the population and to family order, and which sought to promote preventative medicine as a means of addressing reproductive issues. Here, two processes converged: the medicalization of society and state involvement in the field of ‘human life’, the concept of ‘state’ here being extended to subsidiary political bodies such as urban authorities. Therefore, rather than focusing on the ‘bioethical’ debate (which may be partly anachronistic), this chapter explores the ‘biopolitical’ issues surrounding the early days of medically assisted procreation, drawing on Foucault’s notion of biopolitics as an apparatus of control extended over whole populations. Provided it is deployed in relation to specific social and political historical contexts, this global framework is a useful means of exploring debates around both the ‘quantity’ and the ‘quality’ of populations, and sheds light on the functioning of population policies. In considering why reformers were unable to raise political and financial support for their efforts to address the needs of infertile households, and were only partially successful in their aims of generating certain kinds of public medical services and political involvement, it becomes evident that the history of attempts to tackle involuntary childlessness illuminates the contradictions between the aims of different agencies and authorities involved in formulating policies around health and population.

POPULATION PROBLEMS AND EFFORTS TO COMBAT INFERTILITY

In France, as in other comparable countries, infertility was the object of popular practices and cultural traditions dating back to ancient times. In the nineteenth century, various physicians and quacks offered a wide range of methods, rooted in pre-scientific conceptions and beliefs, claiming not only to 'cure' infecundity, but also to determine the sex of the child.³ The emergence of gynaecology as a specialism within medicine in the early nineteenth century reflected heightened concerns about the female reproductive body, including female infertility.⁴ The rising medical interest in involuntary childlessness may also be due to the involvement of French 'middle-class medicine' in bourgeois marital fertility, as physicians attempted to address male anxiety and ward off social decline.⁵ However, until the late nineteenth century, medical treatments for infertility were still only available on a private basis, and therefore probably limited to well-off female patients. This means that the story of responses to the problem of involuntary childlessness is complicated: we need to explain the coexistence of increased interest in infertility and lack of attention to collective methods of tackling the problem.

On the one hand, there was undoubtedly an increase in published medical literature on the topic. These works mostly related to gynaecology and obstetrics, but also to physiology, forensic science, female hygiene, and water cures. Some of the most famous and scientifically and politically influential gynaecologists and obstetricians in France, such as Jacques Doléris (1852–1938), Adolphe Pinard (1844–1934), and Charles Pajot (1816–96), conducted important investigations into infertility, based on both their own clinical practice and international medical research on the topic.⁶ A search of the digital catalogue of the Bibliothèque interuniversitaire de Santé/Médecine in Paris, one of the most important medical reference libraries in the world, reveals that between 1800 and 1914, approximately 60 books or theses with the term '*stérilité*' (infertility) in the title were published.⁷ As the Google Ngram computations below show (Figs. 1 and 2), from the 1880s onwards there was a rise in discussion of '*stérilité involontaire*' (involuntary sterility), and after 1930 the number of publications with the terms '*stérilité involontaire*', '*stérilité conjugale*', or '*stérilité pathologique*' rose sharply once again.⁸ These figures suggest a dramatic increase in medical attention devoted to the problem of involuntary childlessness, with sharp explosions of interest in the decades around the turn of the century, and then again from 1930 to around the mid-century.

On the other hand, for many reasons, the social conditions necessary for recognition of involuntary childlessness as a collective issue were not yet in place. From the 1870s, there was intense concern about the slow rate of population growth in France, fuelled partly by anxieties about the after-effects of defeat in the Franco-Prussian war of 1870–71. It was widely believed that a large and healthy population would be needed both to defeat Germany in any future war, and for imperial expansion. In this context, the rise of feminism and neo-Malthusianism both induced moral panics, while campaigns to promote

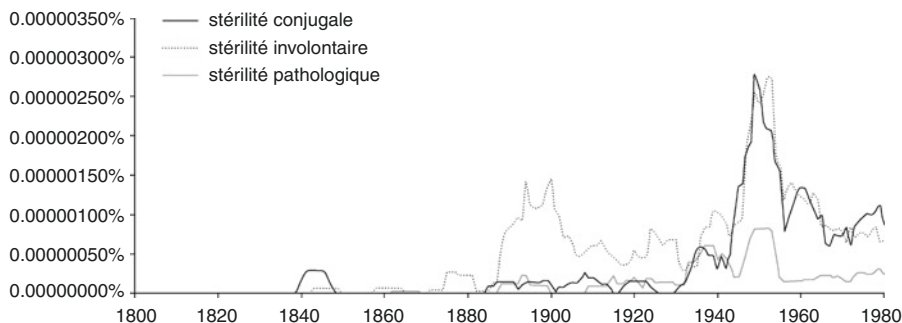


Fig. 1 Ngram of incidence of terms *stérilité conjugale*, *stérilité involontaire*, and *stérilité pathologique*, 1800–1980. (Source: Ngram Culturomics Search: <http://books.google.com/ngrams> [accessed 6 December 2016]. For the purposes of reproduction in this volume, the results of these Ngram searches have been adapted into black-and-white line illustrations by Kirsty Harding.)

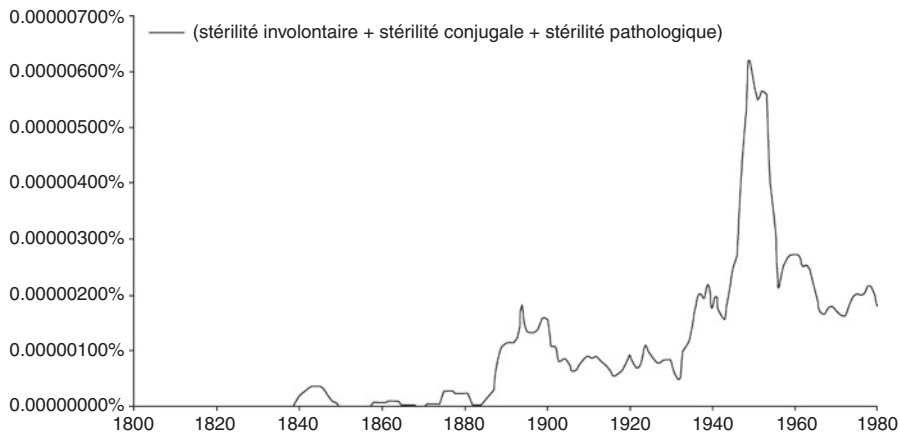


Fig. 2 Ngram of combined incidence of terms *stérilité conjugale*, *stérilité involontaire*, and *stérilité pathologique*, 1800–1980. (Source: Ngram Culturomics Search: <http://books.google.com/ngrams> [accessed 6 December 2016]. For the purposes of reproduction in this volume, the results of these Ngram searches have been adapted into black-and-white line illustrations by Kirsty Harding.)

population growth became more common. At the centre of these efforts was the Alliance nationale contre la dépopulation, a lobbying group founded in 1896 by the statistician Jacques Bertillon (1851–1922).⁹ There was, then, widespread agreement that management of the population was an urgent issue, but far less consensus on what means should be chosen to ‘repopulate’ the nation. There were always great difficulties in simultaneously convincing government decisionmakers, pronatalist pressure groups, pro-family associations,

social hygienists and physicians of the worth of particular interpretations of the cause of relative population decline, or of proposed measures to tackle it.¹⁰ Internal dissension among these collective stakeholders, as well as between them, about the aim of political programmes, their most urgent priorities, and the means by which these aims would be best achieved, made it even more difficult to address the problem of involuntary childlessness.

Of course, one of the main reasons that medical and other pressure groups paid comparatively little attention to involuntary childlessness was that few believed this was an important contributory factor in the decline in the birth rate. Physicians and statisticians had wondered for several decades to what extent the fall of the French birth rate was due to a physiological decrease in reproductive capacity, whether because of venereal diseases, tuberculosis, excessive alcohol consumption, or other ‘diseases of civilization’. Using the number of childless households listed in the 1896 census as the proxy for infertility, in the belief that very few couples want *no* children, Jacques Bertillon calculated that the rate of involuntary childlessness could not exceed 15% of the adult population.¹¹ Like other pronatalist experts and lobbyists, Bertillon believed that ‘physiological causes’ played only a marginal role in the population decline: according to the most respected observers, the main culprits were ‘Malthusian behaviours’ (use of birth control) and, especially from the physicians’ standpoint, ‘criminal abortion’.¹² This interpretation of the reasons for the declining birth rate resulted in the passing of legislation in 1920 which banned the dissemination of contraceptives, propaganda around birth control, and incitement to abortion. In 1923, even harsher measures against abortion were introduced, including making it illegal to recommend an abortionist; an important aspect of this legislation was reclassifying abortion as a minor offence, which in effect made it possible to secure more prosecutions for procuring or performing the operation.¹³ In the same year, the adoption of abandoned or orphaned children was legalized, in recognition of the increased numbers of such children following the 1914–18 war. Although this was not its main purpose, by providing a potential social solution to the difficulties of infertile couples, this law also provided a means of bypassing the medical aspect of the problem.

The belief that birth control and abortion were the main factors behind the population decline led to the belief that the best way to prevent reproductive disorders, including involuntary childlessness, was to reduce gynaecological infections induced by abortion by eliminating abortion itself. Doctors frequently highlighted the association between abortion and secondary infertility. In 1927, a small number of participants in the Kiev Congress of Gynaecology had decried the effects of the 1920 legalization of abortion in the Soviet Union on women’s health. In the early 1930s, the Alliance nationale contre la dépopulation disseminated discussions from the Congress on the dire demographic consequences of legal abortion without any critical commentary.¹⁴ Lobbying groups interpreted medical evidence presented at the Congress as

demonstrating that even when practised by physicians, induced abortion often led to metritis (inflammation of the uterus), salpingitis (infection and inflammation of the fallopian tubes), and post-abortion curettage which damaged reproductive capacity.

Because there was so much anxiety around *voluntary* childlessness, whether by means of birth control or abortion, as *the* cause of the declining birth rate, venereal disease was not awarded the central place among explanations of the causes of involuntary childlessness that it held in Britain (for further discussion of approaches to this issue in Britain, see Anne Hanley's chapter in this volume). French physicians did worry about men transmitting venereal disease (which they had supposedly contracted from sex workers) to their wives, and thereby causing an increase in miscarriages and acquired infertility, but most tended to emphasize the likelihood that venereal disease would result in the production of 'inferior' offspring.¹⁵ These fears increased during the First World War, when social hygienist discourse on the sexual health of French soldiers generated fevered debates on the future of regulated prostitution, stimulated the introduction of a totally new health policy to tackle venereal disease (based on the creation of VD dispensaries), and even led to the army taking direct control of brothels across the country.¹⁶ In subsequent decades, physicians incorporated awareness of the effects of venereal disease to differing extents in their accounts of male and of female infertility. By the end of the Second World War it was widely accepted that gonorrhoeal epididymitis (inflammation of the epididymis) was the main cause of male physiological infertility.¹⁷ However, although physicians were progressively aware of the links between syphilis and spontaneous abortion, and especially between gonorrhoea and tubal infertility, they continued to emphasize the effects of post-abortion complications on female infertility.

All this shows that involuntary childlessness was not framed as an autonomous public health problem (in fact, if we use government involvement as an index, infertility did not achieve this status until the late 1930s). This helps to explain why, in the 1920s, the first significant initiatives in medical treatments for infertility were isolated undertakings, on the margins of the public health system. After the First World War, a number of Parisian gynaecologists and obstetricians combined their desire to relieve patients' suffering with their interests in medical experimentation and the qualitative and quantitative 'betterment' of the French population. Around this time, a handful of doctors who believed that providing assistance to childless couples was more fruitful than hunting down the women who aborted attempted to set up specialized hospital treatments for infertility. The physicians Louis Devraigne (1876–1946) and Jean Dalsace (1893–1970) were influential figures in the attempt to construct medical and social models to address infertility, and to provide practical help for all those who suffered from this problem.

Louis Devraigne was a leader of the *puériculture* movement, which Pinard described in 1896 as concerned with 'research and application of knowledge useful to the reproduction, preservation and improvement of the species'.¹⁸

This movement, often perceived as a French version of eugenics, mixed social hygiene and pronatalism in campaigns for the modernization of hospital maternity wards. Devraigne believed it was essential to rationalize procreation in order to strengthen the social body, and he presented *puériculture*, *dénatalité* (the decline in the birth rate), and *stérilité* as inseparable issues. Jean Dalsace was a different kind of character. He belonged to the more liberal end of the biopolitical spectrum: a member of the French Communist Party, he was also an early advocate of sexology (a discipline which might be viewed as operating at the crossroads of gynaecology, eugenics and psychoanalysis), sex reform, and birth control, which he viewed as both a reproductive right and a necessary measure to protect women from post-abortion diseases. For Dalsace, medical treatments for infertility were, as in the *puériculture* model, a matter of social importance, but he believed the problem of involuntary childlessness could only be resolved if physicians were able to foster individual well-being, in particular in sexual and reproductive life. As this 1937 poster (Fig. 3), used to attract patients to his dispensary in Suresnes, shows, Dalsace saw infertility (*stérilité*) as connected to eugenics (*eugénique*). Dalsace believed, as did many other doctors and later demographers, that only *motivated* couples would ask for reproductive assistance, and that this self-selection for infertility treatment had potential eugenic benefits. By definition, couples who sought



Fig. 3 A poster announcing Dalsace's clinic in Suresnes (1937). By permission of the Archives municipales de Suresnes (Q 66)

treatment must really want to have children, and it was thought that if children were greatly desired, they would be better raised.¹⁹ Like Devraigne's project, Dalsace's work greatly influenced the creation of sites and practices for infertility medicine in interwar France.

THE INVENTION OF NEW PUBLIC INSTRUMENTS IN THE INTERWAR PERIOD

During the 1920s, many French hospitals and dispensaries, guided by the aims of the *puériculture* movement, began to emphasize preventative and social medicine in their prenatal and postnatal medical provision, often targeting the lower classes.²⁰ The first specialized consultation clinics for infertile women and men were organized in this context. In 1925, Devraigne had opened a prenatal clinic in the maternity ward of the Hôpital Lariboisière, a major Parisian hospital, and after lengthy negotiation with the Parisian Hospitals administration managed to obtain authorization to open an infertility unit.²¹ A dozen other infertility units were then set up in Paris on the same model.²² These modest units did not receive specific budgets, and their status as 'outpatient consultation clinics' prevented practitioners from admitting patients to hospital beds.²³ Dalsace took a different route into the provision of treatments for infertility, and instead experimented with his own project in the suburban town of Suresnes, the first garden city created in France. He convinced the mayor, the socialist reformer Henri Sellier (1883–1943), to make a room available in one of the municipal child nurseries for a weekly consultation with infertile patients. This 'infertility and eugenics' clinic opened in 1937. Although it has proved very difficult to find archival sources on Dalsace's activities in Suresnes, there is some evidence that his practice differentiated between 'healthy' women who needed help to become pregnant and 'unhealthy' women, such as victims of syphilis or mental disorders, or the wives of alcoholics. These 'unhealthy' women were encouraged to use the pessaries that Dalsace brought illegally from Britain.²⁴ In both public and private spheres, then, eugenic concerns helped to determine medical attitudes towards the desirability of 'curing' infertility.

These pioneer physicians sought to convince both the authorities and public opinion that science provided a credible answer to infertility by proving their professional skill and technical efficiency. Implicitly, this meant demonstrating their superiority over 'amateurs' and 'improvisers', and avoiding interventions perceived as inappropriate, such as artificial insemination without clear therapeutic justification. At this time, although some doctors in private practice carried out artificial insemination using the husband's sperm, this remained controversial. In a notorious case of 1884, the physician Oscar Lajartre was convicted by the Tribunal civil de Bordeaux for violating the confidentiality of the doctor–patient relationship in order to pursue costs from a patient who refused to pay for failed artificial insemination. However, artificial fertilization in itself was not condemned.²⁵ Significantly, Lajartre was able to continue

publishing advertisements for his ‘miraculous’ treatments in the newspapers.²⁶ Even after the Sanctum Officium (the administrative arm of the Roman Catholic Church, which oversaw Catholic doctrine) pronounced a *non licere* on artificial insemination in 1897, after several years of internal debate on the matter, physicians continued to practise the technique.²⁷ By avoiding such practices, Devraigne and Dalsace hoped to bolster the case for a scientific approach to the understanding and treatment of infertility.

Both this ethos, and the substantial resources of the hospital environment, led to important advances in the diagnosis and treatment of infertility. Practitioners developed an array of laboratory techniques to diagnose and identify the cause of infertility. These included systematic methods to detect mechanical obstacles to fertilization, especially examination of the fallopian tubes (which were frequently infected). Dalsace played a significant role in introducing tubal insufflation to France, as well as contrast radiography (based on Lipiodol injections) which revealed the presence of lesions, malformations, tumours, or fibroids responsible for infertility. During the Nazi Occupation of France (1940–44), Raoul Palmer (1904–85) developed the innovative exploratory surgical technique of coelioscopy (a medical procedure for examining the abdomen, in order to directly observe and possibly treat the fallopian tubes). Finally, after researchers identified the relationship between ovulation, the menstrual cycle, and fertility capacity in the 1920s, physicians were able to bring analysis of male and female genital secretions into their array of diagnostic practices.²⁸

As the number of laboratory techniques potentially available expanded, and the scientific status of this branch of medicine was consolidated, physicians working in infertility medicine began to face a new set of problems. Now, they not only needed consulting rooms in which to examine patients, but they had to obtain the necessary human and material resources to carry out lengthy and expensive investigations. The battery of clinical investigations – gynaecological, urological, and, increasingly, psychological – required time and money. There was also a growing need for specialized staff and equipment in the spheres of biochemistry, endocrinology, cytology, and radiology. New scientific knowledge brought the need for new kinds of practical organization: for example, the need to examine sperm immediately after ejaculation meant that ejaculate could no longer be brought from the patient’s home to the laboratory. Physicians had to find creative solutions to this restriction. Each new clinical and scientific advance in the diagnosis of infertility generated new difficulties to be overcome, without concomitant increases in funding or personnel.

There were fewer advances in therapeutic techniques in the interwar period, although the nature of the debates around the necessity, desirability, and consequences of interventions did shift. Physicians usually sought to pragmatically identify the most appropriate methods of treatment for different diagnoses. Although artificial insemination was now less often criticized for *moral* reasons, at least in official discourse, it was still perceived as unsafe and unpredictable.²⁹ It was not until the 1950s that this practice, sometimes associated with clandestine sperm donation, was really taken seriously. Instead, it seems

that in the interwar years physicians mainly attempted to ‘cure’ infertility through prescribing drugs to treat hormonal disorders or genital infections. Indeed, the most significant improvement in reproductive medicine during the 1940s was probably the introduction of antibiotics to cure both post-abortion and gonococcal infections. There were also some more radical interventions available, although physicians were often reluctant to resort to these, partly because they would deter clients. Nevertheless, surgery to remove genital obstructions was often unavoidable.³⁰

In their publications, French physicians acknowledged that the treatment process was arduous, involving numerous unpleasant examinations and often invasive interventions, and they knew that many individuals or couples gave up before the end of the medical process. These texts constitute an indirect historical source about the experience of infertility, and the human suffering of these men and women. The gender dynamics of infertility treatment were complex. Many physicians believed that informing a man that he was permanently sterile could lead to psychological destruction, or even suicide. At the same time, one of the consequences of medical intervention in infertility was to challenge the social taboo attached to male infecundity.³¹ Here we see another example of the way in which medical and social attitudes to infertility were changing, but in unpredictable directions.

Physicians took great pains to statistically analyse the results of their therapeutic experiments, with the aims of both legitimating their activities and sharing their practical observations. They claimed success rates of between 10% and 20%, but often defined ‘success’ in very different ways, ranging from improved spermatogenesis to conception or birth. As a result, the ultimate significance of such statistics is never obvious. Apart from anything else, it is extremely difficult to assess whether these treatments were even successful on the terms defined by individual physicians. This perhaps demonstrates that the causes and consequences of the medicalization of reproduction cannot be fully measured using statistical approaches to the successful treatment of infertility. As several physicians have suggested, the problem is not only the effectiveness of medical activities, but also the physician’s capacity to provide care, to listen, and to convince patients of the benefits of medical processes.³² To understand the reasons for the cultural change that led men and women to seek professional help when difficulties arose, and the context in which health-seeking behaviour took place, we need to consider wider shifts in attitudes to medicine, infertility, and public health. The remainder of this chapter addresses some of these issues by examining failed attempts to create a national system of medical provision for the diagnosis and treatment of infertility from the late 1930s onwards.

DEVELOPING A NATIONAL SYSTEM: A SERIES OF FAILED ATTEMPTS?

In the interwar period, the pronatalist lobby integrated the issue of involuntary childlessness into its concerns, even if it still saw this issue as far less important than abortion. However, despite its intense activism during the 1930s, this

lobby had little success in forcing the state to introduce public policies to address the problem of infertility. In this respect, 1937 was a turning point: following representations from the Alliance nationale contre la dépopulation, the state authorities formulated for the first time the concept of an institutionalized national system. In December 1937, the Health Minister Marc Rucart (1893–1964) sent a circular to the prefects (state representatives) requiring them to ensure that at least one infertility consultation clinic was available in each French *département* (an administrative unit between the region and the commune). The Minister also recommended the creation of a national centre for infertility research.³³ He even went so far as to provide some public funding. Notably, this made it possible to equip the biology laboratory at the Ecole de puériculture's infertility centre (part of the Faculté de médecine de Paris).³⁴ After the war, this infertility centre, then headed by Professor Max Jayle (1913–78), was at the forefront of research in hormonology.

However, on the eve of the Second World War, these measures had made little impact on the supply of specialized and accessible services for the treatment of infertility. The official explanation for this failure referred to the shortage, except in Paris, of skilled professionals, rather than to limited financial resources.³⁵ While the government had taken steps to intervene in infertility for the first time, it was neither willing to invest the resources necessary to achieve significant results, nor to acknowledge that further investment was necessary. It seems likely that lack of social demand also contributed to the problem. In 1936, Louis Devraigne proudly announced that he had been consulted by more than 3,000 women since 1925, but other physicians could not boast the same popularity.³⁶ In Suresnes, Jean Dalsace only examined 129 patients in 1939, well below his target, despite the efforts of garden-city social workers in distributing leaflets in the streets to attract new patients to the consulting rooms.³⁷ Among the women examined by Professor G. Cotte in Lyon between September and December 1938, in both his private practice and in his capacity as a hospital consultant, only 23 out of 44 women with 'primary infertility', and 5 out of 21 with 'secondary infertility', had initially consulted him because of problems in conceiving. Most had instead sought help for habitual gynaecological problems.³⁸ These figures, although illustrative of trends in only a few practices, suggest that the French population still lagged behind the government in perceiving medical intervention as an appropriate or viable solution to the problem of involuntary childlessness.

This story, of official recognition of the problem coupled with failed attempts to resolve it, was repeated in the tumultuous years of the 1940s. Under the Vichy Regime, the pronatalist and eugenic Fondation pour l'étude des problèmes humains tried to revive government interest and investment in infertility.³⁹ Physicians and activists felt they could exploit the growing obsession with the 'French race'.⁴⁰ The Fondation, also known as the Alexis Carrel Institute after the Nobel Prize-winning biologist who acted as its 'regent', brought together physicians with specialist interests in infertility. These included Maurice Lacomme (1897–1986) at the École de puériculture,

Jacques Varangot (1909–85) at the Hôpital Port-Royal, Raoul Palmer (1904–85) at the Hôpital Broca, and Louis Portes (1891–1950) at the Clinique Baudelocque. Jean Dalsace, for his part, was engaged in the Resistance.⁴¹ The research of the Fondation indicated that 8% of French couples were affected by involuntary childlessness, that 25% of these couples could be treated by appropriate means, and that such treatment might result in 8,000 to 10,000 additional births every year.⁴² To achieve this outcome, it suggested that it was necessary to open more infertility clinics, and to introduce specific training in the diagnosis and treatment of infertility through the Faculties of Medicine. The Fondation provided some funds for this enterprise, including contributions towards the laboratory of gynaecological physiology at the Hôpital Broca, but this did not counteract the repressive spiral set in motion by the Vichy authorities' policies of national regeneration.⁴³ The dictatorial regime was less interested in measures to stimulate fertility among those unable to conceive than in publicizing its efforts in the fight against abortion, the most spectacular and least expensive sign of state involvement in the 'preservation of the race'. Again, small steps towards investment in medical provision for the diagnosis and treatment of infertility were countered by official neglect and retrenchment.

This situation seemed on the brink of change in 1944 with the Liberation. Although it built on some existing provisions, the emblematic creation and institutionalization of the social security system (*Sécurité sociale*) offered new opportunities.⁴⁴ *Sécurité sociale* increased the number of persons covered by health insurance, and encouraged the population to make use of the medical services on offer. At the same time, scientific progress (and especially the development of antibiotics) fuelled social trust in medical cure. Increased access to and use of medical services built on trends evident since the early 1940s. In 1941, the official mission of the public hospitals had been redefined as the provision of medical care instead of the ancient dispensation of charity. In other respects, however, the dismantling of the Vichy Regime meant significant shifts in the direction of policies related to medicine. After the Liberation, the coercive and repressive methods of eugenics, pronatalism, and the fight against abortion were less prevalent. Now, everything possible was done to connect medical actors and social professions. The institutionalization of Mother-and-Child Protection (*Protection maternelle et infantile*) joined together doctors, midwives, nurses, and social workers, and was supposed to provide support for parents and infants from conception to the first years of the child.⁴⁵ Universal prenatal and postnatal consultations were available in each *département* and, at least in theory, infertility consultations were also available at the same level. The state provision of gynaecological and obstetric care had reached a level never previously achieved in France.

From the mid-1940s, then, official support for the rational organization of reproductive medicine, including provision for the treatment of infertility, gathered pace as never before. In 1946, as an offshoot of the law on Mother-and-Child Protection, a ministerial decree established an official committee on

infertility under the aegis of the Ministry of Public Health and Population. This brought together more than 30 participants, including all the most dominant physicians and campaigners for medical provision for the treatment of infertility. Rather than submerging the issue of infertility within one of the other numerous expert commissions created between 1944 and 1946, the government at least temporarily recognized the existence of involuntary childlessness as a specific social problem, and gave it relative visibility. In these favourable conditions, infertility specialists and public health administrators constructed an ambitious and elaborate vision of the future of medical provision for the diagnosis and treatment of infertility, including comprehensive territorial coverage and a solid research infrastructure, structured by multiscale coordination.

Although it is unclear whether the political decisionmakers genuinely intended to implement an actual and consistent public policy on infertility, the medical infertility specialists did not miss the opportunity to express their will. The intervention of one Health Inspector nicely summarizes the ‘Jacobin’ spirit of this brainstorming: he proposed ‘to take a map of France, to identify the main [infertility] centres’ and to determine which geographic zone was ‘under their authority’.⁴⁶ The medical specialists on the committee imagined a detailed plan of infrastructure development on a national scale, even if this continued the traditional privileging of the Parisian region.⁴⁷ This plan set out arrangements for a hierarchical network of medical centres and consulting clinics, developed out of existing structures, and involving division of labour between different institutions, more methodical distribution of patients, standardization of protocols and observations, and even the centralization of bibliographic resources. At the apex of this hierarchy were ‘top-level’ centres, which were not ordinary infertility clinics but specialized units containing high-tech laboratories for diagnosis and research.⁴⁸ This comprehensive plan promised to bring together clinical practice and scientific research at the local, regional, and national levels.

Perhaps most importantly for our purposes, the plan produced by medical specialists on the 1946 committee reflects the strength of the biomedical, and to some extent industrial, approach to reproductive problems. For instance, Professor Max Jayle suggested carrying out mass examinations to increase efficiency. As this ruthlessly rational approach to an intensely sensitive medical issue indicates, doctors were aware that their creative ideas had significant financial implications. The functioning of these laboratories in ‘top-level’ centres would require personnel, new instruments and expensive chemical products.⁴⁹ To carry out standardized hormone tests, huge stocks of animals such as rats, mice, and rabbits would be required; according to a reporter, the cost of these laboratory animals would be equivalent to one-third of the payroll budget for the laboratories.⁵⁰ It was suggested that medical consultations could be financed by a partnership between the Ministry of Health, the *départements*, the local hospital administrations, and the national health insurance fund. But this still left the question of funding for research activities

unresolved. Should the infertility centres be attached to institutions like the Centre national de la recherche scientifique, the Institut national d'hygiène or the Institut national d'études démographiques, or should they operate on a relatively autonomous basis?⁵¹ These questions were never settled.

The year 1946 was an important moment in the history of government interest in infertility, but ultimately the committee had little influence on policy. In the end, the public health authorities decided to do no more than attempt to satisfy existing demand. They made no effort to expand the number of centres or potential patients. A report published in 1958 concluded that 'the important material needs' of the 16 infertility centres in Paris and the 15 centres in provincial main towns meant that further centres were 'not necessary', even though it later became clear that distance from these centres was an important deterrent to those seeking help for infertility.⁵² Nor was there much support for teaching or research in the physiology or epidemiology of reproduction: in 1950, Raoul Palmer complained that his unit in the Hôpital Broca had not received any research credit for three years.⁵³ In part, the failure of the authorities to heed the calls of infertility specialists for further resources might be attributed to the undertones of some of their demands, which were increasingly out of step with mainstream attitudes towards state intervention in reproduction. As an example, in 1970, Jean Dalsace called for reform in premarital examination. Since 1942, this test had been required by law, with the results of the examination disclosed to the individual but not their future spouse: Dalsace denounced the fact that only syphilis and tuberculosis were detected in existing examinations, and that the doctor was unable to forbid marriage. He proposed instead that doctors should be required to check the quality of sperm and the regularity of menses before every legal union, to ensure that fecundity would follow.⁵⁴

In all, public interventions in the fight against infertility remained very limited up to the 1970s. Indeed, until 1978 even health insurance funding coverage for infertility treatments remained limited, with full reimbursement for costs not available.⁵⁵ Why, then, did provision for the diagnosis and treatment of infertility remain situated primarily in the arena of *private* medicine? It seems likely that the preferences of practitioners and patients converged to produce this result. On one hand, it is likely that many private practitioners had a personal or business interest in developing their own infertility clinics rather than contributing to a public service that was not unanimously approved by the profession. On the other hand, patients had various reasons to prefer private practices: shorter waiting times, the possibility of bargaining over treatment (notably to obtain artificial insemination without undergoing multiple examinations), and, overall, greater privacy, discretion, and choice about what would happen to them.

The entrenchment of medical therapies for infertility in the private sphere had several consequences for researchers, practitioners, and patients alike. At the level of research and clinical practice, testing remained largely in the hands of private laboratories, and reproductive medicine remained largely in the

domain of scholarship and professional associations such as the Société française de gynécologie, the Association pour le développement de la lutte contre la stérilité involontaire (linked to the Ecole de puériculture and the Fondation de recherche en hormonologie) and the Société nationale pour l'étude de la stérilité et de la fécondité, founded in the early 1950s by Jean Dalsace. The latter organization worked hand in hand with the Mouvement français pour le planning familial, and became the central hub of the professional network of fertility and infertility physicians, connecting all the different clinical and biological specialities involved in the diagnosis and treatment of infertility.

The development of medical treatments for infertility on the margins of the public health care system also underlines the consequences of the absence of a strict regulatory framework. Although physicians complained about the scarcity of resources at their disposal, they also profited from a tolerant legal framework which they viewed as an asset for scientific innovation. Many private practitioners probably made all kinds of arrangements with their patients, including clandestine treatments with donor sperm, as caricatured in Guy des Cars's 1973 novel *Le donneur*.⁵⁶ From the early 1970s, the first banks for cryopreserved sperm were established as private associations, although based in public hospitals. The main organization, the Centre pour l'étude et la conservation des œufs humains et du sperme, created by Dr Georges David (b. 1923), was founded on strict principles of free access, volunteerism, and anonymity, but is nevertheless a good example of how doctors capitalized on the administrative flexibility and the scope for ethical pragmatism offered by lax legal controls. Only gradually did professionals start pressing for a stronger legal framework, both to harmonize the practices of the different centres and to encourage stricter bioethical regulation. These demands became more insistent when in vitro fertilization, and later preimplantation genetic diagnosis, was introduced to France in the 1980s.⁵⁷ As in other countries, this dramatic change in reproductive technology changed the landscape of medical treatments for infertility completely.

CONCLUSION

Between 1920 and 1950, the infertility question in France was closely tied to other medical and demographic problems, including the declining birth rate, abortion, birth control, venereal diseases, adoption, and mental health. Historically, efforts to combat infertility were developed as a positive form of biopolitics, designed to boost the quantity and quality of the population, and more precisely as a positive alternative to coercive population policies. The pronatalist and eugenic arguments played an important role in legitimating reproductive medicine, but had only limited effects in the domain of the diagnosis and treatment of infertility. This was not because specialists in this field did not share the assumptions of the pronatalist and eugenic movements, but because the most influential experts did not believe that a massive

endeavour to address *involuntary* childlessness would produce spectacular demographic results.

In the interwar period, a few doctors, motivated by pronatalist or eugenic arguments, embarked upon clinical endeavours which led to an early form of institutionalized reproductive medicine and to improvement in diagnostic techniques. These efforts probably also profoundly transformed the patient–doctor relationship, creating new opportunities for infertile couples, but also increasing medical control over the reproductive function, and resulting in the attendant risk of poor care or overtreatment. Until the end of the Second World War, attempts to expand provision for infertility treatment as a public service suffered from lack of government will, lack of resources, and lack of specialized scientific and practical training. However, attendant on the growth of the welfare state in the late 1940s came government recognition of infertility as a problem which might justify setting up a national system of treatment, research, and teaching. In the end though, the visibility of infertility quickly faded. Once again, wider demographic trends affected perceptions of infertility: this was at the start of the baby boom, and as Naomi Pfeffer points out in relation to English-speaking countries, infertile couples were often completely forgotten during this period. Instead, public debate concentrated on unwanted pregnancies, family planning, and the legalization of contraception.⁵⁸ Right until the end of the 1970s, public investment remained quite limited, with loose state and legal control over medical provision for the treatment of infertility in all its dimensions (technical, legal, ethical, financial, and so on). This limited public contribution was also perceived as an asset for medical innovation at a time when pioneers were starting to explore new possibilities for the treatment of infertility.

Across the period covered by this chapter, attitudes to infertility, as well as the state's willingness or ability to intervene in this aspect of private life, were affected by a variety of factors specific to this national context: the slow rate of population growth since the late nineteenth century, especially as compared to other European countries; national self-perception as a threatened imperial nation; and the legacy of 'Latin eugenics' and pronatalist thought. At the same time, the story of medical approaches to infertility in twentieth-century France in some respects echoes those of other European countries: the key moments may well be identified as the two world wars, the growth of the welfare state from the mid-century, and then technological advances in reproductive medicine at its end. The onward march of globalization suggests that the histories of medical approaches to infertility in these countries will increasingly converge as time goes on.

NOTES

1. For example, in her study of women's privacy under the Third Republic, Anne-Marie Sohn discusses conjugal crises induced by involuntary childlessness. See Anne-Marie Sohn, *Chrysalides: femmes dans la vie privée (XIX^e-XX^e siècle)* (Paris, 1996). Exceptions to historiographical silence on infertility in modern France include Françoise Thébaud's research on birth and maternity in the interwar

- period, which has shown that treatments for infertility were already in use in Parisian hospitals in this period, Emmanuel Betta's research on the Roman Catholic Church's role in debates on artificial fertilization during the late nineteenth century, and Jacques Gonzalès's research on the broader history of human reproduction in the Western world. See Françoise Thébaud, *Quand nos grands-mères donnaient la vie: la maternité en France dans l'entre-deux guerres* (Lyon, 1986); Emmanuel Betta, *L'altra genesi. Storia della fecondazione artificiale* (Roma, 2012); and Jacques Gonzalès, *Histoire de la procréation humaine. Croyances et savoirs dans le monde occidental* (Paris, 2012).
2. Simone [Bateman]-Novaes, *Les passeurs de gamètes* (Nancy, 1994).
 3. Robert A. Nye, *Masculinity and Male Codes of Honor in Modern France* (Oxford, 1993).
 4. Louis Funck-Brentano and Édouard Plauchu, *Traitement de la stérilité chez la femme* (Paris, 1912).
 5. Nye, *Masculinity and Male Codes of Honor in Modern France*, pp. 72–97.
 6. Funck-Brentano and Plauchu's book is probably the best synthesis of studies written before the First World War. The notorious names I quote are taken from the extensive bibliography in Funck-Brentano and Plauchu, *Traitement de la stérilité chez la femme*.
 7. These figures have been generated through a search of the digital catalogue of *Bibliothèque interuniversitaire de Santé/Médecine* (Paris).
 8. This search has been conducted using French language sources within Google's digitalized corpus of texts. See Bridget Gurtler's essay in this volume for a fuller explanation of the uses of the Google Ngram algorithm.
 9. Francis Ronsin, *La Grève des ventres. Propagande néo-malthusienne et baisse de la natalité en France (XIX^e-XX^e siècle)* (Paris, 1980), pp.124–6; Anne Cova, *Maternité et droit des femmes en France (XIX^e-XX^e siècle)* (Paris, 1997), pp. 25–39; Susan Pedersen, *Family, Dependence, and the Origins of the Welfare State: Britain and France, 1914–1945* (Cambridge, 1993), pp. 60–3.
 10. Cova, *Maternité et droits des femmes en France*, pp. 25–39.
 11. Jacques Bertillon, *La Dépopulation de la France: ses conséquences, ses causes, mesures à prendre pour la combattre* (Paris, 1911), pp. 90–5. Bertillon's calculations resulted in a figure not too dissimilar to later estimations, although using childless households as the proxy neglects the existence of secondary infertility.
 12. See for example Charles Richet, 'Sur la dépopulation de la France', *Bulletin de l'Académie nationale de médecine* (1917). For a more detailed analysis, see Fabrice Cahen, 'Medicine, Statistics, and the Encounter of Abortion and "Depopulation" in France (1870–1920)', *History of the Family*, 14:1 (2009).
 13. Jean E. Pedersen, 'Regulating Abortion and Birth Control: Gender, Medicine, and Republican Politics in France, 1870–1920', *French Historical Studies*, 19:3 (1996).
 14. A. Mayer, 'L'Avortement légal en U.R.S.S. et ses conséquences', trans. Fernand Boverat, *Russie et chrétienté* (Lille, 1935); Fernand Boverat, 'L'évolution démographique et les résultats de l'avortement légal en URSS', *Le Musée social*, 7 (July 1932).
 15. Virginie De Luca Barrusse, *Population en Danger! La lutte contre les fléaux sociaux sous la Troisième République* (Bern, 2013), pp. 54–6.
 16. Michelle K. Rhoades, 'To Save Future Generations: Masculine Honor and Reproductive Duties, 1914–1918', *Proceedings of the Western Society for French*

- History*, 31 (2003); De Luca Barrusse, *Population en Danger!*, pp. 57–60; Vincent Viet, *La santé en guerre, 1914–1918. Une politique pionnière en univers incertain* (Paris, 2015), pp. 96–109.
17. Paul Funck-Brentano, Henri Bayle, and Raoul Palmer, *Stérilité* (Paris, 1954), p. 57.
 18. William Schneider, ‘Puericulture, and the Style of French Eugenics’, *History and Philosophy of the Life Sciences*, 8 (1986), p. 265.
 19. Archives municipales de Suresnes, Q 64: ‘Dispensaires, Pouponnière Nouvelle Etoile, Cité-jardins, 1933–1942’; Unknown author, ‘Consultations prénuptiales et prénatales’, 24 December 1936. This idea of a eugenic advantage to combatting infertility is expressed, for example, in Jean Sutter, *L’ Eugénique* (Paris, 1951), p. 83.
 20. Françoise Thébaud, *Quand nos grands-mères donnaient la vie*, pp. 94–101.
 21. Henri-Jacques Lechevallier, *Contribution à l’étude de la stérilité, causes et traitement (travail de la maternité de Lariboisière)*, medical thesis (Paris, 1931), p.13; Louis Devraigne, ‘Rapport sur les consultations contre la stérilité conjugale à la maternité de Lariboisière (Conseil Supérieur de la Natalité)’, *Puériculture sociale* (Paris, 1936), p. 235.
 22. Archives municipales de Suresnes, Q 84: Service social, 1919–1941, Poster ‘Consultations externes des hôpitaux et hospices’ (Administration générale de l’Assistance publique à Paris), 1938.
 23. Archives de l’Assistance publique-Hôpitaux de Paris, 1L: Proceedings from the Conseil de surveillance de l’Assistance publique à Paris, session 29 October 1925.
 24. Archives municipales de Suresnes, Q 64: ‘Dispensaires, Pouponnière Nouvelle Etoile, Cité-jardins, 1933–1942’, ‘Consultations prénuptiales et prénatales’, 24 December 1936; Jean Dalsace, ‘Réflexions d’un sexologue’, *La maternité heureuse*, 4 (March 1939); Jean Dalsace, ‘Quelques étapes difficiles du Planning familial en France’, *Planning familial*, 6 (June 1965).
 25. Emmanuel Betta, *L’altra genesi*, pp. 58–60.
 26. *Le Figaro*, 2 March 1887; *Le Matin*, 9 October 1888.
 27. Emmanuel Betta, *L’altra genesi*, pp. 100–4.
 28. Gonzalès, *Histoire de la procréation humaine*, pp. 21–2, 441–65; Lechevallier, *Contribution à l’étude de la stérilité*, p. 31.
 29. For example, in 1936, Devraigne mentioned that he occasionally resorted to artificial insemination, but with very disappointing results: Louis Devraigne, ‘Où en est-on actuellement de la question de la stérilité féminine?’, *Puériculture sociale* (Paris, 1936), p. 51. The lack of success of this form of treatment was most likely related to lack of knowledge about the menstrual cycle and the timing of ovulation.
 30. Jean Dalsace, *La stérilité* (Paris, 1962), pp.102–5; Funck-Brentano, Bayle, and Palmer, *Stérilité* (Paris, 1954), pp. 27–51, 53–77. Comparison of these texts with Funck-Brentano and Plauchu, *Traitement de la stérilité chez la femme* provides some sense of the evolution of therapies for infertility during the first half of the twentieth century.
 31. Lechevallier, *Contribution à l’étude de la stérilité*, p. 17.
 32. Devraigne, ‘Où en est-on actuellement de la question de la stérilité féminine?’, p. 238; H. Vignes, *Médecine et mariage* (Lyon, 1938) p. 178; Dalsace, *La stérilité*, pp. 125–6.

33. Unsigned article, 'La stérilité involontaire sera combattue méthodiquement', *Revue de l'Alliance nationale contre la dépopulation* (January 1938).
34. Archives de la Bibliothèque nationale universitaire de Strasbourg, MS 6.525: Fonds Marc Klein, manuscripts and mixed papers, 1947–1974, Pr Jayle, 'Projet d'organisation des laboratoires annexes aux consultations de lutte contre la stérilité involontaire de la région parisienne' (1946).
35. Henry Flavien, *Stérilité conjugale statistiques du centre de traitement de stérilité de la maternité de Port-Royal 1944–1950*, medical thesis (Paris, 1951), p. 1.
36. Devraigne, 'Rapport sur les consultations contre la stérilité conjugale à la maternité de Lariboisière', p. 236.
37. Archives municipales de Suresnes, Q 65: 'Dispensaire Nouvelle Etoile, 1930–1942', 'Statistiques des consultations, années 1938 et 1939'.
38. G. Cotte, 'La stérilité féminine et le problème de la dénatalité', *Lyon médical*, 10:3 (1939).
39. Andrés H. Reggiani, *God's Eugenicist: Alexis Carrel and the Sociobiology of Decline* (Oxford, 2007), p. 137.
40. Miranda Pollard, *Reign of Virtue. Mobilizing Gender in Vichy France* (Chicago, IL, 1998), pp. 1–41; Cyril Olivier, 'Du crime contre la race. L'avortement dans la France de la Revolution Nationale' in Christine Bard et al (eds), *Femmes et justice penale XIXe – XXe siècles* (Rennes, 2002).
41. Flavien, *Stérilité conjugale*, p. 4; Michèle Blacque-Belair, *De la stérilité conjugale: statistique 1947 de la clinique gynécologique de Broca*, medical thesis (Paris, 1951), pp. 1, 33.
42. Unsigned paper, 'La France et sa population', *Cahiers de la Fondation française pour l'étude des problèmes humains*, 2 October 1944.
43. The laboratory of gynaecological physiology of the Hôpital Broca received new funds from the Fondation pour l'étude des problèmes humains. See Raoul Palmer, *La stérilité involontaire. Evaluation des méthodes de diagnostic et de traitement* (Paris, 1950), p. 9.
44. Bruno Valat, *Histoire de la Sécurité sociale (1945–1967): L'Etat, l'institution et la santé* (Paris, 2001), pp. 111–32; Michel Dreyfus, Michèle Ruffat, Vincent Viet, Danièle Voldmann and Bruno Valat (eds), *Se protéger, être protégé. Une histoire des Assurances sociales en France* (Rennes, 2006), pp. 270–4.
45. Claude Thiaudière, 'La protection maternelle et infantile: politique de santé publique et spécialisation médicale', *Regards sociologiques*, 29 (2004), pp. 23–34.
46. Archives de la Bibliothèque nationale universitaire de Strasbourg, MS 6.525: fonds Marc Klein, Proceedings of the *Comité consultatif de lutte contre la Stérilité involontaire*, 7 October 1946. The concept of a 'Jacobin' health system is borrowed from Vincent Viet, *La santé en guerre*. It refers to an ideal of state centralization and territorial homogeneity. This conception of the relations between centre and periphery was prevalent from the Third Republic up to the Gaullian Fifth Republic.
47. The main archival holdings relating to this committee are included among the private papers of one of its participants, Dr Marc Klein. Klein, a physiologist from Strasbourg and researcher at the Centre national de la recherche scientifique, was very interested in the biology of reproduction. The reports and proceedings of this committee can be consulted in these files: Archives de la Bibliothèque nationale universitaire de Strasbourg, MS 6.518 and MS 6.525.

48. Archives de la Bibliothèque nationale universitaire de Strasbourg, MS 6.525: Fonds Marc Klein, manuscripts and mixed papers, 1947–1974, Pr Jayle, ‘Projet d’organisation des laboratoires annexes aux consultations de lutte contre la stérilité involontaire de la région parisienne’ (1946).
49. On biomedicine in France after 1945, see Jean-Paul Gaudillière, *Inventer la biomédecine. La France, l’Amérique et la production des savoirs du vivant après 1945* (Paris, 2002).
50. Archives de la Bibliothèque nationale universitaire de Strasbourg, MS 6.525: fonds Marc Klein, Pr Jayle, ‘Projet d’organisation des laboratoires annexes aux consultations de lutte contre la stérilité involontaire de la région parisienne’ (1946); Dr Varangot, ‘Projet d’organisation d’un laboratoire central de biologie des hormones sexuelles’ (1946); ‘Rapport du Dr Moricard. Laboratoire central d’hormonologie et cytologie à la clinique gynécologique’ (1946).
51. Archives de la Bibliothèque nationale universitaire de Strasbourg, MS 6.525: fonds Marc Klein, Proceedings of the *Comité consultatif de lutte contre la Stérilité involontaire*, 7 October 1946.
52. Ministère de la Santé publique et de la Population, *Rapport du ministre sur la Protection maternelle et infantile au cours de la période 1952–1956* (1958), p. 37; N. Homasson, *La stérilité conjugale. Étude étiologique et résultats thérapeutiques*, medical thesis (Tours, 1975), introduction.
53. Palmer, *La stérilité involontaire*, p. 9.
54. Jean Dalsace, ‘La farce du certificat pré-nuptial’, *Bulletin du Mouvement français pour le planning familial* (October 1970).
55. Isabelle Engeli, *Les politiques de la reproduction* (Paris, 2010), p. 135.
56. The physician and bioethicist Jean Bernard suggests there was a ‘black market in sperm’ during the 1970s. See Jean Bernard, *L’Homme changé par l’homme* (Paris, 1994), p. 57.
57. Engeli, *Les politiques de la reproduction*, pp. 137–60.
58. Naomi Pfeffer, *The Stork and the Syringe: A Political History of Reproductive Medicine* (Cambridge, 1993), pp.111–12.

RESEARCH RESOURCES

Primary Sources

Archival Sources

The reports and proceedings of the *Comité consultatif de lutte contre la Stérilité involontaire* (1946) can be consulted in these files: *Archives de la Bibliothèque nationale universitaire de Strasbourg*, fonds Marc Klein, MS 6.518 and MS 6.525.

Since 2011, the archives of the CECOS (Centres d’étude et de conservation des œufs et du sperme humains) Federation have been held at the *Bibliothèque de l’Académie nationale de médecine*.

Published Primary Sources

Louis Funck-Brentano and Édouard Plauchu, *Traitement de la stérilité chez la femme* (Paris, 1912). This text is available on *Gallica.fr*, the website of the *Bibliothèque*

nationale de France. Several other texts published before 1914 can also be accessed via this site.

The following are two very useful books for understanding medical approaches to infertility in the 1950s and 1960s:

Jean Dalsace, *La stérilité* (Paris: Presses universitaires de France, 1962).

Paul Funck-Brentano, Henri Bayle, and Raoul Palmer, *Stérilité* (Paris: Masson, 1954).

Secondary Sources

Michael R. Finn, 'Female Sterilization and Artificial Insemination in Fin-de-Siècle France: Facts and Fictions', *Journal of the History of Sexuality*, 18:1–2, (January-May 2009), 26–43.

Simone [Bateman-] Novaes 'Semen Banking and Artificial Insemination by Donor in France: Social and Medical Discourse', *International Journal of Technology Assessment in Health Care*, 2 (1986), 219–29.

Robert A. Nye, *Masculinity and Male Codes of Honor in Modern France* (Oxford: Oxford University Press, 1993).

Naomi Pfeffer, *The Stork and the Syringe: A Political History of Reproductive Medicine* (Cambridge: Polity, 1993).

William Schneider, *Quality and Quantity: The Quest for Biological Regeneration in 20th Century France* (Cambridge: Cambridge University Press, 1993).

‘Phantom Fathers’ and ‘Test-Tube Babies’: Debates on Marriage, Infertility, and Artificial Insemination in the British Media, c. 1957–60

Hayley Andrew

INTRODUCTION

In December 1957, Ronald MacLennan of Glasgow sued his wife Margaret MacLennan for divorce on the grounds of adultery. She stood accused of giving birth to a ‘test-tube baby’ as a result of artificial insemination by donor (AID) without his consent. Margaret was Australian and a former professional figure skater, but since the birth of her daughter in 1956 had been living in Brooklyn, New York and working as a nurse. The question under consideration in *MacLennan v. MacLennan* was whether a wife who had a child as a result of AID could be said to have committed adultery.¹ Mr MacLennan’s barrister suggested that AID gave women the power to have extramarital affairs without consequence. Mrs MacLennan’s barrister countered by alluding to recent developments in deep-freezing and arguing that ‘a woman could be artificially inseminated by a dead man’.² In January 1958, in Edinburgh’s Court of Session, Lord Wheatley ruled that since AID did not come within the definition of intercourse, it therefore could not be ruled adultery under the law. Yet he went on to say that it was nevertheless a ‘grave breach of the marriage contract’ and granted Ronald MacLennan a divorce.³

This controversial judicial ruling on the use of AID within marriage, and whether such acts constituted adultery and therefore grounds for divorce, was the first high-profile case of its kind in Britain. It led to heightened media attention to AID and spurred political, legal, and ethical debate on the

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question.⁴ The MacLennan case, involving sex and scandal, was an easy story with which to engage readers and audiences. The way in which the media captured this case and reported on AID in its aftermath offers a lens through which to understand both anxieties about marriage and the role of the media in reshaping moral norms during this period.

In this chapter, I argue that the popular media pushed against public opinion on the issue of AID, and in so doing began redefining the heteronormative family. Despite public opposition to the practice, the popular media actively supported families who had ‘test-tube babies’. Prominent debates in the press, on radio, and in television and film represented AID positively within progressive, liberal narratives of the family, but always as part of a broader commitment to the traditional marital relationship. The popular media supported AID because it aimed to discourage divorce. In the narratives that followed the MacLennan case, couples undergoing AID treatment were presented as happily married, or as working through the difficulties of having a ‘test-tube baby’. This coverage promoted tales of happiness and reconciliation in spite of reproductive difficulties. By insisting on the importance and centrality of the family, and by giving a voice to couples with children conceived by AID, the popular media helped to expand the definition of what was ‘normal’ in family life. This encouragement of a new family model within the traditional model of heterosexual marriage reflected growing social ‘permissiveness’ in Britain.

ARTIFICIAL INSEMINATION, MARRIAGE, AND THE MEDIA

The MacLennan case took place at a unique moment in twentieth-century history, when fears about the future of marriage and the family intersected with the growth of ‘permissiveness’, and when the popular press and other media outlets had the power, reach, and intent to influence social attitudes. Sales of the national daily press in Britain were at an unmatched high in the 1950s. By 1950, the national dailies had a combined daily circulation of 16.6 million, with Sunday papers selling 30 million copies per week.⁵ The *Daily Mirror* and the *Daily Express* accounted for the majority of these sales.⁶ By 1950, the *Mirror* boasted a circulation of 4.5 million and was the most popular daily paper.⁷ The *Express* had a circulation of over 4 million by 1957.⁸ The editors at both newspapers believed that ‘the popular press had an ethical mandate for change’, and pursued policies which attempted to ‘eliminate the remnants of repressive Victorian morality’.⁹ At this time, newspapers were increasingly in competition with television and radio. Television viewership exploded in the 1950s.¹⁰ Only 4% of the adult population owned a television set in 1950, yet by 1955 this had climbed to 40%, and by 1960 the proportion had exploded to include 80% of the adult population.¹¹ The growing public discourse around AID in the 1950s must be viewed in the context of changes in the media landscape, and especially competition in the media marketplace.¹² As Frank Mort has argued, the growth of television consumption directly influenced the sexual

content of the popular newspapers, placing greater pressure on editors to generate provocative reporting.¹³

In their mission to be socially progressive while also presenting the sunny side of life, the *Mirror* and *Express* presented AID as a positive solution to a medical problem, which offered the promise of greater marital satisfaction rather than threatening the foundation of the family. This approach to AID was significant because newspapers did far more than report on contemporary events. The press was capable of shaping what counted as significant news and, as a result, the attitudes of its readers.¹⁴ As Stephen Vella states, newspapers are not 'neutral conduits of information, but rather gatekeepers and filterers of ideas'.¹⁵ Popular newspapers have often been viewed with suspicion as commercial enterprises, with 'predictable, superficial, and socially conservative' content which privileges entertainment, marginalizes radicalism, and often reinforces stereotypes and supports the status quo.¹⁶ Yet popular newspapers are particularly valuable for understanding social attitudes towards sexual issues. As the dissemination of sexual knowledge remained limited in other forums in the 1950s, most people relied on informal sources of information. In this context, as Adrian Bingham shows, 'newspapers made a significant contribution to attitudes about sex and sexuality'.¹⁷ Media responses to the MacLennan divorce case therefore present a fascinating window into how a controversial issue, touching on both sex and marriage, was presented to millions of British people in the late 1950s.

On the one hand, then, the media's promotion of more tolerant attitudes towards AID can be interpreted as part of the trend towards increased 'permissiveness' on sexual and moral issues in the late 1950s. In recent years, many historians have located the origins of important social and cultural changes, which eventually led the liberal reform of laws on abortion, homosexuality, and divorce in the late 1960s, in the 1940s and 1950s.¹⁸ As Frank Mort has put it, 'the permissive society was neither a revolution in English social life nor a radical break with the sexual cultures that preceded it; rather it was an extremely uneven acceleration of shifts that had a much longer period of incubation'.¹⁹ Likewise, Adrian Bingham's research on newspapers argues that the most significant shifts in reporting on sex took place in the late 1940s and 1950s, not the 1960s.²⁰ He attributes an important role to popular newspapers here, because they 'challenged traditional beliefs and made an important contribution to the climate of reform that produced the legislative changes of the late 1960s'.²¹ We might, then, perhaps view the popular media's portrayal of artificial insemination within the context of the longer-term transition to the 'permissive society'.

On the other hand, there were more conservative tendencies at work, which influenced both the intensity and the nature of anxiety around AID. There was much concern about the security of the family in the 1950s, which manifested in moral panics over adultery and homosexuality, unease about the growing numbers of married women entering the workforce, and disquiet at increasing divorce and illegitimacy rates.²² Concerns about adultery and divorce were particularly pertinent to debates on AID. The number of divorce petitions grew

exponentially immediately after the Second World War and remained high throughout the 1950s, never again returning to the prewar rates.²³ With a particularly high number of men filing suits after the war, more attention was paid to wifely infidelity.²⁴ Throughout the 1950s, adultery remained the easiest way to achieve divorce, but producing proof was often difficult and evidence was often manufactured. As Claire Langhamer argues, whether or not the actual incidence of adultery was increasing over the period, the public believed that extramarital affairs were becoming more common.²⁵

The growing incidence of divorce and the perceived rise in adultery led to a media preoccupation with marriage in the postwar period. For example, between 1946 and 1958, Gallup conducted 16 polls in Britain on marriage and divorce. In comparison, in the five years on either side of that period (1940–45; 1959–64), only one poll on these topics was conducted.²⁶ Many of these polls were triggered, no doubt, by the public profile of the Royal Commission on Marriage and Divorce (1951–56). As part of this renewed attention to marriage, the media became active in constructing acceptable social boundaries for marital relationships. One way in which this was achieved was through quizzes, which became a common addition to the popular newspapers in the postwar period. Between 1955 and 1957, a number of marital quizzes appeared in the *Daily Mirror* offering to tell readers if they were in a ‘happy marriage’ and whether they were a good spouse, including ‘How Do You Rate as a Mate?’, ‘Would You Marry Your Wife Again?’, ‘How Do You Treat Your Wife?’, and ‘Have You Got That Ten-Year Itch?’. The use of quizzes in the postwar period signals new attempts ‘to more explicitly and boldly create norms and ideals amongst readers’.²⁷ In such ways, newspapers reinforced the ideal of companionate marriage and relative gender equality, while at the same time insisting on the importance of upholding some traditional gender roles in the home. Marital relationships were under greater scrutiny, and their success seemed less certain. The perception that the traditional family unit was under threat played as important a role as ‘permissiveness’ in shaping media responses to AID.

By presenting a close analysis of the media’s role in articulating narratives around artificial insemination, this chapter aims to broaden the scope of historical research on fertility and reproductive medicine in the 1950s, and to place this research within the context of wider historical narratives around sex and marriage. Histories of reproduction have neglected infertility, instead focusing on birth control. Likewise, with the exception of recent research by Angus McLaren and Gayle Davis, histories of infertility and reproductive technologies have devoted relatively little attention to artificial insemination.²⁸ When discussed in the existing historiography, the MacLennan case has been used as a marker for bringing greater public attention to artificial insemination and in pushing the Government to create a Departmental Committee to investigate the practice. However, the immediate media response to the

divorce case has been overlooked. This legal case opened the floodgates for debate about the implications of AID and widened an educative discussion about infertility, sex, and reproductive health which was in large part propagated by the press. This chapter therefore contributes to histories of infertility and artificial insemination, builds on recent research on the role of newspapers in creating and reflecting sexual knowledge, and demonstrates the importance of attitudes to marriage and the family in determining responses to reproductive technologies.²⁹

RESPONSES TO THE MACLENNAN CASE IN THE POPULAR PRESS

In 1958, the MacLennan divorce case became a public cause célèbre. The unprecedented ruling challenged an earlier Canadian case, *Orford v. Orford* (1920), and implicitly contested the recommendation of the Royal Commission of Marriage and Divorce (RCMD) that AID without the husband's consent be made a new ground for divorce.³⁰ Active reporting on divorce cases was already a prominent feature of the popular press. Appealing to both sexual curiosity and moral voyeurism, the MacLennan divorce case presented a unique opportunity for the media to engage in a debate over the ethics of conception and the boundaries of marriage. This case was particularly important in clearly identifying that reproduction without sex was possible, while at the same time suggesting that it was perhaps more common than most people assumed. The ruling suggested growing acceptance of artificial insemination. The response to the case was dramatic. In the weeks and months following the ruling, the Archbishop of Canterbury condemned AID, the topic was raised in Parliament and debated in the House of Lords, and a Government Departmental Committee was announced to officially investigate the matter. In the media, an ITV documentary examined all aspects of the treatment, a BBC radio programme interviewed mothers of 'test-tube babies', a TV episode and a film dramatized AID's effect on marriage, and hundreds of newspaper articles reported and discussed what had become a highly controversial public concern.

The MacLennan case was covered by virtually all the daily national newspapers.³¹ In 1958 alone, 150 articles were published on artificial insemination, two-thirds of which were concentrated in the three months following the divorce case. With articles addressing public debates, coverage on television, radio, and film, and human interest stories of 'AID family life', this collection of press reports offers a broad view of the media landscape on artificial insemination in the late 1950s. This chapter distils this material to focus on narratives in popular newspapers. Although the divorce case provoked a variety of responses, none of the papers was quick to denounce artificial insemination. In fact, several correspondents emerged in support of the 'AID family'. The *Daily Mirror* and *Daily Express*, in particular, capitalized on family narratives around artificial insemination. Such human interest stories were central to the success of the popular newspapers.³²

The *Daily Mirror* was quick to jump on the case when it began in December 1957, interviewing Margaret MacLennan in her Brooklyn home. The *Mirror* described Mrs MacLennan and her 'new' life:

In New York today slim, blonde, Australian-born Mrs. MacLennan, 30, went to work as usual at the hospital where she is a nurse. She told me: 'My little girl was born in July 1955 – a darling little blonde-haired girl I named Melanie'. 'Melanie is two and a half now and she is growing up so fast in America I almost wish I was back in Britain again, where children seem to grow up more slowly.' Mrs. MacLennan, who used to be a professional ice-skater, said her first husband was killed during the war. She first met Mr. Ronald MacLennan while she was appearing in an ice show in Glasgow in 1946 and they were married in Edinburgh in 1952. Mrs. MacLennan went on: 'Both of us wanted children desperately. We were heartbroken when our first baby died at birth.' 'Later I travelled between Australia, America and Britain. On one of my visits to America I was artificially inseminated.'³³

The *Mirror* presented a sympathetic view of Margaret's life as marked by the tragedies of losing her first husband in the war, and her first child at birth. Despite having AID in another country without her husband's knowledge, the paper implied that Margaret MacLennan deserved a happy life. The *Mirror* positioned MacLennan as the beautiful, blonde protagonist in a narrative where, after tragic loss, she was now a single working mother living happily in America. Papers were fond of such 'true stories' that humanized and demedicalized the practice of artificial insemination.

Like the *Mirror*, the *Daily Express* clearly supported AID.³⁴ The *Express* responded to the Archbishop of Canterbury's condemnation of AID in January 1958 with an article, 'For the Primate – A Story of Two Happy Wives'. The *Express* told the story of Mrs X, a 36-year-old mother of a seven-month-old boy. She explained that after six years of marriage, she had asked her husband how he would feel about a 'test-tube baby', to which he replied: 'To share in its environment and its upbringing – that's ample for me.'³⁵ Speaking of her baby's beauty, Mrs X said she believed the child resembled her husband. It appears that she felt no religious conflict in their decision to use AID: 'This baby has made us more united because we both believe that science is a gift of God and should be used for man's benefit.'³⁶ The second woman interviewed by the *Express* was Mrs Y, 32 years old, who turned to AID after a stillbirth when she was told that it would be impossible for her to have another child. She explained that her marriage had been 'slipping' and that it was essential for her to have a child. Her husband had agreed that she should have a 'test-tube baby'. Their child was now 4 years old, and so as not to leave Mr Y out of the article, the paper quoted him as saying, 'Of course I spoil him'.³⁷

Both Mrs X and Mrs Y referred to their decision not as having 'a procedure' or as AID, but as having a 'test-tube baby'. The phrase 'test-tube baby' began to be used in newspapers in the interwar period, following

the 1932 publication of Aldous Huxley's *Brave New World*, but the phrase was not commonly used until the late 1940s. A Gallup Poll in 1949 showed that 85% of those surveyed had heard or read about artificial insemination or 'test-tube babies'.³⁸ In the 1950s, the popular press often preferred to use ambiguous language that would not offend readers. Thus, while the quality press employed precise medical terminology, papers like the *Daily Mirror* continued to prefer unscientific language, for instance using 'seed' or 'sex cells' when referring to semen or eggs.³⁹ The phrase 'test-tube baby' can be seen as another example of this ambiguous usage. It was often employed in newspaper pieces about AID, even though the practice of artificial insemination did not equate with the literal meaning of the phrase – children born using AID had been conceived (with the assistance of a syringe) in the mother's uterus. The common use of 'test-tube baby' in responses to the MacLennan case demonstrates how heightened media attention embedded the term in public consciousness in the postwar period, perhaps because it drew attention to the end result of the procedure (a child) rather than the process of conception.

This explanation fits in with the generally positive trend of newspaper reporting on AID. The *Express* article stressed cooperation and agreement between husband and wife in going ahead with the procedure, the centrality of children to marriage, and the normalcy of family life after AID. This type of reporting may have been the only reassurance to some couples that they were not alone in experiencing infertility. A few days later, the *Express* published a letter from a husband whose wife had conceived a 'test-tube baby'.⁴⁰ The paper assured readers that, although anonymous, the letter's authenticity had been verified. The husband described the difficult years of seeing numerous doctors and subfertility experts, having operations and hormone injections, and taking thousands of pills. When the couple heard of a doctor in London's West End having success with AID they decided to go ahead with the treatment. After eight months and a £52 10s fee, his wife was pregnant. Dismissing any suggestion of jealousy, the husband wrote:

I don't care who the donor may be, I don't give a damn for the ethics of the matter – the greatest thing in the world has happened to the most loved person in my life and, if I can rake up the money, I'll do exactly the same thing all over again as soon as possible!⁴¹

These articles were structured to generate empathy and understanding from readers, many of whom were opposed to the practice. A Gallup Poll in January 1958 revealed that 35% of respondents disapproved of AIH (artificial insemination by husband), while a second poll in March 1958 indicated that 49% of respondents disapproved of AID.⁴² Moreover, nine out of ten letters received by the *News Chronicle* in February 1958 on the issue of artificial insemination denounced the practice.⁴³ However, the letters selected for publication presented a balanced view of public concern. The human interest stories in the

press conveyed a level of emotion that was designed to tug at the heartstrings and suggest that Mrs and Mr X could be anyone.

Though not a tabloid paper, the *News Chronicle* also explored the human interest angle of AID stories. Hugh McLeave, a science and medicine correspondent for the *News Chronicle* and *Daily Mail*, reported on a series of stories on AID in early 1958. McLeave told readers of anonymous phone interviews he had conducted with two mothers of ‘A.I.D. children’.⁴⁴ McLeave described how one mother, Mrs X, had called from a public telephone and sounded nervous, perhaps ‘scared of being overheard by an exchange operator’.⁴⁵ Mrs X explained that it was not medically safe for she and her husband to conceive, due to the risk posed to the child. After two years of marriage they went to a specialist who suggested AID as the only safe way to conceive. After months of deliberation they decided to go ahead with the procedure. Both Mrs X and her husband were churchgoers, but did not discuss the method of conception with the vicar or anyone else in the family. When asked to comment on the Archbishop’s recent pronouncements against AID, the ‘quick, nervous voice’ of Mrs X replied: ‘We are certain in our own minds that we have committed no sin and our child is no less happy for not being told. It has made our marriage much happier than it would ever have been without him’.⁴⁶ Their son was now 6 years old, enrolled in school, and ‘very intelligent’. McLeave’s questioning and reporting subtly stressed that AID was a personal and private decision that was not (and should not be) influenced by the Church or state.

In the second case McLeave discussed, he emphasized similar themes. ‘A.I.D. Mother No. 2’ (Mrs A) had five children, including three born through donor insemination during marriage to her first husband, who had an ‘incurable organic disease’.⁴⁷ The other two were ‘normal children’ from her second marriage. Mrs A insisted that her second husband would never know the other children were born by AID. However, she said, there was no difference between them – she loved them all equally. She assured McLeave that there was ‘no sense of guilt or sin’ and they had ‘a very happy family’.⁴⁸ McLeave concluded the report by citing the reflections of Dr Margaret Jackson, an AID practitioner and infertility specialist, on the positive outcomes of AID: ‘The results on the whole are extremely encouraging, the children are rather above the average *mentally and physically*’.⁴⁹ The eugenic undertones of this quotation were less evident elsewhere in the press, which usually sought to reassure parents about the health of the children conceived by AID rather than emphasizing their superior intellect or physical features.

Using photographic evidence, the *Express* created a vision of ‘normal family life’ to help reinforce a positive view of artificial insemination and the family. In March 1958, the *Express* devoted a half-page to a photo of a family of seven – mother and father with five young daughters – with the headline ‘Which Girl is the Test Tube Baby?’ The paper revealed that 6-year-old Carol Anne, the eldest child in the centre of the photograph standing next to her father, was the ‘test tube baby’.⁵⁰ Telling the story of the Knights, a ‘large united family’ in Sydney, Australia, the article and image reassured readers that there was no visible

stigma or indicator attached to a child conceived by artificial insemination. The *Express* celebrated the family and explained that they were proof that having a child born by AIH was 'in every way a happy event', and that Carol Anne was 'in no way different from her sisters'. This story stands out as due to the social stigma attached to artificial insemination, it was unusual for parents and children to be pictured and named. All accounts of AID conception in Britain were shrouded in anonymity, protecting the identities of both parents and children. The Australian family had conceived by AIH, which was more publicly acceptable and did not carry with it the same controversy as using a donor. It is significant that there was a safe geographical and psychological distance from Britain in this case. The same sense of safe distance can perhaps be seen in the case of Margaret MacLennan, who was Australian by birth and had emigrated to America after leaving Ronald MacLennan. AID may have been perceived as more socially acceptable when it took place outside of Britain, or did not involve British nationals. These two cases provided a relatively safe way for the popular press to tell true stories, unhindered by censorship of the parents' identities, about this 'technology' leading to joyful parenthood.

By appealing to the emotions, human interest stories in the press had the power to diffuse some of the anxiety and intensity of debates about AID by generating sympathy. They also sought to normalize artificial insemination by emphasizing the importance of children to marriage. These articles suggested that a child conceived via AIH or AID was better than no child at all. The birth of such children posed less of a threat to the stability of the family and society than the couple remaining childless, which carried the risk of divorce. The colloquial language employed by the popular press humanized and desexualized the practice of AID. Such language was more accessible than, and therefore preferable to, the technical language favoured by the quality press. The popular press stressed the wellbeing of the family, both parents and children, as central to decisions about AID. They tried to emphasize the normalcy of family life with a 'test-tube baby'. In this way, the popular press played a significant role in encouraging acceptance of AID and of children conceived by assisted reproductive technologies. But this acceptance was, of course, contingent upon and contained within the boundaries of heterosexual marriage.

RESPONSES TO THE MACLENNAN CASE ON TELEVISION, RADIO, AND FILM

The MacLennan case was discussed on television almost immediately after the ruling. Televisual treatments of the case mixed editorial comment, reportage, and exploration of public opinion, and so provide an intersection of reactions to the case. On 16 January 1958, a half-hour documentary on artificial insemination appeared on ITV entitled 'A Blessing or a Sin?'⁵¹ This Granada TV programme responded to the Archbishop of Canterbury's speech denouncing

AID. It offered views from a range of people for and against AID, including ordinary people on the street, a reporter, religious leaders, and legal and medical experts.⁵² It did not sensationalize the topic, but presented an informative documentary-style approach, and deliberately aimed to offer a balanced perspective (of the 11 people interviewed on the street, five opposed AID, four supported it, and two were neutral).

The kinds of experts interviewed for the programme reveal how AID was simultaneously positioned as a medical, religious, and personal issue in media coverage. Brian Inglis, deputy editor of the *Spectator* political magazine, conducted several interviews in the studio. His interviewees included Dr Alfred Byrne, the medical correspondent for the *Guardian*, who estimated that since 1941, between 1,000 and 1,500 children had been born in Britain via artificial insemination, and explained the procedure to the audience.⁵³ Also appearing was Pat Taylor, a *Daily Sketch* reporter who the day before the programme had interviewed a mother of a 'test-tube baby'. She described this mother as 40 years old, middle-class, and 'an ordinary normal type of woman that you could see walking down any local high street any day'.⁵⁴ When asked if the mother was happy, Miss Taylor replied:

Oh, she was terribly happy. This baby has . . . well, as she said to me 'it has fulfilled my life'. She nearly had a nervous breakdown before the child arrived because she did try and adopt a child, but there are so many thousands of couples waiting for babies for adoption that there are just not enough babies to go round.⁵⁵

Also interviewed was the Reverend G.R. Dunstan, who supported and reiterated the views expressed by the Archbishop of Canterbury earlier that week. Dr Letitia Fairfield, President of the Medico-Legal Society, spoke on behalf of the Roman Catholic Church, which opposed AID as a 'violation of the Catholic conception of marriage'. The final interview of the programme was with an anonymous doctor who since 1940 had dealt with 50–60 cases of artificial insemination per year, with a success rate of 57.7%. She claimed that most of the patients were middle-class and ranged in age from 22 to 42 years old.⁵⁶

As in reports on AID in the popular press, both the programme and responses to it revealed great concern with the health of a marriage after AID. Yet contributors to the programme also constructed AID as a private decision, and the wellbeing of families who pursued this path as dependent on the ability to pursue a 'normal' life without undue intrusion. The anonymous doctor explained that she did not conduct follow-up studies on the families after the child was born:

[I]f you have got a doctor writing year by year to ask you how little Johnny is getting on and so forth – I feel that you take away their sense of privacy, that you make them feel that they have become a kind of guinea pig – under observation.⁵⁷

Closing the programme, Inglis spoke to the centrality of motherhood in a woman's life: 'You can be sure that the wish of every woman – the wish of every woman to have a baby – is not very easily going to be stifled by the Church or by the law or by anyone else. Goodnight.'⁵⁸ Here, the presumption that motherhood was a natural desire for all women supported the underlying message that neither Church nor state should have control of this reproductive choice.

The relationship between the state and reproductive technologies became a point of controversy after the programme aired. The following day, nearly all the national dailies ran a feature on 'A Blessing or a Sin?'. The state's position on AID became a hot-button issue when it was suggested that artificial insemination was available at no cost through the National Health Service. A full-page feature in the *Daily Sketch* reported that the programme had 'revealed to millions on ITV last night that test tube babies [...] are available under the National Health Service'.⁵⁹ Using information provided by the Ministry of Health, it was reported that AID 'could be got on the Health Service if the doctor considers it necessary', but 'we have no means of knowing whether in fact artificial insemination is being carried out on the health scheme'.⁶⁰ In theory, the NHS could have been providing AID to couples unbeknownst to the Ministry of Health or to the general public. Of primary concern in the newspapers was the number of 'test-tube babies' in existence, and the notion that they were being 'created' under the NHS without anyone's knowledge. Public investment in the nationalized health care system meant that there was a demand for knowledge of any such controversial practice, and the uncertainty surrounding access to artificial insemination was alarming to many.

As press and television coverage on artificial insemination gathered momentum in early 1958, the BBC *Woman's Hour* also weighed into the debate, with a radio show on 'The Unknown Seed', broadcast on 18 February 1958. This kind of programming was standard fare for *Woman's Hour*, a radio programme launched in 1946 and known for its unusually frank discussion of personal, sexual, and relationship issues.⁶¹ During 'The Unknown Seed', two women and two doctors took part in a discussion on artificial insemination, which was recorded in the consulting rooms of a London specialist for the purposes of privacy.⁶² The mother of a 'test-tube baby' was interviewed and told listeners: 'Our little girl is gorgeous and looks exactly like MY HUSBAND AND ME'.⁶³ A second woman, who was trying to conceive through AID, explained that her husband approved of the treatment:

We believe that when two people love each other it is no concern of anyone else what they decide to do about children. It is a purely personal and private matter. We also believe it is not God's will that in those marriages where children are desired the husband and wife should be denied a family.⁶⁴

These narratives were framed around the strength of marital and familial love. The programme countered this warm, fuzzy view of family life by

interviewing a woman who opposed ‘test-tube babies’. Mrs Noreen Hughes of Newport, Monmouthshire criticized the would-be-mother:

How terribly wrong that the sacred and beautiful act of conception should be exploited and distorted to fulfil the untamed desire of a childless wife, so selfish in her desire to prove herself a woman that she will use a child as a means to an end.⁶⁵

Although ostensibly presenting both sides of the issue, the dominant narrative of the radio programme followed the same format as stories in the popular press. It emphasized that mothers were blissfully happy with their babies, and did not care how they were conceived. But within this narrative the fathers – both biological and social – were almost entirely absent.

In a limited way, then, the popular media encouraged a progressive liberal view of marriage and the family. While it was not typical to conceive via artificial insemination, it was possible to have a happy marriage and family life within this model. This message was strengthened in dramatizations of the effect of AID on marriage, in which the narratives overtly discouraged divorce and emphasized the importance of reconciliation. The MacLennan case inspired both a television play and a feature-length film. These dramatized retellings reframed the case, providing a more optimistic outcome in which the couples were reunited in spite of their difficulties in starting a family. These portrayals emphasized the legal and emotional grey areas around AID, and the potential harm that the practice could inflict on a marriage, but in both examples the fictional couples were ultimately reconciled.

In May 1958, Dan Sutherland wrote an episode for ‘Armchair Theatre’, a television run of single plays which was broadcast from 1956–74, entitled ‘Breach of Marriage’. This episode was based on his 1949 play of the same name. The story follows a husband and wife who are unable to conceive naturally, and so turn to artificial insemination. The couple visit a doctor with the hope of arranging AIH. However, the doctor concludes that the husband is ‘suffering from tuberculosis’, and a donor is used instead. The wife and doctor keep the substitution a secret from the husband ‘who is on the verge of a breakdown’.⁶⁶ The dramatic ending involves ‘a chase which leads to an unmasking of the donor’s identity, to a threat of divorce, and to the point of suicide from which [the husband] returns’.⁶⁷ However, the drama closes with the reconciliation between the husband and wife. This play implies that infertility and artificial insemination both put a great strain on marriage, but that this strain could be overcome. This further suggests that even if the majority of the public still were not supportive, the popular media was sympathetic to AID by the late 1950s.

A feature-length film on the subject of artificial insemination released in Britain in the summer of 1958 reaffirmed the media’s support of AID. The film received lukewarm reviews, but garnered significant attention based on its subject matter. ‘Question of Adultery’, also written by Dan Sutherland, tells

the story of a married couple with a tense relationship which is further threatened by AID.⁶⁸ The husband (played by Anthony Steel) is a race-car driver with a temper and a jealous streak. The wife (Julie London) becomes pregnant and hopes a baby will improve the state of their marriage. Crisis unfolds as the couple are involved in a terrible car accident: the wife miscarries and the husband is rendered sterile. Desperate to have a child, the wife suggests artificial insemination. Although the husband is reluctant, he consents. After AID has been successfully performed, the husband changes his mind and files for divorce on the grounds of adultery. Much of the film is based in a courtroom where the jury has to decide whether adultery was committed. This narrative referenced the recent MacLennan case, but the film turned the 'real life' story on its head. The jury, not typically used in civil cases, is a fictional device. Its failure to reach a unanimous verdict is perhaps intended to represent the division in public opinion. Rather than ending in divorce the film concludes with the reconciliation of husband and wife.⁶⁹ The 'happy ending' narrative with a 'test-tube baby' on the way proved popular once again.

CONCLUSION

The response of the popular media to the MacLennan case stressed the importance of working through marital difficulties and maintaining the strength of the family in the face of infertility. The popular press, television, radio and film encouraged reconciliation, implying that relationship problems caused by childlessness and AID could be overcome, and that divorce was not the best solution. The legal and moral ambiguities surrounding AID made for great news and storytelling. The publicity given to the MacLennan case generated narratives sympathetic to the use of AID, which emphasized the importance of preserving marriage in the face of challenges. However, these narratives also suggested that there was no longer only one way to start a family. The MacLennan case was therefore not only a catalyst for growing public awareness and discourse on reproductive technologies, at a time when knowledge of sex and reproduction remained limited, but also contributed to reshaping notions of how families could be constituted.

The media interest in AID provoked by the MacLennan case had many results. It pushed the Government to create a departmental committee to examine the practice. The Departmental Committee on Human Artificial Insemination, commonly known as the Feversham Committee, was appointed in 1958 (this Committee is discussed in depth in Gayle Davis's contribution to this volume). Its purpose was 'to enquire into the existing practice of human artificial insemination and its legal consequences and to consider whether, taking account of the interests of individuals involved and of society as a whole, any change in the law is necessary or desirable'.⁷⁰

In its final report, published on 21 July 1960, the Committee recommended that AID should be strongly discouraged, but that it should not be regulated by law or declared criminal.⁷¹ The recommendations of the Feversham

Committee maintained the status quo, but also contained the seeds of a more radical stance. They discouraged AID, but at the same time supported the same ethical and philosophical position as regards the ultimate rights of the individual to freedom of action within the *private* sphere which had been upheld by the Wolfenden Committee on homosexuality and prostitution (1954–57). But unlike its more famous predecessor, the Feversham Report provoked little media coverage. Although the Government quietly accepted the Report's recommendations, there was a stated reluctance to take action on points requiring legislation.⁷² The Feversham Committee's conclusion that it was not the function of the state 'to impose a uniform morality by means of the criminal law', and that AID was 'not in any particular case offensive to public order or decency', echoed the position taken by the popular media since the MacLennan case.⁷³

In this chapter, I have suggested that in the late 1950s, the media actively framed a new narrative of what it meant to have a 'test-tube baby'. Human interest narratives and dramatizations upheld the value of marriage, but also subtly conveyed the message that neither Church nor state should have control over a couple's reproductive decisions. Echoing the Wolfenden Report's stance on the sanctity of private life, and anticipating the 'permissiveness' associated with the late 1960s, both the popular media and the Feversham Committee quietly emphasized the importance of individual reproductive choice, provided this was exercised within the bounds of marriage.

NOTES

1. 'Question of Adultery', *Times*, 6 December 1957. By the 1950s, artificial insemination by husband (AIH) was largely accepted, but as the MacLennan case shows, AID was still highly controversial.
2. 'Question of Adultery'.
3. 'Test Tube Baby Ruling', *Daily Mirror*, 11 January 1958.
4. The ruling in the MacLennan case was made under Scottish Law, and therefore could not necessarily serve as a precedent for cases tried elsewhere in the United Kingdom.
5. Adrian Bingham, *Family Newspapers? Sex, Private Life, and the British Popular Press 1918–1978* (Oxford and New York, 2009), p. 16.
6. Kevin Williams, *Get Me a Murder a Day! A History of Media and Communications in Britain* (London, 2010), p. 204.
7. Williams, *Get Me a Murder a Day*, p. 210; Bingham, *Family Newspapers?*, p. 19.
8. Arthur Christiansen, *Headlines All My Life*, (New York, 1961), p. 147.
9. Frank Mort, 'The Permissive Society Revisited', *Twentieth Century British History*, 22:2 (2011), p. 278; see also Christiansen, *Headlines All My Life*, pp. 2–3, 151, 237.
10. Bingham, *Family Newspapers?*, p. 40.
11. Williams, *Get Me a Murder a Day*, p. 149; Lyn Gorman and David McLean, *Media and Society Into the 21st Century: A Historical Introduction*, 2nd edn (Oxford, 2009), p. 142.

12. The British press readership was clearly divided by class and education. On one side were the 'quality' or 'highbrow' papers – like *The Times* and *Guardian* – which had low circulation rates, with a well-educated and high-earning readership. On the other side were the 'popular' or 'tabloid' papers – like the *Daily Mirror* and *Daily Express* – that had mass circulations, with readers who were likely to be less educated and from a lower income bracket. Bingham, *Family Newspapers?*, p. 2.
13. Mort, 'The Permissive Society Revisited', pp. 279–80.
14. Bingham, *Family Newspapers?*, p. 3; Stephen Vella, 'Newspapers', in Miriam Dobson and Benjamin Ziemann (eds), *Reading Primary Sources: The Interpretation of Texts from Nineteenth- and Twentieth-Century History* (London, 2009), p. 192.
15. Vella, 'Newspapers', p. 193.
16. Bingham, *Family Newspapers?*, pp. 5–6.
17. Bingham, *Family Newspapers?*, p. 10.
18. Stephen Brooke, *Sexual Politics: Sexuality, Family Planning, and the British Left from the 1880s to the Present Day* (Oxford, 2011), p. 11; Claire Langhamer, *The English in Love: The Intimate Story of an Emotional Revolution* (Oxford, 2013), pp. 11–12; Frank Mort, *Capital Affairs: London and the Making of the Permissive Society* (London and New Haven, CT, 2010), pp. 3–4; Bingham, *Family Newspapers?*, pp. 12, 53.
19. Mort, *Capital Affairs*, p. 4.
20. Bingham, *Family Newspapers?*, p. 12.
21. Bingham, *Family Newspapers?*, p. 53.
22. Matt Houlbrook, *Queer London: Perils and Pleasures in the Sexual Metropolis, 1918–1957* (Chicago, IL, 2005); Claire Langhamer, 'Adultery in Post-War England', *History Workshop Journal*, 62:1 (2006); Stephen Brooke, 'Gender and Working Class Identity in Britain During the 1950s', *Journal of Social History*, 34:4 (2001); Pat Thane, 'Family Life and "Normality" in Postwar British Culture', in Richard Bessel and Dirk Schumann (eds), *Life After Death: Approaches to a Cultural and Social History During the 1940s and 1950s* (Cambridge, 2003); Pat Thane, 'Population Politics in Post-War British Culture', in Becky Conekin, Frank Mort and Chris Waters (eds), *Moments of Modernity? Reconstructing Britain, 1945–1964* (London, 1999).
23. Thane, 'Family Life and "Normality" in Postwar British Culture', p. 198.
24. Thane, 'Family Life and "Normality" in Postwar British Culture', p. 93.
25. Langhamer, 'Adultery in Post-War England', pp. 99–100.
26. George H. Gallup, *The Gallup International Public Opinion Polls, Great Britain 1937–1975, Volume 1: 1937–1964* (New York, 1976).
27. Laura King, 'Hidden Fathers? The Significance of Fatherhood in Mid-Twentieth-Century Britain', *Contemporary British History*, 26:1 (2012); Langhamer, *English in Love*, p. 208.
28. Angus McLaren, *Reproduction by Design: Sex, Robots, Trees, and Test-Tube Babies in Interwar Britain* (Chicago, IL, 2012); Gayle Davis, 'Test Tubes and Turpitude: Medical Responses to the Infertile Patient in Mid-Twentieth Century Scotland', in Janet Greenlees and Linda Bryder (eds), *Western Maternity and Medicine, 1880–1990* (London, 2013). Naomi Pfeffer, *The Stork and the Syringe: A Political History of Reproductive Medicine* (Oxford, 1993), addresses artificial insemination, but this discussion is a minor part of her broader narrative.

29. Bingham, *Family Newspapers?*, p. 4; Mort, 'The Permissive Society Revisited', p. 295.
30. Earlier rulings involving artificial insemination included: *Orford v. Orford* (Toronto, 1920); *R.E.L. v. E.L.* (London, 1948); *Ohlson v. Ohlson* (Chicago 1954); and *Doornbos v. Doornbos* (Chicago, 1954). On the Orford case see McLaren, *Reproduction by Design*, pp. 110–18; on the RCMD, see 'The Great Marriage Muddle', *Daily Mirror*, 21 March 1956, p. 1.
31. This chapter is based on evidence from the press archives of the Eugenics Society (Wellcome Library), the Ministry of Health (National Archives), and the newspaper databases of the *Daily Express*, *Daily Mirror*, *Guardian*, and *The Times*.
32. Bingham, *Family Newspapers?*, p. 264.
33. 'My Test Tube Baby', *Daily Mirror*, 7 December 1957.
34. Arthur Christiansen was Editor of the *Express* from 1933 to 1957.
35. 'For the Primate – A Story of Two Happy Wives', *Daily Express*, 16 January 1958.
36. 'A Story of Two Happy Wives'.
37. 'A Story of Two Happy Wives'.
38. Gallup (ed.), *The Gallup International Public Opinion Polls*, p. 189.
39. 'A.I.D. Baby Looks Like Us', *Daily Mirror*, 19 February 1958; 'The Phantom Fathers', *Daily Mirror*, 21 February 1958; 'A Quiz for A.I.D. Fathers', *Daily Mirror*, 20 October 1958.
40. 'My Wife is Having a Test Tube Baby', *Daily Express*, 20 January 1958.
41. 'My Wife is Having a Test Tube Baby'.
42. Gallup (ed.), *The Gallup International Public Opinion Polls*, pp. 449, 454.
43. 'AID: Right or Wrong? Nine Out of Ten Say WRONG', *News Chronicle*, 13 February 1958; Pfeffer, *The Stork and the Syringe*, pp. 120–1.
44. Hugh McLeave, 'The Phone Rings – A Mother Talks of A.I.D. Twins', *News Chronicle*, 5 February 1958.
45. McLeave, 'The Phone Rings'.
46. McLeave, 'The Phone Rings'.
47. McLeave, 'The Phone Rings'.
48. McLeave, 'The Phone Rings'.
49. McLeave, 'The Phone Rings'.
50. 'Which Girl is the Test Tube Baby', *Daily Express*, 12 March 1958.
51. Wellcome Library, London, GC/193/E/15/7, 'A Blessing or a Sin?: Transcription of Granada TV Programme Re Artificial Insemination', 16 January 1958.
52. Wellcome Library, London, GC/193/E/15/7.
53. 'Test Tube Babies "Not So Evil" Says Bishop', *Daily Mirror*, 17 January 1958.
54. Wellcome Library, London, GC/193/E/15/7.
55. Wellcome Library, London, GC/193/E/15/7.
56. Wellcome Library, London, GC/193/E/15/7.
57. Wellcome Library, London, GC/193/E/15/7.
58. Wellcome Library, London, GC/193/E/15/7.
59. 'Test Tube Babies on the State', *Daily Sketch*, 17 January 1958.
60. Wellcome Library, London, GC/193/E/15/7.
61. Some controllers disapproved of this openness, with one saying in 1948 that 'it was "acutely embarrassing" to hear a discussion of the menopause in the early afternoon'. Bingham, *Family Newspapers?*, p. 40.
62. 'Disease Education by the B.B.C.', *British Medical Journal*, 22 February 1958, p. 450.

63. 'A.I.D. Baby Looks Like Us'.
64. 'A.I.D. Baby Looks Like Us'.
65. 'A.I.D. Baby Looks Like Us'.
66. 'Strong Conflict of Television Play', *Times*, 5 May 1958.
67. 'Strong Conflict of Television Play'.
68. *A Question of Adultery (or The Case of Mrs Loring)* (dir. Don Chaffey, 1958): <http://www.dailymotion.com/video/x3qojbq>. Accessed 6 December 2016.
69. 'Maybe It's Just a Question of Cliches', *Globe and Mail*, 28 February 1959, p. 13.
70. *Report of the Departmental Committee on Human Artificial Insemination*, (London, 1960), p. 1.
71. *Report of the Departmental Committee*, p. 82.
72. National Archives, London HO 342/5, 'Departmental Committee on Human Artificial Insemination: Consideration of the Committee's Recommendations', 1960–1961.
73. *Report of the Departmental Committee*, p. 71.

RESEARCH RESOURCES

Primary Sources

Archival Sources

Wellcome Library, London

Eugenics Society Papers

Family Planning Association Papers

National Archives, London

Home Office, Departmental Committee on Artificial Insemination Evidence

Ministry of Health Papers

Published Primary Sources

Report of the Departmental Committee on Human Artificial Insemination (London, 1960).

George H. Gallup, *The Gallup International Public Opinion Polls, Great Britain 1937–1975, Volume 1: 1937–1964* (New York, 1976).

Journals and Newspapers

British Medical Journal

Daily Express

Daily Mirror

Globe and Mail

Guardian

Lancet

News Chronicle

Observer

Times

Secondary Sources

- Adrian Bingham, *Family Newspapers? Sex, Private Life, and the British Popular Press 1918–1978* (Oxford and New York: Oxford University Press, 2009).
- Stephen Brooke, ‘Gender and Working Class Identity in Britain During the 1950s’, *Journal of Social History*, 34:4 (2001), 773–95.
- Stephen Brooke, *Sexual Politics: Sexuality, Family Planning, and the British Left from the 1880s to the Present Day* (Oxford: Oxford University Press, 2011).
- Hera Cook, *The Long Sexual Revolution: English Women, Sex and Contraception, 1800–1975* (Oxford: Oxford University Press, 2004).
- Gayle Davis, ‘Test Tubes and Turpitude: Medical Responses to the Infertile Patient in Mid-Twentieth Century Scotland’, in Janet Greenlees and Linda Bryder (eds), *Western Maternity and Medicine, 1880–1990* (London: Pickering and Chatto, 2013).
- Kate Fisher, *Birth Control, Sex, and Marriage in Britain 1918–1960* (Oxford: Oxford University Press, 2006).
- Lesley A. Hall, *Hidden Anxieties: Male Sexuality, 1900–1950* (Cambridge: Polity Press, 1991).
- Lesley A. Hall, *Sex, Gender and Social Change in Britain since 1880* (New York: St. Martin’s Press, 2000).
- Carolyn Herbst Lewis, *Prescription for Heterosexuality: Sexual Citizenship in the Cold War Era* (Chapel Hill, NC: University of North Carolina Press, 2010).
- Matt Houlbrook, *Queer London: Perils and Pleasures in the Sexual Metropolis, 1918–1957* (Chicago, IL: University of Chicago Press, 2005).
- Laura King, ‘Hidden Fathers? The Significance of Fatherhood in Mid-Twentieth-Century Britain’, *Contemporary British History*, 26:1 (2012), 25–46.
- Claire Langhamer, ‘Adultery in Post-War England’, *History Workshop Journal*, 62:1 (2006), 86–115.
- Claire Langhamer, *The English in Love: The Intimate Story of an Emotional Revolution* (Oxford: Oxford University Press, 2013).
- Angus McLaren, *Reproduction by Design: Sex, Robots, Trees, and Test-Tube Babies in Interwar Britain* (Chicago, IL: University of Chicago Press, 2012).
- Frank Mort, *Capital Affairs: London and the Making of the Permissive Society* (London and New Haven, CT: Yale University Press, 2010).
- Frank Mort, ‘The Permissive Society Revisited’, *Twentieth Century British History*, 22:2 (2011), 269–98.
- Naomi Pfeffer, *The Stork and the Syringe: A Political History of Reproductive Medicine* (Oxford: Blackwell Publishers, 1993).
- Simon Szreter and Kate Fisher, *Sex Before the Sexual Revolution: Intimate Life in England 1918–1963* (Cambridge: Cambridge University Press, 2010).
- Pat Thane, ‘Family Life and “Normality” in Postwar British Culture’, in Richard Bessel and Dirk Schumann (eds), *Life After Death: Approaches to a Cultural and Social History During the 1940s and 1950s* (Cambridge: Cambridge University Press, 2003), 193–209.

Stephen Vella, 'Newspapers', in Miriam Dobson and Benjamin Ziemann (eds), *Reading Primary Sources: The Interpretation of Texts from Nineteenth- and Twentieth-Century History* (London: Routledge, 2009), 192–208.

Kevin Williams, *Get Me a Murder a Day! A History of Media and Communications in Britain* (London: Bloomsbury Academic, 2010).

‘She Gets the Taunts and Bears the Blame’: Infertility in Contemporary India

Daniel J.R. Grey

INTRODUCTION

Medicine and technology are subjects that hold tremendous status and are correspondingly highly valued in twenty-first-century India. As historian Sarah Hodges has observed, ‘Alongside biotechnology and information technology, corporate healthcare is given pride of place within India’s current “sunshine story”. These industries are taken to be examples of the country’s capacity to deliver and are given much of the credit for the nation’s recent economic successes’.¹ This attitude is not a recent cultural development on the Subcontinent.² Rather, this focus and associated prestige represents a contemporary update and revision of longstanding ideas about the strategic role of health and governance in South Asia which had their roots in the colonial period.³ Across the course of the nineteenth and twentieth centuries, developments in science, technology, and medicine were central to the shaping of modern India. These developments were used to enforce colonial rule before independence, but also potentially offered sites of resistance to it.⁴ For example, the concern with ‘native women’s health’ generated new roles for British women in the imperial project, including as gynaecologists and midwives, but despite being influenced by colonial racism, also offered some indigenous women new opportunities for professional advancement or improved healthcare experiences.⁵

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Science, medicine, and technology were likewise considered of great importance by the government of India following independence and partition in 1947, both for solving domestic problems and for demonstrating ‘modernity’ and national prowess on the international stage.⁶ In particular, Prime Ministers Jawaharlal Nehru (1889–1964) and Indira Gandhi (1917–84) explicitly endorsed this viewpoint.⁷ Yet such glowing depictions of biomedicine in India today, as Sarah Hodges notes, are often avowedly – and deliberately – ahistorical.⁸ This refusal to acknowledge, much less engage with, historical precedents ignores substantial scientific, cultural, and political developments in Indian biomedicine and family planning, along with their social impact, across the course of the twentieth century.⁹ Yet what accounts for the enduring strategic and political importance of reproductive health in India? And to what extent do discussions around commercial surrogacy and affiliated subjects represent a twenty-first-century retelling of these earlier discourses about family size and the state of the nation?

This chapter provides a preliminary survey of infertility and its social context in present-day India, and also aims to demonstrate and foreground the historical aspects of this issue, which are essential in order to understand how and why the Indian fertility industry has developed in the ways it has done, and why infertility remains in many respects a taboo subject. There is as yet no equivalent for India to studies on twentieth-century British approaches to reproductive technology, which have charted the relatively abrupt transition from views of assisted reproductive technologies (ARTs) as morally and medically dubious to their widespread acceptance.¹⁰ This is all the more surprising given that India’s first baby conceived through in vitro fertilization (IVF) was apparently born at Calcutta in 1978 (although the birth of a baby conceived via IVF was not independently verified until August 1986 in Mumbai, and the question of when the first such birth really occurred in India remains controversial among Indian physicians).¹¹ Almost all scholarly research to date on the social and cultural impact of infertility in India, or on related matters such as ARTs or commercial surrogacy, has been based on extensive ethnographic fieldwork and interviews both within and outside the setting of the clinic or hospital.¹² Even journalistic interest in infertility is a more recent phenomenon. Just as was the case for Britain,¹³ it seems that India’s most popular English-language newspaper, the *Times of India*, ran relatively few stories dealing with infertility before the 1980s, but there has been a steady increase in such stories in recent decades.¹⁴

In this chapter, I use a range of published sources – in particular English-language Indian newspapers, but also government reports, film, and literature – to chart the social and cultural context of infertility in contemporary India. I attempt to show how present-day attitudes and practices have their roots in policies and ideas that were originally generated during the late twentieth century. I focus here on four key themes: the demographic context and population policies of India; reproductive medicine, adoption, and surrogacy; the social and cultural context of infertility; and religion. An overarching theme

which resonates throughout each section is how the profound stigmatization of infertility in contemporary India disproportionately affects women, regardless of faith, caste, region, or class background. As one blogger recently observed in a post about the distressing experiences of Indian women struggling to conceive, 'At a time when [an infertile woman] needs mental support, she gets the taunts and bears the blame'.¹⁵

DEMOGRAPHIC CONTEXT AND POPULATION POLITICS

When the US journalist Elisabeth Bumiller was choosing the title for her account of women's lives in 1980s India, she eventually selected the Sanskrit blessing that is often uttered at Hindu weddings: 'May you be the mother of a hundred sons'.¹⁶ This was a phrase which Bumiller had heard at regular intervals during her time living and working with her husband in New Delhi for the *New York Times*. As she later reflected, she eventually came to see this blessing 'as a curse', a shorthand that summed up all the difficulties facing women and girls on the Subcontinent right from the moment of their birth.¹⁷ Such complaints were certainly not new. During the nineteenth century, British commentators repeatedly argued that a pernicious combination of Hindu theology and tribe-specific customs which labelled female children as a severe economic and social burden caused the selective killing of daughters by high-caste families, especially those located in the North and West of India, who hoped to eventually produce a son and heir.¹⁸ Despite the boasts of the colonial administration at the turn of the twentieth century that they had successfully eliminated this crime, it is widely accepted that the selective abortion of female foetuses or the neglect and outright murder of infant girls remains a serious problem in India to the present time.¹⁹

Running in parallel to this pressing issue of the devaluation of female children were longstanding concerns about population control as an essential measure for improving living standards across the country.²⁰ These anxieties were profoundly shaped by India's rapid urbanization and the increasing focus on poverty and its problems during the early twentieth century.²¹ As one leading Indian economist warned in 1952, 'The significant fact about the Indian birth rate is not that it is one of the highest in the world but that it has shown no signs of declining during the last 50 years'.²² While India has never attempted to introduce the same 'one-child' policy famously implemented by China in 1979,²³ it became the first developing nation to introduce a nationwide family planning programme as a means of limiting population growth and effecting 'modernization'. From 1950 right up to the present day, the government has laid out a continual series of five-year plans on population control, including targets for a reduction in the birth rate.²⁴ Indeed, research by Rebecca Williams suggests that this focus in postcolonial India on reducing the population has meant not only that since the 1950s the nation has repeatedly been used as a testing ground for experiments in population control, but that as a result of this India holds a unique – if not

necessarily comfortable – position in international postwar discourses of demography and family limitation.²⁵

Indira Gandhi saw meeting these goals on the ‘population problem’ as an essential prerequisite for tackling India’s social and economic difficulties and improving its international standing. Her profound frustration at increasing political opposition, widespread strikes, and the failure to achieve these population targets in the wake of the Indo-Pakistan War of 1971 and the 1973 global oil crisis ultimately led to the 21-month period known as ‘the Emergency’ (1975–77), which was marked by Gandhi’s assumption of rule by decree, a dramatic curtailment of civil liberties, total state control over the press, and the brutal suppression of those who criticized her rule.²⁶ During this period, under the direct orders of Sanjay Gandhi (1946–80) – who held no official government position but was entirely reliant on his status and influence as Indira Gandhi’s son – government officials took increasingly coercive steps in an attempt to meet population targets.²⁷ These measures resulted in millions of people being forcibly sterilized, and over 17,000 officially acknowledged recorded deaths from botched operations.²⁸ The scandal that erupted from these abuses has been widely acknowledged as a major reason for the decisive ousting from power of Gandhi and the Congress Party in the elections that directly followed the Emergency. The newly elected administration set up the Shah Commission of Inquiry in 1977 to investigate these abuses, and devoted an entire section of its eventual report to ‘government excesses’ regarding family planning and sterilization programmes during the Emergency (including the torture of critics of the regime).²⁹ However, as Rebecca Williams has pointed out, this did not prevent Indira Gandhi being returned to power in 1980 or, even more disturbingly, being honoured by the United Nations in 1983 for her contributions to solving the ‘population problem’.³⁰ In the 1980s, Indian maternity services continued to emphasize the sterilization of women where possible, and in the 1990s some Tamil Nadu hospitals were still automatically fitting maternity patients with intrauterine devices (IUDs) immediately after birth in order to meet family planning targets – sometimes doing so against the express wishes of the woman operated on.³¹

State family planning programmes in India have perhaps become less coercive since the mid-1990s, but they remain highly ideologically charged.³² Despite the strong emphasis in the most recent of the government’s five-year plans on population growth (covering 2012–17) regarding the need to acknowledge multiple perspectives and to ‘do more to build a greater consensus around a common national goal’,³³ the question of how *much* less coercive such policies have been in practice remains controversial.³⁴ Specific numerical targets for the uptake of birth control mechanisms by each family planning centre across the country were only ultimately abolished in 1996.³⁵ As of the 2001 Census, which aimed to provide benchmark demographic and socioeconomic data regarding India’s population for the foreseeable future, the total population of the country stood at 1,026,443,540 people.³⁶ Estimates

suggest that India will have the biggest population of any country worldwide by 2040.³⁷

This overwhelming emphasis on discourses of fertility control and limitation explains why infertility has never been identified as either a public health concern or a policy matter in India.³⁸ The sole (and very recent) exception to this neglect of infertility as a perceived social problem relates to India's small and rapidly declining Parsi population. Here, a longstanding concern at the dwindling numbers of the community has meant that the government has moved on from statements encouraging Parsi families to have more children to offering free counselling and fertility treatment to Parsi married couples who have trouble conceiving.³⁹ Given the long history of population control, and the ongoing and sometimes vitriolic debates over how to best improve the precarious position of women and girls in contemporary Indian society, it is perhaps not surprising that, until recently, significantly more critical attention has been paid to the position of those in India who *can* have children than those who cannot.⁴⁰ However, the central place of parenthood in constituting 'normal' family life in India has nonetheless had a fundamental impact on the development of reproductive medicine and the flourishing of commercial surrogacy.

REPRODUCTIVE MEDICINE AND TECHNOLOGY, SURROGACY, AND ADOPTION

It is difficult to overstate the high value that has long been placed on parenthood in South Asia, where having a child after getting married is still often perceived as an essential step in making the journey to 'full adulthood', regardless of one's chronological age or other achievements and milestones.⁴¹ Premodern Buddhist literature from India made frequent use of maternal imagery, although this was liable to invoke negative (or at least highly ambiguous) representations of motherhood, as well as exemplifying the 'good mother'.⁴² Vedic texts record that in ancient India a man was permitted to abandon his wife if she had not given birth after ten years, on the assumption that barrenness demonstrated that she was possessed by an evil spirit.⁴³ This cultural emphasis on parenthood has been passed on across the diverse international South Asian diaspora, and also resonates strongly for people of Bangladeshi and Pakistani origins as well as migrants from India and their descendants.⁴⁴ Voluntary childlessness among British South Asians is thus described by the sociologists Nicky Hudson and Lorraine Culley as 'almost unheard of'.⁴⁵ Those who have not had children are acutely aware of their status as an uncomfortable and anomalous 'invisible minority' within their community.⁴⁶ Adoption of children is also often viewed by British South Asians as an unacceptable alternative to biological parenthood, paralleling the stigmatization of this practice in India as generally dubious and 'unrespectable' at best.⁴⁷

The high cultural value accorded to parenthood has generated a popular demand for fertility treatment, despite governmental concerns about overpopulation, and this has helped the field become a major growth area for Indian biomedical companies. As early as 1953, S.D.S. Greval, Professor of Immunology at Calcutta School of Tropical Medicine, remarked on the possibility for some married couples to conceive through artificial insemination, citing studies of the subject published in the *British Medical Journal* as offering hope to the infertile.⁴⁸ More recently, several factors have intersected to cement India's place as a hub for reproductive medicine and technology in the twenty-first century. As Aditya Bharadwaj and Peter Glasner have pointed out, 'In India, unlike in the Euro-American context, there is no consensus on the moral status of the human embryo'.⁴⁹ This ambiguity, combined with the historical and cultural emphasis on the importance of science and technology in twentieth-century India, the high demand for services, and the low level of regulation, helped delay the introduction of more stringent regulatory measures around ARTs.⁵⁰ It was not until 2000 that the Indian Council of Medical Research developed a code of ethical guidelines for practices involving human subjects, including embryos.⁵¹ Perhaps most controversially, these factors have also led to a thriving market in commercial surrogacy for both Indian and foreign clients since 2002.⁵² Those who travel to India for commercial surrogacy frequently cite the combination of few restrictions, high quality medical care, and, perhaps most significantly, the dramatically lower cost of Indian clinics compared with North American or European options.⁵³ Given the expensive and time-consuming nature of all fertility treatment, cost is a particularly acute issue for sufferers across the global South, including India.⁵⁴

Many foreigners who employ Indian commercial surrogates are very sensitive to suggestions that they exploit these women. For example, in her recent self-published 'surrogacy memoir', one British woman who employed an Indian surrogate mother was palpably keen to stress that the potential for exploitation had been a serious concern for her and her husband, and that they had attempted to ensure the relationship was not exploitative.⁵⁵ However, the painful reality is that most commercial surrogates, as Amrita Pande found, have been 'driven to surrogacy because of financial desperation, often compounded by a medical emergency and an urgent need for liquid cash'.⁵⁶ Under these circumstances, it seems inevitable that few, if any, of these transactions ever truly offer 'mutual benefit' to both infertile couples (whether foreign or domestic) and to impoverished Indian women, even though this is how commercial surrogacy is marketed.

Moreover, current advertising for IVF and associated treatments often contravenes the guidelines of the Indian Council of Medical Research by preying on the desperation of potential clients. The possible exploitation of clients was identified as a special danger as early as 2000 by fertility specialist Aniruddha Malpani, who noted that 'infertile patients are emotionally vulnerable and highly motivated. This provides a ground ripe for unethical practices'.⁵⁷ One recent study in Ahmedabad suggested that many people visited fertility clinics

directly as a result of seeing an advertisement, but up to 72% of advertisements by private fertility clinics in the city made totally unrealistic claims, such as guaranteeing those who used their services a successful pregnancy and delivery.⁵⁸ In contrast, the head of the clinic where Holly Donahue Singh conducted her fieldwork was careful to warn patients that a success rate of 40% was much more realistic.⁵⁹ Clinics which make dubious claims may engage in other illegal or unethical practices. A clinic based in Bengaluru was recently closed down after complaints to police that women treated there suffered severe side effects from the prescribed medication. Furthermore, in at least one instance, a DNA test has determined that a baby born via surrogacy was not, as claimed by medical staff, the biological offspring of the Indian couple in question.⁶⁰

There have also been several high-profile international incidents where commercial surrogacy arrangements have broken down, or children born via surrogacy have been officially demarcated as stateless, with potentially dire consequences for the infant.⁶¹ In the infamous 'Baby Manji' case of 2008, a Japanese couple divorced shortly before the Indian surrogate mother carrying their child gave birth. This case demonstrated the extreme difficulties and hardship which can result in the absence of clearly defined regulations: both Japan and India initially refused to provide the baby with a passport, or to allow her to leave for Japan with her paternal grandmother.⁶² The following year, a German man faced similar difficulties when trying to arrange passports for his twin boys born to a commercial surrogate.⁶³ Perhaps most distressingly, the uncertainty and potential for harm in these cases was underscored in 2014 when the Chief Justice of the Family Court of Australia, Diana Bryant, revealed that two years earlier an Australian couple whose Indian surrogate had given birth to twins had returned home with the baby girl but refused to apply for the paperwork for her twin brother. They had decided they did not want this child since they already had a son, even though they knew this meant the boy would be left uncared for and officially stateless.⁶⁴

Cases like these have strengthened the demand for greater regulation of commercial surrogacy. Guidelines issued in 2012 now ban same-sex couples, unmarried men, and women (whether in a relationship or not), and all those married for less than two years from obtaining a visa to use commercial surrogacy services.⁶⁵ The moral imperatives at play in this reframing of the rules on commercial surrogacy had little or nothing to do with the vulnerability of babies born to commercial surrogates to abandonment or abuse. After all, the Japanese couple at the centre of the 'Baby Manji' case had been married for several years before their divorce. Attitudes to sexuality in contemporary India are by no means monolithic, but the formulation of these rules on 'acceptable' clients for commercial surrogacy has much more to do with the prevalence of staunch conservative prejudices against those who do not conform to the 'right' (heterosexual, two-parent, securely established) family structure than the needs of children.⁶⁶ Although regulation of commercial surrogacy was first mooted in 2005, and bills proposing stricter rules have repeatedly been introduced to Parliament since that time, the subject is still hotly contested. An

article in *The Tribune* from June 2015 observed that: ‘A draft [act] acceptable to all concerned stakeholders continues to elude’.⁶⁷

The latest and perhaps most important development, however, was the sudden announcement by the Indian government in October 2015 that it now intends to ban the use of commercial surrogacy services by *all* foreigners in the near future.⁶⁸ A temporary ban is already in place, awaiting the ruling of the Supreme Court on this issue, although foreign couples who had begun the commercial surrogacy process before the autumn announcement have been exempted.⁶⁹ It is currently proposed that a new law, the latest iteration of what was originally the Assisted Reproductive Techniques (Regulation) Bill 2014, will impose very strict limits on surrogacy. If passed in its current format, this will in the future restrict the import or export of embryos, and only allow altruistic surrogacy for married Indian couples who have been ‘examined by a competent authority’.⁷⁰ This decision is not only a response to ongoing criticisms of commercial surrogacy as a deeply exploitative practice from both within and outside India, but also reflects the twin dominant beliefs on the Subcontinent that only married heterosexual couples can – or should – be parents, and that having children is an essential part of married life.

SOCIAL AND CULTURAL PERCEPTIONS OF INFERTILITY

In 1961, a joint study by the United Nations and the government of India on the interrelation of demographic and socioeconomic factors in Mysore recorded that: ‘For a woman to have no children at all has traditionally been regarded as one of the greatest misfortunes, and even cause for ostracism’.⁷¹ Ten years later the influential Khanna Study, based on eight years of intensive fieldwork in rural Punjab and supplemented by a year-long follow-up a decade later, concluded that the inability of a couple to have children was often a major factor in causing divorce or separation.⁷² The assertion that infertility almost inevitably leads to marital breakdown in India has been frequently repeated since this period. In 1991, an advanced fertility treatment workshop held at Nowrosjee Wadia maternity hospital in Bombay reiterated that infertility was very likely to generate intense prejudice against affected couples, and that it dramatically increased the likelihood of divorce.⁷³ Only one year later, the initial attempt of high-profile fertility doctors Anjali and Aniruddha Malpani to set up a support network in Bombay for affected couples foundered as a result of the stigma surrounding infertility. This group did not become active again until 1998, when there were sufficient members for a regular meeting to become viable.⁷⁴

It remains the case that a high proportion of married couples in India are under a great deal of pressure to have children as soon as possible, and face intrusive questions from their relatives and neighbours if pregnancy does not occur within a few years of marriage. Those who cannot conceive easily – and especially women, who are invariably singled out for particular blame – are rapidly stigmatized within their communities, whether these are urban or

rural.⁷⁵ The decision of the actor Aamir Khan and his filmmaker wife Kiran Rao to make a formal statement after the birth of their son in 2011 that he had been conceived via IVF and surrogacy remains an exceedingly rare public declaration of fertility problems. Crucially, in this case, the announcement followed the successful birth of a child.⁷⁶ The fact that childlessness is still seen as an aberration in India is underscored by a throwaway remark made in an otherwise deeply sympathetic investigation of couples suffering from involuntary childlessness in twenty-first-century Rajasthan: the author asserts in passing that the desire to have children is a universal drive shared by all humans which almost inevitably leads to deep unhappiness if it remains unfulfilled.⁷⁷ Apparently, the author did not consider this statement to be problematic in any way, despite the unspoken implication that voluntary childlessness would be abnormal and potentially even unnatural.⁷⁸

The silence and stigma that surrounds the subject of infertility in India has even extended to its treatment (or rather, lack thereof) as a plot device in film and literature. As cultural critic Monica Khanna Jhalani has pointed out, fictional representations of infertility by Indian writers were remarkably few in number until after the turn of the millennium.⁷⁹ The Urdu short story *Dada* ('Godfather') by the Lucknow-born Pakistani author Khadija Mastoor (1927–82) was a rare exception in utilizing infertility as a plot device before this time.⁸⁰ The humiliating treatment that can result from neighbours perceiving a woman as infertile was central to the plot of the 1986 Hindi film *Swarag Se Sunder* (More Beautiful Than Heaven), where the character of Lakshmi is abused and shunned by her entire village at the start of the film since she has not had children.⁸¹ Tellingly, this was a Hindi remake of the earlier Telugu-language film *Thalli Prema* (1968), and despite the social and cultural changes that occurred in India during this 18-year gap, the stigmatization of infertility was just as important in this later version and struck just as much of a chord with its audience.⁸² Even in recent years, such plots have remained confined to a small handful of works such as Suroopa Mukherjee's novel *Across the Mystic Shore* (2006) and Abbas and Mustan Burmawalla's Bollywood film *Chori Chori Chupke Chupke* (2001) – some of which are reactionary in their message rather than sympathetic to the characters they portray.⁸³ Indeed, it is notable that in *Chori Chori Chupke Chupke* (the title of which translates into English as *Quietly and Stealthily*), the surrogate mother employed by the middle-class Indian couple at the centre of the story to carry their baby is actually a sex worker in her 'everyday' life. This plot twist reinforces a stereotyped and erroneous popular association between the two roles that has contributed to considerable prejudice on the Subcontinent against women who act as surrogates.⁸⁴ The entwined themes of infertility, surrogacy, secrecy, and the impact of these on family life are also central to the plot of British author Meera Syal's 2015 novel *The House of Hidden Mothers*. The action in this novel moves between India and the United Kingdom, and Syal (whose parents were from New Delhi) grapples directly with the idea of foreign couples from a variety of backgrounds – including, in the case of the lead character, the Indian diaspora – relying on

Indian surrogate mothers while simultaneously attempting to avoid any overt exploitation of the women involved.⁸⁵

As this discussion of literature and film suggests, in many ways there has been remarkable continuity in social and cultural attitudes to infertility in India since at least the mid-twentieth century. Marcia Inhorn has demonstrated that in the Middle East, among Muslim men there is currently a radical cultural reappraisal of attitudes to infertility underway which lessens the assumption that the condition is solely or primarily a ‘woman’s fault’.⁸⁶ However, it does not seem that this social transformation is being replicated in South Asia. In fact, research by Inhorn and Aditya Bharadwaj strongly suggests that, for women in particular, infertility acts as a negative form of ‘master status’ – in other words, a role that overrides all other aspects of identity within a given society – and that it is best understood in this cultural context as a form of disability.⁸⁷ Unlike countries such as Zambia, where ethnographic research suggests that there is little or no correlation between infertility and an increased risk of domestic violence, infertile women in India seem to be at high risk of abuse, including actual or attempted murder.⁸⁸ In one example reported by the *Times of India* in June 2015, a 32-year-old woman living in rural Bihar was apparently subjected to eight years of systematic violence from her husband and mother-in-law, including being literally chained up in her home to prevent any chance of escape. Her abusers justified this treatment as a punishment for her inability to become pregnant. She was finally rescued when her brother became suspicious and alerted the authorities.⁸⁹ If the stigmatization of the infertile in India is generally the same regardless of region, however, one factor above others may well strongly influence what sorts of biomedical or other means are chosen in order to try and solve this problem. This is the religion of the men and women in question, which plays a crucial role in decisions on what constitutes ‘acceptable’ treatments for the infertile in India.

RELIGION

India is an avowedly secular republic, a state of affairs formally enshrined in the preamble to the Constitution since 1976 but with considerable historical precedent.⁹⁰ However, India has for centuries been home to a very diverse set of different faiths, all of which need to be accommodated by the postcolonial state.⁹¹ Indian civil law – including marriage, inheritance of property, and child guardianship or adoption – remains governed by the ‘personal laws’ set down for each religious group.⁹² Religion – perhaps even more than caste and class – thus plays a very significant role in how infertility and efforts to overcome it might be interpreted and experienced by individual men and women in India.⁹³ Writing in May 2015 about a married friend who was having IVF treatment in Bengaluru, one blogger reported that the other woman’s in-laws firmly believed that the couple’s inability to conceive was the punishment from Heaven for risking familial disapproval in a ‘love match’ where horoscopes had not been carefully considered and matched beforehand.⁹⁴

As Amy Allocco has shown, Hindu women in Tamil Nadu are frequently considered especially vulnerable to a flaw in their astrological chart called *nāga dōṣam* (literally 'snake blemish', traditionally associated with the killing of snakes) that is believed to postpone marriages and cause infertility in those afflicted by it.⁹⁵ Women who have this combination of constellations located in their horoscope attribute great importance to following the rituals designed to propitiate the local snake goddess and to alleviate the problems which *nāga dōṣam* brings – in particular the inability to have children.⁹⁶ Hindu mythology also provides examples of divine favour resulting in the gift of parenthood to the worthy faithful. The most famous example of this, and one which will be familiar to most if not all Indians regardless of their own religious affiliation, is almost certainly the stories surrounding the solo creation by his mother of the ever-popular Ganesh, the elephant-headed god of good omen.⁹⁷ Yet this idea of faith being rewarded through parenthood can also be seen in the magical provision of heirs to three infertile queens – Kuntī, Mādīrī, and Gāndhārī – as depicted in the Sanskrit epic the *Mahābhārata*.⁹⁸

Faith can also have a direct impact on what Western medical procedures patients consider 'acceptable' in fertility treatment. Following a conference on Islamic bioethics at Morocco in 1997, Sunni Muslims have been forbidden to use third-party gametes in assisted conception.⁹⁹ This is particularly relevant in the case of India since, with some notable regional exceptions, most Indian Muslims are from a Sunni background. Catholic doctrine is even stricter than Sunni Islam in limiting the use of reproductive technologies for believers.¹⁰⁰ Hinduism, in contrast, has no such restrictions.¹⁰¹ While some individual Hindu men might have qualms about using sperm from an anonymous donor in assisted reproduction, this seems to be rare: in general there are no objections to the process.¹⁰² As such, Hindu couples seeking fertility treatment have perhaps the widest range of allopathic medical options available to them, although as with all fertility treatment, medical interventions aim to bypass particular physiological difficulties rather than to provide a 'cure' as such.¹⁰³

Infertility, of course, is not restricted to members of any single religious community, and members of all faith groups in India can and do frequently seek to invoke divine as well as medical intervention to rectify the problem.¹⁰⁴ Spiritual healers are frequently consulted, either by the affected parties, or sometimes by their relatives, regarding concerns about infertility, and many such figures pride themselves on a high success rate, with or without additional biomedical interventions.¹⁰⁵ Attempts to resolve infertility may even involve consulting religious figures or spiritual healers from outside the sufferers' own faith. More than one person interviewed by Holly Donahue Singh during her fieldwork in Lucknow was adamant that most infertile people would seriously consider *any* potential method that might lead to them having children, regardless of their own religious background.¹⁰⁶ In June 2015, the *Times of India* reported that short counselling sessions offered at a Catholic church in Mumbai for a variety of issues, including infertility, had proved so popular with non-Catholics as well as local worshippers that 40% of those in attendance identified as either Hindu

or Muslim.¹⁰⁷ It is well established that Indian attitudes to religion are often syncretic and flexible, but the willingness of infertile men and women to seek help from several different religious sources also points to the need for emotional support during these stressful experiences.¹⁰⁸ Given the intense stigma associated with infertility, such support may well be unavailable from the usual sources that sufferers might rely on in other circumstances, such as friends and family.

In a similar vein, those suffering from fertility problems might well attempt cures using Ayurvedic or Unani remedies or homeopathy, as well as Western medicine. Daniel Cohen noted during his fieldwork at Varanasi that one Hindu couple who were engaged in ghost exorcism rituals for more than two years in an attempt to successfully conceive had previously spent considerable time and money using both Western and homeopathic medicine in an attempt to cure their fertility problems. They later went on to become parents of a baby girl.¹⁰⁹ This case demonstrates the flexibility of individuals and couples in attempting to tackle infertility, whether this means adhering to the rules set out by their faith for ‘solving’ the problem, or borrowing from the rituals of others, whether through prayer or deciding to pursue or refuse particular Western or indigenous medical treatments. Religion thus potentially plays a significant part in how individuals deal with the experience of infertility in contemporary India.

CONCLUSION

Infertility remains a deeply taboo subject in contemporary India, and the cause of severe stigma to sufferers. Despite the fact that the country has undergone significant social, economic, and cultural changes since the 1970s, it remains the case that ‘marriage and motherhood are considered essential’ for women.¹¹⁰ The level of controversy that the idea of infertility generates is so great that even fictionalized representations of the condition on screen or the page have only begun to appear relatively recently. Given the stigma that faces those known in their communities to suffer from infertility, men and women who are involuntarily childless might well be reluctant to discuss or even to openly acknowledge their experiences.¹¹¹ The stigmatization of infertility has a grossly disproportionate impact on women, who conversely are also still the primary focus of the family-planning policies designed to limit fertility and reduce population growth. While the blessing urging women to ‘be the mother of a hundred sons’ is hardly endorsed by either population policy or by the broader shift across the course of the twentieth century to having smaller families,¹¹² becoming a mother – and ideally the mother of *boys* – remains very much the expected norm.

NOTES

1. Sarah Hodges, “‘It all changed after Apollo’: Healthcare Myths and their Making in Contemporary India’, *Indian Journal of Medical Ethics*, 10 (2013), p. 248.

2. Nor is this to suggest that the process has been simplistic, uncontested, or uninterrupted: see especially Sarah Hodges, 'Umbilical Cord Blood Banking and its Interruptions: Notes from Chennai, India', *Economy & Society*, 42 (2013).
3. Sarah Hodges, 'Toward a History of Reproduction in Modern India', in S. Hodges (ed.), *Reproductive Health in India: History, Politics, Controversies* (Delhi, 2006).
4. The historiography of these broad areas is vast, but some key examples include David Arnold, *Science, Technology and Medicine in Colonial India* (Cambridge, 2000); Ishita Pande, *Medicine, Race and Liberalism in British Bengal: Symptoms of Empire* (New York, 2010); Mridula Ramanna, *Health Care in Bombay Presidency 1896–1930* (New Delhi, 2012); David Arnold, *Everyday Technology: Machines and the Making of India's Modernity* (Chicago, IL, 2013); Erica Wald, *Vice in the Barracks: Medicine, the Military and the Making of Colonial India, 1780–1868* (Basingstoke, 2014).
5. Padma Anagol, *The Emergence of Feminism in India, 1850–1920* (Aldershot, 2005), pp. 57–104; Geraldine Forbes, *Women in Colonial India: Essays on Politics, Medicine and Historiography* (Delhi, 2005), pp. 79–142.
6. Aditya Bharadwaj and Peter Glasner, *Local Cells, Global Science: The Rise of Embryonic Stem Cell Research in India* (New York, 2009), p. 1.
7. Ashok Partharathi, *Technology at the Core: Science and Technology with Indira Gandhi* (New Delhi, 2007); Priya Chacko, *Indian Foreign Policy: The Politics of Postcolonial Identity from 1947 to 2004* (Abingdon, 2012), pp. 21–45, 32–4; David Arnold, 'Nehruvian Science and Postcolonial India', *Isis*, 104 (2013), pp. 360–70.
8. Hodges, "It all changed after Apollo".
9. Notable exceptions are Sanjam Ahluwalia, *Reproductive Restraint: Birth Control in India 1877–1947* (Chicago, IL, 2008); Sarah Hodges, *Contraception, Colonialism and Commerce: Birth Control in South India, 1920–1940* (Aldershot, 2008); Sarah Hodges, 'South Asia's Eugenic Pasts', in Philippa Levine and Alison Bashford (eds), *The Oxford Handbook of the History of Eugenics* (Oxford, 2010); and Sarah Hodges (ed.), *Reproductive Health in India: History, Politics, Controversies* (Delhi, 2006).
10. Naomi Pfeffer, *The Stork and the Syringe: A Political History of Reproductive Medicine* (Cambridge, 1994); Martin Richards, 'A British History of Collaborative Reproduction and the Rise of the Genetic Connection', in Tabitha Freeman, Susanna Graham, Fatemeh Ebtehaj and Martin Richards (eds), *Relatedness in Assisted Reproduction: Families, Origins and Identities* (Cambridge, 2014).
11. Aditya Bharadwaj, 'Conception Politics: Medical Egos, Media Spotlights, and the Contest over Test-Tube Firsts in India', in Marcia C. Inhorn and Frank van Balen (eds), *Infertility around the Globe: New Thinking on Childlessness, Gender, and Reproductive Technologies* (Berkeley, CA, 2002).
12. Key examples of this work include Bharadwaj and Glasner, *Local Cells, Global Science*; Maya Unnithan, 'Infertility and Assisted Reproductive Technologies (ARTs) in a Globalising India: Ethics, Medicalisation and Agency', *Asian Bioethics Review*, 2 (2010); Maya Unnithan, 'Learning from Infertility: Gender, Health Inequities and Faith Healers in Women's Experiences of Disrupted Reproduction in Rajasthan', *South Asian History and Culture*, 1 (2010); Holly Donahue Singh, 'Aulad: Infertility and the Meanings of Children in North

- India'. Unpublished PhD thesis, University of Virginia, 2011; Kalpana Ram, *Fertile Disorder: Spirit Possession and Its Provocation of the Modern* (Honolulu, HI, 2013), pp. 106–131; Amrita Pande, *Wombs in Labor: Transnational Commercial Surrogacy in India* (New York, 2014); France Winddance Twine, *Outsourcing the Womb: Race, Class, and Gestational Surrogacy in a Global Market*, 2nd edn (New York, 2015), pp. 54–61; Sharmila Rudrappa, *Discounted Life: The Price of Global Surrogacy in India* (New York, 2015); and Sayantani Dasgupta and Shamita Das Dasgupta, (eds), *Globalization and Transnational Surrogacy in India: Outsourcing Life* (Lanham, MD, 2014).
13. In Britain, infertility also began to be more widely (and sympathetically) discussed by the press during the 1980s: see for example Thomson Prentice, 'Stress of Infertility "Like that of Cancer"', *The Times*, 15 May 1984, p. 3. This increased level of reporting may also have been influenced by the fact that in this decade or so the UK made several major political and policy decisions relating to this subject, including the establishment of the Warnock Committee in 1982, the outlawing of commercial surrogacy in 1985, and the establishment of the Human Fertilisation and Embryology Authority in 1991. See for example 'Report of the Committee of Inquiry into Human Fertilisation and Embryology', *Parliamentary Papers*, 1984, Cmnd. 9134, pp. 1–111.
 14. As of 2007, the paper had a circulation rate of 13.6 million readers per day: see Usha M. Rodrigues, 'Print Media in the Era of Globalisation', in Maya Ranganathan and Usha M. Rodrigues (eds), *Indian Media in a Globalised World* (New Delhi, 2010), p. 53. A search of the ProQuest *Times of India* archive database (which covers 1838–2005) for all articles relating to 'infertility' since August 1947 found 102 results for 1980–89 – a stark increase from previous decades; 255 reports for the years 1990–99, and 327 from 2000–05. However, searches using this term are potentially problematic, as especially before 1990, 'infertility' was as or more likely to be used in articles reporting on agricultural developments (such as crop failure) as those concerned with the plight of hypothetical or actual humans unable to conceive.
 15. Ramya Abhinand, 'Am I Only My Womb? The Stigma Of Infertility', Women's Web: For Women Who Do: <http://www.womensweb.in/2015/05/stigma-of-infertility/>. Accessed 6 December 2016.
 16. Elisabeth Bumiller, *May You Be The Mother Of A Hundred Sons: A Journey Among the Women of India* (New Delhi, 1991).
 17. Bumiller, *May You Be The Mother Of A Hundred Sons*, p. 10.
 18. Rashmi Dube Bhatnagar, Renu Dube and Renna Dube, *Female Infanticide in India: A Feminist Cultural History* (Albany, NY, 2005); Daniel J.R. Grey, "'Who's really wicked and immoral, women or men?': Uneasy Classifications, Hindu Gender Roles and Infanticide in Late Nineteenth-Century India', in Vivien Miller and James Campbell (eds), *Transnational Penal Cultures: New Perspectives on Discipline, Punishment and Desistance* (New York, 2014).
 19. Barbara Miller, *The Endangered Sex: Neglect of Female Children in Rural North India*, 2nd edn (Delhi, 1997); Veena Talwar Oldenburg, 'Questionable Motives, Flimsy Alibis: Reinvestigating the Murder of Female Infants in Colonial Punjab', in Avril A. Powell and Siobhan Lambert-Hurley (eds), *Rhetoric and Reality: Gender and the Colonial Experience in South Asia* (New Delhi, 2005); Maya Unnithan-Kumar, 'Female Selective Abortion – Beyond "Culture": Family

- Making and Gender Inequality in a Globalising India', *Culture, Health and Sexuality*, 12 (2010); and Tulsi Patel (ed.), *Sex-Selective Abortion in India: Gender, Society, and New Reproductive Technologies* (New Delhi, 2007).
20. Sarah Hodges, 'Governmentality, Population and Reproductive Family in Modern India', *Economic and Political Weekly*, 39 (2004); Matthew Connelly, *Fatal Misconception: The Struggle to Control World Population* (Cambridge, MA, 2008), pp. 213–230; Annika Berg, 'A Suitable Country: The Relationship between Sweden's Interwar Population Policy and Family Planning in Postindependence India', *Berichte zur Wissenschaftsgeschichte*, 33 (2010); Rahul Nair, 'The Construction of a "Population Problem" in Colonial India, 1919–1947', *Journal of Imperial and Commonwealth History*, 39 (2011); Asha Nadkarni, *Eugenic Feminism: Reproductive Nationalism in the United States and India* (Minneapolis, MN, 2014).
 21. Nandini Gooptu, *The Politics of the Urban Poor in Early Twentieth-Century India* (Cambridge, 2001).
 22. Sripati Chandrasekhar, *Demographic Disarmament for India: A Plea for Family Planning* (Bombay, 1952), p. 7.
 23. See broader context in Tyrene White, *China's Longest Campaign: Birth Planning in the People's Republic, 1949–2005* (London, 2006).
 24. The full text of all 12 of the five-year plans relating to population control and family planning issued by the government of India since 1950 have been digitized and are freely available online at Planning Commission, Government of India, '5 Year Plans': <http://planningcommission.nic.in/plans/planrel/fiveyr/default.html>. Accessed 6 December 2016.
 25. Rebecca Williams, 'Revisiting the Khanna Study: Population and Development in India, 1953–1960'. Unpublished PhD thesis, University of Warwick, 2013.
 26. Shah Commission of Inquiry, *Interim Report I* (New Delhi, 1978), pp. 17–32.
 27. 'Voluntary Family Planning: Still As Important As Ever', *Times of India*, 15 April 1977, p. 8; 'Probe into "Nasbandi Excesses" in Delhi', *Times of India*, 31 August 1977, p. 3; 'Sterilisation: TN teachers were "Bullied"', *Times of India*, 9 March 1978, p. 15; Shah Commission of Inquiry, *Interim Report II* (New Delhi, 1978), pp. 118–19; Lalita Panicker, 'Emergency's Shadow on Family Planning', *Times of India*, 22 June 1995, p. 12.
 28. Emma Tarlo, *Unsettling Memories: Narratives of the Emergency in Delhi* (London, 2002); Connelly, *Fatal Misconception*, pp. 317–26; Rebecca Jane Williams, 'Storming the Citadels of Poverty: Family Planning under the Emergency in India, 1975–1977', *Journal of Asian Studies*, 73 (2014).
 29. Shah Commission of Inquiry, *Third and Final Report* (New Delhi, 1978), pp. 153–207.
 30. Williams, 'Storming the Citadels', p. 474.
 31. Cecilia Van Hollen, *Birth on the Threshold: Childbirth and Modernity in South India* (Berkeley, CA, 2003), p. 142 and p. 144.
 32. This question of coercion remains very much up for debate: Leela Visaria, 'From Contraceptive Targets to Informed Choice: The Indian Experience', in Radhika Ramasubban and Shireen J. Jeejeebhoy (eds), *Women's Reproductive Health in India* (Jaipur, 2000); Rachel Simon-Kumar, *'Marketing' Reproduction? Ideology and Population Policy in India* (New Delhi, 2006); Patricia Jeffery and Roger Jeffery, *Confronting Saffron Demography: Religion, Fertility, and Women's Status*

- in India* (New Delhi, 2006); Berg, 'A Suitable Country'; Betsy Hartmann and Mohan Rao, 'India's Population Programme: Obstacles and Opportunities', *Economic and Political Weekly*, 50 (2015).
33. Government of India Planning Commission, *Twelfth Five Year Plan (2012–2017) Faster, More Inclusive and Sustainable Growth, Vol. I* (New Delhi, 2013), p. 4.
 34. Shruti Pandey, Abhijit Das, Shravanti Reddy and Binamrata Rani (eds), *Coercion Versus Empowerment: Perspectives from the People's Tribunal on India's Coercive Population Policies and Two-Child Norm* (New Delhi, 2006).
 35. Alok Ranjan Chaurasia and S.C. Gulati, *India: The State of Population 2007* (New Delhi, 2008), p. xviii.
 36. Census of India 2001, *Population Profiles (India, States & Union Territories)* (New Delhi, 2004), p. 1.
 37. Chaurasia and Gulati, *India*, p. xvi.
 38. Unnithan, 'Infertility and Assisted Reproductive Technologies', p. 3.
 39. Rakhi Chakrabarty, 'Govt. Scheme to Boost Population of Parsis', *Times of India*, 24 September 2013: <http://timesofindia.indiatimes.com/city/delhi/Govt-scheme-to-boost-population-of-Parsis/articleshow/22956209.cms>; Linda Pressly, 'How India Makes Parsi Babies', *BBC News*, 15 July 2015: <http://www.bbc.co.uk/news/magazine-33519145>. Both accessed 6 December 2016.
 40. On gender politics in contemporary India see Rajeswari Sunder Rajan, *The Scandal of the State: Women, Law, and Citizenship in Postcolonial India* (Durham, NC, 2003); Carolyn Heitmeyer and Maya Unnithan, 'Bodily Rights and Collective Claims: The Work of Legal Activists in Interpreting Reproductive and Maternal Rights in India', *Journal of the Royal Anthropological Institute*, 21 (2015); Sharmila Lodhia, 'From "Living Corpse" to India's Daughter: Exploring the Social, Political and Legal Landscape of the 2012 Delhi Gang Rape', *Women's Studies International Forum*, 50 (2015).
 41. Donahue Singh, 'Aulad', pp. 3–4. On the implications of motherhood for middle-class women see Henrike Donner, *Domestic Goddesses: Maternity, Globalization and Middle-Class Identity in Contemporary India* (Aldershot, 2008).
 42. Reiko Ohnuma, *Ties That Bind: Maternal Imagery and Discourse in Indian Buddhism* (Oxford, 2012).
 43. Sukumari Bhattacharji, 'Motherhood in Ancient India', in Maithreyi Krishnaraj (ed.), *Motherhood in India: Glorification without Empowerment?* (Abingdon, 2010), p. 47.
 44. See for example Papreen Nahar et al., 'Living with Infertility: Experiences among Urban Slum Populations in Bangladesh', *Reproductive Health Matters*, 8 (2000); Lorraine Culley and Nicky Hudson, "'For Him, It's Got to Be Your Own Son": Adoption and Infertility in British South Asian Communities', in Marilyn Cranshaw and Rachel Balen (eds), *Adopting after Infertility: Messages from Practice, Research and Personal Experience* (London, 2010); Katherine R. Hampshire, Mwenza T. Bell and Bob Simpson, "'Everybody is moving on": Infertility, Relationality and the Aesthetics of Family among British-Pakistani Muslims', *Social Science & Medicine*, 74 (2012); Nicky Hudson and Lorraine Culley, 'Infertility, Gamete Donation and Relatedness in British South Asian Communities' Kinship', in Tabitha Freeman, Susanna Graham, Fatemeh Ebtehaj and Martin Richards (eds), *Relatedness in Assisted Reproduction: Families, Origins and Identities* (Cambridge, 2014).

45. Hudson and Culley, 'Infertility, Gamete Donation and Relatedness', p. 235.
46. Alison Shaw, 'British Pakistani Elderly Without Children: An Invisible Minority', in Philip Kreager and Elizabeth Schröder-Butterfill (eds), *Ageing without Children: European and Asian Perspectives* (Oxford, 2004).
47. Aditya Bharadwaj, 'Why Adoption is Not an Option in India: The Visibility of Infertility, the Secrecy of Donor Insemination, and Other Cultural Complexities', *Social Science & Medicine*, 56 (2003); Culley and Hudson, "'For Him, It's Got to Be Your Own Son'"; Donahue Singh, 'Aulad', pp. 228–75.
48. S.D.S. Greval, *Lyon's Medical Jurisprudence for India*, 10th edn (Calcutta: Thacker, 1943), p. 412.
49. Bharadwaj and Glasner, *Local Cells, Global Science*, 62.
50. Sandhya Srinivasan, 'Endless Quest of Childless Women', *Times of India*, 10 August 1999, p. 12.
51. Kalpana Jain, 'Ethics Code for Medical Research Using Human Beings as Subjects is Ready', *Times of India*, 3 June 2000, p. 7.
52. Pande, *Wombs in Labor*; Winddance Twine, *Outsourcing the Womb*; Holly Donahue Singh, 'The World's Back Womb? Commercial Surrogacy and Infertility Inequalities in India', *American Anthropologist*, 114 (2013).
53. Examples include Malathy Iyer, 'Infertility Cures Draw Med Tourists to City', *Times of India*, 4 March 2005, p. 2; Ketan Tanna, 'A Mumbai Mother for Chinese Couple's Child', *Times of India*, 29 September 2005, p. 5.
54. Ram, *Fertile Disorder*, p. 124; Suneeta Mittal et al, 'Sociodemographic Profile of Infertile Couples Requesting Assisted Reproduction in a Low-Resource Setting in India', *International Journal of Gynecology & Obstetrics*, 110 (2010).
55. Susan Clare, *Namaste Baby: A Journey to Surrogacy in India* (Kibworth Beauchamp, 2013).
56. Pande, *Wombs in Labor*, p. 20.
57. Aniruddha Malpani, 'Are We Exploiting the Infertile Couple?', *Indian Journal of Medical Ethics*, 8 (2000), p. 24.
58. Chitra Unnithan, 'Ad Blitz behind 54% of IVF Procedures: Study', *Times of India*, 6 June 2015: <http://timesofindia.indiatimes.com/city/ahmedabad/Ad-blitz-behind-54-of-IVF-procedures-Study/articleshow/47566003.cms>. Accessed 6 December 2016.
59. Donahue Singh, 'Aulad', p. 108.
60. Sunitha Rao, 'Con Job in Child's Name', *Times of India*, 6 April 2015: <http://timesofindia.indiatimes.com/city/bengaluru/Con-job-in-childs-name/article-show/46817438.cms>. Accessed 6 December 2016.
61. Anil Malhotra, 'More Questions than Answers over Rent-A-Womb Market', *The Hindu*, 24 July 2010: <http://www.thehindu.com/opinion/open-page/more-questions-than-answers-over-rentawomb-market/article531996.ece>. Accessed 6 December 2016.
62. 'Baby Manji Yamada Vs. Union of India & ANR. [2008] INSC 1656 (29 September 2008)', Advocate Khoj Law Library: Supreme Court Judgments: <http://www.advocatekhoj.com/library/judgments/index.php?go=2008/sep/tember/183.php>; 'Finally, Baby Manji Flies to Papa in Japan Today', *Times of India*, 31 October 2008: <http://timesofindia.indiatimes.com/city/jaipur/Finally-baby-Manji-flies-to-papa-in-japan-today/articleshow/3659352.cms>. Both accessed 6 December 2016.

63. 'Surrogate Babies Born in India are Indians', *India Today*, 13 November 2009: <http://indiatoday.intoday.in/story/'Surrogate+babies+born+in+India+are+Indians'/1/70679.html>. Accessed 6 December 2016.
64. 'Australian Couple Abandons Surrogate Baby in India', *Times of India*, 9 October 2014: <http://timesofindia.indiatimes.com/india/Australian-couple-abandons-surrogate-baby-in-India/articleshow/44747623.cms>; Liam Quinn, 'Australian Couple Who Abandoned Baby Boy Knew Law was Being Broken', *Daily Mail*, 13 April 2015: <http://www.dailymail.co.uk/news/article-3036978/Australian-couple-abandoned-newborn-boy-surrogate-mother-engaged-India-twins-Australian-government-did-KNEW-doing-illegal.html>. Both accessed 6 December 2016.
65. Winddance Twine, *Outsourcing the Womb*, pp. 55–6.
66. Stephen Legg and Srila Roy, 'Neoliberalism, Postcolonialism and Hetero-Sovereignities: Emergent Sexual Formations in Contemporary India', *Interventions*, 15 (2013).
67. Vandana Shukla, 'Unregulated Surrogacy: Law Yet to Deliver', *The Tribune*, 24 June 2015: <http://www.tribuneindia.com/news/comment/unregulated-surrogacy-law-yet-to-deliver/97741.html>. Accessed 6 December 2016.
68. 'India Bans Foreigners from Hiring Surrogate Mothers', *The Guardian*, 28 October 2015: <http://www.theguardian.com/world/2015/oct/28/india-bans-foreigners-from-hiring-surrogate-mothers>. Accessed 6 December 2016.
69. Philip Sherwell, 'India Surrogacy Ban Dismays British Couples', *The Telegraph*, 18 November 2015: <http://www.telegraph.co.uk/news/worldnews/asia/india/12001903/India-surrogacy-ban-dismays-British-couples.html>. Accessed 6 December 2016.
70. 'No Commercial Surrogacy, Only for Needy Indian Couples, Govt Tells SC', *Indian Express*, 25 December 2015: <http://indianexpress.com/article/india/india-news-india/govt-to-make-commercial-surrogacy-illegal-panel-to-decide-on-cases-of-infertile-couples/>. Accessed 6 December 2016. Ironically, when I first read this article, it was automatically accompanied by pop-up advertising that urged the reader to 'Find a surrogate mother. Fully screened moms, fast matching. Become a parent. Free consultation!'
71. United Nations, *The Mysore Population Study: A Co-operative Project of the United Nations and the Government of India* (New York, 1961), p. 139.
72. John B. Wyon and John B. Gordon, *The Khanna Study: Population Problems in the Rural Punjab* (Cambridge, MA, 1971), p. 164. Despite the fact that the Khanna Study has often been perceived as a 'failed experiment' in family limitation, it continues to explicitly or implicitly influence broader discussions of population policy to the present day. See Williams, 'Revisiting the Khanna Study'.
73. 'Infertile Couples Looked Down Upon', *Times of India*, 2 September 1991, p. 3.
74. Malathy Iyer, 'Infertility, A Cause in Search of a Celebrity', *Times of India*, 20 August 2001, p. 3.
75. Catherine Kohler Riessman, 'Stigma and Everyday Resistance Practices: Childless Women in South India', *Gender & Society*, 14 (2000); Catherine Kohler Riessman, 'Positioning Gender Identity in Narratives of Infertility: South Indian Women's Lives in Context', in Marcia C. Inhorn and Frank van Balen (eds), *Infertility around the Globe: New Thinking on Childlessness, Gender, and Reproductive Technologies* (Berkeley, CA, 2002); Marcia C. Inhorn and Aditya Bharadwaj, 'Reproductively Disabled Lives: Infertility, Stigma, and Suffering in

- Egypt and India', in Benedicte Ingstad and Susan Reynolds White (eds), *Disability in Local and Global Worlds* (Berkeley, CA, 2007); Bhamini Mehta and Shagufa Kapadia, 'Experiences of Childlessness in an Indian Context: A Gender Perspective', *Indian Journal of Gender Studies*, 15 (2008); Bharadwaj and Glasner, *Local Cells, Global Science*, pp. 76–8; Donahue Singh, 'Aulad'. The situation is very similar in Bangladesh: see Papreen Nahar and Sjeek van der Geest, 'How Women in Bangladesh Confront the Stigma of Childlessness: Agency, Resilience, and Resistance', *Medical Anthropology Quarterly*, 28 (2014).
76. Anindita Majumdar, 'The Rhetoric of the Womb: The Representation of Surrogacy in India's Popular Mass Media', in Sayantani Dasgupta and Shamita Das Dasgupta (eds), *Globalization and Transnational Surrogacy in India: Outsourcing Life* (Lanham, MD, 2014), p. 207.
 77. Vinita Lavania, *Childless Couples: Social Consequences of Sterility and Infertility* (Jaipur, 2006), p. 31.
 78. On changing representations of voluntary childlessness in the postwar USA, see Laurie Chauncey and Susan A. Dumais, 'Voluntary Childlessness in Marriage and Family Textbooks, 1950–2000', *Journal of Family History*, 34 (2009).
 79. Monica Khanna Jhalani, *Deconstructing Motherhood: Indian Cultural Narratives and Ideology, 1970s Onwards* (New Delhi, 2010), pp. 101–52.
 80. See key discussion of this story and its context in Donahue Singh, 'Aulad', pp. 116–22.
 81. *Swarag Se Sunder* (dir. Kovelamudi Bapaiah, 1986). See especially discussion of this film in Khanna Jhalani, *Deconstructing Motherhood*, pp. 105–9.
 82. *Thalli Prema* (dir. Srikanth, 1968).
 83. Khanna Jhalani, *Deconstructing Motherhood*, pp. 101–52.
 84. *Chori Chori Chupke Chupke* (dir. Abbas-Mustan, 2001). On the perceived links between sex work and surrogacy in India see Amrita Pande, 'Not an "Angel", Not a "Whore": Surrogates as "Dirty" Workers in India', *Indian Journal of Gender Studies*, 16 (2009); and Amrita Pande, '"At Least I Am Not Sleeping with Anyone": Resisting the Stigma of Commercial Surrogacy', *Feminist Studies*, 36 (2010).
 85. Meera Syal, *The House of Hidden Mothers* (London, 2015).
 86. Marcia C. Inhorn, *The New Arab Man: Emergent Masculinities, Technologies, and Islam in the Middle East* (Princeton, NJ, 2012).
 87. Inhorn and Bharadwaj, 'Reproductively Disabled Lives'.
 88. Cynthia K. Shinabarger Reed, 'Intimate Partner Violence and Infertility in Zambia'. Unpublished PhD thesis, Texas Women's University, 2010.
 89. Abdul Qadir, 'Barren Woman Kept in Chains to Punish Infertility in Gaya Village', *Times of India*, 27 June 2015: <http://timesofindia.indiatimes.com/city/patna/Barren-woman-kept-in-chains-to-punish-infertility-in-Gaya-village/articleshow/47843302.cms>. Accessed 6 December 2016.
 90. Note, however, the very distinctive nature of Indian secularism: Shabnum Tejani, *Indian Secularism: A Social and Intellectual History, 1890–1950* (Ranikhet, 2007); Nandini Chatterjee, *The Making of Indian Secularism: Empire, Law and Christianity, 1830–1960* (Basingstoke, 2011).
 91. See variously Christopher J. Fuller, *The Camphor Flame: Popular Hinduism and Indian Society*, 2nd edn (Princeton, NJ, 2004); Robert Eric Frykenberg, *Christianity in India: From Beginnings to the Present* (Oxford, 2008); Yulia Egorova and Shahid Perwez, *The Jews of Andhra Pradesh: Contesting Caste and*

- Religion in South India* (Oxford, 2013); Tanweer Fazal, *'Nation-State' and Minority Rights in India: Comparative Perspectives on Muslim and Sikh Identities* (New York, 2015).
92. Rina Verma Williams, *Postcolonial Politics and Personal Laws: Colonial Legal Legacies and the Indian State* (New Delhi, 2006), pp. 96–190.
 93. Aditya Bharadwaj, 'Sacred Conceptions: Clinical Theodicies, Uncertain Science, and Technologies of Procreation in India', *Culture, Medicine & Psychiatry*, 30 (2006); Khanna Jhalani, *Deconstructing Motherhood*, pp. 128–9; Donahue Singh, 'Aulad'.
 94. Abhinand, 'Am I Only My Womb?'. On the context and negotiations involved in 'love matches' see Perveen Mody, *The Intimate State: Love-Marriage and the Law in Delhi* (Abingdon, 2008).
 95. Amy Leigh Allocco, 'Snakes, Goddesses, and Anthills: Modern Challenges and Women's Ritual Responses in Contemporary South India'. Unpublished PhD thesis, Emory University, 2009.
 96. Allocco, 'Snakes, Goddesses, and Anthills'; Amy Leigh Allocco, 'Fear, Reverence, and Ambivalence: Divine Snakes in Contemporary South India', *Religions of South Asia*, 7 (2013).
 97. Paul B. Courtright, *Gaṇeśa: Lord of Obstacles, Lord of Beginnings* (Oxford, 1985), p. 5; and Rachel Dwyer, 'Vighnaharta Shree Siddhivinayak: Ganesh, Remover of Obstacles, Lord of Beginnings in Mumbai', *Comparative Studies of South Asia, Africa and the Middle East*, 35 (2015).
 98. John D. Smith, *The Mahābhārata* (London, 2009), pp. 42–51, and Swasti Bhattacharyya, *Magical Progeny, Modern Technology: A Hindu Bioethics of Assisted Reproductive Technology* (Albany, NY, 2006), pp. 29–48.
 99. Soraya Tremayne and Marcia C. Inhorn, 'Introduction: Islam and Assisted Reproductive Technologies', in Marcia C. Inhorn and Soraya Tremayne (eds), *Islam and Assisted Reproductive Technologies: Sunni and Shia Perspectives* (Oxford, 2012), p. 3.
 100. Marcia C. Inhorn, Pasquale Patrizio, and Gamal I. Serour, 'Third-Party Reproductive Assistance around the Mediterranean: Comparing Sunni Egypt, Catholic Italy, and Multisectarian Lebanon', in Marcia C. Inhorn and Soraya Tremayne (eds), *Islam and Assisted Reproductive Technologies: Sunni and Shia Perspectives* (Oxford, 2012).
 101. S. Cromwell Crawford, *Hindu Bioethics for the Twenty-First Century* (Albany, NY, 2003), pp. 117–24; Bhattacharyya, *Magical Progeny, Modern Technology*.
 102. Inhorn and Bharadwaj, 'Reproductively Disabled Lives', p. 94.
 103. Potential allopathic medical interventions can be seen in Sulbha Arora, Rubina Merchant and Gautam N. Allahbadia (eds), *Reproductive Medicine: Challenges, Solutions and Breakthroughs* (New Delhi, 2014).
 104. For examples of Pentecostal Christians in contemporary India praying for infertility to be cured see Chad M. Bauman, *Pentecostals, Proselytization, and Anti-Christian Violence in Contemporary India* (Oxford, 2015), pp. 112–14.
 105. Daniel J. Cohen, 'Ghost Exorcism, Memory and Healing in Hinduism', in Ivette Vargas-O'Bryan and Zhou Xun (eds), *Disease, Religion and Healing in Asia: Collaborations and Collisions* (New York, 2015); Unnithan, 'Learning from Infertility'; Donahue Singh, 'Aulad', pp. 217–19.
 106. Donahue Singh, 'Aulad'.

107. Nergish Sunavala, 'Devotees of All Faiths Go for Counselling at Mumbai Church', *Times of India*, 14 June 2015: <http://timesofindia.indiatimes.com/city/mumbai/Devotees-of-all-faiths-go-for-counselling-at-Mumbai-church/articleshow/47660716.cms>. Accessed 6 December 2016.
108. Examples of the potential willingness to engage with healing practices from other religions can be seen in Joyce Burkhalter Flueckiger, *In Amma's Healing Room: Gender and Vernacular Islam in South India* (Bloomington, IN, 2006); and Fabrizio M. Ferrari, 'Devotion and Affliction in the Time of Cholera: Ritual Healing, Identity and Resistance among Bengali Muslims', in Ivette Vargas-O'Bryan and Zhou Xun (eds), *Disease, Religion and Healing in Asia: Collaborations and Collisions* (New York, 2015).
109. Cohen, 'Ghost Exorcism', pp. 73–4.
110. National Committee on the Status of Women, *Status of Women in India: A Synopsis of the Report of the National Committee on the Status of Women (1971–1974)* (New Delhi, 1975), p. 14.
111. Donahue Singh, 'Aulad'; Inhorn, *The New Arab Man*, pp. 72–5.
112. Hodges, *Contraception*.

RESEARCH RESOURCES

Primary Sources

Official Publications

Government of India Planning Commission, '5 Year Plans': <http://planningcommission.nic.in/plans/planrel/fiveyr/default.html>

Newspapers

The Hindu

Times of India

Secondary Sources

- Aditya Bharadwaj, 'Sacred Conceptions: Clinical Theodicies, Uncertain Science, and Technologies of Procreation in India', *Culture, Medicine & Psychiatry*, 30 (2006), 451–65.
- Aditya Bharadwaj and Peter Glasner, *Local Cells, Global Science: The Rise of Embryonic Stem Cell Research in India* (New York: Routledge, 2009).
- Swasti Bhattacharyya, *Magical Progeny, Modern Technology: A Hindu Bioethics of Assisted Reproductive Technology* (Albany, NY: State University of New York Press, 2006).
- Lorraine Culley and Nicky Hudson, "'For Him, It's Got to Be Your Own Son": Adoption and Infertility in British South Asian Communities', in Marilyn Cranshaw and Rachel Balen (eds), *Adopting after Infertility: Messages from Practice, Research and Personal Experience* (London: Jessica Kingsley Publishers, 2010).
- Sayantani Dasgupta and Shamita Das Dasgupta (eds), *Globalization and Transnational Surrogacy in India: Outsourcing Life* (Lanham, MD: Lexington Books, 2014).
- Holly Donahue Singh, 'Aulad: Infertility and the Meanings of Children in North India'. Unpublished PhD thesis, University of Virginia, 2011.

- Sarah Hodges (ed.), *Reproductive Health in India: History, Politics, Controversies* (Delhi: Orient Longman, 2006).
- Marcia C. Inhorn and Aditya Bharadwaj, 'Reproductively Disabled Lives: Infertility, Stigma, and Suffering in Egypt and India', in Benedicte Ingstad and Susan Reynolds White (eds), *Disability in Local and Global Worlds* (Berkeley, CA: University of California Press, 2007), 78–106.
- Monica Khanna Jhalani, *Deconstructing Motherhood: Indian Cultural Narratives and Ideology, 1970s Onwards* (New Delhi: SSS Publications, 2010).
- Catherine Kohler Riessman, 'Stigma and Everyday Resistance Practices: Childless Women in South India', *Gender & Society*, 14 (2000), 111–35.
- Amrita Pande, *Wombs in Labor: Transnational Commercial Surrogacy in India* (New York: Columbia University Press, 2014).
- Maya Unnithan, 'Learning from Infertility: Gender, Health Inequities and Faith Healers in Women's Experiences of Disrupted Reproduction in Rajasthan', *South Asian History and Culture*, 1 (2010), 315–27.
- Rebecca Jane Williams, 'Storming the Citadels of Poverty: Family Planning under the Emergency in India, 1975–1977', *Journal of Asian Studies*, 73 (2014), 471–92.

PART III

Situating Infertility in Medicine

Introduction: Situating Infertility in Medicine

Gayle Davis and Tracey Loughran

The chapters in this section explore medical approaches to infertility in a variety of geographical contexts and chronological periods, considering how doctors have conceptualized, diagnosed, and responded to infertility as a condition. They examine how medical understandings of, and reactions to, infertility have been shaped historically, and how access to treatment has been mediated by a range of social, political, and scientific factors. These authors thereby offer rich insights into medical thinking and practice, into the complex socio-medical politics and ethical anxieties which have surrounded the topic, and into the broad interface between medicine, science, and culture.

The attribution of ‘blame’ is a prevalent feature of these chapters. With her focus on the late Middle Ages, Catherine Rider problematizes the prevailing assumption – still remarkably stubborn today – that a couple’s failure to conceive was always attributed to the woman. Her chapter considers the extent to which medical recipes deemed men the cause of infertility and targeted them as the main recipient of any proposed treatments. Medieval medical writers encouraged couples to take a test which determined the source of their infertility, whether the man or woman, and a significant number of remedies required men to play an active role in treatment, or even – on occasion – made men the more prominent party in the treatment regime, with women’s active participation largely absent. Some recipes,

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alternatively, asked the couple to undertake treatment together, rather than requiring them to even identify which party was infertile. Joint participation by husband and wife in a form of treatment may have been a way of avoiding the need to assign blame too closely to one partner, and protecting the reputation and self-esteem of both parties.

Tracing the concept of blame into the early modern period, Cristina Pinheiro explores how European authors drew on the authority of ancient medicine, particularly the ideas of Galen and Hippocrates, to justify the attribution of responsibility to men or women respectively in cases of infertility. Humoral theory attributed disease to an imbalance in the four humours, and in conceptualizing male and female bodies as having different humoral constituencies (that is, the healthy female as hot, moist and spongy, and the healthy male as cold, dry and firm) it necessitated separate treatment regimes for men and women afflicted with the same pathology. Early modern authorities made frequent reference to male sterility, even in treatises which focused specifically upon women's disease, such as the Portuguese physician Rodrigo de Castro's (1546–1627/9) *De universa mulierum medicina* (A complete book about the comprehensive medicine of women). This influential text stressed the complementarity of the sexes in matters of reproduction, and considered incompatibility in a couple as a cause of infertility. Nonetheless, Pinheiro also examines Castro's *scholium*, a section appended to *De universa* that focused solely on female accountability. This section related female infertility, in particular, to masculine features such as a hoarse voice and thick, black hair around the female genitalia, which were considered external signs of 'deviance'.

This concentration upon the female partner is the focus of the remaining authors in this section. Sophie Vasset's chapter on nineteenth-century France notes that, although physicians theoretically understood sterility to be a condition which affected both sexes, women were the first to be diagnosed and treated. Indeed Vasset's case study of the patient Madame Robert and deconstruction of the medical correspondence surrounding her care finds little mention of her husband, to whom their sterile marriage was never attributed. Yet ironically, some French physicians at this time – with resonances of early modern Portugal – perceived women to be sterile when 'viragoes' of a more 'masculine' appearance, constitution, and temperament. Others focused on a different conceptualization of 'deviancy', by hypersexualizing the sterile woman and associating her with prostitution and 'women of pleasure'. Some medical figures, such as the *accoucheur* Claude-Martin Gardien (1767–1838), therefore took it upon themselves to paint a specific physiognomic portrait of fertile and sterile women in order to advise husbands how to choose their ideal mate in order to guarantee a future fertile marriage. This fuelled the perception of women as the critical party in, or principal impediment to, the propagation of a healthy population.

Such eugenic and racial preoccupations echoed medical anxieties which crystallized around the concept of degeneration, a pessimistic biological theory devised by figures such as the French psychiatrist Bénédict-Augustin Morel (1809–73).¹ Theorists of degeneration attempted to explain the social problems which had beset nineteenth-century Western civilization by focusing upon and classifying ‘deviant’ groups such as prostitutes, syphilitics, and criminals, whose regression in evolutionary terms was believed to be effecting the gradual degeneration of the human species, and proposed forms of ‘treatment’ to thwart their ability to procreate future tainted generations.²

These themes are explored in greater depth in Anne Hanley’s chapter on fin-de-siècle Britain. Here, the specific causative links between infertility and the ‘racial poison’ of venereal disease are explored and contextualized within broader medico-social debates on degeneration, heredity, and eugenics. While venereal diseases, especially gonorrhoea, were slowly being ‘unsexed’ in the late nineteenth century,³ venereal disease-induced infertility remained a very gendered problem. Women were seen as the party primarily at ‘fault’ in childless marriages. Although men were increasingly identified as carriers of venereal diseases, who could pass the disease to ‘innocent’ wives and children, their susceptibility to infertility remained largely overlooked. While medicine now recognizes a relationship between gonorrhoea, syphilis, and fertility in both women and men, Hanley attributes this earlier preoccupation with women to the fact that diseases affecting reproductive health were principally addressed under the auspices of gynaecology over the previous two centuries, thereby establishing infertility as a female problem. There was no established medical discipline within which to discuss male reproductive health, and few established practices for diagnosing or treating male infertility. Moreover, the assumption that male infertility was a rare occurrence was, in some respects, a self-perpetuating conclusion. Doctors, convinced that male infertility was uncommon, were less inclined to examine the husbands of seemingly infertile women.

The pathological female is, similarly, a central character of Gayle Davis’s chapter on mid-twentieth-century Britain. Her examination of medical witness testimony to the 1958 Departmental Committee on Human Artificial Insemination demonstrates how the female patient seeking treatment through artificial insemination by donor (AID) was pathologized not merely because of her imperfectly functioning reproductive system – indeed AID was generally turned to because of infertility in the *husband*, not *wife* – but due to medical constructions of her as emotionally or psychologically damaged. However, Davis also explores how others involved in the treatment of these women – most notably the sperm donors but also the doctors themselves – did not escape this tendency to be pathologized. Like Hanley, Davis relates such judgements to the ‘eugenic considerations’ which lay at the heart of infertility and its treatment through AID. While the careful selection of semen donors might have offered a constructive strategy for positive

eugenic improvement, doctors tended instead to characterize the semen donor as eugenically compromised or motivated only by grubby financial incentives. This robust questioning of the health and motives of willing semen donors was one of several 'obstructive' strategies employed by medical practitioners to discourage eager patients from receiving treatment. Yet in deconstructing the 'blame game' that these doctors were participating in, Davis highlights their own hypocrisy. Their practice of inseminating a woman with a mixture of semen from her husband and an anonymous donor arguably reveals them to be the most deceptive party in this story, by placing couples in a position where they would not know whether the husband or anonymous donor was the father of the child.

The chapters in this section highlight the variety of ways in which doctors have historically approached infertility and its treatment, whether enthusiastic or reluctant, whether sympathetic or more calculating, and whether arrogant or ignorant. Where women were held the guilty party for a couple's inability to conceive, the chapters are illustrative of the fact that medicine has provided a powerful justification for the construction, prescription, and treatment of 'diseased' and 'deviant' sexualities. To a pronounced extent, female sexuality has historically been pathologized when it was perceived to deviate from a narrowly defined norm located within the dual constraints of a marital and maternal framework.⁴ Since, as feminist scholars have stressed, maternity has long been considered the 'female norm',⁵ those seeking to limit their fertility through recourse to contraception or abortion were effectively 'reproductive deviants' who were refusing to embrace their biological destiny as mothers.

A pathologization of the reluctantly pregnant woman is seen particularly clearly in democracies which medicalized access to abortion, such as Britain and Canada. Thus, Sally Sheldon has illustrated how Britain's 1967 Abortion Act was 'fundamentally underpinned by the idea that reproduction was an area for medical control and expertise', with the doctor cast in political discussions as the 'responsible and reassuring figure' who could be trusted to rationally decide which women merited a termination of pregnancy and to dissuade those who were not deemed to qualify.⁶ The pregnant woman was depicted, in marked contrast, as being unable to make a reasoned assessment of her own situation due to her intrinsically and unhealthily emotional state. Feminist interpretations have tended to view reproductive policy formation as a political struggle that strongly reflected the ideological prejudices of a patriarchal society, and – in the case of countries which enforced a medical monopoly upon access to abortion and family planning – have lambasted women's resulting dependence 'on the vagaries of medical discretion and good will'.⁷

Even those women who attempted to embrace this 'cult of domesticity' but in some way failed were not uncommonly seen as psychologically

unstable. This was true not only in cases of inability to conceive but in conditions such as postnatal/postpartum depression, where women were perceived to have fallen short of the demands which motherhood placed upon them.⁸ Indeed, nineteenth-century psychiatrists believed women to be more vulnerable to insanity due precisely to the instability of their reproductive system and its interference with rational control, and tended to link theories of female insanity to the various biological ‘crises’ of the life-cycle: puberty, pregnancy, childbirth, and menopause.⁹ The term ‘puerperal insanity’ was coined to encompass that form of insanity which befell pregnant women and new mothers, and could apparently strike any class of woman.¹⁰ This diagnostic label seemed to cover quite a miscellany of symptoms, from relatively brief nervous upsets to violent mania and severe melancholia which could threaten the life of both mother and child. Nonetheless, it was seen as emblematic of women’s intrinsic biological weakness, fragile nervous system, and unpredictable reproductive organs. With motherhood set at the ideological centre of femininity, an inability to adapt to the demands of maternity was an inability to perform a woman’s most important life functions. Some of the chapters found here link well to this scholarship, moving the discussion on from those unwilling to be pregnant and thus seeking fertility limitation devices, and from those unable to embrace, or cope with, pregnancy and motherhood, to reflect upon some of the main ways in which women’s inability to fulfil their biological destiny through the affliction of infertility was pathologized or psychiatrized.

This section thus illustrates some of the ways in which medical belief and behaviour have been bound by potent social codes, and used to enforce social norms, with medical and moral discourses proving impossible to separate. While doctors and nurses now dominate reproductive healthcare decision-making and treatment practices, some recognize with discomfort the fact that they are being asked to make complex and arguably non-medical decisions with only their own principles to guide them. Much still depends upon the social milieu in which medical advice is sought, one of the reasons why infertility services remain a ‘postcode lottery’ of geographic variability.

Finally, and more subtly, these chapters lament an historical failure to record the patient’s voice, and are able to provide only a very limited sense of the anxiety suffered by involuntarily childless individuals and couples. By focusing upon medical responses to infertility, and exploring largely patriarchal models of medicine, they are suggestive of the very limited extent to which patient autonomy was compatible with medical authority. Despite the fact that men have tended to dominate medical debates and policy-making processes relating to reproductive health across time and place, the pronounced element of ‘reproductive travel’¹¹ seen

historically – and in some of these chapters – acts as an important reminder not only of the inequalities and injustices in infertility provision globally, but of the agency of the women at the heart of these contradictory discourses, and the desperate measures to which women have historically resorted when local access to appropriate medical services is denied them.

NOTES

1. See Janet Browne, ‘Darwin and the Face of Madness’, in William Bynum, Roy Porter and Michael Shepherd (eds), *The Anatomy of Madness: Essays in the History of Psychiatry*, 3 vols (London and New York, 1985), vol. 1; Daniel Pick, *Faces of Degeneration: A European Disorder, c.1848–c.1918* (Cambridge, 1989); Bill Luckin, ‘Revisiting the Idea of Degeneration in Urban Britain, 1830–1900’, *Urban History*, 33:2 (2006).
2. See Mathew Thomson, ‘Sterilisation, Segregation and Community Care’, *History of Psychiatry*, 3:12 (1992); Alison Bashford and Philippa Levine (eds), *The Oxford Handbook of the History of Eugenics* (Oxford, 2010).
3. Michael Worboys, ‘Unsexing Gonorrhoea: Bacteriologists, Gynaecologists, and Suffragists in Britain, 1860–1920’, *Social History of Medicine*, 17:1 (2004).
4. See Lesley Hall, ‘The Sexual Body’, in Roger Cooter and John Pickstone (eds), *Companion to Medicine in the Twentieth Century* (London and New York, 2003); Gayle Davis, ‘Health and Sexuality’, in Mark Jackson (ed.), *The Oxford Handbook of the History of Medicine* (Oxford, 2011).
5. Ann Oakley, ‘Normal Motherhood: An Exercise in Self-Control’, in Bridget Hutter and Gillian Williams (eds), *Controlling Women: The Normal and the Deviant* (London, 1981).
6. Sally Sheldon, *Beyond Control: Medical Power and Abortion Law* (London, 1997), pp. 24–26; Sally Macintyre, ‘The Medical Profession and the 1967 Abortion Act in Britain’, *Social Science and Medicine*, 7 (1973), p. 130.
7. Sheldon, *Beyond Control*, p. 168. See also Melanie Latham, *Regulating Reproduction: A Century of Conflict in Britain and France* (Manchester and New York, 2002); Lesley Hoggart, *Feminist Campaigns for Birth Control and Abortion Rights* (New York, 2003).
8. See Anne Digby, ‘Women’s Biological Straitjacket’, in Susan Mendes and Jane Rendall (eds), *Sexuality and Subordination: Interdisciplinary Studies of Gender in the Nineteenth Century* (London and New York, 1989); Hilary Marland, *Dangerous Motherhood: Insanity and Childbirth in Victorian Britain* (Basingstoke and New York, 2004).
9. See Elaine Showalter, *The Female Malady: Women, Madness and English Culture, 1830–1980* (London, 1985); Digby, ‘Women’s Biological Straitjacket’.
10. Marland, *Dangerous Motherhood*.

11. Marcia Inhorn and Pasquale Patrizio, 'Rethinking Reproductive "Tourism" as Reproductive "Exile"', *Fertility and Sterility*, 92:3 (2009); Christabelle Sethna and Marion Doull, 'Journeys of Choice?: Abortion, Travel, and Women's Autonomy', in Stuart Murray and Dave Holmes (eds), *Critical Interventions in the Ethics of Healthcare: Challenging the Principle of Autonomy in Bioethics* (London and New York, 2009).

Men's Responses to Infertility in Late Medieval England

Catherine Rider

INTRODUCTION

Since the 1980s scholarship on infertility in the Middle Ages has sought to qualify what is often seen as the prevailing assumption that in this period infertility was always blamed on women. Seeking to complicate this picture, in the late 1980s and early 1990s books by Jean-Claude Bologne, Sylvie Laurent, and Joan Cadden noted that medieval medicine acknowledged a variety of causes of infertility and sexual dysfunction in men.¹ More recently scholars have built on these pioneering studies to explore in greater detail what medieval medical texts say about both male and female reproductive disorders and have edited several treatises on the subject.² However, these studies and others have often argued that, although male reproductive disorders were recognized in medicine, this view was not representative of wider social attitudes. Thus, Sylvie Laurent, Shulamith Shahar, and Deborah Youngs in surveys of (respectively) childbirth, childhood, and life-cycle in the Middle Ages all argue that most medieval people blamed infertility on the woman.³ This may even have been true among physicians, despite the claims of medical theory: a number of studies of medical treatises on 'sterility' argue that although these works discussed male infertility, they presented women as more likely than men to be infertile and aimed the majority of their treatments at women.⁴ This was

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perhaps especially true of texts which focused narrowly on treatment rather than on medical theory.⁵

This focus on women as the main recipients of infertility treatment has meant that the history of medieval men's responses to reproductive disorders has been comparatively neglected. The most detailed work in this area has been done on sexual impotence, but this has often been based on church court records, and so has looked particularly at men's reactions to being accused of impotence in court.⁶ However, recent research on infertility in other periods suggests that it is possible to look more broadly at male responses to a wider range of reproductive disorders than simply impotence. For example, recent scholarship on ancient Greece has argued that even if infertility was usually seen as a problem whose source lay in the woman, the subject was probably discussed by men and women, and men sought to take action to affect their wives' ability to conceive sons.⁷ Meanwhile an article on childless men in early modern England by Helen Berry and Elizabeth Foyster has discussed the advice that medical texts offered to men who wished to increase their chances of having children.⁸ These studies suggest questions which we can also ask of medieval sources. In particular they encourage us to focus not on how far male infertility was recognized as possible or likely, in medicine or in society more broadly, but on men's role in seeking or administering treatment when their marriages were childless.

This chapter will explore this topic in one particular context, England in the late Middle Ages, focusing mainly on the fourteenth and fifteenth centuries. In doing so it contributes to what Fiona Harris-Stoertz has described as a growing interest in 'male intervention in matters relating to pregnancy and childbirth' in the Middle Ages.⁹ Research in this field includes Monica Green's study of medieval physicians' treatment of gynaecological and obstetrical conditions, in which she suggests that by the end of the Middle Ages some educated laymen as well as doctors were taking an interest in reproductive medicine.¹⁰ The experiences and views of less educated men are difficult to uncover, but Becky Lee has discussed sources which shed light on men's recollections of childbirth in medieval England.¹¹ However, less attention has been paid to what men were expected to do if pregnancy did not occur. This chapter aims to map out some of the possibilities. It will argue that, although medical writers in this period were likely to present women, more than men, as the ones 'at fault' in cases of infertility, they often assumed men had a role to play in treatment.

RECIPES AS A SOURCE FOR INFERTILITY IN MEDIEVAL ENGLAND

A large number of sources from medieval England discuss infertility, but they do not come from the infertile men or women themselves. There are no known letters or diaries which discuss the subject, for example. The absence of personal accounts means that it is difficult to explore the emotional impact of childlessness on individuals in the ways that historians have done for later periods.¹² Instead, scholars must approach responses to infertility indirectly,

and one way to do this is through medical texts which offer advice on how to conceive. These survive from across medieval Europe and they take many different forms but, in order to get as close as possible to what may have been expected in medical practice, this chapter will focus on manuscripts containing collections of medical recipes. These collections list treatments for a wide range of conditions, sometimes combined with short treatises on practical medicine. Generally they do not mention 'infertility' or 'sterility' as a defined medical condition, but they often include recipes to aid conception. In most cases these recipes say little about why pregnancy may not occur, and focus instead on giving instructions to achieve the desired result, under headings such as 'If a woman will conceive'.

Very large numbers of medical recipes survive from fourteenth and fifteenth-century England, making them a useful source for the common assumptions made by medical writers. To give an indication of the volume of material, the database of Middle English medical and scientific texts compiled by Linda Voigts and Patricia Deery Kurtz contains over 2,500 entries for recipes surviving in groups of three or more, and although that heading includes culinary and other recipes as well as medical ones it does not include material in languages other than English.¹³ The format and length of these collections is very variable. Some are comparatively standardized and survive in multiple copies, while others are unique compilations; some are carefully organized, others more haphazard in structure. Their language also varies. Until the late fourteenth century most medical recipes written in England were recorded in Latin (the language of universities) or Anglo-Norman French (the primary language of the English aristocracy), but from around 1375 we see a substantial growth in the use of English, stimulated by rising levels of literacy among laypeople who could not read Latin, and by the increasing use of English among the aristocracy.¹⁴

In many cases there is little indication of who owned and read the surviving manuscripts of recipe collections, but where owners can be identified, they are often male medical practitioners. This category included men from a variety of backgrounds, such as university-educated physicians, other literate physicians, surgeons, barber-surgeons, and apothecaries.¹⁵ Recipe manuscripts were not only confined to those who made a living from medicine, however, and some were also owned by clergy and educated laymen who may have practised medicine on a smaller scale.¹⁶ Two examples of these readers will be discussed later in the chapter: Robert Thornton (fl. 1418–56), a Yorkshire landowner who copied a recipe collection alongside a series of romances and religious works in the mid-fifteenth century, and John Rede (dates unknown), a parson based in Yorkshire who copied the same recipe collection in 1529 and noted how he had used some of the recipes in practice.¹⁷ Women are found as owners of recipe books occasionally, but in small numbers, compared to later centuries.¹⁸

Although they were sometimes owned by individuals who practised medicine, recipe collections do not give us unmediated reflections of most medieval

people's experiences of infertility, or indeed of any other condition. Literacy and access to educated medical practitioners were both restricted so it is difficult to tell how often the recipes in these manuscripts were used, or for what kinds of patients. Moreover, they are not records of treatments derived from popular culture: instead, they drew heavily on earlier Latin medical texts. They are therefore likely to tell us as much about the expectations of their educated and mostly male readers as about widespread medical practice. Nevertheless, they tell us about the kinds of information that were deemed useful for practitioners in those circles, about possible treatments, and about who was expected to administer them. Their focus on treatment rather than theory also suggests that recipes were designed to inform medical practice even if not every recipe was used. This is hard to prove, but a few manuscripts like John Rede's include cures which the compilers claimed to have used on named individuals.¹⁹

The high number of surviving medical recipes from medieval England means that a comprehensive survey of treatments to aid conception is beyond the scope of a single paper. This chapter will therefore use as a case study the manuscripts of a single collection, the *Liber de Diversis Medicinis* or 'Book of Diverse Medicines'. This is one of the more common collections, surviving in 17 manuscripts which were copied between the early fourteenth and early sixteenth centuries and which have been listed and discussed by George R. Keiser.²⁰ We know two of the people who copied this collection: Robert Thornton and John Rede, mentioned above. The manuscripts of the *Liber* contain several remedies to help a woman conceive or a man to beget a child; to help a woman conceive a boy; or to test whether the 'default of conception' lies in the man or the woman. They are found alongside a few other recipes connected to the reproductive organs: for men there is a remedy for a sore penis, while for women there are several remedies to facilitate childbirth.²¹ Remedies for childbirth or a sore penis were designed to treat conditions which clearly afflicted one spouse or the other, but the remedies to aid conception that form the focus of this chapter are less closely tied to a single individual. These recipes were not necessarily only for cases when couples could not have any child at all, over a long period. They could equally be used when a couple simply wanted to increase their chances of conceiving, or when they wanted a boy in particular, but references in one recipe quoted below to 'barren' women and the 'man who may get no child' suggest that longer-term infertility was one possibility envisaged by the anonymous compiler of the *Liber*.

The text of these recipes varies substantially between different manuscripts of the *Liber* as scribes omitted sections, added new material, and altered details. This level of variation is not uncommon in medieval recipe collections and the ways in which scribes adapted the collection tell us much about what they anticipated would interest the users of these manuscripts.²² By tracing these variations in how the conception remedies were copied and worded, we can uncover several different assumptions relating to who might seek and

administer treatments to aid conception and cure infertility. In order to explore how representative the *Liber de Diversis Medicinis* was, I will also compare it with several other collections copied in England in the same period, to gain an impression of how far the same assumptions about men's role in treatments to enhance fertility can be found more widely, and to see what other possibilities existed.

The recipes in the *Liber de Diversis Medicinis* and other medieval and early modern recipe manuscripts make use of spices, plants, and parts of animals, all of which may be taken orally, worn, or used to make ointments. Their use was based on two common assumptions made by pre-modern medical theory. Many remedies which used spices or plants were based on the theory of the humours. This was the dominant theory in learned medicine from ancient Greece until at least the seventeenth century, and it held that the body contained four substances called humours: phlegm, blood, black bile, and yellow bile. Each humour had its own balance of four qualities – heat, cold, moisture and dryness – and if these qualities became unbalanced then illness resulted. Reproductive disorders in both men and women were often linked to a lack of heat in particular, and so treatment for both sexes involved the use of 'hot' plants which were believed to raise a person's level of heat such as pepper or catmint. These substances were believed to aid sexual intercourse, promote conception, and even promote the conception of male children, and they could have that effect on either men or women.²³ The use of animal parts was based on another assumption: that the sexual organs of animals – especially animals associated with sexual prowess or fertility, such as hares or cocks – could stimulate the reproductive organs of the men and women who ate them.²⁴ Thus, although they seem outlandish to modern eyes, these plant-based and animal remedies were grounded in ancient and well-respected medical theories and were often drawn from earlier medical texts, and this is likely to have enhanced their authority for medieval readers.

DIAGNOSING INFERTILITY AND AIDING CONCEPTION IN THE *LIBER DE DIVERSIS MEDICINIS*

The tables below list the 17 manuscripts of the *Liber de Diversis Medicinis* identified by Keiser²⁵ and set out the remedies to aid conception or test fertility that appear in each one (Tables 1, 2 and 3).

As these tables show, the recipes relating to conception are not consistently present. In fact, of the 17 copies, they can only still be found in eight, the earliest being *R0*, a late fourteenth-century manuscript. In three further manuscripts the contents list shows that the remedies were once present and gives some indication of how they were presented to readers. Recipes for conception may also once have been present in some of the remaining manuscripts, such as *A2* and *Eg* where pages are now missing. However, the absence of conception remedies in *Cp*, *Du* and *Yo*, where the text of the *Liber* seems to be relatively

Table 1 Manuscripts with surviving remedies to aid conception or test fertility

<i>Keiser's name for manuscript and date</i>	<i>Shelfmark</i>	<i>Conception and fertility remedies</i>
Ro, late 14 th century	London, British Library MS Royal 17.A.VIII, fols. 3r-69r	Two recipes to aid conception. Four recipes to conceive a boy. Test to show whether man or woman is infertile.
S2, c.1400	London, British Library MS Sloane 213, fols. 138r-159r	Test to show whether man or woman is infertile. Four recipes to aid conception. Four recipes to conceive a boy.
S3, c.1425–50	London, British Library MS Sloane 962, fols. 12r-50r	No fertility recipes on pages listed by Keiser but one in Latin 'So that a woman conceives quickly' on the following page, f. 50v.
Thornton Manuscript, 1425–50	Lincoln Cathedral Library MS 91, ed. Margaret Ogden (owned by Robert Thornton)	Test to show whether man or woman is infertile. One recipe to aid conception.
T1, 15 th century	Cambridge, Trinity College MS 913, fols. 213v-242v	Test to show whether man or woman is infertile. Two recipes to aid conception. Four recipes to conceive a boy.
Pp, 15 th century	Cambridge, Magdalene College MS Pepys 878, pp. 59–107	One recipe to aid conception. Test to show whether man or woman is infertile.
Rw, 1529	Oxford, Bodleian Library MS Rawlinson A.393, fols. 2r-88r. (Owned by John Rede)	One recipe to aid conception (copied twice). Test to show whether man or woman is infertile.
S4, 1530	London, British Library MS Sloane 2270, fols. 26v-47r (copy of S2)	Test to show whether man or woman is infertile. One recipe to aid conception. Four recipes to conceive a boy.

complete and pages do not seem to have been lost, suggests that recipes to aid conception were not an essential part of the collection.

The conception and fertility recipes in the *Liber* required men's action in several places. Firstly, all but one of the manuscripts which contained remedies to aid conception also included a test to show whether the man or woman was the source of the couple's infertility. In each case the heading for this test referenced both the man and the woman as possible sources of infertility. Thus, in the words of the earliest manuscript of the *Liber* to include this test, *Ro*, its purpose was 'to know whether it is because of the man or the woman that she bears no child'.²⁶ Other manuscripts phrased this differently but again mentioned both the man and the woman.²⁷ Here, the possibility of male infertility

Table 2 Manuscripts where conception remedies no longer survive because sections of the manuscript are now missing, but are described in the manuscripts' contents lists

<i>Keiser's name for manuscript and date</i>	<i>Shelfmark</i>	<i>Fertility and conception remedies</i>
S1, c. 1400	London, British Library MS Sloane 7, fols 3r-27r	Test to show whether man or woman is infertile. Two remedies to aid conception.
Ar, c. 1450	London, British Library MS Arundel 276, fols. 9r- 41v	Test to show whether man or woman is infertile. One recipe to aid conception. One recipe to conceive a boy.
Mn, 1475–1500	Manchester, Chetham's Library MS Munby A.3.127 (27938), fols. 7r-56v	Test to show whether man or woman is infertile. One recipe to conceive a boy.

Table 3 Manuscripts where remedies to aid conception or test fertility were never present or have left no surviving trace

<i>Keiser's name for manuscript and date</i>	<i>Shelfmark</i>	<i>Fertility and conception recipes</i>
Cp, c. 1330	Cambridge, Corpus Christi College MS 388, fols. 36r-48v	No sign of conception recipes.
Yo, late 14 th - early 15 th century	York Minster Library MS XVI.E.32, fols. 14r-80r	No sign of conception recipes.
Du, c. 1425	Durham University Library MS Cosin V. IV.1, fols. 6r-7r, 8r-32r	No sign of conception recipes.
A1, 15 th century	Oxford, Bodleian Library MS Ashmole 1413, pp. 33–74	Partial copy of text.
A2, 15 th century	Oxford, Bodleian Library MS Ashmole 1444, pp. 119–70, 181–4	Several folios missing.
Eg, 15 th century	London, British Library MS Egerton 833	Section of manuscript missing.
T2, 15 th century	Cambridge, Trinity College MS 1451, part 2, fols. 1r-5r	Partial copy of text.

was acknowledged, even though the visible result was manifested in the woman: 'she bears no child'.

The test also required the participation of both spouses. The man and woman should each urinate into a pot of bran and the pots were then left to stand for a period of seven, ten or 14 nights (different manuscripts vary as to exactly how long). At the end of this time, if the 'fault' lay in one partner, then the pot containing his or her urine would stink and contain worms, but if neither pot contained worms, 'then may men help them to have a child through medicines'.²⁸ The idea of testing a woman or a couple for infertility goes back to ancient Greece and was relatively common in medieval medical texts.²⁹ This particular test was not unique to the *Liber*, but also appears in a number of earlier Latin medical works. It probably came to the *Liber* from the

Trotula, a group of twelfth-century gynaecological treatises which circulated widely in England and elsewhere in Europe and was translated into English several times.³⁰ However, this widespread copying does not necessarily mean that male infertility was widely acknowledged as a real possibility. We do not know how often these tests were performed (although Robert Thornton's manuscript advised the reader to 'note well here').³¹ It is also not certain that if people did use it they seriously expected to identify the man as infertile. Instead, since one outcome of the test was to show that the couple could be helped by medicines, it may have functioned to provide reassurance that conception was possible and would occur in time with the right help. Nevertheless, the fact that the test was copied suggests that men were regularly envisaged as participants in seeking a solution to infertility, at least as far as providing urine.

A significant number of the remedies to make a woman conceive or make her conceive a boy also require men to play an active role. Of the 11 manuscripts which contain or once contained these remedies, eight are very similar (or seem to be, judging by their contents lists) and will be discussed first.³² Of the remaining three manuscripts, two – the Thornton manuscript and *Rw* – are significantly different from the others and will be discussed separately; and *S3* includes only one remedy, just after the end of the text. In the eight manuscripts which form the main group, the recipes' titles underline that they are designed to help men as well as women: 'To do a man gete [to get] child and a woman bere [to bear] child,' 'For to do man and woman to gete childre,' or 'Here be medicines to do a man to beget a child sooner and women to bear a child'.³³ Only one manuscript, *S4*, opts for a different title, the more general 'For Generation', but this could likewise encompass both sexes.³⁴ Several of the recipes which appear under these headings also make it clear that the man and the woman were both required to participate. Thus, the version of the first remedy given in the earliest manuscript to include it, *R0*, reads as follows:

Tak ye ballokes of an ald cok or of a yunge gryse to whiles yat it sukes and brin yam and mak poudre yar of and tak x. corns of pepre ore tinnes x. and mak poudres yar of, and do yis poudres to gedre and gif ye man to eten, and tak ye moder of ane hare and brin it and mak poudre, and do ye poudre of als many cornes of pepre and do yar to and gif ye woman, and lat yam ga to yair bed.

Take the testicles of an old cock or a young pig which is still suckling and burn them and make powder from them, and take ten peppercorns or ten *tinnes* [I have been unable to translate this] and make powder from them, and mix these powders together and give to the man to eat. And take the womb of a hare and burn it and make powder, and make powder from the same number of peppercorns and mix them and give to the woman, and let them go to their bed.³⁵

S2, *S4*, *Pp*, and *T1* require 50 instead of ten peppercorns, a change that would make the remedy more expensive but also more potent in raising the level of heat in the body.³⁶

Ro also includes a series of recipes derived from the *Trotula* to help a woman conceive a boy. The person who is expected to take action in these varies:

For to gete a knaue childe. Tak ye hame of a hare and ye modre and bryn yam and make poudre yar of and gif ye man and ye woman to drynk wyth wyne or yai ga to bed. Another. Tak ye ballok of ane hare and lat ye woman swelow it all hale or scho ga to bedd. Another. Tak wolle vnwaschen wyth all ye swete yar on and wete it in asses milk and bynd it to hir nauete to qwiles yat man lys hir by. Another. Tak ye lyuer and ye eyghen of ye frist grys yat ye sew has and brin yam and mak poudre yar of, and gif ye man yat may get na child at drynk yat poudre or he ga to bed, and ye woman als yat es barayne.

To get a male child. Take the skin of a hare and the womb and burn them and make powder from them, and give to the man and the woman to drink with wine before they go to bed.

Another. Take the testicle of a hare and let the woman swallow it whole before she goes to bed.

Another. Take unwashed wool with all the moisture on it and wet it in ass's milk and bind it to her navel while the man lies with her.

Another. Take the liver and the eyes of the first piglet that a sow has [given birth to] and burn them and make powder from them, and give the man who may get no child that powder to drink before he goes to bed, and also the woman that is barren.³⁷

S2, *S4*, *Pp* and *TI* also include these remedies, though *Pp* and *TI* omit the last one.³⁸ The first and last of these recipes require the man to take action but not alone: both partners are told to eat the appropriate powders and coordinate their actions so that they do so before they have sexual intercourse. Indeed, the first recipe differs from its ultimate source, the Latin *Trotula*, in requiring both the man and the woman to drink the powder made from the hare's womb and skin. In the Latin *Trotula*, only the man is told to prepare and drink the powder, which is made in this case from the hare's womb and vagina. Instead, the woman is told to take the powder made from a hare's testicles which in the *Liber de Diversis Medicinis* is listed as a separate recipe.³⁹

In these recipes, the assumption is that the couple will act together to improve their chances of conceiving. One consequence of this was that the couple were not required to identify who was infertile in order to benefit from them. Ingredients such as pepper, which raised the level of heat in the body, were also believed to improve the fertility of both men and women. As with the fertility test, then, these treatments offered reassurance and the possibility of a solution without the need to ascribe responsibility to one partner or the other.

Not every response to infertility was a joint one, however, and men were not always expected to participate in treatment. All these manuscripts also include recipes to be taken by the woman alone to aid conception, such as this one in *Ro*: 'Take the testicles of a hare and the testicles of a piglet and burn them to powder, and give the woman this powder to drink with wine

before she goes to bed'.⁴⁰ *T1* and *S2* add an extra one for the woman alone, in Latin, which is also found at the end of the *Liber* in *S3*: 'So that a woman conceives quickly, cook catmint with wine until it is reduced to a third [of its volume] and give it to her to drink on an empty stomach for three days'.⁴¹ Two of the four recipes to help a woman conceive a boy quoted above also require only the woman to take action, although the man perhaps would notice wool bound to the woman's navel during intercourse, so may have been expected to consent to its use. There are no equivalent remedies for the man to use alone. This suggests that although men were imagined as playing a role in infertility treatment, women's participation was viewed as more necessary and may have occurred more regularly. It therefore corresponds to some extent with the studies mentioned above, which have argued that medieval medical texts included more infertility treatments for women than for men; nevertheless, in the *Liber*, men take a more important role than is often suggested.

Moreover, two manuscripts of the *Liber* make men more prominent in infertility treatment. These are the Thornton manuscript and *Rw*. Keiser has shown that these two manuscripts are similar in content and were probably copied from the same exemplar, so it is not surprising that they include the same remedies to aid conception, but their approach is also noticeably different from that of the other manuscripts.⁴² Both these manuscripts include the bran-and-urine fertility test, but they only include one recipe to make a woman conceive, and none to conceive a boy. This one conception recipe is the recipe found in Latin in *S2*, *T1*, and *S3*, which requires the use of catmint in wine. In Thornton's and Rede's manuscripts this recipe is translated into English with a difference of emphasis. Now it is the husband who is imagined as seeking out the remedy, and it must be given to him, instead of the woman. In Thornton's copy:

If a man will þat a woman conceyue a childe sone: Tak nept & sethe it with wyne to the third part & gyf hym to drynke fastande thre dayes.

If a man wants a woman to conceive a child soon: Take catmint and boil it with wine until it is reduced to a third of its volume and give him to drink on an empty stomach for three days.⁴³

Rw gives this remedy twice on the same page (perhaps accidentally), and again the initiative of the husband or the male reader is emphasized:

If yu will yt a wyff conceyue of hir hosbond sone: Take nept [catmint] & seith it with wyne to ye iii. parte and gyff hym to drynk iii. dayes fastyng & ye grace of god withall had, it shall help [. . .]. If a man will yt a woman conseue a child sone: Tak nept and seith itt with wyne to the third part be lefft and gyff hym to drynke iii dais fastyng.

If you want a woman to conceive of her husband soon: Take catmint and boil it with wine until it is reduced to a third of its volume and give him to drink for three days on an empty stomach and with the grace of God it will help [. . .]. If a

man wants a woman to conceive a child soon: Take catmint and boil it with wine until a third is left and give him to drink for three days on an empty stomach.⁴⁴

It is possible that this change was not made deliberately but rather occurred when the remedy was translated from Latin into English. The Latin instruction *da ei bibere* could be translated as either 'give him to drink' or 'give her to drink', although the reference in the Latin to making a woman conceive suggests that 'her' would be the more likely translation. Even if this was a case of loose translation rather than deliberate adaptation, however, these two versions of the remedy present a response to infertility that places far more emphasis on the man, especially since they are not accompanied by any remedies to be taken by the woman.

The manuscripts of the *Liber de Diversis Medicinis* therefore present a range of possible male responses to infertility. Men are regularly imagined as playing a role in treatments to facilitate conception (or the conception of sons) by providing urine for tests and taking medicines before sex. In most recipes these men were presented as acting jointly with their wives rather than alone, and their participation was not always necessary. Nevertheless, Thornton and Rede's manuscripts show that it was possible to imagine men showing greater initiative in desiring and taking a remedy because they wanted their wives to conceive.

MEN'S AND WOMEN'S RESPONSES IN OTHER ENGLISH RECIPE COLLECTIONS

To what extent was this range of male responses typical of English medicine in this period? In the absence of a large-scale study it is impossible to answer this definitively, but other fourteenth and fifteenth-century recipe collections include similar remedies to those described in the *Liber*, as well as mentioning a number of other possibilities. The bran-and-urine test to see whether the man or woman is infertile is found in other fourteenth and fifteenth-century recipe collections.⁴⁵ Thus the idea of a man participating in a fertility test was likely to have been familiar to readers of medical recipes as well as readers of longer works such as the Latin *Trotula* or its English translations. Other fourteenth and fifteenth-century recipe collections also included recipes in which treatment was given to both the man and the woman similar to those in the *Liber*. For example, a fifteenth-century collection of recipes owned by one Master William Somers (about whom nothing else is known) recommends:

For default of issue of a man or woman: Take the testicles and the navel of a male pig who is the only one in the sow's litter, and dry them and make powder, and give this powder in the evening to the man who may not engender and to the barren woman.⁴⁶

However, like the *Liber*, Somers's manuscript also included other remedies for the woman only. One was a remedy 'for a woman who wants to conceive' where all the action was taken by her, including (it seems) the initiative to have sex: 'dry the testicles of a boar or a young male pig and make powder of them, and drink with wine, and then do her lay by her husband'.⁴⁷

Several recipe manuscripts which do not mention any male response to infertility at all also confirm the impression that the man's participation might be useful but was not essential. A collection which was probably put together in the fifteenth century by Nicholas Spalding (dates unknown), who may have been a medical practitioner, recommended bloodletting and two medicines to treat infertility caused by an excess of cold humours in the woman: 'For a woman who may bear no child because of cold blood: Let her blood and take *triasandali* and *diapendion* [two recognized medicines composed of a variety of ingredients] and take and lay them together with honey and eat from them each day, and [she will] have blood that is both hot and good'.⁴⁸

Another fifteenth-century manuscript (owner unknown) contains a highly detailed set of instructions for a religious cure which is implemented by the woman alone. She is to arrange a weekly mass in honour of St John the Baptist, at which she must be present. She must also have seven candles made in honour of the seven gifts of the Holy Spirit, and have them burning at these masses. If she does this, she will conceive within a year. There is no mention of the man's involvement.⁴⁹

However, although women's actions are described more often than men's, a minority of manuscripts do include recipes for the man to use alone, without the woman's participation. William Somers's manuscript includes one for a man who 'may not engender' which imagines him administering the treatment for his own infertility or sexual dysfunction ('may not engender' could refer to either condition): 'He should anoint his privy members with a bull's gall'.⁵⁰ A second collection of remedies of unknown provenance, probably copied in the fifteenth century, includes a remedy to be used by the man, even though it is implied that the woman is infertile: 'For to make a woman conceive, take an ointment of the brains of a crane and gander's fat and lion's fat and anoint the man's penis. If the woman might not before conceive, after that she shall'.⁵¹ As in Somers's collection, however, this remedy is accompanied by other recipes to be used by the woman alone: male initiative is only one of several possible responses.

A final and more unusual possibility is suggested by a late fourteenth and early fifteenth-century collection of medical, astrological, and divinatory works of unknown provenance. This manuscript includes no conception remedies for the woman but includes one for the man which not only requires him to take the initiative, but explicitly excludes the woman from active participation: 'So that a woman conceives: Give her mare's milk to drink without her knowledge and at once if someone has intercourse with her she will conceive'.⁵² Like many recipes, this one derives from an earlier Latin source: in this case from the late thirteenth-century *Marvels of the World* attributed to the philosopher Albertus

Magnus (d. 1280), which discussed the wondrous properties of natural substances.⁵³ Although the woman's husband is not explicitly mentioned, he is probably the most likely person to be able to give her mare's milk before sexual intercourse. Here a male reader is expected to take the initiative on his own behalf and not as part of a joint response to infertility.

A variety of medical recipe collections therefore assume that men will play a role in seeking out and using treatments to aid conception. This suggests that the *Liber de Diversis Medicinis* was not unique in its assumptions, and indeed it would be surprising if it were unique, since many medieval recipes drew on the same pool of earlier texts such as the *Trotula*. In several cases the men's role is imagined to be a more active one than in the *Liber*, and they are expected to apply treatments to themselves without any equivalent treatment to be applied to the woman; but, as in most manuscripts of the *Liber*, these male-initiative recipes are rarely the only possibility envisaged and they are not the most common. Nevertheless, in a minority of cases (as in a minority of manuscripts of the *Liber*) men are given a very prominent role and women's active participation is largely absent.

CONCLUSION

This chapter has only been able to scratch the surface of the source material for men's responses to infertility in the Middle Ages. Nevertheless, the evidence suggests that if we focus solely on whether men or women were believed to be the ones afflicted with infertility, we may underestimate the extent to which men were involved in responding to the condition. In some cases, joint participation in treatment may have been a way of avoiding the need to assign blame too closely to one partner: fertility tests could be used to show that the couple would conceive in time, while certain remedies include ingredients which increased both men's and women's fertility and could be taken by both partners. The requirement for the man and the woman to use some of these remedies together may suggest a means by which some knowledge of learned reproductive medicine was transmitted to some women, even if there is little evidence that women owned or read medical manuscripts themselves.

This evidence of men's responses to infertility, or responses jointly by the couple, is less abundant than evidence for women's responses, but it is nonetheless significant and reminds us that medieval men, like men in other periods, had much interest in their wives' fertility and desired information that would help them solve the 'problem' of infertility. Monica Green has discussed one example of this, the English landowner Humphrey Newton (1466–1536), who in the late fifteenth and early sixteenth centuries owned a copy of the *Trotula*, and copied into it extra recipes in Latin and English, including one 'Ffor to make a woman to conseyue child'. Green argues that this interest in gynaecology fits well with Newton's other interests in his estate and family.⁵⁴ It is difficult to make firm arguments about other men's hopes and fears from the manuscripts discussed here, but Newton was probably not alone in his interests. Among the

owners of the *Liber* is another landowner, Robert Thornton, who may have had similar concerns about lineage and family, while John Rede the priest may have treated those among the local gentry who did.

This evidence for men's interest in and responses to infertility is not unique to the Middle Ages. As noted above, scholars have found men taking action to help their wives conceive in other periods and, given that having children has been important in many societies for a variety of reasons which apply to men as well as women – as heirs, to provide support in old age, and as markers of adulthood among other things – it would be surprising to find a society in which men were not interested in aiding conception. Nevertheless it is possible that a 'joint' response to infertility fitted particularly well with marriage law as it operated in western Europe in the later Middle Ages. From the twelfth century onwards, the Church gradually established its jurisdiction over marriage and its position was that infertility was not a ground for annulling a marriage.⁵⁵ The inability to have sex was a ground for annulment, as long as the marriage had not been consummated, which is why studies based on medieval church court records discuss sexual dysfunction rather than infertility more broadly. However, men (or women) who were childless but sexually capable were in theory unable to separate and remarry in order to have a child. In practice it is not clear how far men and women did remain in childless marriages. The evidence is contradictory and the situation was probably very varied: informal separation and remarriage occurred but there is also evidence that at least some people knew the Church's rules on marriage and took them seriously.⁵⁶ If this was the case, it would be in men's interests to seek solutions to infertility alongside their wives.

Further study of other periods and other places will shed more light on how far the rules relating to marriage and divorce may influence men's, or women's, responses to infertility: their emotional, legal, and religious responses, as well as medical ones. Other factors, including social status, income, and the kinds of medical and non-medical treatment available, are also likely to play crucial roles in determining who seeks out what sort of treatment. As the history of infertility develops and scholars explore this issue in greater detail for medieval and other societies, it is important to discuss the roles of both sexes, both as they relate to ideas about the causes of infertility, and the responsibility for seeking a cure.

NOTES

1. Jean-Claude Bologne, *La naissance interdite: Stérilité, avortement, contraception au Moyen Age* (Paris, 1988), pp. 62–3; Sylvie Laurent, *Naître au Moyen Age* (Paris: 1989), pp. 49–5; Joan Cadden, *Meanings of Sex Difference in the Middle Ages* (Cambridge, 1993), pp. 241–3.
2. Amy Lindgren, 'The Wandering Womb and the Peripheral Penis: Gender and the Fertile Body in Late Medieval Infertility Treatises'. Ph.D. thesis, University of California, Davis, 2005. Editions include Pedro Conde Parrado, Enrique Montero Cartelle and María Cruz Herrero Ingelmo (eds), *Tractatus de Conceptu, Tractatus de Sterilitate Mulierum* (Valladolid, 1999).

3. Laurent, *Naitre au moyen âge*, p. 48; Shulamith Shahar, *Childhood in the Middle Ages* (London and New York, 1990), p. 37; Deborah Youngs, *The Life Cycle in Western Europe c.1300-c.1500* (Manchester, 2006), p. 43.
4. Cadden, *Meanings*, pp. 249–53; Parrado, Cartelle and Herrero Ingelmo (eds), *Tractatus de Conceptu*, p. 23; Kristen Geaman, 'Childless Queens and Childlike Kings: Negotiating Royal Infertility in England, 1382–1471'. Ph.D. Thesis, University of Southern California, 2013, p. 77.
5. Catherine Rider, 'Men and Infertility in Late Medieval English Medicine', *Social History of Medicine*, 29:2 (2016), pp. 245–66.
6. See for example Frederick Pedersen, 'Privates on Parade: Impotence Cases as Evidence for Medieval Gender', in Per Andersen, Mia Münster-Swendsen and Helle Vogt (eds), *Law and Private Life in the Middle Ages* (Copenhagen, 2011).
7. Laurence M.V. Totelin, *Hippocratic Recipes: Oral and Written Transmission of Pharmacological Knowledge in Fifth- and Fourth-Century Greece* (Leiden, 2009), p. 118; Rebecca Flemming, 'The Invention of Infertility in the Classical Greek World: Medicine, Divinity and Gender', *Bulletin of the History of Medicine*, 87:4 (2013), p. 575.
8. Helen Berry and Elizabeth Foyster, 'Childless Men in Early Modern England', in Helen Berry and Elizabeth Foyster (eds), *The Family in Early Modern England* (Cambridge, 2007), pp. 172–3.
9. Fiona Harris-Stoertz, 'Pregnancy and Childbirth in Twelfth- and Thirteenth-Century French and English Law', *Journal of the History of Sexuality*, 21 (2012), p. 264.
10. Monica H. Green, *Making Women's Medicine Masculine: The Rise of Male Authority in Pre-Modern Gynaecology* (Oxford, 2008), pp. 194–6.
11. Becky R. Lee, 'A Company of Women and Men: Men's Recollections of Childbirth in Medieval England', *Journal of Family History*, 27 (2002).
12. Berry and Foyster, 'Childless Men', pp. 178–81; Patricia Crawford, *Blood, Bodies and Families in Early Modern England* (London, 2004), pp. 38–40.
13. Linda Ehksam Voigts, 'Multitudes of Middle English Medical Manuscripts, or the Englishing of Science and Medicine', in Margaret R. Schleissner (ed.), *Manuscript Sources for Medieval Medicine: A Book of Essays* (New York, 1995), p. 192.
14. See Päivi Pahta and Irma Taavitsainen, 'Vernacularization of Scientific and Medical Writing in its Sociohistorical Context', in Irma Taavitsainen and Päivi Pahta (eds), *Medical and Scientific Writing in Late Medieval English* (Cambridge, 2004); Linne R. Mooney, 'Manuscript Evidence for the Use of Medieval English Scientific and Utilitarian Texts', in Richard Firth Green and Linne R. Mooney (eds), *Interstices in Middle English and Anglo-Latin Texts in Honour of A. G. Rigg* (Toronto, 2004).
15. Mooney, 'Manuscript Evidence', p. 186.
16. Mooney, 'Manuscript Evidence', p. 188.
17. Margaret S. Ogden (ed.), *The Liber de Diversis Medicinis in the Thornton Manuscript (MS Lincoln Cathedral A.5.2)*, Early English Texts Society o. s. 207, revised edn (London, 1969), pp. x-xiv; George R. Keiser, 'Robert Thornton's "Liber de Diversis Medicinis": Text, Vocabulary and Scribal Confusion', in Nikolaus Ritt and Herbert Schendl (eds), *Rethinking Middle English: Linguistic and Literary Approaches* (Frankfurt, 2005), p. 33.

18. Monica H. Green, 'The Possibilities of Literacy and the Limits of Reading: Women and the Gendering of Medical Literacy', in Monica H. Green, *Women's Healthcare in the Medieval West* (Aldershot, 2000), pp. 45–7.
19. Peter Murray Jones, 'Witnesses to Medieval Medical Practice in the Harley Collection', *Electronic British Library Journal* (2008), p. 3; Mooney, 'Manuscript Evidence', p. 188.
20. Keiser, 'Robert Thornton's "Liber de Diversis Medicinis"', pp. 30–41.
21. Ogden, *Liber de Diversis Medicinis*, pp. 44, 56–7.
22. Henry Hargreaves, 'Some Problems in Indexing Middle English Recipes', in A. S. G. Edwards and Derek Pearsall (eds), *Middle English Prose: Essays on Bibliographical Problems* (New York and London, 1981), p. 92.
23. Jennifer Evans, *Aphrodisiacs, Fertility and Medicine in Early Modern England* (Woodbridge, 2014), pp. 90–100; On catmint, see Monica H. Green (ed. and trans.), *The Trotula: An English Translation of the Medieval Compendium of Women's Medicine* (Cambridge, 2001), p. 91.
24. Evans, *Aphrodisiacs*, pp. 116–20.
25. Keiser, 'Robert Thornton's "Liber de Diversis Medicinis"', p. 40. For dates see George R. Keiser, *A Manual of the Writings in Middle English*, vol. 10 (New Haven, CT, 1998), p. 3841. I have consulted all manuscripts except *Cp*, where I have used the edition in Tony Hunt and Michael Benskin (eds), *Three Receptaria from Medieval England: The Languages of Medicine in the Fourteenth Century* (Oxford, 2001), and the Thornton Manuscript, where I have used Ogden, *Liber de Diversis Medicinis* and Derek S. Brewer and A. E. B. Owen, *The Thornton Manuscript (Lincoln Cathedral MS 92)* (London, 1975).
26. 'To wyte qweyer it es lange on ye man or on ye woman yat scho bers na childe.' *Ro*, f. 65r.
27. *Ar*, f. 41r; *Mn*, f. 3r; *Pp*, p. 103; *Rw*, f. 41v; *Sl*, f. 4v; *S2*, f. 155v; *S4*, f. 45r; *Tl*, f. 239v; Ogden, *Liber de Diversis Medicinis*, p. 56.
28. 'yan may men help yam to haue child thorgh medicynes'. *Ro*, f. 65r-v.
29. Totelin, *Hippocratic Recipes*, pp. 181–2.
30. Green, *Trotula*, pp. 76–7.
31. 'Nota bene hic': Ogden, *Liber de Diversis Medicinis*, p. 56.
32. *Ar*, *Mn*, *Pp*, *Ro*, *Sl*, *S2*, *S4*, *Tl*.
33. *Ro*, f. 63v; *S2*, f. 155v; 'Her ben medicines to don a man þe rapere to bigeten a child and wimmen to beren a child.' *Pp*, p. 103. See also *Tl*, f. 239v; *Ar*, f. 41r; *Mn*, f. 3r and *Sl*, f. 4v.
34. *S4*, f. 45r.
35. *Ro*, ff. 63v-64r.
36. *S2*, f. 155v; *S4*, f. 45r, *Pp*, p. 103, *Tl*, f. 239v.
37. *Ro*, ff. 64v-65r; Cf. Green, *Trotula*, p. 77.
38. *Pp*, p. 103; *Tl*, f.239v; *S2*, ff. 155v-156r; *S4*, ff. 45r-v.
39. Green, *Trotula*, p. 77.
40. 'Tak ye ballokes of a hare and ye ballokes of a grys [piglet] and brin yam to poudre and gif ye woman to drynk yis poudre wyth wyne or scho ga to bed.' *Ro*, f. 64r.
41. 'Anoper vt mulier cito concipiat neptam cum vino coque ad. iiii. partem et da ei bibere ieiuno stomacho per iiii. dies.' *Tl*, f. 240r. Cf. *S2*, f. 156r; *S3*, f. 50v.
42. Keiser, 'Robert Thornton's "Liber de Diversis Medicinis"', pp. 32–8.
43. Ogden, *Liber de Diversis Medicinis*, p. 56.
44. *Rw*, f. 41v.

45. For example Warren R. Dawson (ed.), *A Leechbook or Collection of Medical Recipes of the Fifteenth Century* (London, 1934), p. 171; Willy Louis Braekman (ed.), *Studies on Alchemy, Diet, Medecine [sic] and Prognostication in Middle English, Scripta*, 22 (Brussels, 1986), p. 134.
46. 'For defaut of issue of man or woman: Tak þe ballokes and þe midrefe of a pyg male, whan þe sowe fallouþ bote one [when the sow has only given birth once], and dre hem and make poudre, and 3if [give] þis pouder ate euene to þe man þat may no3t engendre, and to þe woman barayn.' Braekman, *Studies*, p. 133.
47. Braekman, *Studies*, p. 133.
48. 'For a wommane yt may not bere no chyld for colde blode: Take and let hire blode and take *triasandali* and *diapendion* [two recognized medicines composed of a variety of ingredients] and take and ley yem togedere with hony and ete iche day yerof and [she will] haue blode bothe hote and gode.' London, British Library MS Harley 2378, f. 57v. On the ownership of the manuscript see the British Library catalogue entry: [http://searcharchives.bl.uk/primo_library/libweb/action/dlDisplay.do?docId=IAMS040-002032704&vid=IAMS_VU2&indx=1&dym=false&dcnt=1&onCampus=false&group=ALL&institution=BL&ct=search&vl\(freeText0\)=040-002032704&vid=IAMS_VU2](http://searcharchives.bl.uk/primo_library/libweb/action/dlDisplay.do?docId=IAMS040-002032704&vid=IAMS_VU2&indx=1&dym=false&dcnt=1&onCampus=false&group=ALL&institution=BL&ct=search&vl(freeText0)=040-002032704&vid=IAMS_VU2). Accessed 6 December 2016.
49. London, British Library MS Sloane 783b, f. 168v.
50. 'Do hym enyont his priue membres wiþ þe galle of a bullock.' Braekman, *Studies*, p. 129.
51. 'For to make a woman for to conceyue tak an oynement of ye braynes of a crane and ganderes grece & lyones grece and anoynte ye mans 3erde. If ye wyman my3te nouth be forn conceyue after yat sche xal.' London, British Library MS Sloane 706, f. 169r.
52. 'Ut mulier concipiat: Da sibi lac equinum ipsa ignorante ad bibendum et statim si quis cum ea coerit, concipiet.' Harvard University, Houghton Library MS lat. 235, ff. 20v-21r. On this manuscript see Linda Ehram Voigts, 'A Handlist of Middle English in Harvard Manuscripts,' *Harvard Library Bulletin*, 33 (1985).
53. Antonella Sannino, *Il De Mirabilibus Mundi tra tradizione magica e filosofia naturale* (Florence, 2011), p. 127.
54. Green, *Making Women's Medicine Masculine*, pp. 194–5.
55. James A. Brundage, *Law, Sex and Christian Society in Medieval Europe* (Chicago, IL, 1987), p. 201.
56. Brundage, *Law*, pp. 453–4; Frederick Pedersen, 'Did the Medieval Laity Know the Canon Law Rules on Marriage? Some Evidence from Fourteenth-Century York Cause Papers,' *Mediaeval Studies*, 56 (1994), pp. 150–2.

RESEARCH RESOURCES

- Helen Berry and Elizabeth Foyster, 'Childless Men in Early Modern England', in Helen Berry and Elizabeth Foyster (eds), *The Family in Early Modern England* (Cambridge: Cambridge University Press, 2007), 158–83.
- James A. Brundage, *Law, Sex and Christian Society in Medieval Europe* (Chicago, IL: University of Chicago Press, 1987).
- Joan Cadden, *Meanings of Sex Difference in the Middle Ages* (Cambridge: Cambridge University Press, 1993).

- Warren R. Dawson (ed.), *A Leechbook or Collection of Medical Recipes of the Fifteenth Century* (London: Macmillan, 1934).
- Jennifer Evans, *Aphrodisiacs, Fertility and Medicine in Early Modern England*, (Woodbridge: Boydell and Brewer, 2014).
- Rebecca Flemming, 'The Invention of Infertility in the Classical Greek World: Medicine, Divinity and Gender', *Bulletin of the History of Medicine*, 87:4 (2013), 565–90.
- Monica H. Green, *Making Women's Medicine Masculine: the Rise of Male Authority in Pre-Modern Gynaecology* (Oxford: Oxford University Press, 2008).
- Monica H. Green, 'Bodies, Gender, Health, Disease: Recent Work on Medieval Women's Medicine', *Studies in Medieval and Renaissance History*, 3rd ser. II (2005), 1–46.
- Monica H. Green (ed. and trans), *The Trotula: An English Translation of the Medieval Compendium of Women's Medicine* (Cambridge: Cambridge University Press, 2001).
- Deborah Youngs, *The Life Cycle in Western Europe c.1300-c.1500* (Manchester: Manchester University Press, 2006).

The Ancient Medical Sources in the Chapters about Sterility of Rodrigo de Castro's *De universa mulierum medicina*

Cristina Santos Pinheiro

INTRODUCTION

In past societies, bodies, sex, and gender were experienced in very different ways. Ancient medical texts allow us to access a whole set of issues relating to family and sexuality in the past that would otherwise be difficult or even impossible to appreciate. For centuries, Greek and Roman authorities were cited, commented upon, and revised. New approaches to Greek and Roman medicine have allowed scholars to break new ground on the cultural and intellectual frameworks characterized by different perceptions of body and health.¹ In spite of these differences, or perhaps because of them, ancient texts can be a useful background against which later texts can be read and understood.

Rodrigo de Castro (1546–1627/9), also known as Rodericus a Castro Lusitanus, was a Portuguese physician of Jewish birth. After pursuing his studies in medicine at the University of Salamanca, he seems to have achieved some notoriety in Lisbon. He was invited to travel to India to study medicinal plants, but declined King Philip II's invitation;² he also worked as physician to the soldiers of the Spanish Armada before they set sail from Lisbon.³ Around 1590, he fled the persecution of the Jews, establishing himself in Hamburg, where he edited his most important book, *De universa mulierum medicina*. This was the first treatise about women's diseases written by a Portuguese author, and remained extremely influential in Europe many years after the author's death.

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Edited for the first time in Hamburg in 1603, *De universa* underwent numerous successive editions and revisions (Hamburg, 1617, 1628, 1662; Venice, 1644; Cologne, 1689), which attest to its popularity.⁴ The full title of the first edition was *De universa mulierum medicina, Novo et antehac a nemine tentato ordine absolutissimum opus; studiosis omnibus et utile, vero medicis pernecessarium* ('A complete book about the comprehensive medicine of women, with a new organization by no one else attempted before; useful to all scholars, but extremely necessary to physicians'). Written in Latin, as was the practice at that time, the book was edited in two separate volumes. Part I, about theory, was entitled *De natura mulierum* ('On female nature') and was divided into four books: (1) Anatomy of the uterus and breasts; (2) Seed and menstruation; (3) Intercourse, conception, and pregnancy; (4) Childbirth and breastfeeding. Part II, *De morbis mulierum* ('On female diseases') was more practical in nature, but was also divided into four books: (1) Diseases common to all women; (2) Diseases of widows and virgins; (3) Diseases related to generation and pregnancy; (4) Puerperal and wet-nurses' diseases.

As was usual in this kind of medical text, authors often turned to the authorities of the past in order to consolidate and justify their own opinions, yet frequently they failed to identify the sources which they drew upon. Castro's massive gynaecological treatise is a good example of the confluence of the ancient and scholastic traditions with early modern trends in science, medicine, and gynaecology. Evaluating the classical and Arabic heritage – Hippocrates, Aristotle, Pliny, Galen, Averroes, Avicenna – Castro established a complex dialogue between the traditional ideas of the past and the authors of his own time, all important names in the history of European medicine, such as Amato Lusitano (1511–68), Luis de Mercado (1525–1611), Martin Akakia (1539–88), Ambroise Paré (1510–90), François Rousset (1530–1603), and Girolamo Mercuriale (1530–1606), whom he cited and commented upon. However, above all, the influence of Galen (129–216/217) is omnipresent. For centuries, Galenic theories had moulded European medicine, especially through Arabic and Syriac translations, and were the basis of learned medicine in Europe. Consolidated and developed by the Arabs, Galen's ideas were taught at the universities and maintained his status as an undisputed authority well into the seventeenth century.

For the purposes of this chapter, I will focus upon the section of *De universa* which examines sterility. We can thereby understand how Castro accounted for the inability to conceive, and how he respectively established female and male responsibility for failure in conception. More broadly, I will investigate how ancient Greek and Roman texts about women's diseases and specifically about sterility were used by Castro, who relied upon ancient medical, biological, and philosophical texts to structure his own views. Finally, analysis of the *scholium*, a commentary appended to this sterility section entitled 'On sterile women', will highlight some of the cultural and moral issues in Castro's thought.

GENDER IN EARLY MODERN MEDICINE

The presence of ancient texts is clearly evident in early modern medicine. Classical medical tradition had been central to Western medical learning, but from the later decades of the fifteenth century, the philological study, editing and translation of Greek medical texts made fuller knowledge of ancient medicine available to a wider audience. In particular, the Latin translation by Marcus Fabius Calvus (d. 1527) of the Hippocratic Corpus, published in 1525, generated a new interest in Hippocrates (c. 460–c. 370 BCE).⁵ The Hippocratic Corpus is a heterogeneous collection of around 60 medical texts, the majority dating from the fifth and fourth centuries BCE, and traditionally ascribed to Hippocrates. These writings cover a wide range of topics, including women's diseases, reproduction, and infertility. Both in Latin translation and in the original Greek language, these editions were an important stimulus to the establishment of Hippocrates as an authority on women's diseases and to the remarkable increase in published books on this subject between the sixteenth and seventeenth centuries.

Early modern treatises about women's diseases have aroused some interest in recent decades. Notably, they have been exploited to offer key arguments against Thomas Laqueur's thesis that the idea of incommensurable anatomical difference between the sexes was an eighteenth-century invention. Laqueur argued that before this time, the 'one-sex model' held sway. His 'one-sex model' theory is based on the Galenic notion that the female body was identical to the male's, but turned inside out, so whereas the sexual organs were identical in both sexes, the male's were located on the exterior of the body, and the female's were internally contained. As such, the scrotum was considered the equivalent of the uterus, the testes of the ovaries, the penis of the cervix and vagina, and so forth. Laqueur therefore asserts that in this model 'the boundaries between male and female are of degree and not of kind'.⁶ Scholarly revisions of Laqueur's thesis, which draw heavily upon Hippocratic gynaecology, prove that there was, in fact, a conception of the female body as fundamentally different.⁷ The text that Laqueur cites as evidence – Galen's *The usefulness of the parts*, 14.6 – is not, as we shall see, the strongest basis for a whole theory of sexual differentiation. In addition, as Laqueur's critics have demonstrated, this notion had long coexisted with a 'two-sex model'. The idea of two sexes with very different physical forms was, as Helen King rightly asserts, already present in the Hippocratic gynaecological texts.⁸

This 'two-sex model' is further reflected in humoral theory. Ancient medicine was firmly based on the idea of balance: between four humours (phlegm, blood, bile, and black bile), or the four qualities of hot and cold, moist and dry. It was believed that an imbalance of these factors produced an unusual state of body and mind, and so caused disease. In its natural state, the Hippocratic female body was considered to be hot, moist, and spongy, whereas the male was cold, dry, and firm. In the Hippocratic Corpus, the opposite traits ascribed to the sexes were used as a rudimentary system for explaining different

pathologies and different reactions to the same disease, and justified separate treatment regimes for men and women.

While humoral theory was never a systematic or entirely uniform theory in ancient times, throughout late antiquity and the Middle Ages, authors like Galen's followers and others developed it into a more or less cohesive method of diagnosis. By Castro's times, the uneven proportion of the qualities was called *intemperatura* or *intemperamentum*. This could mean either an overwhelming abundance or a deficiency of one of the qualities (hot/cold/dry/moist), or a combination of two (hot and dry, hot and moist, cold and dry, cold and moist). This imbalance was supposed to have physical and psychological consequences. For instance, hot (*calida*) women were thought to be more active and eager for sex than cold ones. Cold and moist women were largely uninterested in sex, and produced a thin, watery, and infertile semen that engendered female children. This is in fact an Aristotelian concept: the idea that, in a scale that ranges from the male (located at the top) to a monster (at the bottom), to beget a female is to fall short of perfection.

Assertion of difference between the sexes is seen in the Hippocratic treatise *Diseases of Women*, where the author criticizes doctors for treating women with serious diseases as if they were men:

Ἄμα δὲ καὶ οἱ ἰητροὶ ἀμαρτάνουσιν, οὐκ ἀτρεκέως πυνθανόμενοι τὴν πρόφασιν τῆς νόσου, ἀλλ' ὡς τὰ ἀνδρικὰ νοσήματα ἰόμενοι· καὶ πολλὰς εἶδον διεφθαρμένας ἤδη ὑπὸ τοιούτων παθημάτων. Ἀλλὰ χρηὶ ἀνερωτῶν αὐτίκα ἀτρεκέως τὸ αἴτιον· διαφέρει γὰρ ἡ ἵησις πολλῶ τῶν γυναικῶν νοσημάτων καὶ τῶν ἀνδρώων. (*Diseases of Women*, 1.62)

At the same time the doctors also make mistakes by not learning the apparent cause through accurate questioning, but they proceed to heal as though they were dealing with men's diseases. I have already seen many women die from just this kind of suffering. But at the outset one must ask accurate questions about the cause. For the healing of the diseases of women differs greatly from the healing of men's diseases.⁹

What the text asserts is difference, not similarity. Likewise, in the Hippocratic text *Places in Men*, the womb was classified as 'the cause of all diseases' in women. No similar claim, to my knowledge, was ever made about the male genitals, and certainly not about the scrotum. Female pathologies were understood to be caused by organs and physiological processes that were absent in men. In Hippocratic gynaecology, menstrual regularity was considered a prerequisite for women's wellbeing. This also had no equivalent in men. In short, not only can we detect a manifest difference between the two sexes in these medical writings; we might consider them as opposites.

It was, to be fair, very challenging to analyse the interior reproductive structures of the female body with the scarce technical means that Greek and Roman physicians had at their disposal. It was therefore very common to describe the inner processes of the body using comparisons and metaphors.

As explored further in Laurence Totelin's chapter in this volume, the development of the embryo was likened to the growth of a plant (*Nature of the Child*, 22), while a foetus presenting abnormally was compared to an olive pit, stuck inside a small mouthed oil-flask (*Diseases of Women*, 1.33). Many of the inner physiological processes were the object of theoretical speculation, so it was also common for medicine and philosophy to overlap. Galen's own theories about reproduction were much indebted to the Aristotelian tradition, and its belief, supported by theological, philosophical and medical arguments, in the inferiority of women (that women were colder than men, and as such unable to concoct blood into semen).

The study of medical theory and practice during the Renaissance, strongly influenced by the rediscovery of ancient texts, helps us to understand the dynamics of a trend toward sexual dimorphism that was inherited from the past, and not invented in the eighteenth century, as Laqueur proposed. According to Patricia Simons, Galen's supposed 'one-sex model' was never 'a complex theory of sexual oneness'.¹⁰ Moreover, his treatise *De usu partium*, where the female reproductive organs were said to be equivalent to the male's, the difference being merely the position, had a very limited circulation in the West before the fifteenth century.¹¹ Indeed, because Galen never wrote a comprehensive treatise on gynaecology, his influence on the subject was limited.

In the West, Soranus of Ephesus' (fl. 98–138) *Gynaikēia* put forward arguably the most influential set of ideas relating to women's diseases.¹² Soranus was a physician of Greek origin who lived in Rome in the beginning of the second century. In writing his gynaecological treatise he had in mind an audience of midwives, who knew the Greek language and seem to have been highly skilled, both in practice and theory. Soranus himself owed much to Herophilus of Alexandria (330/320–260/250 BCE), especially in the assertion that women's bodies functioned in the same way that men's did, the only differences residing in processes that were exclusive to women like conception, pregnancy, parturition, and breastfeeding. Soranus wrote:

καὶ <Ἡρόφιλος ἐν τῷ Μαιωτικῷ> φησι τὴν ὑστέραν ἐκ τῶν αὐτῶν τοῖς ἄλλοις μέρεσι πεπλεγθῆαι καὶ ὑπὸ τῶν αὐτῶν δυνάμεων διοικεῖσθαι καὶ τὰς αὐτὰς παρακειμένας ἔχειν ὕλας καὶ ὑπὸ τῶν αὐτῶν αἰτιῶν νοσοποιεῖσθαι [. . .]: οὐδὲν οὖν ἴδιον πάθος γυναικῶν πλὴν τοῦ κυῆσαι καὶ τοῦ τὸ κυηθὲν ἐκθρέψαι καὶ ἀποτεκεῖν καὶ τὸ γάλα πεπᾶναι καὶ τὰ ἐναντία τούτοις. (*Gynaikēia*, 3.3)

Herophilus, moreover, in his 'Midwifery' says that the uterus is woven from the same stuff as the other parts, and it is regulated by the same forces, and it has available the same substances, and that it suffers disease from the same causes [. . .]. Consequently, there is no condition in women peculiarly their own except conception, pregnancy, parturition, lactation, and conditions antagonistic to these.

It should be noted that Soranus' treatise was not known in the West in its original Greek form until the rediscovery in the nineteenth century of the only

extant manuscript. It was instead known through translations, adaptations, and excerpts that figured in later texts, such as those of Oribasius of Pergamum (c. 325–400), Aëtius of Amida (fl. 530) and Paul of Aegina (fl. 630). Latin translations proved the most important vehicle for Soranus' theories, especially one by an unknown author whose name is variously given as Mustio, Muscio or Moschion. These Latin versions were more accessible and purged much of the theoretical and etymological material in Soranus' original. They transmitted a brief, clear, and practical account of Soranus' book, rearranged in a question-and-answer format. Mustio's popular *Genecia* (Latin equivalent for *Gynaikeia*) circulated in Europe for centuries. It was included in the *Gynaeciorum libri*, an extensive Latin compendium of ancient and contemporary texts about gynaecology, first published in 1566.¹³ This compendium was very important in the configuration of gynaecology as a valid field of medicine, consolidating the perspective, derived from the ancients, that this area was not under women's exclusive control.

In early modern writings about women's diseases and female nature, ancient texts which described women as essentially different or inferior to men were also re-evaluated in the light of new discoveries, such as the identification of the clitoris, the ovaries and fallopian tubes (already known in antiquity, but misunderstood), and the practice of caesarean section. Although these discoveries may seem to us innocuous or irrelevant, they arguably challenged a whole set of cultural, social, religious, and legal ideas relating to motherhood, embryology, female sexuality, and pleasure, and even the concept of the soul. Therefore, these treatises were not only about female pathologies and conditions. They embraced topics including medicine, religion, philosophy, and law.

CASTRO AND STERILITY

Hippocrates, Aristotle, and Galen are the most important ancient authorities in Castro's *De universa*. These three authors are especially visible where Castro expounds his ideas about conception. The most important question in ancient theories about conception was whether or not women contributed seed to the generation of the embryo. In the Hippocratic Corpus, the mixture of both male and female seed seems to be implied; whereas in Aristotle's biology, women were considered to have no intervention in conception beyond the material and nutritive element provided by menstrual blood. As women were deemed colder than men, they were believed to lack the ability to transform blood into semen, menstrual blood being an intermediate product in this process. Herophilus had identified the ovaries, unknown or at least unmentioned by his predecessors. He went further, to ascertain that women produced semen, but failed to identify the connection between the ovaries and the uterus: therefore he thought that female semen was excreted through the bladder.¹⁴ Some centuries later, Galen advocated a two-seed theory, recognizing the intervention of the mother, but he claimed a difference in importance:

female seed was less powerful than male. Following Aristotle, the Galenic theory of conception assumed that male seed was more dynamic and acted upon the female menses to fashion blood as a sculptor shaped clay.¹⁵

Castro discussed all of these theories in his chapter ‘Does woman have semen and what it provides to the formation of the foetus?’.¹⁶ He endorsed Galen’s thesis that women did produce semen, and that this semen was crucial in generation. To Castro, this was a sign of God’s providence:

Disponens enim omnia benigne et suaviter Deus, non uni sexui, sed utrique generationis opus commisit, ut foemina voluntaria congregaretur, non solum oblectamento, et delectatione illecta, sed etiam ut sui individui substitutio, et similitudo quoque fieri posset, duraret. (Part 1, Book 2, Chapter 3, p. 45)

Because arranging everything in a benign and tender way, God trusted the task of generation not to one sex alone, but to both, so that women would in their own free will join men, not just enticed by pleasure and delight, but also so that their substitution as an individual and their resemblance could continue as possible.

Thus, the sexes were said to have complementary roles in generation. Women and men were both needed in order to beget children. The differences arose from a natural, indeed a divine, necessity.

In the preface to the first volume, Castro explains why he decided to write the treatise: out of compassion for the poor women who suffered from many diseases, some similar to men’s afflictions, but others ‘completely different’ (‘plane diversis’). Otherness is construed here not as inferiority, but as complementarity. In spite of the undeniable Galenic influence, Castro expresses his doubts about the humoral explanation for why the female genitals were internal, stating that lack of heat was not sufficient cause. ‘Then’, he asks, ‘why do the bladder and the kidneys and the other organs remain in the interior of the male body?’ (Part 1, Book 3, Chapter 8). The differences between the sexes were too many and too important to be explained by this one factor. In order to support his theories, Castro drew upon Hippocratic authority.

In Part II, Book 1 discusses diseases that are common to all women,¹⁷ and Book 2 considers diseases that affect virgins and widows,¹⁸ especially old virgins and young widows. Widows and virgins were perceived as problematic categories of women because they were women who should be married. In the Hippocratic Corpus, they were assumed to be particularly prone to disease, especially to the abnormal movements of the uterus and the retention of the menses. At the beginning of Book 3, we then find a section comprising five chapters plus an autonomous part which Castro called a *scholium*, the Latin word for a comment or a short note. This section, entitled *De sterilibus* (On sterile women), begins with a definition of sterility: ‘Sterility is some sort of inability or difficulty that a woman who sleeps with a man has in conceiving at the convenient time’.¹⁹ Four types of sterility are described: sterility caused by a natural and known defect;²⁰ sterility caused by the relationship between

husband and wife;²¹ sterility caused by an illness or ‘diverse pathology’;²² and sterility related to time, that is, of a woman who after the birth of the first or second child has become sterile.²³

Each of these categories is discussed in Chapters 1–4. Chapter 5 is about male sterility, because, as Castro explains at the beginning of the chapter, male sterility accidentally makes women sterile, too. It might come as a surprise that male diseases and the welfare of men are mentioned often in a gynaecological treatise. However, this may be explained by the fact that complementarity between the sexes seems to have been central to Castro’s ideas about generation. Several times, Castro recommends a therapy for the wife and a similar or additional one for the husband, such as that ‘the husband should wash his feet in the same decoction’,²⁴ or that ‘the husband, after washing his feet, must anoint the penis with frankincense’.²⁵

In fact, ancient texts considered sterility as a problem of both men and women. The Pseudo-Aristotelian *History of Animals*, 10 (633b–13–14), opens with the statement that failure to beget children resides sometimes in both partners, sometimes in one or in the other.²⁶ Likewise, Mustio’s version of Soranus’ treatise on gynaecology provides the following definition of sterility:

Sterilitas commune vitium est et masculis et feminis, et de pluribus causis evenire solet [...]. Haec ergo sterilitas efficitur cum aut masculus aut foemina aliquam valetudinem corporis habent aliquando universi, aliquando partium illarum conceptui necessariarum. (2.16 (51))

Sterility is a problem common to men and women that can usually originate from multiple causes [...]. Sterility happens when either the male or the female has some physical disease, sometimes in the whole body, sometimes in those body parts which are necessary for conception.

This consideration of male sterility is frequently encountered in early modern treatises about women’s diseases, which often began by asserting that sterility might be caused by women’s or men’s problems. Definitions of sterility in these texts closely follow Mustio’s assertion. For instance, in his *De morbis mulierum curandis*, Nicholas de la Roche begins Chapter 20 about sterility by stating that ‘there are two causes of sterility: one that comes from the man, and the other from the woman’.²⁷ In the same way, Christoph Funcke, in his treatise about female sterility, *Theses de sterilitate muliebri* (1615), declared that sterility was a pathology common to men and women. Complementarity is an important feature of these approaches. Early modern medical writings about women’s diseases usually included a chapter about sterility caused by incompatibility (*per collationem*). For some reason, spouses might not conceive together, but could conceive with other sexual partners. This is also an ancient idea that we can find even in a text like Lucretius’ (c. 99–55 BCE) *De rerum natura*, a didactic poem about Epicurean philosophy, suitably cited – and not infrequently – by Castro.

In order to conceive and beget children, it was also deemed crucial that the couple indeed comprised a man and woman; that is, that neither partner

deviated from patterns considered to be normal. Deviant categories – eunuchs, spadones (impotent or sterile people), hypospadias (boys with malformed penises), viragoes, and the like – were sterile or, at least, assumed by doctors to have difficulty in conceiving children. Female infertility might be diagnosed from external signs of deviance: the hoarse sound of a woman’s voice, black and thick hair in her genital parts, and the look of the *virago*, the masculine woman, whom Castro described as a hot woman with solid, compact flesh. These signs of deviance were, in fact, considered to be typical features in men. The appearance of female sterility had much to do with not looking feminine.

To diagnose sterility, Castro recommended the much debated Hippocratic scent therapy, especially when describing the tests physicians might use to determine whether a woman could conceive or not. These fertility tests were based on the use of aromatic substances, such as garlic, saffron, incense, or frankincense. One is described as follows: ‘garlic used in a pessary put in the genital parts of a woman and left overnight. If the next morning, she feels the taste and the odour of garlic in her mouth, she is fertile. Otherwise, she is not’.²⁸ The same test is mentioned in the Hippocratic *On Sterile Women*, 214:

Ἄλλο· μάλυζαν σκορόδου περικαθήραντα τὴν κεφαλὴν, ἀποκνίσαντα, προσθεῖναι πρὸς τὴν ὑστέριν, καὶ ὀρῆν τῇ ὑστεραίῃ, ἣν ὄζει διὰ στόματος· καὶ ἣν ὄζει, κυήσει· ἣν δὲ μὴ, οὐ.

Another [test]: snip off a head of garlic; clean it, and put it in her womb. On the next day check to see if she smells the odour in her mouth: if she smells it, she will conceive, but if not, then she will not.²⁹

This kind of test relied on the belief that scent should pass through the body, migrating upward from the vagina, without obstructions.

These tests were very common in Hippocratic gynaecology texts. They appear in *On Sterile Women*, *On Female Nature*, and even the *Aphorisms*. See, for instance, *Aphorism*, 5.59:

Γυνὴ ἣν μὴ λαμβάνῃ ἐν γαστρὶ, βούλη δὲ εἰδέναι εἰ λήψεται, περικαλύψας ἱματίοισι, θυμία κάτω· κῆν μὲν πορεύεσθαι δοκέῃ ἢ ὁδμὴ διὰ τοῦ σώματος ἐς τὰς ῥίνας καὶ ἐς τὸ στόμα, γίνωσκε ὅτι αὐτὴ οὐ δι’ ἐωυτὴν ἄγονός ἐστίν.

If a woman does not conceive, and you wish to know if she will conceive, cover her round with wraps and burn perfumes underneath. If the smell seems to pass through the body to the mouth and nostrils, be assured that the woman is not barren through her own physical fault.³⁰

The *Aphorisms* are, in fact, one of the Hippocratic treatises that Castro cited most often, even including in his own text the Latin translation of the Greek original. This may be explained by the nature of the *Aphorisms*, which were short simple sentences that medical students, even in Castro’s time, had to learn by heart.³¹ In the section *De sterilibus*, Castro quotes several times the *Aphorisms* related to weight disorders. This issue was represented more widely

within the Hippocratic gynaecological materials, like *De sterilibus* (229, 237) or *De natura muliebri* (19–20), and similarities in the vocabulary of these texts have been noted by Ann Elis Hanson.³² These tests claimed that abnormally fat or abnormally thin women should not conceive and, if they did, would be unable to carry a pregnancy to term. Weight problems were held to cause pathological sterility (*sterilitas morbosa*) in both men and women. On obesity, Castro cites a popular joke he attributes to Galen, based on the opposition between *crassus* (fat) and the two meanings of *subtilis* (thin, or, as is the case here, ‘clever’): ‘everyone knows that a fat belly does not beget a subtle intellect’ (*celebratum illud est, crassum ventrem non parere subtilem intellectum*).³³

A different style of life and change in diet was advised. In order to restore balance, Castro mentions the practice of eating certain kinds of food that allegedly aided weight loss. Women from Seville ate gazpacho, made from bread and a mixture of water and vinegar; women from Salamanca prepared a delicacy with water and spices; and Portuguese women worried about their beauty ate lemons with salt. He also recommended baths, vomits, purgatives, and diuretics. The frequent references to obesity suggest that it was perceived as a common problem. An overly sedentary lifestyle might also cause sterility in women who had successfully given birth to a child, but were afterwards unable to conceive or carry a pregnancy to term because their womb had become tired (*defessus*). Castro added that this disorder affected mainly noblewomen and men living in idleness.

Conception was also believed to be difficult, and in some cases impossible, when the nature and composition of the partners was abhorrent to each other. Castro discussed whether this incompatibility could be cured and, if not, whether it could justify divorce, as recommended by some of the authors he cited. This notion of a *dissidium intemperamenti* that could make partners infertile and lead them to separation appears to have troubled Castro. He cites twice a sentence from Aëtius of Amida, a physician and medical writer of the fifth or sixth century, ‘for love reconciles seed’:³⁴

Inviti coitus utriusque aut alterutrius, ut fieri solet inter eos qui inviti matrimonium contrahunt, steriles censentur, amor enim ut inquit Aetius, conciliat genituram, quocirca amantes foeminae crebrius pariunt. (Part 2, Book 3, Chapter 2, p. 360)

Unwanted sex for one or the other, as usually happens between those who are married against their will, must be considered infertile. Love, indeed, as Aëtius says, reconciles seed. Therefore, women who are in love have more children.

At the end of Chapter 2, Castro states that those who were unable to conceive together generally requested a divorce, and the judge or magistrate usually called for a doctor to advise him on the legitimacy of the request. Castro refers here to impotence trials, not uncommon in Europe during the medieval and early modern periods.³⁵ An old and honourable woman was summoned to check if husband and wife were doing the appropriate things: sleeping

together, talking to each other, embracing each other, eating hot and spicy foods, and drinking wine, for example. This old woman had then to report what she saw to the doctor, who in turn advised the judge. Note that Castro's last sentence in this chapter is 'but he must be careful not to be deceived, because, as we have said, in this matter, many frauds are usually committed'.³⁶ These words echo those of Guy de Chauliac (c. 1300–1368), in *Chirurgia magna*:

Caveat tamen ne sit deceptus: quia multae fraudes in talibus consueverunt committi, et maximum periculum est separare quos Deus coniunxerat, nisi iustissima causa requirente. (p. 354)

But he must be careful not to be deceived, because many frauds are usually committed and there is the greatest risk in separating those that God united, unless under the most righteous cause.

Castro thus admonished the physician to consider carefully what the appointed 'virtuous, honourable, old and trained lady'³⁷ reported on the couple's ability to have intercourse before giving his advice to the judge.

We turn now to the *scholium*, a sort of appendix that was used to explore issues not directly related to the main subject of the treatise. According to Gianna Pomata, it appeared first in collections of *curationes*, accounts of successful cases, or of *observationes*, accounts of specific cases.³⁸ It is, to my knowledge, an uncommon feature of gynaecological treatises. The *scholium* is easily distinguishable for the reader, as it is set in italics, whereas the main text is set in plain type. In collections of *curationes* and *observationes* it seems to have been used to differentiate the cases described in the main text from the doctrines discussed in the *scholium*. Nevertheless, in *De universa*, there are different kinds of *scholia*, differing in length and in the themes explored, which include *materia medica*, therapeutics, literature, and ethics.

The *scholium* in the section on sterility opens with the sentence: 'Those who are incapable of procreation are called *impotentes* [. . .] *impotentia* is of two kinds: natural and accidental'.³⁹ Castro then provided the relevant legal definitions. Lawyers called those who were impotent by nature *frigidi*, and those who were impotent by accident *maleficiati*. This distinction dated back to a Papal letter by Pope Gregory IX in the thirteenth century, and possibly even earlier, in which frigidity and spells to induce sterility were assumed to be causes of infertility and hence an impediment to marriage. In 1587, Pope Sixtus V issued a document known as *Cum frequenter* (its opening words), in which he justified why eunuchs and spadones should not be allowed to marry.⁴⁰ Men without both testicles, or with atrophied testicles, should not marry because they were supposed to be *frigidi* and hence could not properly perform their marital duties. Castro explored this topic in the first part of the *scholium*, asking: Is sterility a sufficient cause for the annulment of a marriage? If the sterility is a permanent condition and predates the marriage, it is enough to declare the marriage void?

The law held that permanent infertility invalidated the marriage contract because it obliged the partner to provide something – children – which could not then be provided. Thus, so-called *frigidi* were not allowed to remarry. The law also included under the designation *frigidi* men and women who did not conceive together because of their different and incompatible temperaments. Castro did not support this remarriage ban because, he argued, a cold man remarried to a hot woman would be able to beget children.⁴¹ Nor did he advocate divorce. He urged that marriage must not be dissolved except in the most serious and legitimate cases. Even if perpetual *impotentia* was suspected, only after three years must the case be decided and, if after this time there were still doubts, the decision could be deferred. In cases of *arctatio mulieris* (narrowness of the female genital organs impeding intercourse), Castro claimed that if this pathology could be cured by surgical methods, then marriage should not be declared void.

Castro then considers attempts to induce sterility. He describes a series of charms and spells classified as the most effective and dangerous, but notes that he has no experience of them and is not entirely convinced of their efficacy. He also notes the first cause of infertility, not explained by physicians, to be God's will, which can only be overcome with prayers, alms, and penance. Castro then considers the physician as instigator of sterility:

Quaestio hic evenit, an medico liceat sterilitatem inducere, quae duas habet partes: prima est, an conceptum impedire, secunda, an abortum provocare liceat.

In this place the question arises: is it legitimate for the physician to induce sterility? This question has two parts: one being if it is legitimate to prevent conception, the other if it is legitimate to induce abortion.

The connection between sterility and abortion is presented to the reader as obvious and in no need of further explanation. However, as will be shown in the Conclusion, Castro's decision to place these two topics in close proximity to each other may help us to understand how he, and perhaps other early modern physicians, viewed the infertile woman's responsibility for her condition.

Castro reviewed the medical authorities of the past, but he read them in a very particular way. The Hippocratic gynaecological treatises contain hundreds of recipes and remedies to terminate a pregnancy. Perhaps the most famous strategy for aborting is the so-called 'Lacedaemonian leap', known as such because it was mentioned by a Spartan (hence Lacedaemonian, after the Spartan city-state) character in Aristophanes' *Lysistrata* (82). The author of *De natura pueri* (13) states that he had recommended a 'valuable flute-girl who had intercourse with men', for whom it was essential not to become pregnant 'because it would lessen her value', to 'kick her heels against her buttock' in a leaping motion until any generating seed fell from her.⁴² Castro, adding just a few words of his own to the tale, introduced a slightly different – but very significant – meaning. In *De natura pueri*, the slave girl asked her

patroness for help, because she did not want to lose her value. She was a slave and she was supposed to make profit out of her body. When Castro describes this story, he states that Hippocrates ‘in *De natura pueri* advised a servant, who feared infamy, to jump until she expelled the foetus’.⁴³ In fact, in the Greek Hippocratic text there is no mention of honour or infamy. It is purely a matter of professional value.

Castro continued by describing what other authors had said about induced abortion. These authors advocated aborting a foetus only when the life of the mother was at stake, either during pregnancy or childbirth. This usually happened when the cervix was too tight or obstructed by a tumour or something similar, or when the mother was too lean and weak. In these situations, abortion could be the only solution. But Castro continues to endorse a total prohibition, justified through a return to Hippocrates, ‘the same wise old man’,⁴⁴ and to the injunction of the Hippocratic Oath:

Οὐ δώσω δὲ οὐδὲ φάρμακον οὐδενὶ αἰτηθεὶς θανάσιμον, οὐδὲ ὑψηγίσσεται
 ζυμβουλὴν τοῦνδε· ὁμοίως δὲ οὐδὲ γυναικὶ πεσσὸν φθόριον δώσω.

And I will not give a drug that is deadly to anyone if asked [for it], nor will I suggest the way to such a counsel. And likewise I will not give a woman a destructive pessary.⁴⁵

Once again Castro’s translation adds something to the Greek original:

idem circumspēctissimus senex, qui in iureiurando mulieri ad corrumpendum conceptum vel foetum, medicamentum non esse exhibendum, asseuerantissime confirmat.

the same wise old man earnestly establishes in the Oath that no drug should be shown to a woman in order to destroy what has been conceived or the foetus.

Castro translates the Greek expression πεσσὸν φθόριον, which means ‘a destructive pessary’, as a ‘drug to destroy what has been conceived or the foetus’. Calvi’s 1525 translation of the Oath makes a similar transformation: ‘I shall not give to any woman, so that she might remove or loose the foetus, a remedy or a pessary’.⁴⁶

In ancient medical texts relating to women’s diseases, the adjective φθόριος was used to designate a substance that destroyed the foetus or, at an earlier stage of pregnancy, the result of conception. The meaning of πεσσὸν, translated here as ‘pessary’, is more speculative because it refers only to one of many ways to apply drugs. In the first century, Soranus (1.60) had already wondered why Hippocrates should have left unmentioned in the *Oath* all other known ways to induce abortion, such as orally or externally administered drugs, and mechanical or surgical techniques.⁴⁷ The choice of just one of these methods, the administration of vaginal suppositories, is at the centre of the debate about the abortion ban in the *Oath*. Soranus noticed a remarkable inconsistency in the Hippocratic collection: that despite Hippocrates’ apparent prohibition

on abortion, there is plenty of information about how to terminate pregnancy. He commented on his predecessors' opinion about this:

διὸ καὶ τὸν <Ἱπποκράτην> παραιτησάμενον τὰ φθόρια παραλαβεῖν <ἐν τῷ Περὶ παιδίου φύσεως> ἐκβολῆς χάριν τὸ πρὸς πυγὰς πηδᾶν. γεγένηται δὲ στάσις. <οἱ μὲν> γὰρ ἐκβάλλουσιν τὰ φθόρια τὴν <Ἱπποκράτους> προσκαλούμενοι μαρτυρίαν λέγοντος: “οὐ δώσω δὲ οὐδενὶ φθόριον”, καὶ ὅτι τῆς ἰατρικῆς ἔστιν ἴδιον τὸ τηρεῖν καὶ σώζειν τὰ γεννώμενα ὑπὸ τῆς φύσεως. <οἱ δὲ> μετὰ διορισμοῦ συντάσσουσιν αὐτά, τοῦτ' ἔστιν οὐχ ὅτε διὰ μοιχείαν τις βούλεται φθεῖραι τὸ συλληφθὲν οὔτε δι' ἐπιτήδευσιν ὠραιότητος, ἀλλ' ὅτε διὰ <τὸ> κίνδυνον κωλυσαὶ γενησόμενον ἐν ταῖς ἀποτέξεσιν, μικρᾶς τῆς μήτρας ὑπαρχούσης καὶ μὴ δυναμένης χωρῆσαι τὴν τελείωσιν [...].

Hippocrates, although prohibiting abortives, yet in his book ‘On the Nature of the Child’ employs leaping with the heels to the buttocks for the sake of expulsion. But a controversy has arisen. For one party banishes abortives, citing the testimony of Hippocrates who says: ‘I will give to no one an abortive’; moreover, because it is the specific task of medicine to guard and preserve what has been engendered by nature. The other party prescribes abortives, but with discrimination, that is, they do not prescribe them when a person wishes to destroy the embryo because of adultery or out of consideration for youthful beauty; but only to prevent subsequent danger in parturition if the uterus is small and not accommodating the complete development [...].⁴⁸

As Soranus' text shows, in antiquity, Hippocrates' opposition to abortion had already become an accepted thesis. By the first half of the first century, prior to Soranus, Scribonius Largus (c. 1–50) had stated very clearly that the *Oath* expressed a complete prohibition. The fourth-century physician Theodorus Priscianus was of the same opinion.⁴⁹ Castro quotes, almost verbatim but without identifying his source, the second part of Priscianus' text about abortion, which reads as follows:

Abortivum dare nulli unquam fas est, ut enim Hippocratis attestatur oratio, tam duri reatus conscientia medicorum innocens officium non decet maculari. (*Euporiston* 3.6.23)

It is never right to give a substance that induces abortion, like Hippocrates' speech testifies. The consciousness of such a serious guilt should not stain the blameless service of the physicians.

Castro repeats these last words in order to stress his position: abortion is homicide. Over and over again he states that abortion should not be practised in any situation because, even when there is danger of losing the mother, she faces the same risk in aborting, as ‘nature struggles as fiercely as she can to retain an unripe foetus’.

According to Thomas Rutten, in the fifteenth and sixteenth centuries the *Oath* elicited much attention and translators interpreted it in light of their own varying contexts and concerns, rather than providing a literal translation.⁵⁰ As

stated, this tendency to a loose interpretation of the *Oath* had already begun in ancient times, but in early modern medicine Hippocrates' text was used to justify specifically religious prohibitions and beliefs surrounding the practice of induced abortion. Therefore, notions of crime and sin were inserted into the text and it was read as a complete ban on abortion. Hippocrates thus became a convenient authority to invoke when chastising those who might consider terminating their pregnancies.

I consider the *scholium* a showcase of Renaissance ethics. In it Castro expressed his opinions about a theme that would be developed in his *Medicus politicus*, namely the ethics of deceit. In this commentary, he explains the physician's instrumental role as it relates to the law, but also highlights the possibility that the physician may be deceived by others who wish to take advantage of this knowledge for illegitimate and even criminal uses. In Castro's opinion, abortion is one of these uses. By inserting the *scholium* in the section about sterility, he seems to conflate sterility with induced termination of pregnancy. It must be noted, though, that this conflation is only evident in the *scholium*, not in the main text, which follows contemporaneous works in its conservative approach to what constitutes diagnosis and therapy.

CONCLUSION

In Castro's discussion of sterility, physical incompatibility between husband and wife, divorce, and abortion, there is some tendency towards moralistic reasoning, as we see particularly in the *scholium*. He argues that the law must condemn those who teach 'little women' (*mulierculae*)⁵¹ how to prevent conception in order that they might live promiscuously and hide their sexual adventures (debauchery, adultery, incest). Women who had got rid of their unwanted reproductive burdens could resume their usual debauched lives, and indeed teach others how to commit 'infanticide'. By employing such terms, Castro draws upon notions of accountability and guilt: what women know about medicines may be used to prevent or destroy pregnancy.

Yet in this section on sterility, there is more than moralistic discourse. Castro also explains how to treat the pathologies that cause sterility, especially female sterility. Indeed, recipes for remedies, baths, and ointments constitute a sizeable part of the section. Does the predominant focus on female pathologies suggest that women were held more responsible for infertility than men? Can we endorse Joan Cadden's opinion in this matter, by assuming that more information means more responsibility and, hence, more guilt?⁵² Can we even speak about accountability? We must remember that this is a treatise about gynaecology, where women should surely be placed at the centre. The woman's role is also rather more significant in generation. The contribution of the father is limited and confined to the attempt to conceive, whereas the mother is involved in various complex stages that might ultimately lead to the birth of a healthy child. In Castro's chapters on sterility, both sexes are discussed. The medical sections are also fairly neutral in tone. Female accountability, guilt, and blame are only

discussed in the *scholium*, appended to the section on sterility. Here, the physician is advised against letting himself be used as an instrument for committing immoral actions. It is only when individuals relegate the physician that ‘bad women’, ‘vicious crones’, or ‘old witches’ (thus not all women) can misappropriate knowledge to endanger the course of nature, in order to commit crimes such as abortion, infanticide, and adultery. Castro seems here to blur the lines between different fields of knowledge by inserting discussions of medical ethics into a gynaecological treatise. Indeed, it is no coincidence that some years later, Castro edited the *Medicus politicus*, a treatise that Schleiner considers to be ‘possibly a milestone in the history of medical ethics’.⁵³

In Castro’s *De universa*, as much as in ancient medical writings about women’s diseases, sterility is never accepted as an incurable condition. Efforts to overcome sterility can be inferred from the extensive materials that have come down to us, dating back at least to the Hippocratic Corpus. These materials are the cornerstone that supports early modern gynaecological texts. As Castro states in Part I, quoting Pliny the Elder, the human being, the proudest of all animals, is so frail, so unprotected and so hopelessly weak from the very start of his life that a sneeze can destroy him. Too much fatness or thinness, pathological conditions, an abnormal constitution of the whole body or of one of its parts, spells, charms, evil eyes, God’s will, immoral women: any one of these can prevent nature’s work of generation. That is why the physician must act with caution and dignity to help, and not to hinder, the efforts of those who ask his advice.

NOTES

1. See especially Mark Golden and Peter Toohey (eds), *A Cultural History of Sexuality in the Classical World* (London, 2011). See also Joan Cadden, *Meanings of Sex Difference in the Middle Ages* (New York, 1993).
2. Rodrigo de Castro, *Medicus politicus* (Hamburg, 1614), Book 3, Chapter 22, p. 194.
3. Castro, *Medicus politicus*, Book 4, Chapter 9, p. 251.
4. Florbela Veiga Frade and Sandra Neves Silva, ‘Medicina e política em dois físicos judeus portugueses de Hamburgo: Rodrigo de Castro e o *Medicus politicus* (1614), e Manuel Bocarro Rosales e o *Status astrologicus* (1644)’, *Sefarad*, 71:1 (2011). The texts cited from the *Universa mulierum medicina* are from the 1628 edition. Unless otherwise stated, the translations of the Greek and Latin texts are my own.
5. Marcus Fabius Calvus, *Hippocratis Coi octoginta volumina* (Rome, 1525).
6. Thomas Laqueur, *Making Sex: Body and Gender from the Greeks to Freud* (Cambridge, MA, 1990), p. 25.
7. See especially Helen King, *Midwifery, Obstetrics and the Rise of Gynaecology: The Uses of a Sixteenth-Century Compendium* (Aldershot, 2007); Helen King, *The One-Sex Body on Trial: The Classical and Early Modern Evidence* (Farnham and Burlington, VT, 2013).
8. Helen King, *Hippocrates’ Woman: Reading the Female Body in Ancient Greece* (London and New York, 1998).

9. Translated in Ann Elis Hanson, 'Hippocrates' *Diseases of Women 1*', *Signs*, 1:2 (1975), p. 582.
10. Patricia Simons, *The Sex of Men in Pre-Modern Europe* (Cambridge, 2011), p. 147.
11. Katharine Park, *Secrets of Women: Gender, Generation, and the Origins of Human Dissection* (New York, 2006).
12. On Soranus' survival in the West, see Ann Elis Hanson and Monica Green, 'Soranus of Ephesus: *Methodicorum princeps*', *ANRW*, 37:2 (1994).
13. King, *Midwifery, Obstetrics and the Rise of Gynaecology*, pp. 1–7.
14. On Herophilus' anatomy, see Heinrich von Staden, *Herophilus: The Art of Medicine in Early Alexandria: Edition, Translation, and Essays* (Cambridge and New York, 1989), pp.183–6, 230–4.
15. On the problems in Galen's reasoning, see Michael Boylan, 'Galen's Conception Theory', *Journal of the History of Biology*, 19:1 (1986).
16. *Semen mulierem habere et quid in foetus constitutione opis id conferat.*
17. *Liber primus de morbis cunctis foeminis communibus.*
18. *Liber secundus de affectibus, qui viduis, ac virginibus accident.*
19. *Sterilitas est quaedam impotentia ac difficultas mulieris, viro utentis, ad concipiendum debito tempore.*
20. *Prima fit a vitio naturali, et cognito.*
21. *Secunda per collationem foeminae, ad proprium virum.*
22. *Tertia ex morbo affectu, et ob diuersas affectiones.*
23. *Quarta est earum, quae pepererunt, verum a primo aut secundo partu steriles factae sunt, et haec dicitur sterilitas ad tempus.*
24. *In simili decocto maritus pedes lavet.*
25. *Vir etiam post lotionem pedum, inungat penem balsamo.*
26. The connection of Book 10 to the remaining books of *History of Animals* and its authorship are problematic. On this, see Philip van der Eijk, 'On Sterility (Hist. an. 10), A Medical Work by Aristotle', *Classical Quarterly*, 49 (1999), p. 490ff.
27. *Causa sterilitatis duplex, una a viro, altera a foemina prodit, 90.*
28. *Allium expurgatum pessi forma adormiturae utero subdito, et si odor vel sapor postridie ad os pervenerit foecunda est, sin minus, sterilis.*
29. Ann Elis Hanson, 'Aphorismi 5.28–63 and the Gynaecological Texts of the Corpus Hippocraticum', in H. F. J. Horstmanshoff and M. Stol (eds), *Magic and Rationality in Ancient Near-Eastern and Roman Medicine* (Leiden, 2004).
30. W.H.S. Jones (ed.), *Hippocrates* (London, 1923), p. 175.
31. The *Aphorisms* were made available in Latin translations very early, and this treatise was 'the best known and most widely disseminated' of the Hippocratic collection. See Pearl Kibre, *Hippocrates Latinus* (New York, 1985), p. 29.
32. Hanson, *Aphorismi* 5.28–63, p. 304.
33. There are many different versions, cited by numerous authors, like Jerome or Erasmus: 'A fat belly does not beget an excellent mind' (*Ingenium excellens non gignit venter obesus*); 'A fat belly does not beget a thin sense' (*Pinguis venter non gignit sensum tenuem*).
34. *Amor enim conciliat genituram.* This sentence had become, by Castro's time, a kind of cliché. Aëtius' words were 'ἢ γὰρ ἀγαπῶσα συναρμιόζει τὴν γονῆν, καὶ διὰ τοῦτο αἱ μετ' ἔρωτος μίξεις ταχυτεκνόταται εἰσι' ('for love reconciles seed, and because of this, intercourse with desire is the one that most quickly produces children').

35. See Pierre Darmon, *Le Tribunal de l'impuissance* (Paris, 1979); Raymond Stephanson, *The Yard of Wit: Male Creativity and Sexuality 1650–1750* (Philadelphia, PA, 2004); Edward J. Behrend-Martinez, *Unfit for Marriage: Impotent Spouses on Trial in the Basque Region of Spain 1650–1750* (Reno, NV, 2007).
36. *caveat tamen ne decipiatur, quia uti diximus, hac in re multae fraudes saepissime committuntur*, Part II, Book 3, Chapter 2, p. 365.
37. *matrona proba, honesta, senior et exercitata*.
38. Gianna Pomata, 'Sharing Cases: The *Observationes* in Early Modern Medicine', *Early Science and Medicine*, 15 (2010).
39. *Qui generare nequeunt impotens dicuntur. Est autem impotentia duplex, naturalis et accidentalis*, Part II, Book 3, *scholium*, p. 365.
40. On *Cum frequenter*, see Joseph Bajada, *Sexual Impotence: The Contribution of Paolo Zacchia (1584–1659)* (Rome, 1988); Aidan McGrath, *A Controversy Concerning Male Impotence* (Rome, 1988).
41. See, for instance, 'Because it does not always happen that a person who is cold to one is cold to another' (*quippe non semper sequitur frigidum uni esse frigidum alteri*). Part II, Book 3, *scholium*, p. 365.
42. Hanson, 'Hippocrates', p. 583.
43. 'quidem Hip[pocrates] [. . .] lib. de nat. pueri, consuluit ancillae, quae dedecus verebatur, ut saltaret, quo foetum expelleret'.
44. *idem circumspectissimus senex*.
45. Heinrich von Staden, "'In a Pure and Holy Way": Personal and Professional Conduct in the Hippocratic Oath?', *Journal of the History of Medicine and Allied Sciences*, 51:4 (1996), p. 406.
46. *nulli foeminae, quo partu abigat perdatve, medicamentum glandulamve suppositiciam dabo*.
47. On abortion in ancient times, see John M. Riddle, *Contraception and Abortion from the Ancient World to the Renaissance* (Cambridge, MA, 1992); Helen King, *Hippocrates' Woman*; Konstantinos Kapparis, *Abortion in the Ancient World* (London, 2002); Cristina Santos Pinheiro, *Orbae matres: a dor da mãe pela perda de um filho na literatura latina* (Lisbon, 2012), pp. 63–74.
48. Owsei Temkin, *Soranus' Gynecology* (Baltimore, MD, 1991), p. 63.
49. Theodorus Priscianus lived around AD 400. His *Euporiston* was initially composed in Greek, but was translated into Latin. The Greek original was lost. In the third book, Priscianus explores women's diseases. See Plinio Pioreschi, *A History of Medicine III: Roman Medicine* (Omaha, NE, 1998), pp. 516–19. On the transmission of the Hippocratic oath and its interpretations, ancient and modern, as an absolute or as a selective prohibition of abortion, see Kapparis, *Abortion in the Ancient World*; M. J. Elsackers, 'Reading between the Lines: Old Germanic and Early Christian Views on Abortion'. Unpublished PhD Thesis, Amsterdam, 2010.
50. Thomas Rutten, 'Receptions of the Hippocratic Oath in the Renaissance: The Prohibition of Abortion as a Case Study in Reception', *Journal of the History of Medicine and Allied Sciences*, 51 (1996).
51. In *De universa mulierum medicina*, *mulierculae* is often used to designate an old woman who acts as a procurer to younger girls. Usually, *mulierculae* are associated with ignorance and superstition. At the end of the *scholium*, Castro calls them sorceresses (*veneficae*), and 'plagues that wander freely through the entire universe' (*pestes per uniuersum orbem liberrime vagantes*).

52. Cadden, *Meanings of Sex Difference*, pp. 249–50.
 53. Weinfried Schlein, *Medical Ethics in the Renaissance* (Washington, DC, 1995), p. 50.

RESEARCH RESOURCES

Primary Sources

- Rodericus Castro, *De universa mulierum medicina*, 2 vols (Hamburg: Froben, 1603–4).
 Rodericus Castro, *De universa mulierum medicina. Tertia editio auctior et emendatior* (Hamburg: Froben, 1628).
 W.H.S. Jones (ed.), *Hippocrates* (London: Heinemann, 1923).
 R. Radicchi, *La Gynaecia di Muscione: manuale per le ostetriche e le mamme del VI sec. d.C.* (Pisa: Giardini, 1970).
 Owsei Temkin, *Soranus' gynecology* (Baltimore, MD: Johns Hopkins University Press, 1991).

Secondary Sources

- Joseph Bajada, *Sexual Impotence: The Contribution of Paolo Zacchia (1584–1659)* (Rome: Editrice Pontificia Università Gregoriana, 1988).
 Michael Boylan, 'Galen's Conception Theory', *Journal of the History of Biology*, 19:1 (1986), 47–77.
 Joan Cadden, *Meanings of Sex Difference in the Middle Ages: Medicine, Science and Culture* (Cambridge: Cambridge University Press, 1993).
 Lawrence Conrad, Michael Neve, Vivian Nutton, Roy Porter and Andrew Wear (eds), *The Western Medical Tradition: 800 BC to AD 1800* (Cambridge: Cambridge University Press, 1995).
 Pierre Darmon, *Le tribunal de l'impuissance* (Paris: Seuil, 1979).
 Lesley-Ann Dean-Jones, *Women's Bodies in Classical Greek Science* (Oxford and New York: Oxford University Press, 1994).
 Marianne Elsackers, 'Reading between the Lines: Old Germanic and Early Christian Views on Abortion'. Unpublished PhD Thesis, Universiteit van Amsterdam, 2010.
 Rebecca Flemming, 'The Invention of Infertility in the Classical Greek World: Medicine, Divinity and Gender', *Bulletin of the History of Medicine*, 87 (2013), 565–90.
 Rebecca Flemming, *Medicine and the Making of Roman Women: Gender, Nature and Authority from Celsus to Galen* (Oxford and New York: Oxford University Press, 2000).
 Danielle Gourevitch, *Le mal d'Être femme* (Paris: Les Belles Lettres, 1984).
 Konstantinos Kapparis, *Abortion in the Ancient World* (London: Duckworth Academic, 2002).
 Helen King, *Hippocrates' Woman: Reading the Female Body in Ancient Greece* (London and New York: Routledge, 1998).
 Helen King, *Midwifery, Obstetrics and the Rise of Gynaecology: The Uses of a Sixteenth-Century Compendium* (Aldershot: Ashgate, 2007).
 Helen King, *The One-Sex Body on Trial: The Classical and Early Modern Evidence* (Farnham and Burlington, VT: Ashgate, 2013).

- Thomas Laqueur, *Making Sex: Body and Gender from the Greeks to Freud* (Cambridge, MA: Harvard University Press, 1990).
- Ian MacLean, *The Renaissance Notion of Woman: A Study in the Fortunes of Scholasticism and Medical Science in European Intellectual Life* (Cambridge: Cambridge University Press, 1980).
- Aidan McGrath, *A Controversy Concerning Male Impotence* (Rome: Editrice Pontificia Università Gregoriana, 1988).
- Vivian Nutton, *Ancient Medicine* (London and New York: Routledge, 2004).
- Katharine Park, 'Cadden, Laqueur and the "One-Sex Body"', *Medieval Feminist Forum*, 46:1 (2010), 96–100.
- Katharine Park, *Secrets of Women: Gender, Generation and the Origins of Human Dissection* (New York: Zone Books, 2006).
- Cristina Santos Pinheiro, *Orbae matres: a dor da mãe pela perda de um filho na literatura latina* (Lisboa: FCT-Gulbenkian, 2012).
- Cristina Santos Pinheiro, 'Suos utero quae necat (Am. 2.14.38): aborto, sexualidade e medicina no tempo de Ovidio', in Cristina Pimental and Nuno Rodrigues (eds), *Sociedade, poder e cultura no tempo de Ovidio* (Lisbon, 2010), 173–186.
- Gianna Pomata, 'Was there a "Querelle des femmes" in Early Modern Medicine?', *Arenal*, 20:2 (2013), 313–41.
- John M. Riddle, *Contraception and Abortion from the Ancient World to the Renaissance* (Cambridge, MA, 1992).
- John M. Riddle, *Eve's Herbs: A History of Contraception and Abortion in the West* (Cambridge, MA, 1997).
- Winfried Schleiner, *Medical Ethics in the Renaissance* (Washington, DC, 1995).
- Patricia Simons, *The Sex of Men in Pre-Modern Europe* (Cambridge, 2011).
- Michael Stölberg, 'A Woman Down to Her Bones: The Anatomy of Sexual Difference in the Sixteenth and Early Seventeenth Centuries', *Isis*, 94 (2003), 274–99.
- Heinrich von Staden, '"In a Pure and Holy Way": Personal and Professional Conduct in the Hippocratic Oath?', *Journal of the History of Medicine and Allied Sciences*, 51:4 (1996), 404–37.
- Sarah Toulalan and Kate Fisher (eds), *The Routledge History of Sex and the Body: 1500 to the Present* (London and New York, 2013).

Female Impotence or Obstruction of the Womb? French Doctors Picturing Female Sterility in the 1820s

Sophie Vasset

INTRODUCTION

Nineteenth-century medical caricatures poking fun at spa treatment expressed suspicion of its effectiveness in treating sterile women (see [Fig. 1](#)):

Le Docteur: Certainement, chère Madame, nos eaux guérissent la stérilité... Mais savant tout je vous recommande les distractions... Ainsi, si vous aviez un ami pour vous divertir pendant le temps que durera la cure...

The doctor: Of course, dear Madam, our waters are a great cure for sterility... but I would advise you to seek all forms of entertainment... If, for example, you had a gentleman companion to divert your spirits during your stay at the spa...¹

Sexual innuendoes relating to miraculous cures for infertility were nothing new. Many eighteenth-century European mock-travel narratives, for example, had ridiculed the so-called ‘fertilising properties’ of mineral waters.² The anonymous author of the satirical fake travel narrative *Letters from a Moor at London* (1736) referred to the curative powers of spa waters in these terms: ‘These waters are of such a wonderful efficacy in barren causes, that women have here conceiv’d without the assistance of their husbands. But then I leave to you, my friend, to judge with whose assistance they must conceive’.³

In the course of my research into infertility in France and Britain during the long eighteenth century, I have commonly encountered masculine discourse on the subject; whether it be sceptical (as discussed above), descriptive,

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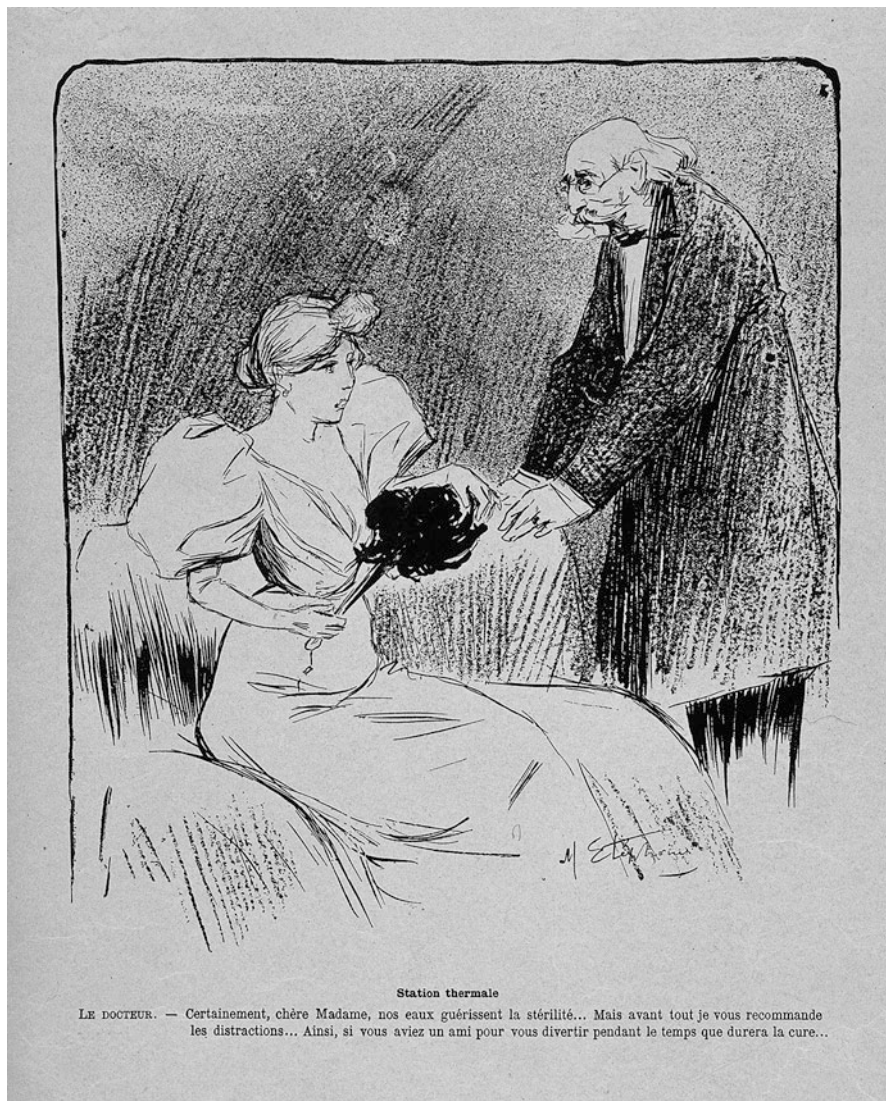


Fig. 1 A woman at a spa

Lithograph by M. Stéphane, c. 1896. Courtesy of Wellcome Library, London

inquisitive, or compassionate, it almost invariably fails to record the female patient's voice. Rare first-person accounts of female infertility tend to relate to a specific action, such as making someone their heir. Although patriarchal models of medicine are enough to explain this phenomenon, as I will explain in the second part of my chapter, other reasons may be given for the lack of explicit discussion on infertility during the long eighteenth century outside the realm

of medical publications and caricature. For example, while in contemporary society female infertility is often suffered by women who are in otherwise good health, the poorer state of health of those who consulted doctors during the long eighteenth century sometimes made infertility a secondary problem to a larger array of ailments.

By looking at a particular case study of ‘sterility’ at the turn of the century, I would like to examine medical practice and medical theory around the notion of infertility. I will focus on the account of Madame Robert written by her family doctor, Dr. G.E. Lamothe, to consider the difficult journey of a young woman whose womb became the object of medical attention. I will show how the term *sterilité* was applied to a myriad of symptoms, and made part of a larger utero-centred medical portrait of an ailing woman. By focusing on this historical example, I would also like to examine the rhetoric at work when a family doctor consulted a more renowned practitioner, Jean-François Delpit (1773–1830), and to deconstruct how Lamothe described a dysfunctional womb within the context of the broader life of his female patient. In addition to the doctor–patient relationship, this case study therefore reveals a doctor–doctor relationship which revolved around a particular patient’s history. To complete my reflection, I will then depart from this specific case to examine the kinds of medical and cultural explanations available at this time, both to professionals and to their educated patients who were confronted with a diagnosis of infertility. I will do so by focusing on the most famous medical dictionary available at the time, *Le Dictionnaire des sciences médicales*, also known by its publisher’s name, the ‘Panckoucke’, written by a renowned group of doctors (including Delpit) and published between 1812 and 1822.⁴

OBSERVATIONS ON MADAME ROBERT FROM LA RÉOLE

In the early modern period, mineral waters were traditionally associated with the curing of infertility. The cross erected at Bath in 1688 by Mary of Modena (1658–1718) in gratitude for her pregnancy symbolized her belief in this miraculous cure, a belief that was fed by both her religious piety and lay medical knowledge. The following century, treatises analysing the chemical properties of mineral waters swamped the market for medical books, and this cure for sterility – offered in places such as Bath and Scarborough in England, and Bagnière de Bigorre and Barèges in France – was analysed and advocated by numerous physicians seeking to promote ‘their’ spas in a competitive environment.⁵ The famous French physician and encyclopaedist Théophile de Bordeu (1722–1776) notably helped to popularize water treatment in the later eighteenth century when he was commissioned by the French government to examine the properties of thermal waters in the Pyrenean region.⁶

Mineral water is therefore a good place to begin an inquiry into infertility and its treatment during the eighteenth and nineteenth centuries. The development of spa towns between the seventeenth and twentieth centuries has predominantly been studied from a social-history perspective. Phyllis Hembry

has examined the secularization of English spas and the commercialization of leisure with a comprehensive review of spas during the seventeenth and eighteenth centuries, while Jérôme Penez has explored the development of French spas within the context of military medicine during the modern period.⁷ However, further research needs to be undertaken from a cultural perspective, as well as to study the impact of spas upon medical thought and practice.

I wish to focus on one particular case, which is documented extensively in the papers of Dr. Jean-François Delpit, held by the Wellcome Library for the History of Medicine in London. Delpit became *Intendant* (chief executive) of the Pyrenean spa in Barèges, a busy town throughout the era of the French Revolution and Napoleonic Wars because of the perceived benefits of its sulphuric water for gunshot wounds.⁸ The water was also considered therapeutic for the treatment of ulcers and, by extension, the cure of barrenness caused by an obstruction or ulcer of the womb.

Unlike many reputed doctors of his time, Delpit's career did not owe much to publication. He never published on his own, though he was part of the distinguished list of contributors to one of the most celebrated medical works of the early nineteenth century, the French medical dictionary *Le Dictionnaire des sciences médicales*, which I will examine hereafter. He was thus part of an active network of physicians who corresponded with their patients and shared their puzzling cases with each other. A close reading of Delpit's papers gives an interesting overview of the great variety of activities in which his profession engaged. His brilliant career was fuelled by a swift climbing of the administrative hierarchy, and his active politics in local institutions gave him the double status of officer in charge of the military hospital and head doctor of the civil spa. He performed his main function as a military doctor, who supervised the military hospital and baths, classified the diseases of soldiers, and granted sick leave to them. However, he also examined civilian patients, his services ranging from lower-class local patients who came to take the waters to wealthier ladies from the South West of France sent by their family doctors for specific reasons.

Such an active doctor would be known to common practitioners in the South West of France, which is probably why Dr. Lamothe, a physician ('docteur-médecin') from La Réole, a town near Bordeaux, sent his long-term patient, Madame Robert, to him. Lamothe had exhausted all treatment possibilities and wanted a confirmation of his diagnosis. It seems that the prospect of water treatment as an alternative to the drugs he had regularly prescribed for several years was also a motivation for recommending Madame Robert. Dr. Delpit was at the end of his career when Madame Robert was sent to him from La Réole in 1823. Lamothe explained in his correspondence that she had already endured several years of suffering. The doctor took pains to present the medical history of the patient in full detail to his colleague, and to paint the evolution of the disease together with his opinion on a potential diagnosis. His whole description is interspersed with sympathetic remarks about his patient's state, yet the reader never hears the patient's voice; her own words are never quoted, only reported indirectly.

In fact, this letter was meant to accompany the patient herself, to be read prior to physical examination and clinical investigation, and therefore the patient would have had, in this particular context, a chance to voice her own symptoms. Still, the letter of introduction made her an object of transaction between two knowledgeable men, who related each of her symptoms to her menstrual cycle and genital area. Lamothe thus starts by acknowledging his patient's pain, while simultaneously flattering Delpit:

L'état continuel de souffrance dans lequel se trouve Madame la Consultante, la forçant à employer tout espèce de moyens pour se procurer du soulagement, elle s'est décidée, d'après l'avis qu'on lui en a donné, à faire un seconde fois le voyage de Bordeaux, et à venir consulter des hommes de l'art instruit qui puissent la fixer d'une manière aussi certaine que possible sur la nature de son affection, et que le mode de traitement qui convient le mieux d'être employé.

The continual sufferings of my patient have compelled her to seek all means of procuring relief, which is why she decided to make another journey from Bordeaux to Barèges, taking her doctors' advice. She will visit the greatest men of the medical arts, who will determine the most precise diagnosis, and suggest the best form of treatment for her.⁹

A long presentation of the patient's case ensues, from around 1812 (when she was an adolescent) to 1823, though Lamothe did not become her doctor until 1822. His observations were thus partly based on what his patient had told him, together with several accounts from her previous physicians, a group of four doctors from Bordeaux, who had met the patient in 1816. Robert was obviously wealthy enough to travel from La Réole to Bordeaux for this group consultation.

Lamothe's utero-centred description of Robert starts very early in a long exposition of her case. Menstruation is mentioned as early as the second sentence of her medical history: 'when she came of age, menstruation did not settle in easily, and when this periodical evacuation first came, it remained scarce, and always after violent colic pains that lasted a long time'.¹⁰ In spite of what were considered abnormal cycles, she was reported to enjoy rather good health, but this seemed to deteriorate quickly after marriage: 'general unease' overtook her, and her colic pains increased before menstruation, which was 'always preceded by white discharges'. This was combined with 'a continuous underlying pain that she reported from inside her sexual parts'.¹¹ By contrast, it seems that what triggered Madame Robert's concern differed from the retrospective diagnosis of her doctor; she was not as much alarmed by her discharges or her irregular menstruation as by her recurrent melancholy, and a strong feeling of 'indifference' that accompanied her periods: 'Her colic pains became more and more intense when she was menstruating. At this time, she was overwhelmed by a general aversion and complete indifference for everything around her, and started to consider that she was affected by a very serious illness'.¹²

This is when the patient decided to seek a consultation in Bordeaux. The Bordeaux physicians, who were probably under the influence of the late eighteenth-century Montpellier school, had given a vitalist account of the patient's pain:

Se proposa-t-on de détourner les mouvemens vitaux qui se dirigeant avec trop de force sur la matrice, et de calmer la sensibilité et l'irritabilité trop grande de cet organe. On en manqua pas plus de la rassurer beaucoup sur le danger de sa maladie, de lui faire entrevoir sa guérison comme presque certaine, elle se retira donc chez elle parfaitement tranquille sur son état et commença de suite le traitement qui lui avait été prescrit.

They offered to change the course of the vital motions, which were pressing too strongly against the womb, to soothe the excessive sensibility and irritability of this organ. They were prompt to reassure her anxieties about the seriousness of the disease, and to raise her hopes of an almost certain cure, so she went back home relieved over her health, and started the prescribed treatment.¹³

Lamothe's retrospective narrative hints at professional disregard for the Bordeaux physicians' lack of judgement and mismanagement of their patient, whose hopes had been raised in vain. He goes on to explain how Robert tried to consult one of them by letter, and how he kept adjusting the treatment according to her persistent pain, while allaying her 'fears of having a polypous or cancerous tumour born in her uterus'.¹⁴ Lamothe's paradoxical use of the verb 'naître/being born', applied to a tumour rather than a baby, is a first allusion to the patient's infertility, and to the morbidity of her womb. Lamothe points out the earlier physician's inability to listen to the patient's fears or to ultimately trust her sensations, since the case history confirmed that she had a tumour. By contrast, he is careful to present himself in a different professional manner, portraying a closer relationship to his patient, and actions that were more attentive to the patient's own account of her ailments.

For another six years before she turned to Lamothe, Robert apparently found no relief in the treatment she was given: 'In the end, she was repulsed by inefficient treatments, and abandoned the disease to itself, remaining powerless, suffering a fluctuating, though constant, pain until June 1822, when she called for me to take care of her.'¹⁵ When Lamothe examined her, the symptoms had worsened, and seemed to have extended to her stomach, as she had lost her appetite, especially when she was menstruating: 'she was excessively oppressed, especially after eating, to such a point that one could say she dared not consume any food'.¹⁶ The patient also shivered and twitched. Lamothe's diagnosis partially confirmed that of the Bordeaux doctors: he concluded that this variety of nervous symptoms was caused by an 'irritation of the womb' that needed to be treated by several remedies (fig, saffron, asafoetida, and althea), and prescribed a variety of treatments directly for her sexual parts: vaginal injections, steam baths for her uterus, a foot bath, and leeches on her vulva just before menstruation, to help the evacuation. However, this package of care failed to work. Lamothe

therefore changed strategy, turned his attention to the stomach, and prescribed a 'white diet', that is, a milk-based regimen that seemed beneficial to the patient, who was anxious to retain it. After this diet, however, her pains returned, as did her anxiety about having 'something serious' in her genitalia.

One can detect a turn in Lamothe's narrative at this point, as he himself uses her anxiety as an opportunity to offer a clinical examination of her uterus: 'I thus offered, for the first time, to check it for myself, to which she consented only very reluctantly.'¹⁷ The need to reassert the patient's reluctance to be physically examined goes against any assumption that the growing number of men-midwives and the development of clinical practice in medical education, which promoted physical examination from the second half of the eighteenth century, had made the bodies of women an easy object of clinical investigation.¹⁸ Madame Robert kept postponing her medical consultations, and her reluctance to submit to the 'medical touch' is emphasized in Lamothe's narrative as an obstacle to efficient diagnosis. The unease and shame entailed by the gendered relationship between patient and doctor was acknowledged as a potential problem, as the medical discussions revolved around her womb, menstruation, and sexuality.¹⁹ Clinical examination was thus subject to negotiation between the female patient and her male doctor, which is likely to have been a common obstacle in the examination of barren women.

Interestingly, the mention of Madame Robert's infertility comes just after the report of Lamothe's clinical examination. He felt a hard tumour which he describes as a 'scirrhus'; that is, a bulk of flesh understood to be the result of stagnation of the glandulous fluids²⁰:

Cette Tuméfaction avec le temps a revêtu un tout autre caractère et a pu passer à l'état squirreux [...] il est reconnu au reste que la stérilité prédispose beaucoup à ce genre d'affection. Madame la consultante est mariée depuis dix ans et n'a jamais été enceinte. C'est appuyé sur de pareils fondemens [sic], que je crois être en droit de pouvoir soupçonner chez elle l'existence d'un squirre. C'est pour en acquérir une assurance plus positive que je l'ai engagée à faire le voyage de Bordeaux.

This tumefaction has grown scirrhus with time [...] it has been acknowledged that sterility is a predisposition for such problems. The patient has been married for ten years and has never been pregnant. On such grounds, I feel entitled to presume the existence of a scirrhus. I have invited her to travel from Bordeaux to have my suppositions positively confirmed.²¹

Lamothe here defines sterility as the incapacity to become pregnant, an important change from the early eighteenth century, when barrenness was often defined as the impossibility of having *surviving* children.²² He also assigns it as a cause for a tumour, but he does not consider that this is the main object of the patient's anxiety. Infertility is only one piece in the puzzle of a complex network of symptoms, and was not the original object of the patient's worry. The detailed evolution of such a case shows that the diagnosis of sterility was only secondary; the doctor's main anxiety lay in the nature of the

tumour that he ‘thought he could feel’ during the clinical examination. Looking back on the case, however, with this final piece of information, one may wonder to what extent the physician’s minute description of the patient’s womb and cycles, her general indifference and tiredness, were part of a clinical and cultural tableau of a fruitless marriage, where both sexual intercourse and the possibility of marital happiness were obstructed by the pain caused by the patient’s tumour.

There is no doubt that Lamothe thought that Madame Robert’s scirrhus could diminish with a regular application of the Barèges waters, as he certainly knew that these waters were recommended in Diderot and d’Alembert’s *Encyclopédie* for ulcers of the womb,²³ and in Panckoucke’s *Dictionnaire des sciences médicales* for engorgement of the womb and amenorrhea.²⁴ Indeed their powers were popularly perceived all over Europe. French and English medical treatises advertised their power for the cure of ulcers, tumours, scirrhuses, and other obstructions of the womb. More than half a century before Robert’s visit to Barèges, Sir Christopher Meighan, an English gentleman who was a member of the French semi-lay Roman Catholic congregation called the ‘order of the Holy Ghost’,²⁵ took an interest in the mineral waters of Barèges as part of this order’s mission to take care of the wounded and the sick. His *Treatise of the Nature and Power of Barèges Baths and Waters* (1773) was read in both England and France. Several cases were sent to Meighan from both countries to enquire whether the waters would be beneficial to the patient.²⁶ Following the structure of mineral water treatises of the time, Meighan gave an account of the chemical properties of the spa, and showed the properties and benefits of such treatment by a series of practical observations, including how one might find a scirrhus located in the womb:

A Lady in my care, having a Scirrhus on the left side of the internal Orifice of the *Matrix*, was seized with a violent Fever, which raised such pains about the callous part, as threatened Suppuration, and notwithstanding our calming endeavours, persisted for some Months so as to deprive the left thigh of motion, by compressing its sciatick Nerve [...]. The Great Reputation which Bareges’s Waters deservedly maintain in *Paris*, and every part of *France* invited her hither in the year 1738, for further Succour. She soon reaped the fruits of her Journey, for a few days there was a sensible diminution of her Symptoms, and she continued the use thereof by Baths, Drinking, and Injections, for three Months Successively, with a constant Increase of Appetite and Strength, whereby her disorder was so much subdued, that she has not to this Day found any return of lameness, nor any Pains, till of late some few discovered the Cause not to have been extirpated.²⁷

The ‘digestive’ properties of the water, as Meighan puts it, corroded the scirrhus and avoided any further operation upon the womb.

Although one cannot be sure that Lamothe had read Meighan’s treatise, Lamothe appears among the subscribers of the *Dictionnaire des sciences médicales*, which clearly indicates that Barèges waters were recommended for

all kinds of ulcers and obstructions of the womb.²⁸ Indeed, Lamothe's letter ends with an obvious reference to the *Dictionnaire*, quoting a similar case that might help to predict an outcome for Madame Robert's ailment. He introduces this idea in a fashionable manner, as we might expect a well-informed doctor to present a new discovery to his colleague: 'I suppose I should not end this report without mentioning the remarks on a similar case by a very learned physician from our capital, Mr. Mécanier, M.D. at the *Hotel Dieu* and current professor at the Medical School of Paris'.²⁹ Clearly, Lamothe was anxious to display his knowledge to Dr. Delpit, who was himself a contributor to the *Dictionnaire*, and while he asks for confirmation before turning to their common scholarly reference ('by supposing that my research has not led me to misinterpret the signs, that my suspicions be based on truth, and that the neck of the matrix is really scirrhus'),³⁰ he sought to assert his professional status by offering himself as a potential interlocutor to Delpit, who stood at one degree of separation from the learned medical men of the capital. Lamothe continues his deferential exposition of the recent observations of Mécanier, 'this learned man', and finally mentions a recent instrument, used by one of the most renowned Parisian doctors, Dupuytren:

Dans son cours de clinique ce savant nous dit que non seulement l'extirpation pouvait se faire avec un grand espoir de succès, ainsi qu'elle avait été pratiquée par Mr le professeur Dupuytren et par un autre, mais aussi qu'on pouvait faire des applications caustiques sur le lieu même affecté, sans craindre d'intéresser les parties voisines, qu'on pouvait détruire le squirre par la cautérisation et cela à la faveur d'un instrument qu'il nous fit voir, instrument dont il est l'inventeur et auquel il a donné le nom de speculum-uteri. L'usage et la forme de cet instrument se trouvent au reste consignés dans le Dictionnaire des sciences médicales, à la fin de l'article Matrice, Tome 3, page 21 et suivantes.

In his clinical lessons, this learned man tells us that not only is it possible in such cases to pull out the tumour with great hopes of recovery, as it had been done by Professor Dupuytren with another physician, but that it is also possible to apply caustics locally, on the exact place of the affliction, without further risk to the neighbouring parts, and that the scirrhus could be destroyed by cauterization thanks to an instrument that he showed us, of which he is the inventor, and which he called *speculum-uteri*. The form and usage of this instrument are described at the end of the article *Matrix* in the *Dictionary of Medical Sciences*, Volume 3, page 21.³¹

Lamothe's compassionate description of Madame Robert can be read in two ways. It either demonstrates commitment to finding any potential solutions for her suffering, or shows that he used the patient's case for self-promotion, to enlarge his professional network through local medical institutions. The case he refers to here, described in the article 'Matrice' in the *Dictionnaire des sciences médicales*, and published only four years previously, is illustrated with a plate of the *speculum uteri* (see Fig. 2). Surprisingly, this case is further developed in a later volume, under the article title 'Speculum'. This later volume was published in 1821, two years before Lamothe wrote this letter. It describes how the

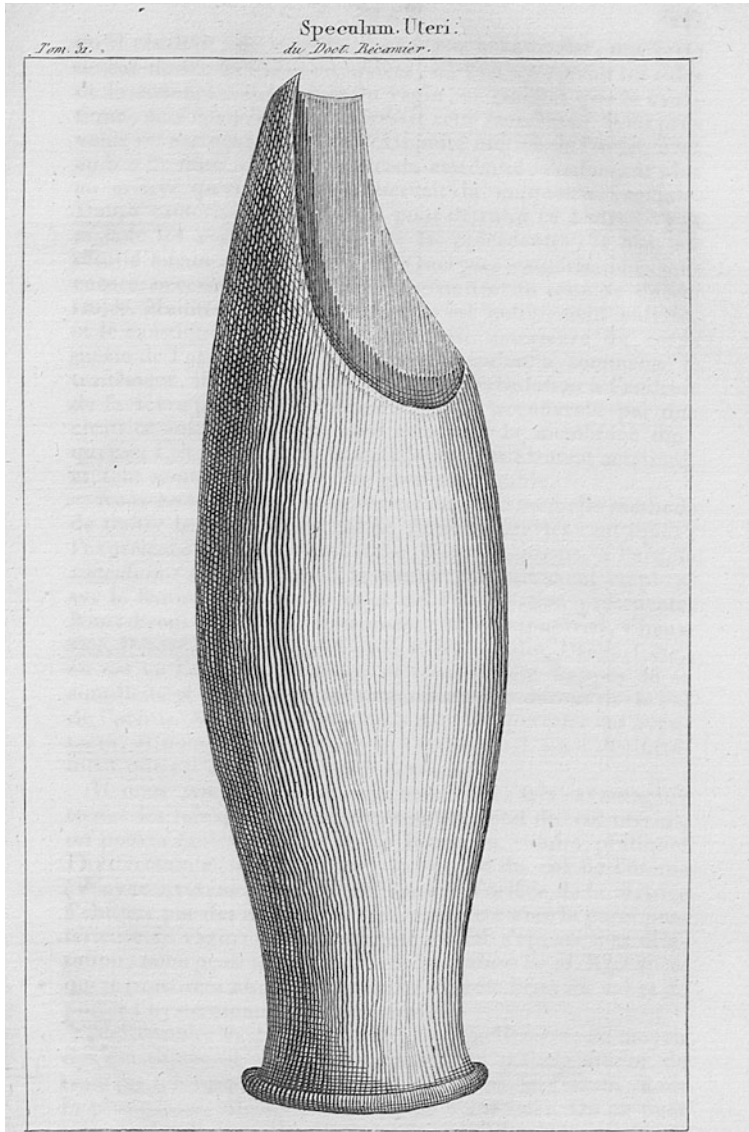


Fig. 2 Speculum uteri du Dr. Récamier. *Dictionnaire des sciences médicales*, Volume 31, Plate 1 (Paris, 1819)

Courtesy of Bibliothèque Inter-Universitaire de Santé, Paris

scirrhous had been treated by several local applications of caustics (mercury), a treatment which initially looked promising in the article ‘Matrice’, but was finally discarded as the patient died in ‘exquisite pain after suffering from stabbing pains in the womb which grew stronger every day and even intolerable in spite of heavy

doses of opium'.³² It seems surprising that Lamothe would have such confidence in the potential benefits to be gained from such an operation, especially as the *Dictionnaire*'s observation ends on an only vaguely positive note: 'some patients have been more efficiently relieved by cauterization'.³³

It is hard to speculate as to what might have motivated Lamothe to seek Delpit's advice about such a treatment, but one can note several signs of professional ambition: his reference to the illustrative plate of the *Dictionnaire*, and his mention of his own attendance at Mécancier's lesson on the use of the speculum (though he was also ignorant of the dramatic consequences of the operation as described in another volume of the same dictionary). All these facts demonstrate a fascination with medical progress and technical innovations on the part of some eager physicians in the provincial regions of France. They sought to enhance their everyday practice by creating a larger network of 'learned men' through the available hierarchical means. Asking for advice and sending patients to more specialist doctors might have been a way of developing professional connections between their own local practice and the capital, as networks of knowledge were very centralized in France, especially after Napoleon reformed its administrative organization.³⁴

Unfortunately, no further reference to this case can be found in the papers of Delpit, and I have not found any more information on the final options taken in the treatment of Madame Robert. Nonetheless, I would like to draw a few conclusions from this case before moving on to the definitions of sterility provided in the *Dictionnaire*. First, Robert did not consult her physicians directly for sterility, even though she had not fallen pregnant once in ten years of marriage; as we have no access to Robert's own account, it is hard to tell whether this was a subject of concern. Secondly, the close reading of this case confirms what Barbara Duden has already noted about eighteenth-century medical practice in Germany: that the medical approach to female patients was utero-centred, and that dysfunctional wombs might be over-represented in the medical literature, especially in expert advice and requests, as is the case for Lamothe and Delpit.³⁵ Finally, the case shows how medical doctors interacted about reference books such as the *Dictionnaire des sciences médicales*, which aimed to give an account of the most recent medical ideas, observations and technologies of their time, to keep up to date with current medical innovations, and to imagine potential operations and new surgical solutions to cure their patient.

THE *DICIONNAIRE DES SCIENCES MÉDICALES* AND STERILITY

Although Lamothe viewed the scirrhus as a *consequence* of Madame Robert's sterility, articles dealing with the subject in Panckoucke's dictionary listed scirrhus among the common *causes* of sterility, as they obstructed orifices and prevented conception.³⁶ Recurrent obstruction of pipes and orifices, general weakness of the female organs, and general 'irritability' of the womb were listed as the most common causes of infertility. The fact that Madame Robert suffered pain during sexual intercourse ('her relationship with a man promptly

awoke new forms of suffering')³⁷ would not have been read as an immediate obstacle to conception.³⁸ In the long run, it could, however, become a cause of female impotence, which was understood as a physiological hindrance to penetration in both sexes (women with an obstructed vagina, for example, would be considered impotent if they could not be penetrated by a penis).³⁹

Sterility has two entries in the *Dictionnaire*, each article dedicated to a specific discipline: the first is physiological, and the second article deals with legal medicine and pathology. The first author, Claude-Martin Gardien (1767–1838), who explained the physiological causes of impotence and sterility, was known as an *accoucheur* who wrote manuals on women's diseases and guidance for midwives. He lists the common causes of sterility: *fluor albus* (white vaginal discharges, also known as 'the whites') or other unusual discharges, amenorrhoea (cessation of menstrual periods), hydropsia (the technical term for dropsy, an oedema or excess of fluid in the tissues), and cancer. According to Gardien, many cases of sterility could indeed be accounted for by invisible organic lesions or malformations. This perception is confirmed by the second article, which lists many cases of post-mortem examination showing obstructions in the matrix or deformed ovaries. Gardien prescribed specific sexual postures to compensate for physiological obstacles to fertility, such as when the cervix was too low. He named tumours of all kinds as one of the most irrevocable causes of sterility, even though he admitted that this did not always end all chance of fertility: 'I know of several examples in which scirrhus and cervical cancer have not prevented the patient from conceiving and going into labour after a full-term pregnancy.'⁴⁰

François-Emmanuel Fodéré (1764–1835), the author of the second article on sterility, from the perspective of legal medicine and pathology, adopted a different stance on the subject. The inclusion of an article in this category can be explained by the French constitution, which allowed sterility to be considered as potential grounds for divorce. A rapid survey of his career illustrates Fodéré's concern with the political consequences of sterility. He was an active publisher, and became professor of legal medicine in Strasbourg at the end of a medical military career. His dissertation *De Infanticidio*, published in 1814 when Fodéré applied for the chair of legal medicine, echoes eighteenth-century political and medical discussions about the criminalization of abortion – which may explain why his article on sterility begins with a diatribe against infanticide.

Fodéré's article is more historical and moral than Gardien's, and opens with a brief survey of ancient conceptions of sterility. He begins by quoting from the Bible, which was a common reference for medical accounts of sterility in the previous century, as many matriarchal figures in Genesis were initially sterile (Sarah, Rachel, and Rebecca). Fodéré goes on to explain that Roman social policies were based on the exclusion of sterile women:

In the early days of the Roman Republic, Romans repudiated their wives when they were sterile; Cornelius Ruga was the first to set the example, which was followed by others for several centuries, until the whole of humanity was converging on Rome, as it were, and the law was no longer needed.⁴¹

The freeman's name is misspelt: Fodéré almost certainly meant to refer to the case of Spurius Carvelius Ruga, who was known for divorcing his wife even though he loved her, because he had promised to marry to beget children. Fodéré quickly adds: 'Medicine does not enter into these political schemes',⁴² but such a 'moral' introduction set the tone for the whole article, where infertility is 'always considered as evil' and fecundity 'always as a blessing'.⁴³

Although both articles mention male impotence and sterility, most of the cases they discuss, and the impediments to fertility which they highlight, concern women. The articles demonstrate the longevity of many ideas about female sterility and sexuality that have been discussed in this volume for earlier periods, such as the associations between thin bodies, lust, and infertility examined in Sarah Toulalan's chapter, and the beliefs in the 'masculine' appearance of barren women described by Cristina Santos Pinheiro. Gardien elaborated a physiognomic portrait of fertile and sterile women, advised husbands on their ideal choice of mate, and provided tips to recognize the signs of a future fertile marriage. Indeed, the description is not unlike cattle advice books on how to choose a good milk cow,⁴⁴ especially as, in both cases, temperament is cited as a key element, both in the sense of good or bad temper, and in the more Hippocratic sense of *crassis*:

Une taille moyenne, plutôt petite que grande, une belle carnation, des chairs remplies de sucs, avec des mamelles bien formées, un bon appétit avec un caractère gai, des mœurs pures et très-peu de désirs, sont en général des caractères qui présagent une nombreuse postérité. Celui qui la croit encore un bienfait, doit éviter de choisir pour compagne une de ces femmes longues, effilées, maigres, pâles, affêtées, moroses, qui ont souvent des spasmes, qui visent à l'esprit et dédaignent les choses ordinaires. Si elles ne sont pas tout à fait stériles, et si, après avoir composé avec leurs époux, ces femmes ont un enfant ou deux, elles seront encore bien moins bonnes mères que les premières.

Here are common features that predict bountiful posterity: her size should be average – rather small than tall – her carnation should be beautiful, her flesh gorged with vital sap, her mammary well-formed, she should have good appetite and a jolly temper, an untarnished lifestyle and very few desires. He who still thinks that posterity is a good thing should avoid choosing one of those lean and skinny women for a companion, as they look meagre, affected and morose; they frequently complain of spasms, and look for higher occupations of the mind, scorning anything that might look too ordinary. Even if these women are not entirely sterile, and if, once they have composed with their husbands, they beget one or two children, they will be the worst of mothers compared to the first kind of women I described.⁴⁵

The description clearly establishes connections between submission (small size, and no occupation of the mind), country-girl-like qualities ('good appetite and jolly temper'), and obvious physiological qualities evoking earlier fertility goddesses. Urban life and intellectual exchanges are turned into bothersome pathological features and rejected in favour of higher moral notions such as family-building and the happiness of children.

The question of female sexuality was also tackled by Gardien and Fodéré, who both established a connection between female orgasm and fecundity. According to them, moderate pleasure (*ébranlement*) was much more conducive to childbearing than passionate intercourse (*désir ardent*); women of pleasure, they noted, were often sterile. They developed the idea that spasms and irritability predispose to infertility because they prevent efficient nesting in the womb. Gardien even tried to offer a tentative formula for measuring the strength of orgasm on the one hand, and the chances of fertility, on the other: 'Observation teaches us that women who shake less than others at the peak of their pleasure sometimes prove more fertile'.⁴⁶ This preference for moderation (and perhaps even frigidity) reinforces the idea of a physiological type for motherhood – characterized by moderate and tenderly loving temper – as well as a typology of sterile women, who are loosely associated with prostitutes and viragoes. Sterile women were therefore hypersexualized, echoing other eighteenth and nineteenth-century medical anxieties about certain aspects of sexuality, such as masturbation, venereal disease, and repeated abortions (in the case of prostitutes in particular).⁴⁷ Fodéré, for example, after reviewing all the potential causes of sterility, claimed that the only cause of sterility that was potentially permanent, and made conception impossible, was a debauched sexuality: 'Libertinism may well be a likely cause, as nymphomaniacs and prostitutes are usually sterile, and this is often the case for men who have had a liberal youth.'⁴⁸

Women deemed to be more masculine were also perceived by Fodéré as more likely to be sterile: 'Women who show a temperament and bodily dispositions more akin to the constitution of men than to their own sex are proved most of the time to be sterile'.⁴⁹ Similarly, Gardien spent a long time describing the 'viragoes' of antiquity, to complete the list of his physiological types of female sterility:

Les femmes qui par leur tempérament et les dispositions de leur corps se rapprochent plus de la constitution de l'homme, que de celle de la femme, sont presque toujours stériles. Les Latins les désignaient sous le nom de viragines, à raison de cette apparence. Leur voix est grave et forte; leur menton et leur lèvre supérieure sont garnis de barbe comme ceux des hommes, la couleur de leur peau est basanée, et leur poitrine souvent couverte de poils: elles n'ont point ou peu de règles, sans que leur santé en soit dérangée; les plaisirs de l'amour n'ont aucun attrait pour elles, et elles préfèrent pour l'ordinaire la vie active des hommes aux occupations paisibles de leur sexe. Ils n'est pas rare d'en reconstrer dans les camps, où elles paraissent se plaire.

Women, who by their temperament and bodily constitution are more like men than women, are almost always sterile. The Romans, because of the way they looked, called them *viragoes*. They have a deep and loud voice, their chin and upper lip is covered with hair just like men, their skin is brownish and their breast is often covered with hair as well: they hardly menstruate, without any hindrance to their health. They are not attracted by the pleasures of love, and tend to prefer the active life of men rather than the quiet occupations of their own sex. They are regularly found in military camps, where they seem rather happy.⁵⁰

Although such women show no interest in sex, their gender is altered, patterned on a failed masculine type of behaviour and character which can breed no inheritance.

Both articles end with a representation of sterility as a mysterious and unfathomable condition, and both articles conclude on a disconcerting paradox: sterile women 'look entirely apt to have children'.⁵¹ Both Claude-Martin Gardien and François-Emmanuel Fodéré stressed the difficulties of diagnosing infertility and finding its cause, and the uncertainty of available treatments. Gardien recurrently mentioned that doctors consulted for this reason were 'restricted to conjectures', while Fodéré talked of the 'mysterious causes' of sterility.⁵² Yet, both refused to definitively consider sterility a permanent condition: 'When consulted by a woman who appears to have the right disposition to conceive, but has had no children, despite being married some time, pronouncing whether her sterility will be permanent or simply temporary becomes an embarrassing affair.'⁵³

One of the reasons for such deep anxiety on this matter was that at the beginning of the nineteenth century, French women could be divorced by their husbands if medical experts could prove that their sterility was permanent. Fodéré stressed the responsibility placed on these experts, whose decision could have a dramatic impact on the lives of the individuals concerned: 'one cannot decide on the happiness or misery of families and individuals by simple conjecture'.⁵⁴

Both Gardien and Fodéré were adamant in defending the indissolubility of marriage, and in cautioning that sterility should not be diagnosed hastily, suggesting that only impotence could be diagnosed with certainty.⁵⁵ Both authors provided a list of couples initially thought to be sterile, but who were almost miraculously cured of their sterility after 'ten, fifteen, twenty, and even twenty-two years of marriage'.⁵⁶ Beyond the legal context, which placed doctors in the position of deciding whether a divorce should be granted or not, it could be argued that the refusal to consider that sterility might be a permanent condition is representative of a long-lasting cultural representation of sterility that I would like to call 'the anxiety of emptiness'.⁵⁷ This might be defined as a sort of displacement to the domestic and medical sphere of the idea that 'nature abhors a vacuum'. Fodéré's literary introduction to his article is a clear development of this idea:

Si la stérilité nous présente l'image sèche et aride du néant, si le triste célibataire n'offre à nos regards qu'un regard froid et ridé, qui ne peut aimer que soi, si, au contraire, l'aspect d'une verdure qui succède aux frimas, des troupeaux qui la broutent, accompagnés de leurs petits, si même les insectes qui pullulent nous dilatent d'aise et d'admiration, si la naissance d'un fils produit les plus délicieuses émotions, si l'amour et le lien conjugal ont inspiré de tous temps les plus beaux vers! comment se fait-il que la stérilité soit regardée aussi comme un bienfait, et la fécondité, cet heureux symbole d'une nature toujours jeune, comme un malheur, qu'on cherche à prévenir par mille mystérieuses précautions et à détruire au besoin par les crimes révoltants d'infanticide et d'aborticide?

On the one hand we associate infertility with the dryness and aridity of nothingness, we lament the cold and wrinkled look of the sad bachelor, who is condemned to self-love, and on the other, the contemplation of green pastures resurfacing after the cold winter, of the grazing flocks with their offspring and even of the myriad creeping insects, which fill us with ease and admiration. A newborn son is one of the happiest emotions, and conjugal love has inspired the most beautiful poems in all ages! And yet, despite this, sometimes sterility is considered as a blessing and fecundity, this happy symbol of the everlasting rejuvenation of nature, is seen as fatality which is to be avoided by thousands of mysterious precautions and to be destroyed by the repulsive crimes of infanticide and aborticide.⁵⁸

From the pastoral depiction of fertility to the lyrical denunciation of abortion as a crime, sterility stood somewhere in the continuum between natural happiness and unnatural misery. The bachelor, ‘condemned to self-love’, was contrasted with a cosmogonist system of fertility where agrarian and human fertility corresponded to the ultimate experience of happiness for individuals and society. In this context, Fodéré’s expression ‘dryness and aridity of nothingness’ is a philosophical reflection on sterility, death, and the murderous crimes of infanticide and abortion.

CONCLUSION

I would like to return to Madame Robert’s case and Lamothe’s description of it. What does the *Dictionnaire des sciences médicales* tell us about this clinical case? First of all, as Lamothe himself implies, scirrhus and cancers were not necessarily considered to be incurable conditions, nor a necessary cause of sterility. Although we have no correspondence from Mme Robert herself, we might, in turn, conjecture that her consultations were sincere attempts to improve her health, if not to cure her sterility. Secondly, the reading of Delpit’s medical correspondence together with the published articles by Lamothe and Fodéré demonstrates that, even though sterility was theoretically understood as a condition which affected both sexes, women were the first to be diagnosed and treated. Not once do we read about Mme Robert’s husband, his regimen and habits, and his agency in the couple’s life, except through his wife’s painful experiences during coition.

Madame Robert’s sterile marriage was thus never once attributed to her husband. This may be because her initial condition showed signs of irregular menstruation and echoed Gardien’s anxious description of ‘morose intellectual women’. In that case, the correlation between morosity – in Robert’s case, ‘general disgust for her environment’ – and weak wombs could potentially be cured by taking the waters, which, as Gardien argued, were as good as aphrodisiacs for curing sterility in phlegmatic women:

C'est dans la stérilité de cette espèce que pourrait convenir l'emploi de toutes les substances stimulantes auxquelles les médecins ont attribué la vertu aphrodisiaque. L'usage des

eaux minérales de Vichy, de Sylvanès dans la Forêt Noire, etc. prises intérieurement, ou employées en bains, ont quelquefois réussi à rendre les femmes fécondes.

In this type of sterility, it might be efficient to use invigorating substances which doctors have considered to be aphrodisiac. Vichy mineral waters and Sylvanès in the Black Forest, taken internally or in bathing, have sometimes rendered women fertile.⁵⁹

There was no accompanying mention of a potential gentleman companion, unlike in the nineteenth-century caricature quoted at the beginning of this chapter. Yet this reveals a continuous medical belief, throughout the nineteenth century, in the therapeutic powers of spas for those affected with problems related to barrenness. Gardien's statement needs to be read in parallel with earlier prescriptions of spa treatment, such as those eagerly followed by Royal Princesses and Queens, including Anne d'Autriche in seventeenth-century France, Queen Anne of Great Britain, who did not have a surviving heir in spite of her 17 pregnancies, her sister Queen Mary, who did not have an heir at all, and her stepmother Mary of Modena, whose spa cure proved successful at the end of the Restoration period.⁶⁰

To return to the morosity described by Gardien's article, and by Dr. Lamothe in his letter to Delpit, it seems that one of the ways in which medical doctors approached sterile women at the turn of the nineteenth century was based on a loose typology. By this I mean that several types of sterile women emerge when reading both articles on sterility, and Lamothe's letter: the lean and hot type, the virago, the melancholy and morose, and the anxious intellectual. As he writes, Lamothe, consciously or unconsciously, adapts his description to one of the major types that circulated in medical discussions of female sterility. These types should be investigated as collective cultural references at work in literature, caricature, and periodicals. They framed the medical and cultural understanding of a condition that remained invisible and mysterious even for reputed medical doctors such as Gardien and Fodéré.⁶¹

NOTES

1. All translations are the author's, unless stated otherwise.
2. See, for example, Ange Goudard, *The Chinese Spy; or, Emissary from the Court of Peking, Commissioned to Examine into the Present State of Europe. Translated from the Chinese* (London, 1765), pp. 265–326. In this satirical account of France, miraculous cures for infertility are in fact performed by the visiting garrison.
3. *Letters from a Moor at London to his friend at Tunis: Containing an Account of his Journey through England, with his Observations on the Laws* (London, 1736), p. 250.
4. Claude-Martin Gardien, 'Stérilité (physiologie)', and François-Emmanuel Fodéré, 'Stérilité (pathologie et médecine légale)', *Dictionnaire des sciences médicales*, vol. 52 (Paris, 1821). On the historical context of this publication, see Claude Blanckaert and Michel Porret (eds), *L'Encyclopédie méthodique (1782–1832): des Lumières au positivisme*, vol. 68 (Geneva, 2006).

5. On Bath, see James Graham, *A New, Plain, and Rational Treatise on the True Nature and Uses of the Bath Waters* (Bath, 1789). On Barèges and Bagnières de Bigorre, see Christopher Meighan, *A Treatise of the Nature and Powers of Baresges's Baths and Waters* (London, 1742). On Scarborough, see Friedrich Hoffman, *New Experiments and Observations upon Mineral Waters, Directing their Farther Use for the Preservation of Health, and the Cure of Diseases* (London, 1743).
6. Théophile and Antoine de Bordeu, *Précis d'observations sur les eaux de Barèges et les autres eaux minérales du Bigorre et du Béarn ou Extraits de divers ouvrages périodiques, au sujet de ces eaux* (Paris, 1760). On Bordeu see Alexandre Wenger, *Le Médecin et le philosophe. Théophile de Bordeu selon Diderot* (Paris, 2012).
7. Phyllis May Hembry, *The English Spa, 1560–1815: A Social History* (Madison, NJ, 1990); Jérôme Penez, *Histoire du thermalisme en France au XIXe siècle: Eau, médecine et loisirs* (Paris, 2005).
8. Jean-Christophe Sanchez, 'Prè et proto-thermalisme à Bagnères-de-Bigorre et Barèges', *Revue de Comminges et des Pyrénées Centrales*, 128:2 (2012).
9. Wellcome Library, London, MS 5329. This box is a collection of papers from Dr. Delpit, mostly correspondence and case studies, together with several descriptions and maps of the Barèges Spa.
10. 'arrivée à l'âge de la puberté la menstruation eût beaucoup de peine à s'établir chez elle, cette première évacuation périodique ne vient peu abondamment que précédée de coliques extrêmement fortes et qui la tinrent longtemps'. Wellcome Library, London, MS 5329.
11. 'six mois s'étaient à peine écoulés qu'un malaise général s'empara d'elle. son coloris et sa fraîcheur se perdirent peu à peu, sa menstruation devint moins copieuse. elle était toujours précédée et suivie de quelques pertes blanches, et n'apparaissait jamais qu'après des coliques qui la tenaient un couple de jours. à cela se joignit une douleur sourde, continue, qu'elle rapportait à l'intérieur d'une partie sexuelle'. Wellcome Library, London, MS 5329.
12. 'Les coliques devenaient plus fortes aux époques menstruelles alors un dégoût général, une insouciance complète pour tout ce qui l'entourait s'empara d'elle, elle commença à considérer la maladie comme extrêmement sérieuse.' Wellcome Library, London, MS 5329.
13. Wellcome Library, London, MS 5329.
14. 'elle entra alors en correspondance avec l'un de messieurs les médecins qu'elle avait vu à Bordeaux ce dernier en fessant de tems en tems subir au traitement quelque légère modification, et ne manquait jamais de la rassurer sur les craintes qu'elle concevait et principalement sur celle de voir naître dans l'utérus, soit une affection cancéreuse soit une excroissance polypeuse'. Wellcome Library, London, MS 5329.
15. 'Enfin dégoûtée de tout traitement infructueux, elle abandonna sa maladie à elle même, et resta ainsi dans l'inaction, souffrant toujours, tantôt plus, tantôt moins, jusque au mois de juin 1822 époque où elle m'appela auprès d'elle pour que j'eusse à lui prodiguer mes soins.' Wellcome Library, London, MS 5329.
16. 'Elle éprouvait aussi une oppression considérable surtout lorsqu'elle avait mangé, au point qu'elle n'osait plus pour ainsi dire se nourrir'. Wellcome Library, London, MS 5329.
17. 'Je lui fis alors pour la première fois la proposition de m'en laisser assurer par moi-même, elle y consentit non sans beaucoup de répugnance, et voici à peu près ce que

- J'ai cru reconnaître dans l'intérieur des organes.' Wellcome Library, London, MS 5329.
18. See, for example, Adrian Wilson, *The Making of Man-Midwifery: Childbirth in England, 1660–1770* (Cambridge, MA, 1995); Michel Foucault, *Naissance de la clinique* (Paris, 1988).
 19. 'Le col de la matrice est un peu plus saillant dans l'intérieur du vagin qu'il ne l'est dans l'état ordinaire, il est de plus doué d'une sensibilité très grande et attentin d'une Tuméfaction bien prononcée. Cette Tuméfaction est dure et offre Beaucoup de résistance. Plusieurs rugosités, plusieurs bosselures irrégulières plus prononcées à droite qu'à gauche se font remarquer autour du museau de Tanche. Celui-cy reste un peu Béant et laisse une ouverture d'une ligue à peu près de Diamètre laquelle ouverture est plutôt arrondie qu'allongée. c'est précisément à ce point-là que madame la consultante rapporte ses douleurs; c'est ce même point aussi qui la fait, dit-elle, si cruellement souffrir toutes les fois qu'elle se trouve en communication avec son mari.' Wellcome Library, London, MS 5329.
 20. The definition provided by James's *Medicinal Dictionary* accounts for this hard tumour as a stagnation of fluids: 'A scirrhus may be produced by whatever is capable of coagulating, inspiffating, or drying the liquid in the Glands but especially such as contain an easily inspiffated liquor, and from the Situation dispose their contents in a stagnation. Hence a scirrhus frequently happens in the eyes, the Nostrils, the Mouth, the Breasts, the Axilliae, the Groin, the Pancreas, the Mesentery, and the Uterus.' Robert James, *Medicinal Dictionary* (London, 1743–45).
 21. Wellcome Library, London, MS 5329.
 22. See, for example, Nahema Hanafi, 'Souffrantes et soignantes au siècle des Lumières. Corporités féminines, savoirs de santé et usages des soins'. Unpublished PhD thesis, France, Suisse, 2012.
 23. See, for instance, Diderot's *Encyclopédie*: 'Les personnes qui en sont attaquées ressentent des douleurs dans cette partie, sont tristes, languissantes, abattues, sans force, sans appetit: la fièvre, les frissons, les défaillances, &c. surviennent quelquefois. [. . .]. Les remedes qu'on doit regarder comme plus appropriés, sont les décoctions vulnéraires, balsamiques, les baumes, les eaux minérales, sulphureuses, celles de Barege, de Banniere, de saint Laurent, &c. prises intérieurement & injectées dans la matrice.' Denis Diderot, *Encyclopédie, ou dictionnaire raisonné des sciences, des arts et des métiers* (Paris, 1750–65).
 24. *Dictionnaire des sciences médicales*, vol. 15 (Paris, 1815), p. 28.
 25. 'Ordre des Hospitalier du Saint Esprit'.
 26. *The Chirurgical Works of Benjamin Gooch, Surgeon; A New Edition, with his Last Corrections and Additions* (London, 1773), p. 246.
 27. Meighan, *Treatise of the Nature and Powers of Bareges's Baths and Waters*, p. 99.
 28. *Dictionnaire des sciences médicales*, vol. 15, p. 28.
 29. 'Je ne crois pas devoir terminer sans faire part d'une réflexion que dans une circonstance à peu près semblable j'entendis faire par un médecin très instruit de la capitale, par Mr Mécanier, médecin à l'Hotel Dieu et actuellement professeur à l'école de médecine de Paris'. Wellcome Library, London, MS 5329.
 30. 'En supposant que mes recherches ne m'aient point induit en erreur, en supposant que mes soupçons soient fondés, que le col de la matrice soit réellement dans un état squirreux'. Wellcome Library, London, MS 5329.

31. Wellcome Library, London, MS 5329.
32. Here is a more extensive description of the case: 'Nous avons présenté à l'article *matrice* une partie de l'histoire de la malade à laquelle on a appliqué pour la première fois le nouveau *speculum*, et la méthode de traiter les cancers de l'utérus par la cautérisation. Nous avons promis d'offrir ici le résultat de cette méthode; quoiqu'il n'ait pas été heureux, nous l'avouons avec autant de franchise que nous avons mis d'empressement à annoncer ce mode de traitement dont les premiers effets semblaient si avantageux. Madame S***, après avoir éprouvé un soulagement marqué et une guérison apparente, ressentit bientôt vers l'utérus des élancements qui augmentant chaque jour, devinrent intolérables malgré de fortes doses d'opium; après des souffrances très aiguës, la malade succomba dans le mois de janvier 1820.' *Dictionnaire des sciences médicales*, vol. 52, p. 273.
33. 'Quelques femmes ont cependant obtenu de la cautérisation un soulagement plus durable.' *Dictionnaire des sciences médicales*, vol. 52, p. 273.
34. On the French medical context see, for example, Caroline Hannaway and Ann La Berge (eds), *Constructing Paris Medicine* (Amsterdam and Atlanta, GA, 1998); Ann La Berge and Mordechai Feingold (eds), *French Medical Culture in the Nineteenth Century* (Amsterdam and Atlanta, GA, 1998).
35. See Barbara Duden, *The Woman Beneath the Skin: A Doctor's Patients in Eighteenth-Century Germany*, trans. Thomas Dunlap (Cambridge, MA, 1991).
36. 'L'ouverture peut aussi être bouchée par une tumeur'. Gardien, 'Stérilité (physiologie)', p. 507.
37. 'Le commerce d'un homme ne tarda pas à lui faire naître de nouvelles souffrances'. Wellcome Library, London, MS 5629.
38. See Thomas Laqueur, *Making Sex: Body and Gender from the Greeks to Freud* (Cambridge, MA, 1990).
39. See 'Impuissance', *Dictionnaire des sciences médicales*, vol. 24, p. 176.
40. 'Il existe cependant plusieurs exemples dans lesquels le squirre et le cancer du cold de la matrice n'ont pas empêché les femmes de concevoir et d'accoucher à terme.' Gardien, 'Stérilité (physiologie)', p. 505.
41. 'Aussi, dans les commencemens de la république, les Romains répudiaient les femmes qui étaient stériles; Cornélius Ruga fut le premier qui en donna l'exemple, lequel fut suivi pendant plusieurs siècles, jusqu'à ce que tout le genre humain affluant, pour ainsi dire, dans Rome, on n'eut plus besoin de cette loi.' *Dictionnaire des sciences médicales*, vol. 52, p. 515.
42. 'la médecine n'entre pas dans les calculs de ces politiques'. *Dictionnaire des sciences médicales*, vol. 52, p. 515.
43. 'Pour [la médecine] la fécondité sera toujours un bien, et la stérilité un mal'. *Dictionnaire des sciences médicales*, vol. 52, p. 515.
44. See, for example, Jean Henri Magne, *How to Choose a Good Milk Cow; Or, A Description of All the Marks by Which the Milking Qualities of Cows May Be Ascertained* (London, 1853).
45. Gardien, 'Stérilité (physiologie)', p. 518.
46. 'L'observation apprend que les femmes qui éprouvent le moins d'ébranlement dans les jouissances, sont quelquefois les plus fécondes.' Gardien, 'Stérilité (physiologie)', p. 510.
47. See, for example, Hannah Thompson, *Taboo: Corporeal Secrets in Nineteenth-Century France* (London, 2013); Jann Matlock, *Scenes of Seduction: Prostitution, Hysteria, and Reading Difference in Nineteenth-Century France* (New York, 1994).

48. 'Le libertinage pourrait bien être une cause efficace, car les nymphomanes et les prostituées sont ordinairement stériles, et il en est assez souvent de même des hommes qui ont abusé de leur jeunesse.' Fodéré, 'Stérilité (médecine légale, pathologie)', p. 516.
49. 'Les femmes qui, de par leur temperament et les dispositions de leur corps se rapprochent le plus de la constitution de l'homme que celle de la femme, sont Presque toujours stériles.' Fodéré, *Dictionnaire des sciences médicales*, vol. 52 (Paris, 1821), p. 512.
50. Gardien, 'Stérilité (physiologie)', p. 518.
51. 'souvent elle est conformée de la manière la plus avantageuse pour en avoir'. Gardien, 'Stérilité (physiologie)', p. 515.
52. 'On est le plus souvent réduit à des conjectures lorsqu'il s'agit de déterminer les causes qui s'opposent à ce qu'elle ait lieu.' Gardien, 'Stérilité (physiologie)', p. 505. 'les causes sont le plus souvent un mystère et qui en ont d'autant plus excite tous les efforts de la curiosité humaine'. Fodéré, 'Stérilité (médecine légale, pathologie)', p. 515.
53. 'Quand on est consulté par des femmes qui jouissent en apparence des dispositions les plus favorables pour concevoir, et qui n'ont pas eu d'enfants, quoique mariées depuis longtemps, il est embarrassant de prononcer si leur stérilité sera perpétuelle ou seulement temporaire.' Fodéré, 'Stérilité (médecine légale, pathologie)', p. 515.
54. 'ce n'est pas sur de simples conjectures qu'on doit décider du bonheur ou du malheur des familles ou des individus'. Fodéré, 'Stérilité (médecine légale, pathologie)', p. 522.
55. 'Avant de prononcer qu'une femme est stérile et de décider de la légitimité d'une demande de divorce intentée sous ce prétexte, il faut constater auparavant s'il existe une cause d'impuissance incurable'. See Gardien, 'Stérilité (physiologie)', p. 505. 'Des conclusions tirées de ces indices en faveur de la dissolution du mariage, ou contre la légitimité des enfants, seraient néanmoins prises trop à la légère: il n'en est pas de la stérilité comme de l'impuissance; celle-ci, qu'elle soit temporaire ou perpétuelle, curable ou incurable, se démontre par des caractères positifs; l'autre n'est plus souvent que conjecturale'. See Fodéré, 'Stérilité (médecine légale, pathologie)', p. 522. On this issue, see Fabrice Brandli, Claude Blanckaert and Michel Porret (eds), *L'encyclopédie méthodique (1782-1832)* (Geneva, 2006), p. 14.
56. 'On pourrait citer des exemples nombreux de fécondité qui n'ont eu lieu qu'après dix, quinze, vingt et même vingt-deux ans de mariage. C'est après une stérilité aussi prolongée qu'Anne d'Autriche, reine de France, mit au monde Louis XIV'. Fodéré, 'Stérilité (médecine légale, pathologie)', p. 510.
57. Sarah Jordan's book *The Anxieties of Idleness: Idleness in Eighteenth-Century British Literature and Culture* (Lewisburg, PA, 2003) has inspired me to use this expression.
58. Fodéré, 'Stérilité (médecine légale, pathologie)', p. 515.
59. *Dictionnaire des sciences médicales*, vol. 52, p. 511.
60. See, for example, Frederick F. Holmes, *The Sickly Stuarts: The Medical Downfall of a Dynasty* (Stroud, 2003).
61. I am indebted to Florence Lotterrie, Anne-Emmanuelle Demartini and Claude-Olivier Doron, who kindly invited me to talk about the various typologies of sterile women in December 2016 at Paris-Diderot, and thus inspired this conclusion.

RESEARCH RESOURCES

Primary Sources

It is extremely unusual to find such detailed correspondence on the treatment of a single patient. The relevant correspondence discussed in this chapter is held at the Wellcome Library in London (MS 5329). It contains approximately 20 letters which passed between Dr. Delpit and Dr. Lamothe between 1860 and 1864. The symptoms of the patient are discussed in some depth, but there is some uncertainty about the dating of the letters. Apart from this archival source, interested readers may wish to consult some of the prominent medical dictionaries of the period, which often cross-reference different symptoms and provide an excellent overview of the wider context within which doctors understood infertility. In England, Robert James's *Medicinal Dictionary* (London, 1743–45) was still a standard reference work in the early nineteenth century; in France, the Société de Médecins et de Chirugiens' *Dictionnaire des sciences médicales* (1812–22) rapidly superseded other works.

Further Printed Primary Sources

Théophile de Bordeu, Antoine de Bordeu and François de Bordeu, *Précis d'observations sur les eaux de Barèges et les autres eaux minérales du Bigorre et du Béarn ou extraits de divers ouvrages périodiques, au sujet de ces eaux* (Paris, 1760).

Amédée Dechambre (ed.), *Dictionnaire encyclopédique des sciences médicales* (Paris: G. Masson, 1864–89).

Dictionnaire des sciences médicales (Paris, 1815).

Denis Diderot, 'Matrice', *Encyclopédie, ou dictionnaire raisonné des sciences, des arts et des métiers* (Paris, 1750–65).

Friedrich Hoffman, *New Experiments and Observations upon Mineral Waters, Directing their Farther Use for the Preservation of Health, and the Cure of Diseases* (London: J. Osborn and T. Longman, 1743).

Jean-Henri Magne, *How to Choose a Good Milk Cow; Or a Description of all the Marks by Which the Milking Qualities of Cows May Be Ascertained* (London: Blackie & Son, 1853).

*Secondary Sources**Mineral Waters*

Phyllis May Hembry, *The English Spa, 1560–1815: A Social History* (Madison, NJ: Fairleigh Dickinson University Press, 1990).

Jérôme Penez, *Histoire du thermalisme en France au XIXe siècle: eau, médecine et loisirs* (Paris: Economica, 2005).

Jean-Christophe Sanchez, 'Bagnères-de-Bigorre, histoire d'une ville thermale', *Explorations Pyrénéennes, Bulletin de la Société Ramond* (1993), 55–159.

Jean-Christophe Sanchez, 'Le thermalisme à Bagnères-de-Bigorre au grand siècle à travers la correspondance de Colbert', *Explorations Pyrénéennes, Bulletin de la Société Ramond*, 142 (2007), 101–16.

John K. Walton (ed.), *Mineral Springs Resorts in Global Perspective: Spa Histories* (London: Routledge, 2014).

Fertility, Infertility and Sick Bodies

- Lisa Forman Cody, *Birthing the Nation: Sex, Science, and the Conception of Eighteenth-Century Britons* (Oxford: Oxford University Press, 2005).
- Alain Corbin (ed.), *Histoire du corps 2: de la révolution à la grande guerre* (Paris: Seuil, 2005).
- Eve Keller, *Generating Bodies and Gendered Selves: The Rhetoric of Reproduction in Early Modern England* (Seattle, WA: University of Washington Press, 2007).
- Hannah Thompson, *Taboo: Corporeal Secrets in Nineteenth-Century France* (London: Legenda, 2013).
- David M. Turner, *Disability in Eighteenth-Century England: Imagining Physical Impairment* (London: Routledge, 2012).
- Georges Vigarello, *Le sentiment de soi: histoire de la perception du corps XVIe-XXe siècle* (Paris: Seuil, 2014).
- Robert Woods, *Death before Birth: Fetal Health and Mortality in Historical Perspective*, (Oxford: Oxford University Press, 2009).

Women's Health

- June K. Burton, *Napoleon and the Woman Question: Discourses of the Other Sex in French Education, Medicine, and Medical Law, 1799–1815* (Lubbock, TX: Texas Tech University Press, 2007).
- Kathleen Hardesty Doig and Felicia Sturzer (eds), *Women, Gender and Disease in Eighteenth-Century England and France* (Newcastle upon Tyne: Cambridge Scholars Press, 2014).
- Barbara Duden, *The Woman Beneath the Skin: A Doctor's Patients in Eighteenth-Century Germany*, trans. Thomas Dunlap (Cambridge, MA: Harvard University Press, 1991).
- Marjo Kaartinen, *Breast Cancer in the Eighteenth Century* (London: Pickering and Chatto, 2013).
- Ilana Löwy, *A Woman's Disease: The History of Cervical Cancer* (Oxford: Oxford University Press, 2011).
- Cathy McClive, *Menstruation and Procreation in Early Modern France* (London: Ashgate, 2014).
- Cathy McClive and Nicole Pellegrin (eds), *Femmes en fleurs, femmes en corps: sang, santé, sexualités, du moyen âge aux Lumières* (Saint-Étienne: PU Saint-Etienne, 2010).

‘The Great Foe to the Reproduction of the Race’: Diagnosing and Treating Infertility Caused by Venereal Diseases, 1880–1914

Anne Hanley

INTRODUCTION

In 1895 the doctor and eugenicist Arabella Kenealy (1859–1938) wrote a letter titled ‘A Question of Conscience’ to the editor of the *British Medical Journal* (*BMJ*) in which she recounted her attendance at a case of threatening abortion. It was a house call made to a heavily pregnant and syphilitic woman presenting a typical pattern of venereal infertility. According to Kenealy, the diagnosis was ‘indubitable’. The patient, ‘a wreck of a young woman’, had suffered three miscarriages in rapid succession, followed by the birth of a child who demonstrated clear symptoms of congenital syphilis. She had since suffered another two miscarriages and was again pregnant but haemorrhaging.

Having staunched the haemorrhage and prevented a miscarriage, Kenealy was shown into the family’s ‘handsome library’ where she began penning a prescription. But she was distracted from her prescribing by a noise in a distant corner: ‘On a low stool with its head supported heavily on long, lean-fingered hands, a child of some four or five years was sitting, watching [her] out of mournful eyes.’ After rising with great difficulty, the sickly child dragged itself across the library and towards Kenealy, who claimed that ‘you could read the ache of bones in the way it set its feet down; you could hear the patience of hopelessness in its laboured breath’.

Kenealy went on to recount her horror and overwhelming pity as she ‘looked down on the bulging head and thin hair, the sunken nose, overhung by prominent brows, and the dull, joyless eyes’ of a child blighted by congenital

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syphilis.¹ So appalled was she by this child's suffering that she tore up her prescription, convinced that the mother must be carrying a similarly diseased and deformed child that 'Nature, abhorrent, was striving to cast off'. Drawing upon her eugenic principles, she questioned whether doctors were right in their attempts to 'combat Nature in her effort to abort so monstrous a "degenerate"'. Her letter concluded with an appeal to her fellow doctors. 'Will somebody advise me', asked Kenealy, 'if I did well in this case when I withheld mercury and left Nature to the promptings of her conscience, instead of abetting a crime so great as that of the birth of such a child as laid its dull misshapen head against my knee that morning?'²

Although probably based upon a genuine case of venereal antepartum complication and congenital infection, Kenealy's melodramatic account of wrecked womanhood, infertility and degeneration also drew heavily upon the literary style of New Woman novelists as well as eugenic ideas about heredity and racial decline.³ Her letter is the first recorded case of a qualified female doctor diagnosing and treating venereal diseases in England. More importantly for this chapter, Kenealy's letter illustrates several important turn-of-the-century problems that confronted doctors in their attempts to treat and prevent infertility and congenital infection resulting from venereal diseases.

New bacteriological understandings of disease causation would eventually transform the diagnosis and treatment of infertility caused by venereal diseases, but this was by no means a smooth or universal process. The *gonococcus* may have been identified in 1879, but microscopically identifying its presence was a difficult procedure and slow to be widely adopted in general practice.⁴ The causative microorganism of syphilis, the *spirochete*, was not identified until 1905, and the serodiagnostic Wassermann reaction was not developed until 1906. In 1895, Kenealy could do little more than base her empirical diagnosis upon a collection of characteristic physical symptoms and her patient's suggestively venereal pattern of infertility. Like many of her medical contemporaries, Kenealy found such cases to be troubling and challenging.

Infertility was a source of anxiety for childless couples and a subject of uncertainty and concern for doctors. Yet it has been overshadowed in existing scholarship on venereal diseases by discussion of eugenics, the women's movement, social purity campaigns, prostitution and public health policy.⁵ Gonorrhoea, more so than syphilis, had a direct effect upon fertility by causing pelvic inflammatory disease in women, and epididymitis or orchitis in men.⁶ As seen in the case of threatening miscarriage with which we began, syphilis also posed serious complications for a woman's reproductive health. Yet little specific attention has been given to the social and medical dimensions of infertility caused by venereal diseases.⁷ Rather, it has been addressed as just one among many potential consequences of venereal infection.

Although existing scholarship engages with turn-of-the-century concerns over fecundity and population decline,⁸ the specificities of infertility have been overlooked. Historians have addressed the epidemiological and ideological

links between venereal diseases and degeneration.⁹ Yet such links were embodied in the image of the infected child who might grow up to produce more sickly offspring and so perpetuate racial and national decline.¹⁰ Medical authors at the turn of the twentieth century, and historians in more recent decades, have both been preoccupied with the congenitally syphilitic child or the infant with gonorrhoeal ophthalmia neonatorum (conjunctival infection among newborns).¹¹ The very existence of such infected children implicitly mitigated the problem of infertility. When faced with the emotive imagery of such sickly and suffering children, it is easy to overlook the childlessness of men and women suffering from syphilis or gonorrhoea. As will be seen in the third section of this chapter, eugenicists, preoccupied with hereditarian theories of decline, were less concerned by the prospect of infected men and women being unable to procreate (and thereby perpetuate degeneration) than by the birth of congenitally diseased children.

What little attention has been given to infertility caused by venereal diseases has concentrated upon women, with male infertility going largely unregarded. Diseases affecting reproductive health were principally addressed under the auspices of gynaecology during the nineteenth and early twentieth centuries, thereby establishing infertility as a female problem.¹² There was no established medical discipline within which to discuss male reproductive health, and few established practices for diagnosing or treating male infertility. Surviving records reveal a reoccurring narrative of doctors who, when called upon to treat childless women, refrained from examining their husbands.¹³ A comparative lack of attention in medical literature has meant that existing historical scholarship has also overlooked the implications of venereal infection for male reproductive health. When discussing the venereal infection of men, historians have preferred to focus on vice, the exploitation of women and the transmission of disease to unsuspecting wives and innocent children.¹⁴

This chapter attempts to remedy these historiographical deficits. It first addresses the differential diagnosis and treatment of infertility among men and women. Having established the place of infertility within medical discourse and patient care, it goes on to situate the problem of infertility within wider eugenic concerns over hereditarian degeneration, racial health and national efficiency. The complexity of medical, pseudo-scientific and social debates surrounding infertility caused by venereal diseases cannot be adequately addressed in a single chapter. This chapter instead addresses some of the more significant problems attendant upon accurately diagnosing and effectively treating infertile men and women.

DIFFERENTIAL DIAGNOSIS OF MALE AND FEMALE INFERTILITY

Infertility resulting from venereal diseases posed many diagnostic difficulties. Doctors were hampered in their ability to diagnose and treat the effects of syphilis and gonorrhoea upon their patients' fertility. Even with the

development of bacteriological and serological testing, the venereal aetiology of a patient's infertility was difficult to confirm. Venereal diseases did not always result in infertility and doctors found that many infertile patients demonstrated few clear signs of venereal infection.

Comparatively few medical publications addressed the effects of venereal diseases upon male fertility, and even fewer described how doctors might go about diagnosing infertility among their male patients.¹⁵ Although gonorrhoeal infection was initially thought to be more serious for men than for women, its detrimental effects upon male fertility were never widely addressed. Likewise, the effects of syphilis upon male fertility were overshadowed by discussion of infertility among women, and by wider concerns over conjugal and congenital infection.

Such an omission was due, in large part, to the belief among doctors that the male reproductive organs were less complex than those of women and therefore less susceptible to complications resulting from venereal infection.¹⁶ Although R.A. Gibbons conceded in 1910 that doctors were yet fully to comprehend 'how much men are to blame for sterile marriages', he also reminded his postgraduate audience at the Medical Graduates' College that 'in many cases of sterility about which you will be consulted it is undoubtedly the fault of the woman'.¹⁷ He was not alone in this opinion, which demonstrated prevailing uncertainties and disagreement over the effects of venereal diseases upon male fertility. Doctors devoted considerably less attention to the problem of male infertility (along with its diagnosis and treatment) because it was thought to be such an uncommon condition. Indeed, in 1896, Robert Bell opened the first chapter of his book *Sterility* with the following observation:

In considering the important subject of sterility in the female, we must not forget the fact that occasionally impotency may exist in the male. This is of such rare occurrence, however, that it may be looked upon almost as phenomenal; moreover, when it does occur, it can generally be traced to the effects of some previous gonorrhoeal or syphilitic attack.¹⁸

With few exceptions, medical authors rarely addressed the need to examine and treat both women and men. It may have been increasingly common for infertility or miscarriage to result in a diagnosis of venereal infection among women, but there were few recorded cases where a wife's apparent infertility prompted the attending doctor to examine her husband or to diagnose him as infertile. The assumption that male infertility was a rare occurrence was, in some respects, a self-perpetuating conclusion. Doctors, convinced that male infertility was uncommon, were less inclined to examine the husbands of seemingly infertile women, and in so doing concluded that the 'fault' usually lay with those women.

On the occasions that male reproductive complications were addressed in medical literature, authors usually framed their discussion using the diagnostic category of 'impotency'. Throughout the nineteenth and early twentieth

centuries, medical authors rarely made a clear diagnostic distinction between infertility and impotency.¹⁹ As Arthur Cooper, surgeon to the London Lock Hospital, observed in his 1908 book, *The Sexual Disabilities of Man*,

It not uncommonly happens that, unless the husband is clearly incompetent as regards copulative power, the fault is, as a matter of course, attributed to the wife, and only when the gynaecologist has failed is the husband suspected and submitted to examination [...] whilst it is quite common for medical advice to be sought respecting the copulative power, it seems to be comparatively rare for a man before marriage to have any sort of doubt or anxiety respecting his procreative power.²⁰

So rare, in fact, that two years later Gibbons had to remind his postgraduate audience that '*potentia cœundi* does not necessarily mean *potentia generandi*' ('copulative power does not necessarily mean reproductive power').²¹ Yet if a man was not impotent, it was very difficult to determine empirically whether he was infertile and whether his infertility was a direct result of venereal infection. Although medical authors occasionally attributed impotency to gonorrhoeal and syphilitic complications, it was more often than not identified as a neurasthenic disorder, or as a consequence of sexual excess or masturbation.²²

Throughout the 1880s and 1890s, English doctors remained divided over the American gynaecologist Emil Noeggerath's (1827–95) assertion that gonorrhoea was the cause of much sterility among women *and* men.²³ Many were also divided over the effects of syphilis upon male fertility. The Austrian urologist Victor Vecki (1857–1938) had claimed in his 1901 book *Sexual Impotence* that stricture resulting from syphilis could 'very often cause impotence, and [was] moreover, *always* a hindrance to fecundation'.²⁴ By contrast, Samuel Gross, like many of his medical contemporaries, believed that venereal diseases did not appear to exert much influence upon male fertility.²⁵ Although Cooper identified gonorrhoea as the primary cause of azoospermia (a zero sperm count), he also maintained that

syphilis may cause azoospermia when the testis or epididymis is affected [...]. But apart from lesions of the genital organs themselves, syphilis probably does not often prevent fertilisation of the ovum, though it causes immense destruction of life by killing the foetus later on.²⁶

Inflammation, abscesses, ulcers, urethritis (inflammation of the urethra) and stricture resulting from venereal infection might all cause either impotency or infertility. Yet most medical authors who wrote about gonorrhoeal and syphilitic infection among men focused on the diagnosis and treatment of these associated conditions without directly addressing their effects upon reproductive health.²⁷

A diagnosis of venereal disease relied upon a physical examination and, increasingly, upon a bacteriological examination. A man's genitals were examined for signs of infection and any discharge might be subjected to

bacteriological examination. However, these examinations were intended to determine the presence of infection, not whether this infection had rendered him infertile. The development of the urethral endoscope allowed doctors to determine the effects of venereal diseases upon the mucous membrane and, by extension, their effects upon a man's sexual health. However, the health of a man's spermatozoa could only be established through a microscopical examination of his seminal fluid. In his 1887 treatise on venereal diseases, M.K. Hargreaves had argued that these diseases potentially brought about the degeneration of spermatozoa and that the presence of pus in the semen, whether as a result of abscesses or inflammation, could be indicative of infertility.²⁸ Yet as Gross lamented in that same year, doctors often neglected to test their patients' seminal fluid and to examine the genitalia carefully.²⁹ Almost 20 years later Cooper made a similar observation that 'only when the gynaecologist has failed is the husband suspected and submitted to examination'.³⁰ Such omissions on the part of doctors to examine their male patients meant that little was known about the relative frequency of infertility among men and women.³¹ Only bacteriological examination could conclusively demonstrate a man's infertility or link that infertility to an underlying venereal infection.³² Without such examinations, doctors could not say with certainty whether a husband, rather than his wife, was infertile.

Yet few medical authors believed that, before automatically diagnosing a woman as infertile, it was necessary to determine through physical and microscopical examination whether venereal infection had rendered her husband infertile.³³ Few reminded their readers, as J. Matthews Duncan, lecturer on midwifery at St Bartholomew's Hospital, had done in 1883, that 'fecundity [...] requires the combined matter and forces of *two* duly developed individuals'.³⁴ Arthur Edis, senior physician to the Chelsea Hospital for Women, was another important exception, arguing in 1890 that

the fact should not be forgotten that [...] [a woman] may be potentially fertile, conception not taking place from the absence of healthy living spermatozoa on the part of the husband to impregnate the ovum. It has been proved conclusively that men in robust health [...] may have no living spermatozoa in their spermatic fluid. This may be due to [...] some antecedent inflammatory condition of the testes, notably from orchitis, the sequel of gonorrhoea.³⁵

However, such views were a minority medical opinion, with many doctors, such as Gibbons, considering it advisable to examine a man's seminal fluid *only* if no irregularity could be found upon examining his wife.

By the 1890s the serious consequences of venereal diseases, especially gonorrhoeal infection, for female fertility (and female health more generally) were beginning to be recognized as far more common.³⁶ As we have seen in the case attended by Kenealy, women infected with syphilis often demonstrated a distinctive pattern of infertility that also helped to confirm the medical opinion that women's reproductive health was more susceptible to

complications resulting from venereal diseases. As a result, late-nineteenth and early twentieth-century medical literature focused primarily upon the prevalence, diagnosis and treatment of infertility among women. By 1913, witnesses before the Royal Commission on Venereal Diseases (RCVD) were estimating that up to 35 per cent of married women in England were childless and they attributed a large proportion of these cases to syphilis and gonorrhoea.³⁷

Yet despite such growing certainty about the effects of venereal diseases upon female fertility, there was little guarantee that a woman's infertility could be conclusively diagnosed as a result of venereal infection. This was especially problematic in the years before and immediately following the identification of the *gonococcus* and the *spirochete* (along with the development and wide application of reliable laboratory-based testing). In 1888, the obstetric physician Thomas More Madden had argued that sterility was 'commonly the result of some structural lesion, malformation [. . .] certain morbid constitutional conditions, as well as [. . .] other causes such as sexual incongruity or irrespondence of a moral rather than of a physical kind'.³⁸

Although such sexual incongruity might have encompassed syphilis and gonorrhoea, Madden made no specific reference to either disease as a cause of infertility. In that same year, J. Beresford Ryley, Fellow of the British Gynaecological Society, addressed the effects of salpingitis (infection and inflammation of the fallopian tubes) upon female fertility, but only in the context of uterine leucorrhoea (discharge) and hyperplasia (enlargement of the uterus and often an early sign of cancer).³⁹ Although, in 1891, the gynaecologist George Bantock (1837–1913) acknowledged that gonorrhoea could cause salpingitis in some cases, he questioned whether there was any direct aetiological correlation.⁴⁰ Ryley attributed the cause of leucorrhoea and hyperplasia to, among other things, miscarriage, but did not speculate upon why women might miscarry or why they suffered acute discharge or inflammation in the first place. His only conclusion was that 'miscarriage during the first six to 12 months of marriage is much more frequent than is supposed, and very much more serious than it is usually regarded'.⁴¹ The epidemiology of these miscarriages was not speculated upon.

On the one hand, women with venereal diseases could be rendered completely or partially infertile. They might be unable to conceive or they might conceive and then miscarry or suffer stillbirths. On the other hand, gonorrhoea and syphilis could produce many troubling physiological conditions in the children that infected women were able to carry to full term. Venereal infection did not necessarily prevent conception. David Watson, surgeon to the Glasgow Lock Hospital, was among numerous doctors who conceded that gonorrhoeal infection could precede, coincide with, or follow conception. He argued in 1914 that pregnancy appeared to 'furnish the gonococcus with the conditions which favour its growth, the symptoms are more marked, exacerbations more frequent, and complications more liable to supervene'.⁴² As we have seen in the case attended by Kenealy, the same was also true of syphilis and its effects upon female fertility and infant health.

Children might be born with characteristic signs of congenital syphilis or with gonorrhoeal ophthalmia neonatorum, while other children might demonstrate no discernible signs of infection.⁴³ For example, Bantock had criticized Noeggerath and his supporters, including William Japp Sinclair (1846–1912), professor of obstetrics and gynaecology at the University of Manchester, who argued that gonorrhoea caused innumerable cases of sterility among men and women. Bantock denied having seen ‘a single instance’ of male sterility caused conclusively by gonorrhoea. He also challenged Noeggerath and Sinclair’s argument about gonorrhoeal infertility among women by calling attention to the large numbers of newborns who developed ophthalmia neonatorum following the transmission of *gonococci* from their mothers.⁴⁴ Indeed, in cases of latent gonorrhoea, the birth of such infected children was often the best, and perhaps the only, indication of infection among their mothers.⁴⁵

The fact that many infertile women did not demonstrate clear signs of venereal infection and the fact that other women with diagnosable symptoms were able to carry children, infected or otherwise, to full term meant that the venereal aetiology of infertility remained a subject of medical debate for many decades. This complex and seemingly inconsistent correlation between venereal infection and infertility created problems when attempting to understand and anticipate the effects of venereal diseases upon women’s reproductive health. A focus on complications resulting from venereal diseases during pregnancy meant that the problem of infertility was comparatively overlooked. The unpredictable effects of venereal diseases upon individual women meant that the aetiology of their reproductive complications was not necessarily diagnosed or even diagnosable.

Historians have suggested that standards of modesty prevented doctors from thoroughly examining respectable female patients, instead taking them at their word that they had never suffered from the characteristic symptoms of venereal infection.⁴⁶ Certainly, mid-century doctors were often performing female genital examinations by touch, with eyes averted for the sake of modesty. By 1886, with the repeal of the Contagious Diseases Acts, the speculum had become synonymous with ‘intrusion’ into the female body and its use in genital examinations was a source of much disagreement among doctors.⁴⁷ cursory examinations and reliance upon patient accounts of health and illness undoubtedly impeded the development of knowledge about the effects of venereal diseases upon female fertility.

Yet available sources furnish us with detailed descriptions of genital sores and discharges, suggesting that at least some women, respectable and unrespectable alike, were being carefully examined.⁴⁸ Arthur Edis (1840–93) claimed that ‘whenever we are consulted in a case of sterility, the patient [...] comes prepared to submit to a careful investigation’.⁴⁹ These investigations included thorough physical examinations in which the hymen, vagina and uterus were checked for signs of inflammation, discharge, ulceration and any other irregularities. However, as doctors such as James Ernest Lane (1857–1926), surgeon to the London Lock Hospital, increasingly acknowledged,

such physical examinations could not detect latent or asymptomatic infections.⁵⁰ In many cases there were simply too few clear signs of syphilitic or gonorrhoeal infection to determine the aetiology of a woman's infertility.

The asymptomatic presence of gonorrhoea meant that infection frequently went unregarded or misdiagnosed until it became acute. As the historian Michael Worboys has demonstrated, Sinclair was initially the only doctor in Britain to accept Noeggerath's claims that innumerable women were being infected by husbands who, guided by their doctors, did not appreciate the seriousness of their gonorrhoeal condition. Many of these women consequently went undiagnosed and untreated until they presented acute symptoms, potentially resulting in infertility and requiring surgical intervention.⁵¹ In 1909, Frances Ivens (1870–1944), medical officer for diseases of women at the Liverpool Stanley Hospital, reiterated concerns that doctors without adequate gynaecological knowledge or experience would fail to comprehend the prevalence and severity of gonorrhoeal infections among women patients. As a result, 'cases may be regarded as simple leucorrhoea, cystitis or pelvic inflammation, unless a searching inquiry is made into their aetiology'.⁵² Such inquiries having been neglected, a woman would enter an acute stage of infection. In 1906, Charles Leedham-Green, senior surgeon to Queen's Hospital and lecturer on bacteriology, concluded that, in such cases, the *gonococcus* did not remain localized but rather 'spreads insidiously to the uterus, tubes, ovaries and peritoneum, giving rise to grave trouble and danger'.⁵³ Women in this acute stage of infection often experienced pelvic inflammation and pain, vaginal discharge, painful micturition and menorrhagia (a collection of symptoms now classified as pelvic inflammatory disease).⁵⁴ By the turn of the twentieth century, doctors were increasingly aware that women suffering from these symptoms of acute infection, as well as a variety of associated conditions such as endometritis (inflammation of the lining of the uterus) and salpingitis, were also likely to be rendered infertile.⁵⁵

Empirical practices were central to the diagnostic process. But how could doctors confidently diagnose patients who demonstrated few clear signs of venereal infection? Before the development of bacteriological and serological testing, women presenting obscure symptoms were exceptionally difficult to diagnose. Although not applicable in cases of gonorrhoea, a woman's pattern of infertility was often a key indication of suspected syphilitic infection. This distinctive pattern of neonatal and antenatal complications was defined by Kassowitz's Law (1875), which stipulated that the severity of congenital transmission decreased with each new pregnancy.⁵⁶

In 1887, Jonathan Hutchinson wrote of one case brought under his care in which the wife of a fellow doctor, supposedly having escaped infection from her husband, demonstrated a clear pattern of syphilitic infertility.⁵⁷ His patient demonstrated no clear signs of infection, but she had experienced two stillbirths, and had then given birth to another two children who had died in infancy 'with the usual symptoms of inherited disease'. Although the next seven children lived, each displayed clear signs of congenital syphilis. 'Thus', Hutchinson concluded, 'it would appear that eleven conceptions have in

succession been tainted'. Florence Willey (1867–1945), assistant physician for diseases of women at the Royal Free Hospital, was still drawing upon this empirically based principle of diminution in 1914. It enabled her to determine whether, in the absence of clear physical symptoms, her patients were suffering from syphilis. These 'were cases in which the woman had miscarried two or three times, or had had one or two miscarriages, a stillbirth, or possibly then a child dying within the first four weeks of life'.⁵⁸ As James Sequeira (1865–1948), physician to the skin department of the London Hospital, observed when discussing this phenomenon before the RCVD, 'there would [otherwise] be no possibility of treating them because they have had no symptoms to treat'.⁵⁹

With the identification of the *gonococcus* in 1879 and the *spirochete* in 1905, as well as the development of new diagnostic technologies such as Gram staining and the Wassermann reaction that allowed these microorganisms to be detected, doctors were better able to determine whether infertile women were suffering from a venereal infection and whether that infection might have caused infertility. For example, witnesses before the RCVD cited various cases in which seemingly asymptomatic women gave birth to congenitally syphilitic stillborn children. Following the identification of the *spirochete* and the development of serological testing, these children were often examined pathologically in order to confirm the presence of syphilis in their mothers. Thomas Barlow (1845–1945), President of the Royal College of Physicians, described one infant case in which 'the interior of the body [was] swarming with spirochaetes'.⁶⁰ Such children were a 'more virulent source for cultivating that organism than any acquired case could be'.

When determining the effectiveness of treatments, doctors were increasingly reminded of the necessity to follow up empirical observations with bacteriological or serological examinations of urethral or cervical smears to determine the disappearance of the causative microorganism. In many cases of suspected gonorrhoea encountered at the Liverpool Stanley Hospital, Ivens first checked for a history of pelvic inflammation following the first menstruation after marriage, painful micturition, sterility or the presence of ophthalmia neonatorum if a woman was able to conceive and give birth to a living child. She then confirmed her observational diagnoses by bacteriologically examining discharges from the urethra, cervix, Bartholini's ducts or pelvic abscesses.⁶¹

However, in many cases this was an ideal rather than a realistic practice. Doctors may have been motivated by the prospect of professional advancement to remain abreast of new medical ideas and practices. Yet many were slow to acquire the up-to-date knowledge, skills and laboratory facilities necessary to employ new diagnostic tests, to use the results of such tests to determine the reproductive health of their patients and to implement treatments based upon those results. As Szreter demonstrates, doctors - especially older generations of general practitioners - were also reluctant to abandon traditional diagnostic practices in favour of new technologies that they did not wholly understand and in which they had limited confidence.⁶² In 1891, Bantock had asserted that the test for the *gonococcus* was 'so delicate and complicated that it [was]

practically of little use', and therefore doctors should 'fall back on rigid clinical observation in order to arrive at definite and exact results'.⁶³ The cost of these new technologies, especially the Wassermann test (at between 10s.6d. and £2.2s. per reaction), made them impractical tools for most doctors working outside of the larger general hospitals.⁶⁴ Diagnostic practices reliant upon the presence of a collection of observable symptoms were not quickly displaced or modified by new understandings of micrococcal causation or by developments in bacteriological or serological examination.⁶⁵

THE PRACTICALITIES AND LIMITATIONS OF TREATMENT

Far more information is available regarding the constitutional treatment of syphilis and gonorrhoea, as opposed to specific treatments for venereal disease-induced infertility. There was still much uncertainty surrounding the treatment and treatability of infertility caused by venereal diseases. On the few occasions when specific treatments were discussed, doctors generally agreed that it was first necessary to treat the underlying infection and only then to address the specific problem of infertility.⁶⁶ This combined treatment could be both localised and constitutional, invasive or non-invasive, according to the therapeutic preferences of the attending doctor and the needs of individual patients.

By the turn of the twentieth century, developing bacteriological understandings of gonorrhoea and syphilis were slowly changing how doctors treated their patients. The effectiveness of treatments such as antigonococcal vaccines and salvarsan were beginning to be thought of in terms of their specificity for isolating and destroying *gonococci* and *spirochetae*. The ability to test for the presence of these microorganisms gave doctors a new benchmark from which to determine the effectiveness of treatments. However, as we have seen, the implementation of these technologies was a slow process. Furthermore, these new methods of microscopical testing were designed to determine the disappearance of the causative microorganism of infection, not whether the disappearance of that microorganism had also restored the patient's fertility. Although doctors implicitly assumed that the alleviation of physical symptoms would have a positive effect upon the fertility of men, venereal diseases were thought to cause serious and often irreversible damage to women's reproductive health. New diagnostic technologies could determine the effects of treatment upon constitutional infection but not upon fertility, especially the fertility of female patients.

Although the introduction of salvarsan in 1909 transformed the treatment of syphilis, its use before the First World War was limited to a select few hospitals and infirmaries. The serious side effects from incorrect or wrongly administered doses meant that its administration required a level of skill considerably beyond that of the average general practitioner. It is unsurprising, therefore, that its therapeutic benefits and mode of administration were not widely discussed in pre-war medical writings on infertility caused by venereal disease. Like salvarsan, antigonococcal vaccines developed during the first

decade of the twentieth century were designed to combat infection at a microbial level, but were not commonly administered as treatments for, or preventatives against, infertility. The only instance of this treatment being recommended in cases of infertility was by Gibbons, who advised that any vaginal discharge 'be carefully examined bacteriologically for gonococcus [...and] cultures may be made from the discharge and a vaccine prepared accordingly'.⁶⁷ On the whole, however, doctors continued to favour more traditional surgical interventions and chemical compounds.

Despite therapeutic developments and despite new understandings of the potentially serious implications of venereal infection for reproductive health, many men and women continued to receive inadequate treatment. Doctors regularly expressed concern about the challenges of persuading patients to persist with their entire course of treatment. As Leedham-Green lamented, patients were likely to wrongly regard themselves as cured and therefore end their treatment prematurely: 'As soon as the acute symptoms have subsided, and the pain and copious discharge have disappeared, he is likely to consider his complaint to have passed away, or at any rate to be no longer of importance'.⁶⁸

As historians such as Roger Davidson have argued, fear of mercury's side effects led some patients to terminate their course of treatment and seek therapeutic alternatives.⁶⁹ Various doctors also cited cases in which they were called upon to treat the wives of husbands who, anxious to avoid arousing suspicion, were reluctant to persist with lengthy and unpleasant courses of treatment.⁷⁰ As we have already seen in this chapter, husbands - guided by the medical opinions of their doctors - did not necessarily appreciate the seriousness of their condition or that of their wives, and consequently both received inadequate treatment.⁷¹ Such untreated or inadequately treated infections might eventually become acute. Only when serious complications arose would a concerted effort be made to administer a full course of treatment, by which time the patient's reproductive health was likely to have suffered.

A prevailing diagnostic ambiguity between impotency and infertility meant that there was considerably more ambivalence over available treatments for infertility among men. Since venereal diseases were thought more likely to cause infertility among women, doctors were primarily concerned with the treatment and treatability of female infertility. The treatment of men was not generally discussed in terms of preserving male fertility but rather protecting the health of their wives and any potential children.

As we have seen, infertility was often inseparable from impotency, and it was not until the development of bacteriological testing that doctors were able to determine the effects of treatment upon a patient's spermatozoa and therefore upon his fertility. Yet even in cases of suspected infertility, the primary concern was the alleviation of physical symptoms such as urethritis through the application of constitutional and local treatments. If a man's spermatozoa was thought to be affected, it was hoped that the localized treatment of his physical symptoms, along with the constitutional treatment of his venereal infection, would

in turn influence the health of his spermatozoa. According to Cooper, gonorrhoea was the chief cause of azoospermia, and in such cases he recommended bed rest together with support and gentle massage of the scrotum, and treatment of the underlying gonorrhoeal infection.⁷² In difficult cases, he also recommended combination treatments of potassium iodide and mercury. If local applications of mercury were employed, they needed to be diluted with lanolin and almond oil. Hargreaves similarly argued that, in cases where male sterility was a symptom of an underlying venereal infection, the primary concern was to treat that infection through the 'usual methods'.⁷³

Sterility from syphilis is best cured by resorting to the mercurial and iodide treatment and inunctions of mercury in the groin. When the impoverished semen arises from inflammation and induration of the two epididymis we must insist on rest, purgatives and saline medicines combined with vinum antimonii, and tincture or aconite until nausea is complained of, the scrotum being raised by a suspensory bandage, and cooling lotions used.⁷⁴

In these discussions about treatment there was an implicit belief that the patient's fertility would be restored. If venereal diseases could be successfully attacked at a microbial level, and severity of the physical symptoms alleviated, the general health of the patient would improve and so too might the health and number of his spermatozoa.

Since women were more likely to be diagnosed with infertility, discussion of treatment was tailored to the needs of infertile women. Despite accounts of mistreatment or neglect on the part of husbands and doctors, and despite Kenealy's actions in the case of her own patient, it was increasingly accepted that venereally diseased women required immediate treatment, especially if their reproductive health was to be preserved. Kenealy's decision to withhold treatment from a syphilitic mother lest it save a potentially degenerate foetus was extreme, and vehemently criticized in the medical press.⁷⁵ Some letters to the Editor of the *BMJ* were supportive of her general concerns for the health of mothers and the problems of infertility caused by venereal diseases. However, few countenanced her decision to withhold mercury in the hope of inducing a miscarriage. Kenealy's professional contemporaries criticised her for acting on her eugenic principles. Her actions were, at best, unprofessional, and, at worst, criminal. They maintained that, rather than relying on the discretion of 'Nature', Kenealy should have employed her scientific knowledge and clinical skill to provide the best possible care to restore her patient's health.

Doctors may have asserted the importance of swift and thorough treatment but they also understood that available treatments for venereal diseases had limited therapeutic effect and were often messy, protracted, and the cause of much discomfort.⁷⁶ If administered too regularly or in overly concentrated doses, mercurial treatments could have a variety of dangerous side effects. Kenealy withheld mercury in an attempt to induce a miscarriage. Yet some

doctors suggested that the administration of compounds normally used to treat syphilis could have potentially detrimental effects upon foetal development and could themselves induce miscarriages.⁷⁷

By the early twentieth century, doctors such as Watson were asserting that, in cases of gonorrhoea, 'the antiseptics chosen should have at the same time the greatest penetrating and the least irritating action on the tissues as well as the highest specific bactericidal effect on the gonococcus'.⁷⁸ As with the new combination mercury–salvarsan treatments, these chemical solutions were designed to attack venereal diseases at a microbial level. However, as will be seen, the application of these various chemical solutions was intended primarily to alleviate the symptoms of constitutional infection. They were rarely administered to counteract the specific effects of venereal infection upon a woman's fertility. Mercurial compounds might reduce the possibility of a child being born with signs of congenital syphilis, and the application of strong antiseptics might prevent a child from developing gonorrhoeal ophthalmia neonatorum. These treatments might even have prevented a woman from becoming infertile. However, once infection had become so acute as to impede conception, these treatments had little therapeutic effect.

Compared to infertility among infected men, the damage inflicted upon a woman's reproductive organs was commonly thought to be irreversible.⁷⁹ Unlike cases of male infertility, where specific local treatments were thought to have a positive influence upon the quality and quantity of a man's spermatozoa, corresponding treatments for women could only alleviate the genitourinary symptoms of an underlying venereal infection. Watson concluded that 'whether a woman is rendered sterile or not depends on the areas involved and the amount of damage inflicted'.⁸⁰ He lamented that

it is, in fact, a hopeless task to attempt to abort gonorrhoea in the female. Cases at a stage of infection sufficiently early to make this procedure feasible rarely come under observation, and although the cervical and uterine tissues may be subjected to a much more energetic treatment than is possible in the male urethra, no line of radical treatment short of hysterectomy promises much hope of success.⁸¹

If infection was so acute as to render a patient infertile, there was little that could be done to reverse the tissue damage. The treatments most commonly called upon were those that alleviated inflammation or targeted a build-up of pus in or around the fallopian tubes and ovaries. These treatments offered little guarantee, and doctors could do little more than hope that they would have a positive influence upon a woman's fertility.

Whatever treatment was deemed to be most appropriate, doctors generally agreed that it needed to be administered swiftly before serious and irreparable damage was inflicted. In order to treat inflamed and pus-filled organs, doctors recommended a number of invasive and non-invasive practices. Watson recommended bed rest to 'promote uterine drainage and to assist in localising the inflammation in the pelvis', and 'hot application to the abdomen' to alleviate

pain and assist with the absorption of antiseptic solutions such as tincture of iodine, formalin or strong silver nitrate that were to be applied internally.⁸² Hargreaves similarly used localised vaginal injections of permanganate of potash, but also recommended a 'change of air' and temporary sexual abstinence.⁸³

Although infertile women were more likely to have been subjected to invasive surgical procedures than infertile men, there was a growing understanding that surgical intervention was only advisable as a last resort in the most serious cases. Such procedures were to be limited to the 'late separation of adhesions, and plastic operations to restore the parts to a condition in which they may be enabled to perform their physiological functions'.⁸⁴ Madden may not have explicitly linked salpingitis to gonorrhoea, but he was reluctant to employ surgical techniques to alleviate inflammation of the fallopian tubes and ovaries.⁸⁵ Only when vaccine therapy proved unsuccessful in curing vaginal discharge did Gibbons recommend curetting as a means of facilitating fecundation.⁸⁶ Although Watson recommended the use of sterilized probes and tubes to apply one of several antiseptic solutions in early stage infections, he was adamant that 'intrapelvic manipulation' and invasive treatments were inadvisable in most cases.⁸⁷

'THE HEREDITARY DISEASE *PAR EXCELLENCE*'

Although doctors were slowly beginning to recognize the devastating effects of venereal diseases upon male and female fertility, the problem of infertility caused by venereal disease occupied a negative space in eugenic debate over population decline, national efficiency, differential fertility, 'race motherhood' and degeneration. The literature of the period (and subsequent historical scholarship) is comparatively silent on the link between infertility and these wider issues. There was general concern that declining birth rates from the 1870s onwards would eventually have a deleterious effect upon racial health and national efficiency. The rise of the eugenics movement paralleled growing concerns over the implications of differential fertility declines - concerns that the less fit sections of the population were reproducing in greater proportion. Many doctors - such as Arthur Newsholme (1857-1943), Chief Medical Officer of the Local Government Board from 1908 - were not persuaded by eugenic theories of class-based procreation differentials. Nevertheless, it was generally accepted that syphilis resulted in congenital ill health and that gonorrhoea was the cause of many infertile marriages.⁸⁸ Eugenicists lamented the damage wrought by infertility, but these lamentations rarely extended to infertility among venereally diseased persons.

Eugenic discourse surrounding venereal diseases was limited, in large part, to the hereditarian issues of conjugal and congenital transmission. Comparatively little attention was given to the eugenic implications of infertility resulting from venereal infection. Tension between environmentalist and

hereditary factors in perceived national and racial decline came to a head in the proceedings of the Interdepartmental Committee on Physical Deterioration (ICPD) in 1904. The ICPD rejected the idea of hereditarianism in all cases except insanity and syphilis. As in the wider medical literature, it concluded that syphilis had a deleterious effect upon the reproductive health of women and upon the hereditary fitness of those children that infected women were able to carry to full term.⁸⁹ Although the ICPD did address the general problem of diminished rates of reproduction, the specific problem of infertility caused by venereal disease was overlooked in favour of a focus on the perpetuation of deterioration through the congenital transmission of syphilis, ‘the hereditary disease *par excellence*’.⁹⁰

The *Eugenics Review* published numerous articles encouraging ‘eugenic practice’ to counteract ‘the constitution of [a] society [which] favours the multiplication of the unfit’, but the journal did not identify a preponderate cause for this degeneration.⁹¹ Syphilis and gonorrhoea were two among a variety of causes. The imprecise nature of discussion surrounding ‘degeneration’ allowed the language of degeneracy to be assimilated into other discourses, such as the feminist debate over marriage and disease.⁹² For campaigners such as Christabel Pankhurst (1880–1958), degeneration was embodied in the infection of married women. Indeed, she was among a small number of non-medical authors who explicitly engaged with the problem of infertility caused by venereal diseases:

A great many women are, through no fault of their own, incapable of becoming mothers. The reason for this is that they have been infected by venereal disease, which is the great foe to the reproduction of the race [...] the husband has infected his wife, and thus robbed her of the power of maternity. Such being the connection between the problem of what is called ‘race suicide’ and the infection of women in marriage.⁹³

From the 1890s, supporters of the women’s movement became the most vocal critics of declining fertility resulting from venereal infection. As historians have shown, these women radically redefined the parameters of debate on venereal diseases, from that of regulating prostitution to informing respectable married women about the risks of infection and protecting them from infection.⁹⁴ As Worboys argues, these women presented venereal diseases as a key factor in ‘race suicide’, with syphilis undermining the quality of the race and gonorrhoea affecting its quantity.⁹⁵ The danger of the conjugal transmission of venereal diseases, and its implications for women’s reproductive health, became a principal concern in this new socio-medical debate surrounding degeneration.

However, the hereditary nature of syphilis meant that, from a eugenic perspective, this became the most serious of the venereal diseases - a belief that was reinforced with the publication of the ICPD’s Report.⁹⁶ Gonorrhoeal infection may have been more likely to cause serious reproductive complications but syphilis could lead to hereditary degeneration. Venereal disease-induced

infertility was problematic but the alternative - children born with congenital syphilis or rendered blind from gonorrhoeal ophthalmia neonatorum - was even more troubling. According to A.F. Tredgold, writing in the *Eugenics Review* in 1909, 'The danger lies in the fact that these degenerates mate with the healthy members of the community and thereby constantly drag fresh blood into the vortex of disease and lower the general vigour of the nation'.⁹⁷

The social purity feminist Frances Swiney (1847–1922) similarly criticized a society that allowed an infected man to marry 'a healthy innocent woman' and produce children 'tainted with the worst human scourges and [...] vitiate for generations [...] the race'.⁹⁸ Authors such as Pankhurst may have been calling attention to the problem of infertility within marriages blighted by venereal diseases but, on the whole, eugenic discussion remained preoccupied with the problem of sickly offspring who would potentially perpetuate racial deterioration and become a burden upon the state.⁹⁹ It was the congenitally syphilitic child and the child with gonorrhoeal ophthalmia neonatorum who were of primary concern. That a seemingly significant percentage of the adult population were thought to be infertile from venereal infection was undoubtedly troubling. However, as we have seen in Kenealy's reaction to her pregnant syphilitic patient, infertility was preferable for eugenicists because it precluded the possibility of perpetuating degeneracy through the birth of sickly children.

CONCLUSION

The aetiological relationship between venereal diseases and infertility remained a subject of debate and uncertainty throughout the nineteenth and early twentieth centuries. Its inconclusive aetiology made diagnosis and treatment problematic. Infertility was not unique in the diagnostic and therapeutic challenges that it presented to doctors. It was one important example among a wide variety of conditions that, although thought to possess a venereological aetiology, was very difficult to identify as venereal in origin. New diagnostic technologies brought about a greater understanding of the role played by *gonococci* and *spirochetæ* in a variety of reproductive complications. However, the integration of these new technologies and associated knowledge claims was neither quick nor universal, and did not have as revolutionary an effect upon the diagnosis and treatment of infertility as doctors might have hoped.

Despite Kenealy's extreme response to her patient's syphilitic infection and threatening miscarriage, doctors were genuinely concerned with treating such women and attempting to protect their reproductive health. However, the multiplicity of recommended treatments for female infertility indicates that there was little consensus about how to ensure that protection. It demonstrates that there was ongoing uncertainty regarding the treatments and even the treatability of infertility.

Infertility and the associated problem of congenital infection were not simply private issues affecting the personal happiness of individuals. They

were also a growing source of concern for eugenicists and members of the women's movement. As Worboys argues, venereal diseases, especially gonorrhoea, were slowly being 'unsexed' in the final decades of the nineteenth century, but the specific condition of infertility remained a very gendered problem. Women were thought to be more susceptible and were seen as the party primarily at 'fault' in childless marriages. Although men were increasingly identified as carriers of venereal diseases to wives and children, their susceptibility to infertility remained largely overlooked.

NOTES

1. Jonathan Hutchinson, a respected English authority on venereal diseases, had defined the characteristic signs of congenital infection – what would become known as 'Hutchinson's triad'. Doctors were instructed to look for notched malformations of the milk and permanent teeth, as well as a saddle nose, sabre shins, a persistent snuffle, severe bone pain, joint inflammation, and visual impairment. See Jonathan Hutchinson, *Syphilis* (London, 1887).
2. Arabella Kenealy, 'A Question of Conscience', *British Medical Journal (BMJ)*, 14 September 1895.
3. Sarah Grand, *The Heavenly Twins* (London, 1893); Emma Frances Brookes, *A Superfluous Woman* (London, 1894); Teresa Mangum, *Married, Middlebrow, and Militant: Sarah Grand and the New Woman Novel* (Ann Arbor, MI, 1998).
4. Michael Worboys, 'Unsexing Gonorrhoea: Bacteriologists, Gynaecologists, and Suffragists in Britain, 1860–1920', *Social History of Medicine*, 17 (2004); George Granville Bantock, 'On the Importance of Gonorrhoea as a Cause of Inflammation of the Pelvic Organs', *BMJ*, 4 April 1891; George Granville Bantock, 'The Modern Doctrine of Bacteriology, or the Germ Theory of Disease', *BMJ*, 8 April 1899.
5. See, for example, Philippa Levine, *Prostitution, Race and Politics: Policing Venereal Disease in the British Empire* (New York, 2003); Peter Baldwin, *Contagion and the State in Europe 1830–1930* (Cambridge, 1999); Lesley Hall, *Hidden Anxieties: Male Sexuality, 1900–1950* (Cambridge, 1991); J.E. Ross and S.M. Tomkins, 'The British Reception of Salvarsan', *Journal of the History of Medicine and Allied Sciences*, 52 (1997).
6. Simon Szreter, 'Fertility Transitions and Venereal Disease', in Nick Hopwood, Rebecca Flemming and Lauren Kassell (eds), *Reproduction: From Antiquity to the Present Day* (forthcoming).
7. Simon Szreter, 'The Prevalence of Syphilis in England and Wales on the Eve of the Great War: Revisiting the Estimates of the Royal Commission on Venereal Diseases 1913–1916', *Social History of Medicine*, 27 (2014).
8. Richard A. Soloway, *Demography and Degeneration: Eugenics and the Declining Birthrate in Twentieth-Century Britain* (London, 1990); Richard A. Soloway, *Birth Control and the Population Question in England, 1877–1930* (Chapel Hill, NC, 1982); G.R. Searle, *The Quest for National Efficiency: A Study in British Politics and Political Thought, 1899–1914* (Berkeley, CA, 1971).
9. Andrew Smith, *Victorian Demons: Medicine, Masculinity and the Gothic in the Fin-de-Siècle* (Manchester, 2004); Lucy Bland, "'Guardians of the Race", or "Vampires Upon the Nation's Health?": Female Sexuality and its Regulation in Early Twentieth-Century Britain', in Elizabeth Whitelegg (ed.), *The Changing*

- Experience of Women* (Oxford, 1982); Mary Spongberg, *Feminizing Venereal Disease: The Body of the Prostitute in Nineteenth-Century Medical Discourse* (New York, 1997), pp. 143–59.
10. Such concerns spoke directly to the theory of third-generation infection that was itself a subject of much medical discussion towards the end of the nineteenth century. See, for example, Arthur Conan Doyle, *Round the Red Lamp: Being Facts and Fancies of Medical Life* (London, 1894), pp. 46–64; Jonathan Hutchinson, 'On a Case of Supposed Syphilis in the Third Generation', *Polyclinic* (January 1900), pp. 40–5; Hutchinson, *Syphilis*, pp. 394–9.
 11. See, for example, Elizabeth Lomax, 'Infantile Syphilis as an Example of Nineteenth Century Belief in the Inheritance of Acquired Characteristics', *Journal of the History of Medicine*, 34 (1979); Joan Sherwood, *Infection of the Innocents: Wet Nurses, Infants, and Syphilis in France, 1780–1900* (Montreal, 2010); Anne Hanley, "'Scientific Truth into Homely Language": The Training and Practice of Midwives in Ophthalmia Neonatorum, 1895–1914', *Social History of Medicine*, 27 (2014).
 12. Angus McLaren, *Impotence: A Cultural History* (Chicago, IL, 2007), pp. 126–7.
 13. See, for example, R.A. Gibbons, *A Lecture on Sterility: Its Etiology and Treatment. Delivered at the Medical Graduates' College and Polyclinic on 21 July 1910* (London, 1911).
 14. Spongberg, *Feminizing Venereal Disease*; Judith Walkowitz, *City of Dreadful Delight: Narratives of Sexual Danger in Late-Victorian London* (Chicago, IL, 1992); Levine, *Prostitution, Race and Politics*.
 15. M.K. Hargreaves, *A Practical Manual of Venereal Diseases: Including Disorders of Generation, Spermatorrhœa, Prostatorrhœa, Impotence and Sterility in Both Sexes* (London, 1887); R. Ultzmann, *On Sterility and Impotence in Man* (London, 1887); Samuel W. Gross, *A Practical Treatise on Impotence, Sterility, and Allied Disorders of the Male Sexual Organs* (Edinburgh, 1887); Gibbons, *A Lecture on Sterility*.
 16. McLaren, *Impotence*, pp. 126–8; Naomi Pfeffer, 'The Hidden Pathology of the Male Reproductive System', in Hilary Homans (ed.), *The Sexual Politics of Reproduction* (London, 1985).
 17. Gibbons, *A Lecture on Sterility*, pp. 6, 42.
 18. Robert Bell, *Sterility* (London, 1896), p. 9.
 19. One notable exception is Arthur Cooper, *The Sexual Disabilities of Man and Their Treatment* (London, 1908).
 20. Cooper, *The Sexual Disabilities of Man and Their Treatment*, p. 3.
 21. Gibbons, *A Lecture on Sterility*, p. 6.
 22. McLaren, *Impotence*, p. 127; Victor G. Vecki, *The Pathology and Treatment of Sexual Impotence* (London, 1901), p. 122; James Paget, *Clinical Lectures and Essays* (London, 1879), pp. 276–98; Elizabeth Stephens, 'Coining Spermatorrhœa: Medicine and Male Bodily Fluids, 1836–1866', *Sexualities*, 12 (2009); Lindsay Watson, 'Tom Tiddler's Ground: Irregular Medical Practitioners and Male Sexual Problems in New Zealand, 1858–1908', *Medical History*, 57 (2013).
 23. See, for example, Bantock, 'On the Importance of Gonorrhœa as a Cause of Inflammation of the Pelvic Organs', pp. 749–51; Charles J. Cullingworth, 'The Aetiological Importance of Gonorrhœa in Relation to Some of the More Common Diseases of Women', *BMJ*, 20 July 1889.

24. Vecki, *The Pathology and Treatment of Sexual Impotence*, p. 124. My emphasis.
25. Gross, *A Practical Treatise on Impotence*, p. 97.
26. Cooper, *The Sexual Disabilities of Man and Their Treatment*, p. 50.
27. See, for example, Charles Robert Drysdale, *Syphilis: Its Nature and Treatment with a Chapter on Gonorrhoea* (London, 1873); W. Yeo Harvey, *Syphilis and Gonorrhoea: Their Symptoms and Cure Including Articles Relative to Their Influence on Marriage and Life Assurance* (London, 1898); Charles Leedham-Green, *The Treatment of Gonorrhoea in the Male* (London, 1906); David Watson, *Gonorrhoea and its Complications in the Male and Female* (London, 1914).
28. Hargreaves, *A Practical Manual of Venereal Diseases*, p. 119.
29. Gross, *A Practical Treatise on Impotence*, p. 87.
30. Cooper, *The Sexual Disabilities of Man and Their Treatment*, p. 3.
31. Gross, *A Practical Treatise on Impotence*, p. 83.
32. Arthur W. Edis, *Sterility in Women: Including its Causation and Treatment* (London, 1890), pp. 2–3.
33. Edis, *Sterility in Women*, p. 14.
34. J. Matthews Duncan, ‘The Gulstonian Lectures on the Sterility of Women’, *BMJ*, 24 February 1883. My emphasis.
35. Edis, *Sterility in Women*, pp. 2–3.
36. Worboys, ‘Unsexing Gonorrhoea’, pp. 41–2, 52–8.
37. Royal Commission on Venereal Diseases, PP 1913–1916 Cd 7475 (Appendix to First Report of the Commissioners, Minutes of Evidence), qq. 2157, 2736–7, 6731, 9406–9 (henceforth Royal Commission on Venereal Diseases, Appendix to First Report, Cd 7475).
38. Thomas More Madden, ‘On the Treatment of Sterility in Women’, *BMJ*, 21 April 1888.
39. J. Beresford Ryley, *Sterility in Women: Its Causes and Cure* (London, 1888), pp. 49–64, 69–72.
40. Bantock, ‘On the Importance of Gonorrhoea as a Cause of Inflammation of the Pelvic Organs’, p. 751.
41. Ryley, *Sterility in Women*, p. 69.
42. Watson, *Gonorrhoea and its Complications in the Male and Female*, p. 282.
43. Hanley, “‘Scientific Truth into Homely Language’”; Hutchinson, *Syphilis*, pp. 380–1.
44. Bantock, ‘On the Importance of Gonorrhoea as a Cause of Inflammation of the Pelvic Organs’, p. 751.
45. Hanley, “‘Scientific Truth into Homely Language’”, pp. 215–16.
46. Lomax, ‘Infantile Syphilis as an Example of Nineteenth Century Belief in the Inheritance of Acquired Characteristics’, p. 31; Sponberg, *Feminizing Venereal Disease*, p. 153.
47. The CD Acts allowed authorities to arrest, forcibly examine and treat suspected prostitutes who were residing in various port and military towns throughout Britain between 1864 and 1886. See Ornella Moscucci, *The Science of Woman: Gynaecology and Gender in England, 1800–1929* (Cambridge, 1990), pp. 114–16; Kathryn Yenyurt, ‘When it Hurts to Look: Interpreting the Interior of the Victorian Woman’, *Social History of Medicine*, 27 (2013).
48. See, for example, Peter Horrocks, ‘An Address on the Instruction of Midwives in the Symptoms and Signs of Abnormal Labour’, *BMJ*, 28 September 1907; Watson,

- Gonorrhoea and its Complications in the Male and Female*; Royal Free Hospital Archives, *Casebooks* (1890–1913), RFH/4/PN/1.
49. Edis, *Sterility in Women*, pp. 3–4.
 50. James E. Lane, *The Prophylaxis of Venereal Diseases: A Paper Read Before the London Medical Graduates College and Polyclinic*, 10 December 1906 (London, 1907), pp. 3–15.
 51. Worboys, 'Unsexing Gonorrhoea', p. 52.
 52. Frances Ivens, 'On the Incidence of Gonorrhoea in Gynaecological Hospital Practice', *BMJ*, 19 June 1909.
 53. Leedham-Green, *The Treatment of Gonorrhoea in the Male*, p. 142.
 54. Watson, *Gonorrhoea and its Complications in the Male and Female*, p. 245.
 55. Cooper, *The Sexual Disabilities of Man and Their Treatment*, p. 50; Watson, *Gonorrhoea and its Complications in the Male and Female*, p. 280; Gibbons, *A Lecture on Sterility*, p. 23; Edis, *Sterility in Women*, pp. 14–15.
 56. J.A. Couetts, 'The Hunterian Lectures on Infantile Syphilis', *Lancet*, 11 April 1896; J.A. Couetts, 'The Hunterian Lectures on Infantile Syphilis', *Lancet*, 25 April 1896; A.W. Gilchrist, 'Medical Doctrines of Heredity', *Lancet*, 15 August 1903.
 57. Hutchinson, *Syphilis*, p. 427.
 58. Royal Commission on Venereal Diseases, Appendix to First Report, Cd 7475, p. 11767.
 59. Royal Commission on Venereal Diseases, PP 1913–1916 Cd 8190 (Appendix to Final Report of the Commissioners, Minutes of Evidence), qq. 14631–33 (henceforth Royal Commission on Venereal Diseases, Appendix to Final Report, Cd 8190).
 60. Royal Commission on Venereal Diseases, Appendix to First Report, Cd 7475, pp. 6388–89.
 61. Ivens, 'On the Incidence of Gonorrhoea in Gynaecological Hospital Practice', p. 1476.
 62. Szreter, 'The Prevalence of Syphilis in England and Wales on the Eve of the Great War', pp. 518, 529.
 63. Bantock, 'On the Importance of Gonorrhoea as a Cause of Inflammation of the Pelvic Organs', pp. 749–50.
 64. Worboys, 'Unsexing Gonorrhoea', p. 51; Ross and Tomkins, 'The British Reception of Salvarsan', p. 403.
 65. Medical Research Committee, *Reports of the Special Committee upon the Standardization of Pathological Methods: The Laboratory Diagnosis of Gonococcal Infections* (London, 1918), p. 3.
 66. Hargreaves, *A Practical Manual of Venereal Diseases*, p. 166.
 67. Gibbons, *A Lecture on Sterility*, p. 48.
 68. Leedham-Green, *The Treatment of Gonorrhoea in the Male*, p. 141.
 69. Roger Davidson, *Dangerous Liaisons: A Social History of Venereal Disease in Twentieth-Century Scotland* (Amsterdam, 2000), pp. 18–23.
 70. Royal Commission on Venereal Diseases, Appendix to First Report, Cd 7475, p. 9593–97; Hutchinson, *Syphilis*, pp. 495–6.
 71. Worboys, 'Unsexing Gonorrhoea', p. 52.
 72. Cooper, *The Sexual Disabilities of Man and Their Treatment*, pp. 66–7.
 73. Hargreaves, *A Practical Manual of Venereal Diseases*, p. 120.
 74. Hargreaves, *A Practical Manual of Venereal Diseases*, p. 121.

75. T.C.A., 'A Question of Conscience', *BMJ*, 21 September 1895; J. Braxton Hicks, John Ormsby, M.G. Biggs, and A.G. Welsford, 'A Question of Conscience', *BMJ*, 28 September 1895; J. Foster Palmer, 'Correspondence', *BMJ*, 5 October 1895; Arabella Kenealy, 'A Question of Conscience', *BMJ*, 12 October 1895.
76. Alfred Cooper, *Syphilis and Pseudo-Syphilis* (London, 1884), pp. 440–70; Michael Worboys, 'Was There a Bacteriological Revolution in Late Nineteenth-Century Medicine?', *Studies in History and Philosophy of Biological and Biomedical Sciences*, 38 (2007), p. 28.
77. James Oliver, 'The Determinants of Abortion and How to Combat Them', *BMJ*, 30 November 1907.
78. Watson, *Gonorrhoea and its Complications in the Male and Female*, p. 261.
79. Edis, *Sterility in Women*, pp. 14–15.
80. Watson, *Gonorrhoea and its Complications in the Male and Female*, p. 282.
81. Watson, *Gonorrhoea and its Complications in the Male and Female*, p. 278.
82. Watson, *Gonorrhoea and its Complications in the Male and Female*, p. 281.
83. Hargreaves, *A Practical Manual of Venereal Diseases*, p. 166.
84. Watson, *Gonorrhoea and its Complications in the Male and Female*, p. 282.
85. Madden, 'On the Treatment of Sterility in Women', p. 846.
86. Gibbons, *A Lecture on Sterility*, pp. 48–9.
87. Watson, *Gonorrhoea and its Complications in the Male and Female*, p. 281.
88. Soloway, *Demography and Degeneration*, p. 18.
89. Interdepartmental Committee on Physical Deterioration, PP 1904 XXXII, Cd 2175 (Report), p. 77.
90. Christabel Pankhurst, *The Great Scourge and How to End It* (London, 1913), p. 72. Original emphasis.
91. W.R. Inge, 'Some Moral Aspects of Eugenics', *Eugenics Review* (April 1909–January 1910), p. 29.
92. Stephen Arata, *Fictions of Loss in the Victorian Fin de Siècle* (Cambridge, 1996), pp. 14–15.
93. Pankhurst, *The Great Scourge and How to End It*, pp. 100–1. Original emphasis.
94. Lucy Bland, 'The Married Woman, The New Woman, and the Feminist: Sexual Politics in the 1890s', in J. Rendall (ed.), *Equal or Different: Women's Politics, 1800–1914* (Oxford, 1987); Angélique Richardson, *Love and Eugenics in the Late Nineteenth Century: Rational Reproduction and the New Woman* (Oxford, 2003); George Robb, 'Race Motherhood: Moral Eugenics vs. Progressive Eugenics, 1880–1920', in Claudia Nelson and Ann Summer Holmes (eds), *Maternal Instincts: Visions of Motherhood and Sexuality in Britain, 1875–1925* (London, 1997); Worboys, 'Unsexing Gonorrhoea', p. 42.
95. Worboys, 'Unsexing Gonorrhoea', p. 56.
96. Worboys, 'Unsexing Gonorrhoea', p. 54.
97. A.F. Tredgold, 'The Feeble Minded – A Social Danger', *Eugenics Review* (April 1909–January 1910), p. 102.
98. Frances Swiney, *The Awakening of Women or Women's Part in Evolution* (London, n.d.), p. 141. Swiney's eugenic beliefs compelled her to write a number of pamphlets entitled 'Racial Poisons' that warned women of the dangers of syphilis.
99. For specific discussion of the economic burden of blindness caused by ophthalmia neonatorum, see James W. Ballantyne, *Manual of Antenatal Pathology and Hygiene: The Foetus* (Edinburgh, 1902), p. 52; George Reid, 'Prevention of Blindness from Ophthalmia Neonatorum', *Nursing Notes* (September 1911).

RESEARCH RESOURCES

Primary Sources

- Robert Bell, *Sterility* (London: J & A Churchill, 1896).
- Alfred Cooper, *Syphilis and Pseudo-Syphilis* (London: J & A Churchill, 1884).
- Arthur Cooper, *The Sexual Disabilities of Man and Their Treatment* (London: H.K. Lewis, 1908).
- Arthur W. Edis, *Sterility in Women: Including its Causation and Treatment* (London: H.K. Lewis, 1890).
- Charles Robert Drysdale, *Syphilis: Its Nature and Treatment with a Chapter on Gonorrhoea* (London: Bailliere, Tindall and Cox, 1873).
- Samuel W. Gross, *A Practical Treatise on Impotence, Sterility, and Allied Disorders of the Male Sexual Organs* (Edinburgh: Young J. Pentland, 1887).
- M.K. Hargreaves, *A Practical Manual of Venereal Diseases: Including Disorders of Generation, Spermatorrhœa, Prostatorrhœa, Impotence and Sterility in Both Sexes* (London: R. Kimpton, 1887).
- Jonathan Hutchinson, *Syphilis* (London: Cassell and Co., 1887).
- Charles Leedham-Green, *The Treatment of Gonorrhoea in the Male* (London: Baillière, Tindall and Cox, 1906).
- Heinrich Oppenheimer, *Some Practical Points in the Diagnosis and Treatment of Gonorrhoea in the Male* (London: Rebman Company, 1903).
- Christabel Pankhurst, *The Great Scourge and How to End It* (London: E. Pankhurst, 1913).
- J. Beresford Ryley, *Sterility in Women: Its Causes and Cure* (London: Henry Renshaw, 1888).
- Robert Ultzmann, *On Sterility and Impotence in Man* (London: Arthur Cooper, 1887).
- Victor G. Vecki, *The Pathology and Treatment of Sexual Impotence* (London: W.B. Saunders and Co., 1901).
- David Watson, *Gonorrhoea and its Complications in the Male and Female* (London: Henry Kimpton, 1914).

Secondary Sources

- Peter Baldwin, *Contagion and the State in Europe 1830–1930* (Cambridge: Cambridge University Press, 1999).
- Victoria Bates, “‘So Far as I can Define without a Microscopical Examination’: Venereal Disease Diagnosis in English Courts, 1850–1914”, *Social History of Medicine*, 26 (2013), 38–55.
- Roger Davidson, *Dangerous Liaisons: A Social History of Venereal Disease in Twentieth-Century Scotland* (Amsterdam: Rodopi, 2000).
- Gayle Davis, *‘The Cruel Madness of Love’: Sex, Syphilis and Psychiatry in Scotland, 1880–1930* (Amsterdam and New York: Rodopi, 2008).
- David Evans, ‘Tackling the “Hideous Scourge”: The Creation of the Venereal Disease Treatment Centres in Early Twentieth-Century Britain’, *Social History of Medicine*, 5 (1992), 413–33.
- K. Meghan Fitzpatrick, ‘Prostitutes, Penicillin and Prophylaxis: Fighting Venereal Disease in the Commonwealth Division during the Korean War, 1950–1953’, *Social History of Medicine*, 28 (2015), 555–75.

- Anne Hanley, “Scientific Truth into Homely Language”: The Training and Practice of Midwives in Ophthalmia Neonatorum, 1895–1914’, *Social History of Medicine*, 27 (2014), 199–220.
- Anne Hanley, ‘Venereology at the Polyclinic: Postgraduate Medical Education among General Practitioners in England, 1899–1914’, *Medical History*, 59 (2015), 199–221.
- Pauline M.H. Mazumdar, “In the Silence of the Laboratory”: The League of Nations Standardizes Syphilis Tests’, *Social History of Medicine*, 16 (2003), 437–59.
- Ornella Moscucci, *The Science of Woman: Gynaecology and Gender in England, 1800–1929* (Cambridge: Cambridge University Press, 1990).
- Chris Renwick, *British Sociology’s Lost Biological Roots: A History of Futures Past* (London: Palgrave Macmillan, 2012).
- J.E. Ross and S.M. Tomkins, ‘The British Reception of Salvarsan’, *Journal of the History of Medicine and Allied Sciences*, 52 (1997), 398–423.
- Joan Sherwood, *Infection of the Innocents: Wet Nurses, Infants, and Syphilis in France, 1780–1900* (Montreal: McGill-Queens University Press, 2010).
- Richard A. Soloway, *Demography and Degeneration: Eugenics and the Declining Birthrate in Twentieth-Century Britain* (London: University of North Carolina Press, 1990).
- Mary Spongberg, *Feminizing Venereal Disease: The Body of the Prostitute in Nineteenth-Century Medical Discourse* (New York: Palgrave Macmillan, 1997).
- Simon Szreter, ‘The Prevalence of Syphilis in England and Wales on the Eve of the Great War: Revisiting the Estimates of the Royal Commission on Venereal Diseases 1913–1916’, *Social History of Medicine*, 27 (2014), 508–29.
- Daniel J. Walther, ‘Sex, Public Health and Colonial Control: The Campaign against Venereal Diseases in Germany’s Overseas Possessions, 1884–1914’, *Social History of Medicine*, 26 (2013), 182–203.
- Michael Worboys, ‘Unsexing Gonorrhoea: Bacteriologists, Gynaecologists, and Suffragists in Britain, 1860–1920’, *Social History of Medicine*, 17 (2004), 41–59.

‘A Tragedy as Old as History’: Medical Responses to Infertility and Artificial Insemination by Donor in 1950s Britain

Gayle Davis

INTRODUCTION

The history of sexuality in late modern Britain has, in recent decades, become an intellectually and methodologically vibrant field, with the concept of sexuality deployed as a prism through which a rich range of social, cultural, and political issues have been explored.¹ Much of this scholarship has centred upon England, and in particular upon the metropolitan attitudes and behaviours of London, which are unlikely to have been representative of England as a whole, let alone Britain. Historiographical progress was slightly later in advancing north of the Border,² where scholars have recognized the need to take into account Scotland’s separate traditions in law and local government, as well as an arguably distinctive civic and sexual culture where religion appears to have continued to exercise considerable social significance.³

In both countries, much illuminating historical work has been conducted specifically into reproductive health. The increasing availability of safe and effective means of fertility control – birth control and abortion – and the social politics surrounding it have comprised an important focus.⁴ The history of infertility in

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late modern Britain has, by comparison, been underexplored. Naomi Pfeffer's 1993 monograph *The Stork and the Syringe* remains the most comprehensive work on the subject, and provides an important introduction to medical responses to infertility, set within their wider social and political context.⁵ However, assisted reproduction – the use of techniques such as artificial insemination and in vitro fertilization to enhance fertility – has elicited heated debate from a range of other scholars, including social anthropologists and sociologists, and more recently from historians. Interesting themes include the extent to which such 'unnatural' interventions subvert the legal and moral integrity of the family unit,⁶ and their application as a strategy for positive eugenic improvement.⁷

Such was the concern that infertility and, more specifically, its treatment by artificial insemination engendered by the mid-twentieth century that a Departmental Committee was appointed to investigate the issue. The terms of reference of the 1958 Departmental Committee on Human Artificial Insemination, otherwise known as the Feversham Committee since it was chaired by Lord Feversham, were:

To enquire into the existing practice of human artificial insemination and its legal consequences; and to consider whether, taking account of the interests of individuals involved and of society as a whole, any change in the law is necessary or desirable.⁸

The immediate impetus for the establishment of this Committee was a Scottish divorce action in the Court of Session, *MacLennan v. MacLennan*, which considered whether a woman who had had artificial insemination by donor (AID) without her husband's consent could be said to have committed adultery (media responses to this legal case are discussed in depth in Hayley Andrew's contribution to this volume).⁹ The rich vein of information embedded within the proceedings of the Feversham Committee has not hitherto been adequately explored by historians seeking to chart the history of infertility. The wide range of medical, legal, and religious witnesses approached to give evidence, and the voluminous written and oral testimony received, offer rich insights into medical thinking and practice in 1950s Britain, and into the complex social politics and ethical anxieties surrounding infertility and its treatment by artificial insemination at this time.

This chapter will focus in particular upon the testimony supplied to the Feversham Committee by medical witnesses in order to explore how doctors perceived, characterized, and treated the infertile couple in 1950s Britain. It will confine itself to their discussions of AID, the issue with which the Committee was 'mainly' concerned 'since A.I.H. appear[ed] to raise very few problems'.¹⁰ Thus, artificial insemination using the husband's semen (AIH) elicited significantly less testimony from witnesses. It will be considered to what extent, and in what ways, women seeking treatment for their infertility were pathologized, in terms of their bodies, personalities, and even agency in proactively seeking motherhood. It will also reflect upon whether the men involved – their husbands, the semen donors, and the doctors themselves – escaped these pathologizing tendencies.

RELUCTANCE TO PRACTISE

Since the Feversham Committee was established to investigate the treatment of infertility through artificial insemination, witnesses were asked to focus upon this therapy, rather than providing broader discussion of the possible therapeutic options available to the infertile patient at this time. The method facilitated conception where it was not possible by normal sexual intercourse, either because of sterility in the husband or because of some other physical or mental disability in the husband or wife. Treatment could be performed using AIH or anonymous donor (AID), depending on the couple's specific circumstances. By 1958, it was estimated that there had been 2,000 births by artificial insemination in Britain,¹¹ just over half of which could be attributed specifically to AID.¹² It was also generally acknowledged, however, that such figures could only ever be a rough estimate in view of the ignorance, shame, and secrecy that surrounded the procedure.

A range of medical witnesses submitted written and oral evidence to the Departmental Committee on Human Artificial Insemination, including individual gynaecologists and psychiatrists, representatives from university faculties of medicine, the royal medical colleges, and major medical organizations. Strikingly, the Committee's survey of those offering artificial insemination using donor semen revealed that only six doctors in Britain were regularly providing such a service at the time of giving evidence, all of whom were based in England. These doctors were Bernard Sandler (1907–97), who established his infertility clinic in Manchester Jewish Hospital in 1947 and practised AID from 1948; the Exeter-based physician Margaret Jackson, who had practised AID since 1940; and Mary Barton (since 1940), Philip Bloom (since 1948), Reynold Boyd (since 1942), and Eleanor Mears (since 1943), all based in London.¹³ An attempt was made to attribute an approximate number of AID births to each of these doctors, which varied considerably, from Sandler (16), Mears (20) and Bloom (26) to Jackson (82), Barton (433), and Boyd (500), a total of approximately 1,077 live births.

Two further medical witnesses claimed to have practised AID on a smaller scale in previous years, but to have since given up. Albert Sharman, a consultant gynaecologist, had started a clinic in the 1930s at Glasgow's Royal Samaritan Hospital for Women which was devoted exclusively to the investigation and treatment of infertile marriages, a clinic which he claimed to have been the first of its kind in the United Kingdom.¹⁴ By 1939 it was no longer in operation, and no estimate was provided of the number of births resulting from treatment there. Eustace Chesser was an analytical psychologist based in Harley Street, London, the British hub of private medicine. Five births were attributed to his AID practice in the period prior to 1948. AID was also noted to have been 'practised sporadically' by a range of gynaecologists and general practitioners 'in isolated exceptional cases', both in England and Scotland, including Helena Wright (1887–1982), a London-based specialist who worked closely with the Family Planning Association to provide a variety of services in reproductive

health and sex therapy.¹⁵ However, witnesses representing the Royal College of Obstetricians and Gynaecologists suggested that, 'with the exception of London and two provincial cities [Manchester and Exeter], there ha[d] probably not been much more than 10 children conceived as a result of AID in any one of the large cities of Great Britain during the whole period of the last 20 years'.¹⁶

Reluctance to practise AID appears to have stemmed from a complex blend of legal, practical, and moral factors. Several of the doctors questioned by the Committee indicated confusion as to the legal status of the practice. As one surgeon asked the Committee: 'The medical profession do not at present have the right of carrying out artificial insemination by donor? Am I wrong there?'¹⁷ Indeed, Albert Sharman claimed to have made enquiries to the Medical Defence Union, only to be told that the organization 'would not guarantee that somebody who had had artificial insemination with donated semen could not bring a legal action' against that doctor.¹⁸ In its submission to the Feversham Committee, the Department of Health for Scotland claimed that there was 'some uncertainty' as to the legality of the procedure, since the National Health Service had failed to issue guidelines on it, and recommended that the doctor 'seek to safeguard himself by securing the written consent of all parties to the transaction'.¹⁹

Indeed, such uncertainty was also a feature of the legal evidence submitted. Most legal bodies considered artificial insemination a legal medical therapy, but acknowledged that the practice was 'of such recent origin that the courts ha[d] had little occasion as yet to consider its legal implications and that it [was] impossible to forecast with any certainty the answers which they would give to some of the problems which [would] inevitably arise' if the practice continued.²⁰ However, more critical voices made their presence felt, most notably T.B. Smith, Professor of Civil Law at the University of Edinburgh, who argued vigorously that AID was illegal, given the 'element of deception involved' and 'the production of a bastard', and that it constituted the common law crime of fraud in Scotland and the crime of conspiracy in England.²¹

Medical witnesses also offered various practical reasons for their resistance to offering artificial insemination to patients. Although Albert Sharman continued to undertake insemination using the husband's semen, he discontinued the practice of donor insemination at his clinic after five years because 'success was rare' and donated semen 'very difficult to obtain'. Lack of success featured, similarly, in the oral evidence submitted by Hector Maclennan (1905–78), a senior gynaecology consultant in Glasgow and future President of the Royal College of Obstetricians and Gynaecologists (1963–66), who complained that patients held the 'prevalent' but mistaken idea that those 'prepared to submit to AID' would find success.²² Inflated patient optimism was a most unwelcome feature as far as many doctors were concerned, particularly given the fact that there was 'an upsurge of requests for AID when anything appeared in the Press'.²³ Eleanor Mears, a London-based doctor who had given up general practice to specialize in subfertility and psychosexual problems, complained

similarly that the 'recent publicity arising out of the Maclennan [divorce] case in Scotland' had increased her referrals 'tremendously'. She added that this influx of patients included those who had previously 'been told nothing could be done' for their infertility, but for whom the press discussion of AID gave new hope.²⁴ The difficulties of attracting suitable and sufficient donations were discussed extensively by medical witnesses, and will be explored in greater depth below.

In addition to such legal and practical impediments were objections of a more moral nature. Written evidence from the British Medical Association noted that, while AID 'would not appear to contravene any of the accepted principles of scientific medicine', there was 'a substantial body of opinion in the profession which regard[ed] this practice as an undesirable one and many doctors [were] absolutely opposed to it on [...] religious grounds'.²⁵ Professor Andrew Claye (1896–1977), President of the Royal College of Obstetricians and Gynaecologists (1957–60), argued that the great majority of the College's Council viewed AID as unethical, and that the 'main reason why gynaecologists did not practise AID was that they considered it morally wrong'.²⁶ Similarly, a Medical Advisory Committee of doctors representing the United Birmingham Hospitals explained that the Committee 'deplored the practice' of AID, finding it 'objectionable on moral, religious, and ethical grounds, especially having regard to the marriage vows'.²⁷

Such collective statements were supported by numerous individual witness statements. Doctors representing the Royal College of Surgeons of Edinburgh referred to finding 'much that is repugnant in the practice of AID',²⁸ and G.W.B. Jones, a London-based psychiatrist, found himself 'bound to admit that I find AID revolting and ethically offensive'.²⁹ John McDonald, a psychiatrist based in Perth, chose to characterize AID not as a medical treatment but as adultery;³⁰ similarly Eustace Chesser in Harley Street argued that, in involving 'an extra-marital relationship', AID 'cut right across the decree of the Christian faith'.³¹ Audrey Freeth, who had practised gynaecology in both Birmingham and Glasgow, declared to the Committee her disapproval of AID 'on moral, religious and ethical grounds', and tried to dissuade patients from seeking treatment by focusing upon 'all the difficulties and snags' in her patient consultations.³² Although she claimed that she would refer 'persistent couples' to a more sympathetic practitioner in England, she admitted upon further questioning that she had 'never in fact done so'. Similarly, Hector Maclennan noted that a 'simple statement' calling into question the suitability and motivation of the semen donor was 'sufficient in most cases to discourage further enquiry'.³³

However, if the patient still insisted on treatment by this method, Maclennan declared himself 'quite prepared to refer her to a recognized practitioner' based in London. One of these was Reynold Boyd, a New Zealander who had specialized in genitourinary surgery but now did 'nothing else but infertility'.³⁴ Boyd's evidence noted that he had received artificial insemination referrals from Maclennan and other senior gynaecologists 'all

over England and Scotland [. . .] and other countries as well, especially South Africa'. He added that Mary Barton and Margaret Jackson received a related range of referrals. As Sandler remarked, 'Margaret Jackson's name got into the newspapers and she told me as a result of that she has had a lot of enquiries and usually anything further away [from Exeter] than Birmingham she refers to me'.³⁵ Helena Wright noted a similarly 'wide geographical field – from Scotland to Rome' from which she received applications for AID.³⁶ Even in the case of those doctors who were receptive to patients seeking AID and referred them accordingly, it could be suggested that making the patient travel a significant distance to consult them, at some personal expense, was just one of several 'obstructive' methods employed by doctors throughout Britain. Indeed, even patients for whom travel was an option might take some considerable time to track down an appropriate and sympathetic practitioner. Some of Bernard Sandler's patients 'told him they had been trying to contact an A.I.D. practitioner for up to 10 years'.³⁷

The group of doctors representing the Royal College of Surgeons of Edinburgh suggested a further strategy to dissuade eager patients: the creation of an 'independent' panel in each region to consider applications, consisting of 'a gynaecologist, psychiatrist, minister of religion, welfare worker with experience in marriage-guidance problems, and the applicant's own doctor'. This group would collectively interview both husband and wife in order principally to 'satisfy themselves that the consent of the former was both willing and sincere'.³⁸ By subjecting the couple to this intimidating panel of professionals, they concluded, 'it is our intention to make the whole thing rather difficult. We have not made suggestions to make it easier, quite the contrary'.³⁹

Such strategies have resonances with the 'abortion games' played by British doctors a decade later, strategies adopted in order to minimize their own personal responsibility for decisions made in relation to termination of pregnancy in the years immediately following the passage of the 1967 Abortion Act.⁴⁰ Doctors arguably were not trained or qualified to make decisions in these areas, and thus embraced alternative strategies in order either to simplify or displace the decision-making process surrounding the provision of abortion and infertility services. Indeed, as one psychiatrist told the Feversham Committee, the judgement of psychiatrists in this matter was 'in no way enhanced because of their status as Psychiatrists. I feel that it should be stressed that psychiatrists have no peculiar right to make judgement in what is largely a moral field'.⁴¹ Similarly, representatives of the Royal College of Obstetricians and Gynaecologists argued that it was 'outside the province of a medical man to choose who shall impregnate any woman, or intervene in the fundamentals of a marital partnership'.⁴²

A final, related explanation for medical reluctance to offer AID is the extent to which it could be considered a medical procedure. With its 'turkey baster' connotations, insemination was described by some witnesses as a 'very simple procedure' which did not appear to necessitate skilled medical involvement.⁴³ Indeed, in 1950s Britain, figures like the English birth control pioneer Marie

Stopes (1880–1958) were promoting AID as a ‘home’ remedy for infertility, outlining the technique so couples could ‘do it themselves’.⁴⁴ Yet, none of the medical witnesses questioned by the Committee discussed the possibility of couples practising the technique themselves, independently of medical involvement. Perhaps they believed, as the London-based psychiatrist and AID practitioner Philip Bloom noted, that artificial insemination took ‘so much time and trouble’ that there was ‘practically no chance of its being carried out in back streets by unqualified people’ in the way that abortion was at this time.⁴⁵

The widespread use of AID in the agricultural sector can have done little to persuade doctors to offer this therapy, although few witnesses reflected explicitly on this subject. Religious witnesses were the most likely to speak disparagingly of the conflation of farm and clinic, such as the United Free Church of Scotland, which argued that AID ‘reduced human beings to the level of breeding animals’ and should be ‘confined to the farm-yard, where it belongs’.⁴⁶ Dr Hector MacLennan was more subtle in his remarks, but reflected at length on his farming friends’ ‘extremely difficult work [. . .] to get a good donor and their disappointments [. . .] in breeding’. He asked the Committee: ‘How much more complicated is the human being than the Aberdeen Angus bull?’, explaining that it was not just a question of physique but also IQ and emotional state, the latter factor being ‘extraordinarily hard to assess’.⁴⁷ Employing language more suited to the farm, the final line of his written memorandum advised women ‘to breed from the best possible stock’, and concluded ‘I cannot imagine that a donor is the best possible stock’.⁴⁸

DISPARAGING THE DONOR

The difficulties inherent in obtaining semen samples of sufficient quality and quantity were discussed widely in medical testimony submitted to the Feversham Committee. As Audrey Freeth noted, ‘the donor situation’ was ‘distinctly tricky’ because women had to be supplied ‘with a satisfactory specimen’.⁴⁹ Evidence suggests that semen donors were required to be ‘satisfactory’ in two key respects: physical and psychological.

Physical fitness was one aspect of the ‘eugenic considerations’ which lay at the heart of donor selection. Donors were to be of good general health and intelligence, with no history of transmissible disease or ‘adverse genetical characteristics such as alcoholism, criminality, or tuberculosis’. Naturally, they must be fertile. Albert Sharman specified that their semen ‘must have a volume of at least one c.c.; must liquefy and rapidly become homogenous; the sperm count must exceed 60 millions per c.c.; and there must be no spontaneous agglutination’.⁵⁰ He continued:

The spermatozoa must show little variation of head-lengths and include less than 15 per cent abnormal forms. Indifferent or intermediate and pathological cell-forms [. . .] must be rare. Bacteriological cultures from the fresh semen must be sterile or show but a light growth of harmless contaminants.

It was also deemed crucial to ensure that the semen donor was not related to the mother, which could 'lead to an exaggeration of all characteristics of the genetic line, including the bad ones'.⁵¹ Although this belief led numerous medical witnesses to urge the creation of a donor register, 'which should record the full medical history of the donors, the number and frequency of donations, and the births resulting', these doctors also tended to stress that such records should be 'kept centrally' with 'carefully restricted' access, restricted even from the infertile couple in order to preserve the donor's anonymity.⁵² If the donor's identity was revealed, this would almost certainly discourage would-be donors, who were already in short supply.

To complicate matters further, some medical witnesses discussed the need for infertile couples to be matched to semen donors who could help them to produce children resembling the husband. Thus, the semen donor's hair colour, eye colour and height were all to be considered in relation to the husband's. Some patients also requested religious or racial compatibility. Audrey Freeth, among others, expressed her worries over the accidental use of the semen of 'coloured gentlemen' in white couples.⁵³ Indeed, Bernard Sandler noted his refusal to practise AID on a white woman when he found that the husband

was a negro and I was being asked to do AID for a mixed marriage. I thought about this for a great deal of time and I decided that it was too great a responsibility for me to bring a child of mixed parentage into the world. Perhaps I was cowardly but I said there are very many mixed children wanting adoption and I think you ought to adopt one.⁵⁴

In cases of racial compatibility, Sandler 'tried to match donors with recipients as regards' not only 'physical characteristics' but also 'intelligence and background'.⁵⁵ Mary Barton did the same, but cautioned of the potential dangers of 'introducing a highly intelligent child into a less intelligent home', though she qualified that 'such problems also arose with natural conceptions'.⁵⁶ Indeed, such was the pressure placed on doctors to exactly 'reproduce' the husband that, as Albert Sharman stressed, couples must be warned explicitly that 'no likeness, physical or otherwise, can be guaranteed'.⁵⁷

Added to this were the potential psychological barriers to semen donation. Some doctors offered a lengthy list of ideal attributes for semen donors, including the fact that they should be married men with at least two legitimate children of their own, not only to illustrate the quality of their 'stock' but so that their 'parental drive' would already have 'an available object'.⁵⁸ However, for other practitioners, the very fact that a man was willing to donate his semen made him unsuitable for the task. Dr Gerrard, representing the British Medical Association, stated: 'It is the motive that worries me. [...] One cannot help worrying just a little bit about the type of man who will be a party to it'.⁵⁹ Hector Maclennan went so far as to explain to his patients that a donor

prepared to give semen to a woman, whose mental and physical background is unknown to him, and who is prepared to father children who will be born into a completely unknown environment, so far as he is concerned, is a man whose ethical standards are so unusual as to be of doubtful value from a eugenic point of view.⁶⁰

David Stafford-Clark, a psychiatrist at Guy's Hospital, pointed out that donation involved masturbation, and that a person who took this 'in his stride' should be regarded with suspicion.⁶¹ He divided donors into three classes: the 'unreflective', 'those who found in it a vicarious enjoyment', and 'the psychopaths', the latter of whom doctors practising AID would find it 'extremely difficult to recognise'.⁶²

Feversham witnesses who represented religious bodies employed similar medical terminology, possibly in a conscious effort to strengthen their argument, as was the case in slightly later abortion debates, where non-medical groups recognized the power of medical language in fighting for their cause, whether it be to liberalize or restrict access to abortion.⁶³ Thus, the Free Presbyterian Church of Scotland suggested that a willing semen donor could only be regarded as 'psycho-physically or psychologically abnormal' since 'few normal men, if any, would debase themselves to donate semen'.⁶⁴ Similarly, the United Free Church of Scotland highlighted donors motivated by 'a perverted sense of power' to perform an act that 'might appeal to many men with undesirable mental abnormalities', and the resulting 'grave danger of large numbers of children inheriting such undesirable traits'.⁶⁵ Such medico-moral statements reveal a distinct pathologization of those men willing to act as semen donors.

A further attempt to denigrate the semen donors, expressed by numerous medical witnesses, related to their alleged financial motivation for involvement in the process. A committee of doctors representing the Royal College of Surgeons of Edinburgh declared themselves 'at a loss to assess the motives of men who act as donors, but believed that in most cases these must include financial gain', and stressed their 'abhorrence' at 'the possibility that a man might make his living, or even a substantial income, out of such "donations"'.⁶⁶ Indeed, this group argued that 'there should be no direct remuneration of the gynaecologist concerned', let alone the semen donor, given the technical simplicity of the procedure and the 'obvious abuse' which could arise from financial incentives on anyone's part. In subsequent oral evidence to the Feversham Committee, the Chairman asked them to account for their belief 'that most cases involved financial gain', since the evidence of those actually engaged in the practice of AID suggested that donors were 'often husbands of the wives who had been successfully treated' for infertility, who were thus acting 'out of gratitude, in the spirit of service to others' rather than for financial gain.⁶⁷ The surgeons responded: 'I do not think we have any factual knowledge. We were judging what we believed to be the state of affairs in the United States [...] in regard to [Britain], one has heard some mention of the

fees paid to donors, but we have no factual evidence whatsoever'.⁶⁸ With only marginally more 'factual evidence' was Dr Jones, St Mary's Hospital, who had 'known one would-be donor personally', and stated that donor's motive to be 'money [. . .] he asked for 25 guineas per case, with first class travel and a daily subsistence allowance'.⁶⁹

Medical witnesses who offered AID treatment at the time of giving evidence, or had in the past, were in fact asked to account for the origins of the semen donations which they had obtained. Most began by stressing the difficulty of finding donors. As Albert Sharman complained, 'the provision of semen' was 'entirely in the physician's hands'.⁷⁰ This was a somewhat ironic statement as it turned out, since his personal solution was to approach fellow doctors, as well as personal friends.⁷¹ Similarly, Philip Bloom 'had to rely on acquaintances he knew well and this accounted for a large proportion of his donors being in the medical profession'.⁷² While Barton did not acknowledge it in her testimony to Feversham, it subsequently transpired that her husband – the Austrian physiologist Bertold Paul Wiesner (1901–72), with whom she jointly managed her private fertility clinic in London – had anonymously donated sperm that his wife used to perform AID, resulting in an estimated 600 successful births.⁷³

Nor, it seems, were these doctors alone in this practice, since the National Marriage Guidance Council felt compelled to urge that 'doctors (or husbands of women doctors) should not be donors in AID they perform'.⁷⁴ On a possibly related note, Thomas Norman Arthur Jeffcoate (1907–92), Professor of Obstetrics and Gynaecology at the University of Liverpool, spoke of 'unmarried students being used as donors in Liverpool, at an age when they were easily persuaded on emotional grounds of the rightness of the cause'.⁷⁵ It was not, however, stated whether these were specifically medical students.

Otherwise, evidence presented to Feversham found little mention of medical donors. Most of the donors used by Bernard Sandler and Margaret Shotton were husbands of patients 'treated successfully for infertility' who 'acted out of gratitude', with no payment made to them.⁷⁶ Half of Eleanor Mears's donors were, similarly, the husbands of patients she had treated for subfertility; the other half were 'friends with families'.⁷⁷ Mary Barton explained that, when she began practising AID, she had sometimes used the semen of the husband's brother, 'but this was universally fatal to the marriage', so she had since 'found it necessary to make payment' to attract some donors.⁷⁸ Similarly, Albert Sharman cautioned that:

Certain facile assumptions suggested by purely biological considerations must be refuted. Thus, the husband's brother might be regarded as the first choice because of genotypical resemblance, but experience shows that this choice is usually incompatible with secrecy, and that it is conducive to emotional disturbances involving both husband and wife.⁷⁹

As one of many, Sharman emphasized that 'prospective parents should never be aware of the identity of the donor', since a 'responsible donor' and

'maternal women' would be 'emotionally too deeply involved in procreation to regard their relationship with detachment'. Atypically, Bernard Sandler also discussed the very general practicalities involved in semen donation: 'I have to have a man who works reasonably near to my place, he can slip out during his lunch hour, produce a specimen, go back to work. He also has to be on the telephone because I give them very short notice and I do not pay them in any way'.⁸⁰

SUITABILITY FOR PARENTHOOD

Such pronounced medical reluctance to offer AID as a treatment for infertility leads us to consider how the women consulting these doctors were characterized and treated. As evidenced by their testimony to the Feversham Committee, some doctors further justified their lack of involvement in AID, or denial of treatment in specific cases, by stressing the female patient's lack of suitability. These problems tended to be of a more emotional or psychological nature, rather than physical. Representatives from the Royal College of Surgeons of Edinburgh noted: 'One finds most of the women who are infertile suffer from various forms of neurosis'.⁸¹ While such characterization of all infertile women as psychologically damaged appears to have been a particularly extreme viewpoint, within the context of the testimony received, even those practising AID on a regular basis, such as Bernard Sandler, mentioned their need to refuse treatment to some women 'on psychological grounds'.⁸² He described 'a certain type of woman who can become quite obsessional about her childlessness', and considered infertility 'one symptom, if you like, of a general disturbance of the whole personality'.⁸³

In addition, several gynaecologists chose to characterize those women who sought AID in a similarly dysfunctional way. Thus, Hector Maclennan described most of the patients who approached him for this form of treatment as being 'of a highly nervous disposition', 'frustrated and introverted', and 'a bit emotionally disturbed'.⁸⁴ Similarly, Audrey Freeth criticized the wife who 'must have a child at any price', indicating 'a lack of understanding and an emotional immaturity' that did 'not augur well for the future of that marriage'.⁸⁵ While it was natural that a married woman would wish for a family, she could want this too much and thus get 'carried away emotionally'.⁸⁶ Some of the psychiatrists who submitted evidence to Feversham were similarly minded. Eustace Chesser automatically regarded a woman seeking AID as 'unstable', and suggested that her motives 'must be largely neurotic', since 'normal people would prefer adoption'.⁸⁷ London-based psychiatrist G.W.B. Jones had 'always been struck by the obsessional attitude of women' he had met 'who had requested (or demanded) AI'. He added: 'Most seemed to be in need of psychiatric treatment rather than semen'.⁸⁸

Even noted advocates of the therapy, such as Bernard Sandler, might make damning remarks about the type of woman seeking AID, and those who failed to conceive thereby. In his oral evidence to the Committee,

Sandler suggested that 'emotionally immature women often failed to conceive', and that even where treatment succeeded in such cases, it was 'not always [...] with very happy results'.⁸⁹ Rather more curiously, he discussed a woman's ability to conceive only when she had made a 'conscious decision' to do so: 'She has to decide whether she is having a baby or new curtains or a new car or giving up a profession and therefore this is a conscious decision'. Eleanor Mears noted that perhaps half of the couples who she rejected for AID were rejected on the grounds of their psychological instability.⁹⁰

More common still was acknowledgement of the inevitably damaging nature of the AID treatment itself. This featured particularly prominently in the evidence presented by the two witnesses who had practised AID on a smaller scale but since discontinued the practice. Albert Sharman discussed the 'danger of psychological damage to the patients, both husband and wife', 'either through the inevitable interference with their sexual relations or through the consciousness of reproductive inferiority'.⁹¹ Eustace Chesser no longer offered AID 'because of the psychological significance'.⁹² He was disturbed by one patient 'who treated him as the father', and noted the 'tremendous blow' to the male partner's pride, 'confirmed by their reluctance even to have sperm counts undertaken'. He warned that 'couples could not forget that their child was an AID child', particularly the husband, for whom AID 'reflected his own inadequacy and broke the marriage bond'.

The potentially damaging impact of AID upon marriage was a focus of attention in the witness statements of numerous other doctors, but particularly psychiatrists. It was expressed unanimously that single women were not and should not be treated with AID, so the relationship at the heart of these patient consultations was commonly reflected upon. David Stafford-Clark argued that a woman 'pregnant by semen which her husband had not contributed' had 'received something intrinsically sexual from outside the marriage', 'the final seal on the husband's incapacity'. He flagged up the related 'danger that the child would be made to suffer at a later stage', summing up that 'human beings were not as rational as AID presupposed them to be'.⁹³ Similarly, John McDonald suggested that AID was problematic for any less than perfect marriage, for the birth of a child by this procedure would constitute 'a standing reminder' of 'already disturbed family relationships'.⁹⁴ Echoing Chesser's experience, McDonald added that the female patient 'may even feel that she is committing adultery with the doctor'. An unnamed forensic medicine lecturer at the University of Edinburgh expressed the related view that 'denigration of the family concept [...] was the most extensive and serious cause of mental disturbance and human maladjustment', the implication being that AID would compromise the integrity of the 'natural' family unit.⁹⁵ This mixture of concerns on the psychological impact of infertility and its treatment has strong resonances with Jacky Boivin and Sofia Gameiro's contribution to this volume.

Adding further complexity to the issues raised was the treatment option of 'AIHD', the practice of inseminating a woman with a mixture of semen from

her husband and an anonymous donor. The technique appears to have been adopted predominantly in the hope that the couple would believe that they had conceived naturally, though Reynold Boyd was atypical in employing AIHD because it was 'virtually impossible to guarantee sterility', thus the husband had 'a chance of fatherhood in almost every case'.⁹⁶ Most who supported the practice noted that the procedure of mixing sperm might mitigate some of the psychological dangers inherent in donor insemination, including damage inflicted upon the self-esteem of infertile husbands and the 'stigma of "test-tube" origins' suffered by resulting children who became aware of their status.⁹⁷ The procedure might make the husband 'feel that he had a chance of being the father',⁹⁸ or, as Mary Barton put it, 'let the couple have their little bit of pleasant doubt'.⁹⁹

Expressed in fuller detail, Albert Sharman's technique involved not telling the husband when he was totally sterile, but having a 'heart to heart talk' with his wife and asking her to keep that information to herself.¹⁰⁰ As he put it, 'I told the wife she was not to go home and blurt out the whole truth of the matter [...] I saw marriages going on the rocks, ruin and divorce, through telling the husband'. The husband was instead told that he was 'impaired' but that there was 'hope with treatment or in time things might remedy themselves', thus any resulting pregnancy using AIHD might be passed off as resulting from marital intercourse. Going further still, Eleanor Mears 'did not believe in telling a man he was sterile',¹⁰¹ so asked him to provide a specimen for the purposes of artificial insemination, but tended then not to use it, using only donor semen. Several doctors also noted that, whether or not AIHD was used, the couple was encouraged to 'lead a normal married life' (i.e. to have marital intercourse) during artificial insemination treatment.¹⁰²

However, most medical witnesses who expressed serious reservations about AID extended their deep concerns to AIHD. Summing up these concerns, a group from the University of Edinburgh's faculty of medicine argued that this mixture of semen led to 'unnecessary confusion and ambiguity', made the 'accurate' keeping of records 'impossible', and that it was fundamentally dishonest to place the couple in a position where they did not know whether or not the husband was the father of their child.¹⁰³ Hector Maclennan similarly stressed the dishonesty of the procedure, adding that since he objected in principle to AID, 'mixing it up with the husband's semen does not strike me as making it any more right. It is just putting a cloak over it'.¹⁰⁴ For perhaps more practical reasons, the Royal College of Obstetricians and Gynaecologists argued that in no case was AIHD warranted: if the husband was not sterile, donated semen should not be used at all, and if he was sterile, the use of his semen was 'pointless'.¹⁰⁵

Given the inherently dishonest nature of AIHD, medical hypocrisy in characterizing the infertile woman herself as somehow 'duplicitous' is striking. Doctors from the Royal College of Surgeons of Edinburgh, for example, noted that steps must be taken to ensure that such women were 'genuine

and honest' in their desire for such treatment.¹⁰⁶ Meanwhile, in cases of AIH and AIHD, Albert Sharman cautioned that female patients being asked 'to bring along a specimen of the husband's semen' must also be requested to supply proof that this was indeed her husband's semen *and* that he had consented to the procedure.¹⁰⁷ After all, as Sharman complained, 'the woman could bring along a substitute semen if she so felt [. . .]. We have no proof: we are injecting it in good faith'. When a member of the Feversham Committee retorted that this point was surely 'only a theoretical one' since any woman who would 'go to the trouble of bringing the semen of a man other than her husband' would 'surely try ordinary methods of adultery', Sharman responded defensively that he had 'no doubt [. . .] from the way an occasional woman talked to him, that she did indulge in adultery'.¹⁰⁸

In a bid to counter such allegations, Bernard Sandler wrote to the Feversham Committee, subsequent to appearing before them, with a case that had just been referred to him.¹⁰⁹ It involved a couple married for seven years, who had adopted a child after two years of marriage upon the discovery that the husband had incurable sterility. Having found that adoption 'did not satisfy either of them', and seemingly with no other options available, 'after very much thought and consideration' the wife arranged 'to have intercourse with another man, with her husband's full knowledge and consent'. The intended outcome of this adulterous encounter, a natural birth, was successfully achieved. The couple then wished for a further child, but 'neither [. . .] felt able because of the emotional strains' of this adulterous method. Some years later, 'only when the publicity of last year in the press revealed to them that there was such a practice as AID did they feel that this was the method of choice for them'. Sandler stressed the importance of this case in illustrating that, 'contrary to what the critics think, AID is a highly moral and ethical procedure which in the rare cases such as this one will actually avoid immorality'.¹¹⁰ As another of AID's strongest advocates and most enthusiastic practitioners, Margaret Jackson wrote similarly: 'Many of the couples asking for AID seem to regard it as a special form of adoption [. . .]. They are deeply hurt if they are told that AID is tantamount to adultery – that is precisely what they wish to avoid'.¹¹¹

Nonetheless, for those doctors who appear to have conflated AID with adultery and moral taint, this story is likely to have done little to dissuade them of their belief. While most witnesses were sympathetic to the woman's plight, in her unsuccessful quest for motherhood, Hector Maclennan was not alone when he stated that barren women had 'been there since the old days, in the Old Testament', 'a tragedy as old as history', and that modern medicine was providing false hope to such women. 'It would be far better', Maclennan argued, for such patients to 'face the fact [. . .] and be told to adopt than that she should go from clinic to clinic' with such a small chance of successful treatment.¹¹² Such medico-moral discussion of infertile women seeking treatment bears a striking resemblance to the religious testimony received. Thus, the Church of Scotland asked the infertile to accept 'the mysterious workings

of Providence [. . .] without resentment and in quiet trust',¹¹³ while the Free Church urged the childless 'to recognise the Divine will' and to 'pray for submission', which would 'maintain the sanctities of the marriage bond and the joys of the marriage relationship in a way that was impossible by the [adulterous] methods of artificial insemination'.¹¹⁴

CONCLUSION

Over 100 organizations and individuals were approached to give evidence to the Feversham Committee. The resulting oral and written testimony provides significant insights for the historian of infertility and its treatment in twentieth-century Britain, who often has to work hard to uncover suitable sources in this sensitive field. This chapter has exploited those archival riches, which provide a valuable snapshot of medical thinking and practice. One must naturally bear in mind the context within which the Committee was operating – in this case, the aftermath of a divorce case which had divided legal opinion and caused 'public outrage', according to some newspapers of the time – which may have influenced both the questions asked of witnesses and the responses given. One might also lament the difficulties of capturing a 'patient' perspective through such sources, whether that be the voice of the woman, husband, or married couple collectively seeking treatment, or even the semen donor, all of whom are effectively silenced. Thus, oral history-based investigations such as Angela Davis's contribution to this volume, which explores women's perceived loss of autonomy in medical encounters from their own perspective, can provide a valuable counterbalance to such 'official' testimony.

The proceedings of the Feversham Committee nonetheless shed a valuable light on the history of infertility and its treatment through artificial insemination in mid-twentieth-century Britain, particularly from the medical perspective. We can note a lack of extensive or sustained experience in the practice of AID in many of those giving evidence (for a range of legal, practical, and moral reasons), which nonetheless did not prevent most witnesses from expressing strong views on the subject. Such ill-informed yet confidently voiced beliefs arguably betray the sense that moral objections played a significant part in the formation of medical views on AID. Doctors appear to have refused to offer this form of treatment where it conflicted with their own moral sensibilities, and used various strategies to repel eager patients, including robustly questioning the health and motives of willing semen donors and in some cases subjecting patients to an intimidating degree of scrutiny.

Medical testimony reveals a pronounced tendency to pathologize the infertile woman, whom they appeared to consider diseased not simply by virtue of her imperfectly functioning reproductive system, or even because of a perceived association with psychological impairment, but because it was psychologically and morally questionable to seek out AID as a form of treatment. Even for those (presumably) fertile women married to an infertile man, there was an explicit questioning of what motivated them to seek insemination treatment,

with perceived risks of dishonesty due to the level of desperation that many felt to be pregnant. A wish to engage with this form of therapy was taken as the very proof that you were not a healthy and appropriate candidate for parenthood. As feminist historians have stressed, maternity has long been considered the ‘female norm’,¹¹⁵ but some women could want this too much, such that they became frustrated, obsessive, and precisely the wrong sort of person to ‘function well as a parent’.¹¹⁶ Thus, the infertile woman seeking treatment by artificial insemination was arguably considered to be as reproductively ‘deviant’ as the woman seeking a termination of pregnancy in mid-twentieth-century Britain.

Yet, the fundamentally dishonest nature of AIHD treatment throws into sharp relief the hypocrisy of the medical profession in characterizing the female patient as somehow untrustworthy or duplicitous. Indeed, Feversham testimony indicates that the woman was by no means the only pathological character in this story. One could say that every other element of AID was equally pathologized by mid-twentieth-century doctors. Thus, we find much enthusiastic characterization of the greedy, eugenically compromised or psychopathic semen donor. A rather more paternalistic, or simply patronizing, attitude was displayed towards the (infertile) husband, with concerns that he had not consented to such a treatment and might thus be deceived by an adulterous wife, or that his self-esteem simply could not cope with the knowledge of his reproductive inadequacy. Discussion of the husband nonetheless betrays a tendency to pathologize him, too, not merely in terms of his imperfectly functioning reproductive system, but of his fragile psychological state. Moreover, ‘adulterous’ doctors do not escape this tendency to pathologize, their motives questioned for involvement in a sphere of activity with agricultural associations which did nothing to boost their skills or reputation. Finally, the very treatment itself was pathologized. Little wonder, then, that some of the most critical Feversham witnesses did not single out one of the parties for criticism, warning instead that everyone involved must be punished for practising ‘this unnatural form of immorality’ – the couple themselves, the donor who supplied the semen, and the doctor who facilitated the therapy.¹¹⁷

NOTES

1. See, for example, Jeffrey Weeks, *Sex, Politics and Society: The Regulation of Sexuality since 1800*, 3rd edn (Abingdon, 2010); Lesley Hall, *Sex, Gender and Social Change in Britain since 1880*, 2nd edn (Basingstoke, 2012); Harry Cocks and Matt Houlbrooks (eds), *Palgrave Advances in the Modern History of Sexuality* (Basingstoke, 2005); Gayle Davis, ‘Health and Sexuality’, in Mark Jackson (ed.), *The Oxford Handbook of the History of Medicine* (Oxford, 2011).
2. See especially Roger Davidson and Gayle Davis, *The Sexual State: Sexuality and Scottish Governance, 1950–80* (Edinburgh, 2012).
3. Callum Brown, *The People in the Pews: Religion and Society in Scotland since 1780* (Glasgow, 1993).

4. See, for example, Barbara Brookes, *Abortion in England, 1900–1967* (London, 1988); Lesley Hoggart, *Feminist Campaigns for Birth Control and Abortion Rights in Britain* (Lewiston, NY, 2003); Davidson and Davis, *The Sexual State*, part 2.
5. Naomi Pfeffer, *The Stork and the Syringe: A Political History of Reproductive Medicine* (Cambridge, 1993).
6. Rita Snowden, *The Artificial Family: A Consideration of Artificial Insemination by Donor* (London and Boston, MA, 1981); Fenella Cannell, 'Concepts of Parenthood: The Warnock Report, The Gillick Debate, and Modern Myths', *American Ethnologist*, 17:4 (1990); Sarah Franklin and Helena Ragone (eds), *Reproducing Reproduction: Kinship, Power, and Technological Innovation* (Philadelphia, PA, 1998).
7. John McMillan, 'The Return of the Inseminator: Eutelegensis in Past and Contemporary Reproductive Ethics', *Studies in History and Philosophy of Biological and Biomedical Sciences*, 38:2 (2007); Martin Richards, 'Artificial Insemination and Eugenics: Celibate Motherhood, Eutelegensis and Germinal Choice', *Studies in History and Philosophy of Biological and Biomedical Sciences*, 39:2 (2008); Angus McLaren, *Reproduction by Design: Sex, Robots, Trees and Test-Tube Babies in Interwar Britain* (Chicago, IL, 2012).
8. National Records of Scotland (NRS), HH 41/1460, 'Note on Report of the Departmental Committee on Artificial Insemination', undated.
9. See also Gayle Davis, 'Sexual Snapshots: Departmental Committees and their Value to the Historian of Sexuality', *Scottish Archives*, 18 (2012).
10. NRS, HH 41/1450, 'Notes for Representatives of Government Departments appearing before the Committee on 7 December, 1958', November 1959.
11. NRS, GRO 5/1838, 'Notes for Representatives of Government Departments appearing before the Committee on 7 December 1959'.
12. NRS, HH 41/1459, 'Extent of AID in this Country', undated appendix to AI (59) 5.
13. NRS, HH 41/1459, 'Extent of AID in this Country', undated appendix to AI (59) 5.
14. NRS, HH 41/1453, Memorandum of Evidence by Dr Albert Sharman, 6 November 1958. Sharman also co-authored the textbook *Sterility and Impaired Fertility: Pathogenesis, Investigation and Treatment*, 2nd edn (London, 1948) in conjunction with fellow authorities in the field including Mary Barton.
15. NRS, HH 41/1459, 'Extent of AID in this Country', undated appendix to AI (59) 5.
16. NRS, HH 41/1453, Verbatim Report of Oral Evidence by the Royal College of Obstetricians and Gynaecologists, January 1959.
17. NRS, HH 41/1455, Verbatim Report of Oral Evidence by the Royal College of Surgeons of Edinburgh, 13 October 1959.
18. NRS, HH 41/1458, Verbatim Report of Oral Evidence by Dr Albert Sharman, 11 February 1959.
19. NRS, HH 101/1628, Memorandum of Evidence by the Department of Health for Scotland, undated.
20. NRS, HH 41/1450, Memorandum by the Lord Chancellor's Office, 30 September 1958.

21. NRS, HH 41/1461, Verbatim Report of Oral Evidence by Professor T. B. Smith, December 1959.
22. NRS, HH 41/1458, Verbatim Report of Oral Evidence by Dr Hector Maclennan, 10 February 1959.
23. NRS, HH 41/1455, Verbatim Report of Oral Evidence by the Royal College of Surgeons of Edinburgh, 13 October 1959.
24. NRS, HH 41/1458, Verbatim Report of Oral Evidence by Dr Eleanor Mears, 11 February 1959.
25. NRS, HH 41/1453, Memorandum of Evidence by the British Medical Association, undated.
26. NRS, HH 41/1461, Verbatim Report of Oral Evidence by Professor Andrew Claye, 10–11 February 1959.
27. NRS, HH 41/1453, Memorandum of Evidence by the United Birmingham Hospitals, 21 May 1959.
28. NRS, HH 41/1453, Memorandum of Evidence by the Royal College of Surgeons of Edinburgh, undated.
29. NRS, HH 41/1453, Letters forwarded by the Royal Medico-Psychological Association, 1 May 1959.
30. NRS, HH 41/1453, Memorandum of Evidence by Dr John McDonald, 28 January 1959.
31. NRS, HH 41/1453, Memorandum of Evidence by Dr Eustace Chesser, January 1959.
32. NRS, HH 41/1458, Verbatim Report of Oral Evidence by Dr Audrey Freeth, 10 March 1959.
33. NRS, HH 41/1453, Memorandum of Evidence by Dr Hector R. Maclennan, undated.
34. NRS, HH 41/1458, Verbatim Report of Oral Evidence by Dr Reynold Boyd, 14 January 1959.
35. NRS, HH 41/1456, Verbatim Report of Oral Evidence by Dr Bernard Sandler, 9 June 1959.
36. NRS, HH 41/1461, Verbatim Report of Oral Evidence by Dr Helena Wright, 8 December 1959.
37. NRS, HH 41/1456, Verbatim Report of Oral Evidence by Dr Bernard Sandler, 9 June 1959.
38. NRS, HH 41/1453, Memorandum of Evidence by the Royal College of Surgeons of Edinburgh, undated.
39. NRS, HH 41/1455, Verbatim Report of Oral Evidence by the Royal College of Surgeons of Edinburgh, 13 October 1959.
40. I. Malcolm Ingram, 'Abortion Games: An Inquiry into the Working of the Act', *Lancet*, 30 October 1971; Gayle Davis and Roger Davidson, "'Big White Chief", "Pontius Pilate", and the "Plumber": The Impact of the 1967 Abortion Act on the Scottish Medical Community, c.1967–1980', *Social History of Medicine*, 18:2 (2005), pp. 301–4.
41. NRS, HH 41/1453, Memorandum of Evidence by Dr John McDonald, 28 January 1959.
42. NRS, HH 41/1453, Memorandum of Evidence by the Royal College of Obstetricians and Gynaecologists, January 1959.
43. NRS, HH 41/1453, Memorandum of Evidence by the Royal College of Surgeons of Edinburgh, undated.

44. Martin Richards, 'Artificial Insemination and Eugenics: Celibate Motherhood, Euteleogenesis and Germinal Choice', *Studies in History and Philosophy of Biological and Biomedical Sciences*, 39:2 (2008), p. 217.
45. NRS, HH 41/1459, Note by the Feversham Secretary, 8 April 1959.
46. NRS, HH 41/1454, Memorandum of Evidence by the United Free Church of Scotland, undated.
47. NRS, HH 41/1458, Verbatim Report of Oral Evidence by Dr Hector Maclennan, 10 February 1959.
48. NRS, HH 41/1453, Memorandum of Evidence by Dr Hector Maclennan, undated.
49. NRS, HH 41/1458, Verbatim Report of Oral Evidence by Dr Audrey Freeth, 10 March 1959.
50. NRS, HH 41/1453, Memorandum of Evidence by Dr Albert Sharman, 6 November 1958.
51. *Glasgow Herald*, 1 March 1958.
52. NRS, HH 41/1455, Verbatim Report of Oral Evidence by the Royal College of Surgeons of Edinburgh, 13 October 1959.
53. NRS, HH 41/1458, Verbatim Report of Oral Evidence by Dr Audrey Freeth, 10 March 1959.
54. NRS, HH 41/1456, Verbatim Report of Oral Evidence by Dr Bernard Sandler, 9 June 1959.
55. NRS, HH 41/1456, Verbatim Report of Oral Evidence by Dr Bernard Sandler, 9 June 1959.
56. NRS, HH 41/1461, Verbatim Report of Oral Evidence by Dr Mary Barton, 10–11 February 1959.
57. NRS, HH 41/1453, Memorandum of Evidence by Dr Albert Sharman, 6 November 1958.
58. NRS, HH 41/1453, Memorandum of Evidence by Dr Albert Sharman, 6 November 1958.
59. NRS, HH 41/1457, Verbatim Report of Oral Evidence by British Medical Association, 23 September 1959.
60. NRS, HH 41/1453, Memorandum of Evidence by Dr Hector R. Maclennan, undated.
61. NRS, HH 41/1459, 'Extent of AID in this Country', undated appendix to AI (59) 5.
62. NRS, HH 41/1461, Verbatim Report of Oral Evidence by Dr David Stafford-Clark, 10 March 1959.
63. Gayle Davis and Roger Davidson, "'The Fifth Freedom" or "Hideous Atheistic Expediency": The Medical Community and Abortion Law Reform in Scotland, c.1960–75', *Medical History*, 50:1 (2006).
64. NRS, HH 41/1454, Memorandum of Evidence by the Committee of the Free Presbyterian Church of Scotland, undated.
65. NRS, HH 41/1454, Memorandum of Evidence by the United Free Church of Scotland, undated.
66. NRS, HH 41/1453, Memorandum of Evidence by the Royal College of Surgeons of Edinburgh, undated.
67. NRS, HH 41/1455, Verbatim Report of Oral Evidence by the Royal College of Surgeons of Edinburgh, 13 October 1959.
68. NRS, HH 41/1455, Verbatim Report of Oral Evidence by the Royal College of Surgeons of Edinburgh, 13 October 1959.

69. NRS, HH 41/1453, Letters forwarded by the Royal Medico-Psychological Association, 1 May 1959.
70. NRS, HH 41/1453, Memorandum of Evidence by Dr Albert Sharman, 6 November 1958.
71. NRS, HH 41/1458, Verbatim Report of Oral Evidence by Dr Albert Sharman, 11 February 1959.
72. NRS, HH 41/1461, Verbatim Report of Oral Evidence by Dr Philip Bloom, 10–11 February 1959.
73. ‘British Scientist “Fathered 600 Children” by Donating Sperm at his own Fertility Clinic’, *Daily Mail*, 8 April 2012.
74. NRS, HH 41/1454, Memorandum of Evidence by National Marriage Guidance Council, London, 5 June 1959.
75. NRS, HH 41/1459, ‘Extent of AID in this Country’, undated appendix to AI (59) 5.
76. NRS, HH 41/1456, Verbatim Report of Oral Evidence by Dr Margaret Shotton, 12–13 May 1959; Verbatim Report of Oral Evidence by Dr Bernard Sandler, 9 June 1959.
77. NRS, HH 41/1461, Verbatim Report of Oral Evidence by Dr Eleanor Mears, 10–11 February 1959.
78. NRS, HH 41/1461, Verbatim Report of Oral Evidence by Dr Mary Barton, 10–11 February 1959.
79. NRS, HH 41/1453, Memorandum of Evidence by Dr Albert Sharman, 6 November 1958.
80. NRS, HH 41/1456, Verbatim Report of Oral Evidence by Dr Bernard Sandler, 9 June 1959.
81. NRS, HH 41/1455, Verbatim Report of Oral Evidence by the Royal College of Surgeons of Edinburgh, 13 October 1959.
82. NRS, HH 41/1456, Verbatim Report of Oral Evidence by Dr Bernard Sandler, 9 June 1959.
83. NRS, HH 41/1453, Memorandum of Evidence by Dr Bernard Sandler, undated.
84. NRS, HH 41/1453, Memorandum of Evidence by Dr Hector R. MacLennan, undated.
85. NRS, HH 41/1458, Verbatim Report of Oral Evidence by Dr Audrey Freeth, 10 March 1959.
86. NRS, HH 41/1455, Verbatim Report of Oral Evidence by the Royal College of Surgeons of Edinburgh, 13 October 1959.
87. NRS, HH 41/1461, Verbatim Report of Oral Evidence by Dr Eustace Chesser, 10–11 February 1959.
88. NRS, HH 41/1453, Letters forwarded by the Royal Medico-Psychological Association, 1 May 1959.
89. NRS, HH 41/1456, Verbatim Report of Oral Evidence by Dr Bernard Sandler, 9 June 1959.
90. NRS, HH 41/1459, ‘Extent of AID in this Country’, undated appendix to AI (59) 5.
91. NRS, HH 41/1453, Memorandum of Evidence by Dr Albert Sharman, 6 November 1958.
92. NRS, HH 41/1461, Verbatim Report of Oral Evidence by Dr Eustace Chesser, 10–11 February 1959.

93. NRS, HH 41/1461, Verbatim Report of Oral Evidence by Dr David Stafford-Clark, 10 March 1959.
94. NRS, HH 41/1453, Memorandum of Evidence by Dr John McDonald, 28 January 1959.
95. NRS, HH 41/1460, Memorandum of Evidence by the Lord Lyon King of Arms, 3 December 1959.
96. NRS, HH 41/1459, 'Extent of AID in this Country', undated appendix to AI (59) 5.
97. NRS, HH 41/1461, Minutes of Meeting held in London, 14–15 April 1959; NRS, HH 41/1453, Memorandum of Evidence by Dr Albert Sharman, 6 November 1958.
98. NRS, HH 41/1461, Minutes of Meeting held on 14 January 1959; NRS, HH 41/1453, Memorandum of Evidence by Dr Albert Sharman, 6 November 1958.
99. NRS, HH 41/1459, 'Extent of AID in this Country', undated appendix to AI (59) 5.
100. NRS, HH 41/1458, Verbatim Report of Oral Evidence by Dr Albert Sharman, 11 February 1959.
101. NRS, HH 41/1458, Verbatim Report of Oral Evidence by Dr Eleanor Mears, 11 February 1959.
102. NRS, HH 41/1459, 'Extent of AID in this Country', undated appendix to AI (59) 5.
103. NRS, HH 41/1453, Memorandum of Evidence by Faculty of Medicine, University of Edinburgh, February 1959.
104. NRS, HH 41/1458, Verbatim Report of Oral Evidence by Dr Hector MacLennan, 10 February 1959.
105. NRS, HH 41/1459, 'Extent of AID in this Country', undated appendix to AI (59) 5.
106. NRS, HH 41/1455, Verbatim Report of Oral Evidence by the Royal College of Surgeons of Edinburgh, 13 October 1959.
107. NRS, HH 41/1458, Verbatim Report of Oral Evidence by Dr Albert Sharman, 11 February 1959.
108. NRS, HH 41/1458, Verbatim Report of Oral Evidence by Dr Albert Sharman, 11 February 1959.
109. NRS, HH 41/1453, Bernard Sandler to Departmental Committee on Artificial Insemination, 20 July 1959.
110. NRS, HH 41/1453, Bernard Sandler to Departmental Committee on Artificial Insemination, 20 July 1959.
111. NRS, HH 41/1453, Memorandum of Evidence by Margaret Jackson, undated.
112. NRS, HH 41/1458, Verbatim Report of Oral Evidence by Dr Hector MacLennan, 10 February 1959.
113. NRS, HH 41/1454, Report of the Committee on Church and Nation of the Church of Scotland, adopted by the General Assembly in May 1959.
114. NRS, HH 41/1454, Memorandum by the Public Questions and Religion and Morals Committee of the Free Church of Scotland, undated.
115. See, for example, Ann Oakley, 'Normal Motherhood: An Exercise in Self-Control', in Bridget Hutter and Gillian Williams (eds), *Controlling Women: The Normal and the Deviant* (London, 1981); Sally Sheldon, *Beyond Control: Medical Power and Abortion Law* (London, 1997).

116. NRS, ED11/511, Note by W. S. Kerr, 'Feversham Committee on Artificial Insemination', 13 October 1958.
117. NRS, HH 101/1628, Free Presbyterian Church of Scotland to Ministry of Health, Edinburgh, 1 June 1959.

RESEARCH RESOURCES

Primary Sources

Archival Sources

National Records of Scotland, Edinburgh
 Departmental Committee on Artificial Insemination (Feversham Committee)
 Wellcome Library, London
 Eugenics Society Archive
 Family Planning Association Archive

Published Primary Sources

G.W. Bartholomew, 'Legal Implications of Artificial Insemination', *The Modern Law Review*, 21:3 (1958), 236–58.

Mary Barton, Kenneth Walker and Bertold Wiesner, 'Artificial Insemination', *British Medical Journal*, 13 January 1945, 40–3.

Report of the Departmental Committee on Human Artificial Insemination (Great Britain: H.M.S.O., 1960).

Albert Sharman, Kenneth Walker and Mary Barton, *Sterility and Impaired Fertility: Pathogenesis, Investigation and Treatment* (London: Hamish Hamilton, 1939).

V. Zachary Cope, F.M.R. Walshe, G.L. Davies and J.A. Forrest, 'Artificial Insemination', *British Medical Journal*, 24 February 1945, 276–7.

Secondary Sources

Christina Benninghaus, 'Beyond Constructivism? Gender, Medicine and the Early History of Sperm Analysis, Germany, 1870–1900', *Gender & History*, 24:3 (2012), 647–76.

Fenella Cannell, 'Concepts of Parenthood: The Warnock Report, The Gillick Debate, and Modern Myths', *American Ethnologist*, 17:4 (1990), 667–86.

Cynthia Daniels and Janet Golden, 'Procreative Compounds: Popular Eugenics, Artificial Insemination and the Rise of the American Sperm Banking Industry', *Journal of Social History*, 38:1 (2004), 5–27.

Ken Daniels and Karyn Taylor, 'Secrecy and Openness in Donor Insemination', *Politics and the Life Sciences*, 12:2 (1993), 155–70.

Roger Davidson and Gayle Davis, *The Sexual State: Sexuality and Scottish Governance, 1950–80* (Edinburgh: Edinburgh University Press, 2012; paperback 2014).

Jeanette Edwards et al (eds), *Technologies of Procreation: Kinship in the Age of Assisted Conception* (London and New York: Routledge, 1999).

Michael Finn, 'Female Sterilization and Artificial Insemination at the French Fin de Siècle: Facts and Fictions', *Journal of the History of Sexuality*, 18:1 (2009), 26–43.

- Michael Finn, 'Physiological Fictions and the Fin-de-Siecle Female Brain', *Nineteenth-Century French Studies*, 39:3-4 (2011), 315-31.
- Sarah Franklin and Helena Ragone (eds), *Reproducing Reproduction: Kinship, Power, and Technological Innovation* (Philadelphia, PA: University of Pennsylvania Press, 1998).
- Faye Ginsburg and Rayna Rapp, 'The Politics of Reproduction', *Annual Review of Anthropology*, 20 (1991), 311-43.
- F. Allan Hanson, 'Donor Insemination: Eugenic and Feminist Implications', *Medical Anthropology Quarterly*, 15:3 (2001), 287-311.
- Angus McLaren, *Impotence: A Cultural History* (Chicago, IL, and London: University of Chicago Press, 2007).
- Angus McLaren, *Reproduction by Design: Sex, Robots, Trees and Test-Tube Babies in Interwar Britain* (Chicago, IL: University of Chicago Press, 2012).
- James Monach, *Childless: No Choice - The Experience of Involuntary Childlessness* (London and New York: Routledge, 1993).
- Regina Markell Morantz-Sanchez, 'Coming to Grips with the Limitations of Science: Infertility and Heredity in American History', *Reviews in American History*, 25:2 (1997), 207-212 & 25:3 (1997), 445-50.
- Simone B. Novaes, 'Semen Banking and Artificial Insemination by Donor in France: Social and Medical Discourse', *International Journal of Technology Assessment in Health Care*, 2:2 (1986), 219-29.
- Ann Oakley, 'Normal Motherhood: An Exercise in Self-Control', in Bridget Hutter and Gillian Williams (eds), *Controlling Women: The Normal and the Deviant* (London: Croom Helm, 1981), 79-184.
- Naomi Pfeffer, 'Artificial Insemination, In-Vitro Fertilization and the Stigma of Infertility', in Michelle Stanworth (ed.), *Reproductive Technologies: Gender, Motherhood and Medicine* (Cambridge, 1987), 81-98.
- Naomi Pfeffer, *The Stork and the Syringe: A Political History of Reproductive Medicine* (Cambridge: Polity Press, 1993).
- Martin Richards, 'Artificial Insemination and Eugenics: Celibate Motherhood, Euteleogenesis and Germinal Choice', *Studies in History and Philosophy of Biological and Biomedical Sciences*, 39:2 (2008), 211-21.
- Robert Snowden and Geoffrey Duncan Mitchell, *The Artificial Family: A Consideration of Artificial Insemination by Donor* (London and Boston: Allen & Unwin, 1981).
- Kara Swanson, 'Adultery by Doctor: Artificial Insemination, 1890-1945', *Chicago-Kent Law Review*, 87:2 (2012), 591-633.
- Kara Swanson, 'The Birth of the Sperm Bank', *The Annals of Iowa*, 71:3 (2012), 241-76.
- Daniel Wikler and Norma Wikler, 'Turkey-Baster Babies: The Demedicalization of Artificial Insemination', *The Milbank Quarterly*, 69:1 (1991), 5-40; plus responses in that volume from Daniel Callahan, Patricia St. Clair Stephenson and Marsden Wagner.
- Sarah Wilmot (ed.), 'Between the Farm and the Clinic: Agriculture and Reproductive Technology in the Twentieth Century', special issue, *Studies in History and Philosophy of Biological and Biomedical Sciences*, 38:2 (2007), 303-529.

PART IV

Agency and Invisibility in Constructions
of Infertility

Introduction: Agency and Invisibility in Constructions of Infertility

Tracey Loughran and Gayle Davis

As 1979 drew to its close, Hilary Mantel spent the Christmas period in hospital, ‘having my fertility confiscated and my insides rearranged’.¹ She had suffered from chronic undiagnosed endometriosis (a condition in which tissue that normally forms the womb lining is found outside the uterus) for several years. By the time she managed to prise this diagnosis out of doctors, following her own extensive research on the condition, the endometriosis had wreaked such havoc on her reproductive system that she needed a hysterectomy. She was 27 years old.

Mantel had first noticed odd ‘nibbling’, ‘stabbing’, ‘flitting’ pains several years earlier, when she was reading for an undergraduate degree in law.² The first time she went to see a doctor, he was nonplussed. The second time, he put her on antidepressants that blurred her vision, disturbed her sleep, and left her dull and apathetic, but did nothing for her pain. The doctor sent her to a psychiatrist, who diagnosed her with the ‘female complaint’ of ‘stress, caused by overambition’, and recommended that she rethink her future career. On her second visit to the psychiatrist, she was prescribed even stronger pills and sent to the university psychiatric clinic, where staff interpreted her insistence that she was physically ill as further evidence of her delusions. There, she was pulled onto a nightmarish merry-go-round of violent episodes, extreme panic, and insensibility caused by a combination of Valium, Fentazine, and Largactil.³ Looking back years later, the terror still raw, Mantel recollected that her doctors did not even attempt a physical diagnosis. Of course not; no further

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explanation was necessary, for it was widely perceived to be ‘in the nature of educated young women [...] to be hysterical, neurotic, difficult, and out of control’. The only object of doctors was ‘to get them back under control’.⁴

After being discharged from the clinic, Mantel tried to stay out of the medical system, despite chronic abdominal pain, sickness, and agonizing menstrual periods. By the age of 24, she had learnt that ‘whatever my mental distress – and it does distress one, to be ignored, invalidated, and humiliated – I must never, ever go near a psychiatrist or take a psychotropic drug’. When driven to the doctor’s surgery because she could bear the pain no longer, GPs assured her that these ‘period pains’ would clear up when she had her first baby. Although she was eventually able to diagnose herself through extensive research in medical textbooks, this knowledge came too late to prevent the loss of her womb, ovaries, and a ‘few lengths of bowel’ into the bargain.⁵

At 27, Mantel had never tried to get pregnant. In fact, despite the availability of the oral contraceptive pill, she had always ‘only half believed I could coerce my body and suspected that it might have some filthy tricks in store; the filthy tricks would be on the line of putting a baby in your arms before you were ready’.⁶ But now:

I was not free and the possibilities were closed off. Biology was destiny. Neglect – my own, and that of the medical profession – had taken away my choices. Now my body was not my own. It was a thing done to, operated on. I was twenty-seven and an old woman, all at once [...] I was no good at breeding, so what was I good for? Who was I at all? My hormonal circuits were busted, my endocrinology was shot to pieces. I was old while I was young. I was an ape, I was a blot on the page, I was a nothing, zilch.⁷

In the aftermath of the operation, her marriage collapsed, her medication altered her body out of all recognition, and when the endometriosis returned a few years later, she had to battle once again to make doctors accept the reality of her physical pain.⁸ Although she remarried (the same man), published several novels, and made a happy life for herself, more than two decades after the hysterectomy she still missed and felt haunted by ‘the child I never had’.⁹

This is Mantel’s story, but it is also a story about what could and what did happen to women in the Western world in the second half of the twentieth century. The history of women in these decades is usually told as a story of ‘liberation’, as a resurgent feminist movement capitalized on the freedoms offered by the oral contraceptive pill and legalized abortion to demand better education, rights in the workplace, and sexual equality. How, then, at the height of this onward march, could a young working-class woman from the North of England end up covering and afraid in a psychiatric hospital because she had dared to tell a doctor that she was in pain? Making sense of Mantel’s experiences helps us to understand women’s expectations of their reproductive futures, their abilities to shape their own lives, and the forces that constrained these choices even in this era of unprecedented freedom and choice.

In histories of infertility, the issues of agency and invisibility are deeply entwined. The power to act depends in part on social recognition of a ‘problem’, and the choices of those whose voices are not heard, or, even worse, are deliberately silenced, are narrowed – sometimes to the point of non-existence. In past societies, as in the contemporary world, disparities of power marked and determined the experience of infertility. This section, substantially focused on the period since 1945, explores how constructions of infertility have contributed to either expanding or limiting the capacities of different groups. It demonstrates how the claims of certain groups (whether Freudian psychologists, feminists in the global North, or white middle-class infertile couples) to reproductive rights have often marginalized those with less power and status (female patients, women in the global South, or indigenous peoples and ethnic minorities). At the same time, while ideological constructions of gender, race, and class have conditioned popular, legal, and medical approaches to infertility, stigmatized and neglected groups have managed to fight back and to challenge these constructions in unexpected ways.

The section opens with Sofia Gameiro and Jacky Boivin’s historical overview of the use of psychological models within infertility medicine. From the 1930s, the Freudian-derived model of ‘psychogenic infertility’ which explained infertility as a result of psychic conflict, often believed to result from failure to adapt to socially prescribed gender roles, dominated infertility medicine. Although the cruder manifestations of this model have been superseded, debates about whether stress affects fertility are ongoing. In the 1980s, the ‘psychological sequelae’ model suggested that psychological problems in the infertile were an outcome of the emotional tribulations provoked by the experience of involuntary childlessness, rather than a cause of the condition. This model highlighted the need for professional support for infertile couples and resulted in an influx of mental health professionals into the field of infertility medicine. With the proliferation of assisted reproductive technologies, the role of mental health professionals became entrenched, and often they served as gatekeepers for access to treatment – often, in the process of determining who could be deemed fit to parent, further entrenching heteronormative and class-based ideals. However, as evidence began to show that the intervention of psychologists during the treatment period was not always effective, a trend evolved towards psychosocial care delivered at different points in the process of diagnosis and treatment, by all staff in the fertility clinic rather than simply mental health professionals. Today’s psychological interventions in infertility medicine are more thoroughly based on evidence than past practices, and more sensitive to the needs and desires of previously stigmatized groups such as same-sex parenting couples.

Hilary Mantel’s horrific experiences in the British mental health system in the 1970s give some indication of the potential consequences of the misuse of psychological models within medicine. Shurlee Swain’s chapter on the interplay between infertility and adoption in twentieth-century Australia provides another chilling example of how the psychogenic model of infertility ruined

the lives of those without sufficient power to negotiate the medical and legal system. In postwar Australia, a decline in the number of babies available for adoption coincided with the rise of the psychogenic model of infertility. In doctors' surgeries and in the popular media, it became common belief that infertility caused by psychological barriers could often be 'cured' by the adoption of a child; taking on the mothering role would resolve a woman's psychological conflicts, and pregnancy would surely follow. Infertile couples therefore sought adoption as a route to biological parenthood. Tragically, their desires for adoptive children coincided with the beliefs of medical personnel and social workers that white middle-class infertile couples were more 'deserving' parents than single mothers. As a result, between the 1950s and 1970s, thousands of babies were forcibly taken from single mothers and given to childless married couples for adoption. It is only in the past decade, with a national inquiry into forced adoption, that the voices of the mothers and children whose lives were irrevocably altered by these policies and practices have finally been heard.

Tracey Loughran's chapter on feminism and infertility in Britain between the 1960s and 1970s addresses from a different angle the issue of whose voices are privileged, and why, in different discourses of infertility. Loughran compares representations of involuntary childlessness in popular women's magazines and Women's Liberation Movement (WLM) publications to illustrate the dilemmas infertility posed for feminism. Mass-market women's magazines were sympathetic to the suffering of infertile women, but this validation of infertile women's desires depended on the implicit (and sometimes explicit) belief that the maternal instinct governed women's social roles. The WLM challenged this biological determinism and fought for women's control over reproduction. In practice, however, feminist assertions of 'the right to choose' usually focused on the right *not* to have children, and so the feminist press rarely engaged with infertility in the 1970s. In the 1980s, as influential feminist theorists argued that new reproductive technologies resulted from a 'technopatriarchal' conspiracy and reified global inequalities in power, infertile women were further marginalized within the feminist movement. Yet although elements within the movement stigmatized and marginalized their infertile sisters, Loughran argues that the WLM nevertheless provided women with the tools to create alternative discourses of infertility – tools which feminist historians can use to create new histories.

These complexities are further explored in Sara MacBride-Stewart and Rachel Simon-Kumar's review of feminist debates on infertility in the global North and global South. In the 1970s, feminists in the First World fought for women's rights to reproductive choice and control, but by the 1990s it was increasingly clear that discourse focused on the right to contraception and abortion was ill-adapted to the needs of women in other parts of the world who were subject to policies of population control. Moreover, the claims of infertile women in the West to a 'right' to biological parenthood, underpinned

by the rhetoric of individualism, often depended on the exploitation of women in the Third World. Although there are no easy answers for a feminism that seeks to challenge patriarchy, ethnocentrism, and the exploitative legacy of colonialism while maintaining the rhetoric of emancipation for all, its best hope lies in the efforts of feminists in the global South to claim self-defined reproductive rights, autonomy, and recognition. The global feminism of the future must work to develop understandings that resolve the tensions between women's productive and reproductive roles, and are equally valid for high-fertility developing countries and low-fertility Western nations.

The next two chapters turn to groups whose members might be considered privileged in certain contexts, but who are also potentially subject to commercial exploitation or stigmatization. Rene Almeling's ethnographic research on egg and sperm donors in the contemporary USA examines gendered experiences of bodily commodification. Almeling compares the different physical experiences of men and women in gamete donation. She argues that although egg donors undergo similar physical experiences to women in the first stage of an IVF cycle, financial reimbursement for these risks results in very different bodily experiences to those who are paying to undergo them. Although sperm donors do not undertake similar kinds of physical risks, they also report that masturbation is experienced differently in the contexts of 'work' and 'pleasure'. Finally, Almeling reflects on the effects of the social organization of egg donation as gift exchange, and sperm donation as paid work. Throughout, she argues that the social context in which physical experiences occur directly affects how the body feels. Her research should warn ethnographers of past societies to be wary of treating the body as a transhistorical object, experienced in the same way regardless of context; the problem of how to balance awareness of bodies as constructed objects without reducing them to mere constructs is one of the most urgent problems facing historians of the body.

The section ends with Virpi Ylänné's analysis of media representations of postmenopausal reproduction and infertility in twenty-first-century Britain. Those who can access reproductive technologies to become pregnant and give birth even after the end of their 'natural' childbearing lives might be viewed as one of the most privileged groups of women in contemporary society. However, as Ylänné shows through a close reading of headlines, common adjectives, and terms of reference within newspaper articles, media representations of ageing mothers are riven by contradictions. While these mothers are sometimes represented positively, usually by female journalists, as committed, experienced, and good parents, when these representations are perceived as atypical they can reinforce negative perceptions of older mothers as unrealistic and selfish. Yet, as Ylänné shows, while postmenopausal mothers are often marginalized as 'others' and represented as a threat to traditional social and familial structures, the positioning of these women as objects of evaluation also credits them with agency in making choices about their

reproductive lives – an agency often denied to younger infertile women in media narratives that focus on their ‘desperation’.

In all, this section illustrates how issues of power and control reverberate in strange and unexpected ways in discourses and experiences of infertility. Often, an individual’s status as victim, hero, or abuser depends on perspective, and the same person can hold these positions simultaneously. The white middle-class adoptive parents of illegitimate children in mid-century Australia could be seen either as victims of infertility, cruelly denied biological parenthood by a twist of fate, as loving and generous people who saved innocent children from the stigma of illegitimacy and provided them with homes, or as powerful perpetrators complicit in the abuse of single mothers’ rights. Similarly, postmenopausal mothers in contemporary Britain can be viewed as unfortunate women who were unable to fulfil their dreams of parenting at a younger age because they did not have the financial or practical resources to provide for children, as brave pioneers of a new reproductive landscape where technology has defeated biology, or as immensely privileged individuals who exploit both lax legal controls on the use of reproductive technology in other countries and the bodies of their economically marginalized sisters in the Third World.

This might lead to the depressing conclusion that exploitation is inevitable wherever infertile individuals and couples pursue their desires for parenthood, but there are perhaps more positive lessons to be taken from this exploration of agency and invisibility. These historical investigations also show that no matter how apparently marginalized and powerless, people can find ways to enact their agency within and against oppressive structures, and although the struggle is often long, painful, and costly, it makes the path easier for those who follow. As groups organize to resist stigmatization and marginalization, they are able to make their voices heard. Mantel’s story, which opened this section, remains a tragedy; the children she might have had will remain ghostly presences forever. However, her ability to tell her story, and for it to be published and read, was dependent not only on her own grit, determination, and talent, but on the social effects of a feminist movement that exposed the influence of gender ideologies on medicine and psychiatry. Finally, of course, in making the stories of the powerless known, history itself becomes a tool to right the wrongs of the past, and a resource that can be used to prevent the same disasters being repeated in a different age. This section demonstrates and enacts this work of reparative justice.

NOTES

1. Hilary Mantel, *Giving Up the Ghost: A Memoir* (London, 2010), p. 185.
2. Mantel, *Giving Up the Ghost*, p. 155.
3. Mantel, *Giving Up the Ghost*, pp. 171–82 (quotation p. 174).
4. Mantel, *Giving Up the Ghost*, p. 177.

5. Mantel, *Giving Up the Ghost*, pp. 184, 209.
6. Mantel, *Giving Up the Ghost*, p. 158.
7. Mantel, *Giving Up the Ghost*, pp. 211–12.
8. Mantel, *Giving Up the Ghost*, pp. 231, 239.
9. Mantel, *Giving Up the Ghost*, p. 227.

The Psychology of Infertility in Reproductive Medicine and Healthcare, c. 1940s–2000s

Sofia Gameiro and Jacky Boivin

INTRODUCTION

The psychology of infertility refers to the study of cognitive, emotional, behavioural, social, and relational aspects of the experience of infertility. In past decades, published work on psychological aspects of infertility has described psychological phenomena, identified explanatory mechanisms of action, predicted the relationship between psychological determinants and psychological or biological outcomes, and attempted to control psychological experiences via intervention. This chapter reviews the history of psychological approaches to infertility within reproductive medicine and healthcare between the 1940s and the present. It demonstrates that while psychological inquiry initially responded to the needs of reproductive medicine, psychological needs now influence infertility healthcare. The chapter traces the evolution of this reciprocal relationship, using illustrative cases of interchange from the 1940s to the present day.

This approach reveals five major developments. When psychology entered the field of infertility medicine in the 1930s, the diagnostic techniques of the time were limited and a high percentage of infertility cases could not be medically explained. This led the psychogenic model of infertility, which explained infertility as a form of psychosomatic illness, to dominate psychological approaches to the disorder within medicine and reproductive healthcare for several decades. In the 1970s, there was a realization that the inability to have children was in itself a major source of psychological distress, and this led to the focus on the emotional and social consequences of infertility characteristic of the psychological sequelae model of infertility. Then, in the 1980s, the

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rapid proliferation of assisted reproductive techniques such as in vitro fertilization (IVF) led to a better integration of psychologists in fertility clinics. Psychologists were now responsible for assessing couples requesting treatment, in order to ensure the welfare of the child, and for delivering implications counselling to support informed decision-making. In the 1990s the medical field embraced a more rigorous approach to interventions in the treatment of infertility, calling for empirical evidence of their effectiveness and side effects, including psychological support interventions. Finally, in the new millennium there is now growing awareness that a major problem which infertile people face is preparing for and managing the protracted treatment period. This awareness is leading to an increased emphasis on optimizing all factors contributing to treatment success.

This historical overview is necessarily constrained. First, psychological issues are addressed by many disciplines (psychiatry, psychology, social work, nursing) and each might recognize different critical time points. Where important, we have referred to specific disciplines, but otherwise use generic terms such as 'researchers' or 'mental health professionals'. Second, it has not been possible to acknowledge all important contributions to psychological approaches within infertility medicine. The research base is voluminous and the journey has been long. We focus on contributions that changed the direction of travel but acknowledge that many important contributions were made by those who persisted in one direction. Our aims in this chapter are to describe the medical and psychological context of each of the major developments outlined above, explain the paradigm shift, and reflect on the nature of past and present contributions related to the domain of inquiry. In this way, we hope to illuminate the interrelation between psychology and reproductive medicine, identify the major turning points in the psychology of infertility, and demonstrate the importance of past and current psychological contributions to reproductive medicine.

THE PSYCHOGENIC MODEL OF INFERTILITY

The psychology of infertility emerged from what Barbara J. Berg and John F. Wilson later named the psychogenic model of infertility, which proposed that psychopathology played an aetiological role in infertility.¹ The psychogenic model was introduced in the 1930s to account for infertility that had no identifiable biomedical cause. At that time the diagnosis of 'unexplained infertility' was given to more than 30% of presenting cases.² This notion of psychogenic infertility originated in psychosomatic concepts, introduced by Sigmund Freud (1856–1939) and elaborated by Franz Alexander (1891–1964), that promulgated the view that psychological factors could cause disease. The key psychosomatic concepts explored were psychogenesis, conversion, and specificity.³ Psychogenesis referred to the assumption that psyche and soma were part of the same underlying biological system, able to influence each other to cause disease and able to be known using different investigative methodologies. Conversion referred to the process whereby the patient could convert a repressed

psychic conflict into a symbolic physical representation (a symptom) via the voluntary nervous system. Through this physical transformation the patient would become relatively free of the anxiety the conflict would otherwise have produced.⁴ For example, bulimia (excessive incorporation of food) was considered the symbolic symptom used for the relief of tension related to the repressed need to be impregnated (to receive semen and to carry a foetus).⁵ Chronic emotional tensions caused by psychic conflicts were proposed to produce vegetative dysfunctions – for example asthma, gastric ulcers, or unexplained infertility – and these dysfunctions were known as psychosomatic disorders in recognition of their mainly psychogenic origins. Specificity referred to the correspondence between the psychosomatic disorder and the psychic conflict. For example, the specific psychic conflict perceived to be the cause of asthma was the same across asthmatic patients, but different to the psychic conflict producing infertility or gastric ulcers.

In 1943, the psychiatrist William C. Menninger (1899–1966) described unexplained infertility as ‘a psychic conflict sailing under a gynaecologic flag’. Psychologists who held this belief proposed numerous forms of conflict to account for medically unexplained infertility, most involving relational issues between the infertile woman or man and their own mothers.⁶ Helene Deutsch (1884–1982) believed infertility was a defence mechanism against the inherent dangers of the procreative role, and thought it was caused by unresolved Oedipal issues, a conflicted sexual identity and/or a conflicted relationship between the self and mother.⁷ Another model, proposed by the psychologist I.C. Fischer, divided women with unexplained infertility into two personality styles: the weak, emotionally immature, overprotected woman and the ambitious, masculine, aggressive, and domineering career woman.⁸ The emotionally weak woman was thought to be unable to separate or to differentiate from her own mother or express anger in a direct fashion, and to have an abnormal fear of sex, motherhood, pregnancy, and labour that inhibited her reproductive ability. In contrast, ambitious women were infertile to avoid accepting sexual feelings or competing with an unborn child. Infertility in men was attributed to domineering mothers who expected conformity to rigid moral codes and who over-controlled their sons by threatening withdrawal of love and/or who created anxiety in their sons by their own sexual inhibitions.⁹ On the cusp of the sexual revolution, such explanations were applied to so-called ‘new impotence’, when men were thought to be infertile due to performance pressure from sexually liberated women who expected sexual encounters to be mutually rewarding.¹⁰ Infertility in men was also attributed to conflicted and ambivalent feelings about parenthood or their own masculinity.¹¹

Over time the psychogenic model fell out of favour due to the increased ability of newer diagnostic technologies to detect causes of unexplained infertility, the lack of success of fertility treatments based on these principles, and the lack of empirical support for psychosomatic concepts. Laparoscopic procedures (keyhole surgery) revealed that 78% of patients with unexplained infertility showed pelvic pathology that accounted for the infertility.¹² Reviews

of the psychogenic literature revealed no consistent or striking evidence for conversion or specificity in infertility.¹³ Psychoanalytic analyses of fertility problems occasionally still surface even now,¹⁴ but it has generally been concluded that long-standing infertility is unlikely to be caused exclusively by psychic stimuli.¹⁵

However, the demise of traditional psychosomatic theory has not put an end to research on psychological influences in fertility. As psychosomatic theories were revised to accommodate multifactorial models of disease aetiology (for example, the biopsychosocial model), researchers directed their attention to the vulnerability of *all* patients to psychological causes.¹⁶ According to these models, disease states have diverse biological, environmental, social, and psychological determinants and consequences, with individuals more or less susceptible depending on their own personal history (which includes genetic background, life events, and learning). In combination with concepts from other areas of psychology, including behavioural medicine and health psychology, much current research on the psychological determinants of fertility now concerns identifying the extent to which psychological influences directly or indirectly contribute to or modify the onset, progression, and outcome of disease.

One continuing line of research evolving from the psychogenic tradition is the study of stress and fertility. Investigating this association was ethically and practically challenging when studies depended on couples trying to conceive spontaneously, but was made easier when the sample became couples trying to conceive with assisted reproduction technologies (ARTs) such as insemination and IVF. Couples undergoing fertility treatment provided an ideal context to test the link between stress and fertility because psychological factors could be measured before the start of a reproductive attempt (the cycle of treatment) and the outcome of each attempt could be measured (via a pregnancy test) in a highly controlled environment where all couples were subjected to the same procedures. The first study on IVF patients showed that anxiety was associated with a lower pregnancy rate, possibly via an influence on the stress hormone cortisol.¹⁷ Since then a plethora of studies have been published describing stress effects in various infertile patients and conditions (broken down in diverse ways, including by gender, treatment type, or stressor); investigating explanatory mechanisms (for example via hormones, lifestyle, and patient compliance, as well as identifying methodological factors which might prevent comparison between studies); predicting time course effects (so over single or multiple treatment cycles); and evaluating stress-reducing interventions such as education, information provision, and counselling. This voluminous research shows that psychological factors are undoubtedly implicated in infertility but that effects may be caused indirectly via patient behaviour, for example lifestyle habits known to affect fertility such as smoking or alcohol consumption, or suboptimal help-seeking behaviour, rather than directly through physiological or hormonal effects.¹⁸ No conclusion has yet been reached about the effect of stress on couples' capacity to conceive spontaneously, because stress effects in that context remain difficult to investigate.

Overall the legacy of the psychogenic model has been significant. Even though psychosomatic proposals now seem far-fetched, causal explanations were sufficiently compelling throughout the mid-twentieth century to allow the entry of psychology into the exclusive club of obstetrics and gynaecology. It is not at all certain that psychology would have been admitted if it had only offered methods to make patients feel better. Psychosomatic questions also provided the foundation for much of the research contributing to our present multifactorial and broad understanding of the factors that influence conception and the capacity to reproduce, because these concepts helped to shape biopsychosocial models of disease.¹⁹ However, there are also less positive legacies. Early case reports are the source of many persistent myths, as well as unhelpful and ineffective advice often given to couples about reducing emotional tension to ensure pregnancy (relax and you'll get pregnant; don't think about it and you'll get pregnant).²⁰ Second, because conversion was believed to be primarily a female disorder, most of the patients treated were women and this caused a disproportionate focus on women as a cause of their own infertility. Male fertility was believed not to be related to the psychological domain and currently men continue to be excluded from research and neglected during treatment.²¹ Although there are other explanations for the focus on women, such as the belief that fertility is more important to women, the underlying assumption still remains that the female body is more vulnerable to psychic influence than is the male body. Finally, the strong emphasis on psychological factors as causes of infertility meant less emphasis on their conceptualization as consequences of an unfulfilled wish for a child, which did not benefit couples struggling with the emotional fallout of this medical condition. In the next section we describe how the advocacy movement of the 1970s shifted focus to the psychological *consequences* of infertility.

THE PSYCHOLOGICAL SEQUELAE MODEL

As more research was published it became clear that psychological disturbances were probably more frequently a consequence of not being able to conceive than a cause of it.²² The shift from cause to consequence is probably most associated with the work of Barbara Eck Menning, an infertility nurse who was also a very passionate and active patient advocate. She wrote the first infertility self-help book – *Infertility: A Guide for the Childless Couple* (1977) – and founded the first patient advocacy group, Resolve, which continues to be the largest support and lobbying organization for infertile people in the USA. This movement stimulated the worldwide growth of infertility support groups including in the UK (such as Infertility Network UK, COTS, Donor Conception Network, Daisy Network, Fertility Friends, and Pride Angel). Menning is also credited with the application of the Kübler-Ross descriptive framework of reactions to death and dying to the infertility context, stating that infertility was accompanied by ‘a nearly universal syndrome of feelings’ that included shock/surprise, denial, isolation, anger, guilt, and grief.²³ This

process-oriented perspective drew attention to the significant psychological trauma of infertility and the fact that emotional needs change over time and according to specific demands. For example, emotional needs in treatment may relate to coping with the uncertainty of the treatment outcome, whereas after treatment needs may be about coming to terms with permanent childlessness.

The contributions of Menning redirected the course of psychological studies in subsequent decades. First, there followed a plethora of studies aimed at investigating the negative effects of infertility (and its treatment) on the wellbeing of individuals and couples. This extensive research has been the subject of numerous reviews.²⁴ Some of the major findings of this research are that infertility is emotionally distressing but that the average psychological functioning of infertile individuals is within the normal range; that women experience more intense negative reactions to infertility than men; that infertility frequently strengthens the marital relationship; and that the two-week waiting period in treatment (to determine whether conception has been achieved) is the most stressful aspect of treatment for most couples. This type of research is ongoing, but research attention is now also focused on the factors that modify the intensity of emotional reactions to infertility; for example, ethnicity and cultural values, coping strategies, marital factors like congruence between the desires and expectations of spouses, and so on. More recently, researchers have also made greater efforts to understand how infertility affects individuals from low-resource countries, especially concerning social aspects of infertility such as loss of status, stigmatization, and harassment by in-laws.²⁵ One achievement that has facilitated such investigations has been the development of the international fertility quality of life tool (FertiQoL), which assesses the impact of infertility in core life domains (personal, mind/body, relational, social) and is available in 30 languages.²⁶

A second strand of present-day work originates from Menning's committed campaign to help infertile people cope with the observed psychological effects of infertility, and concerns support interventions for people with fertility problems. Menning mainly sought to help couples by encouraging them to identify, 'work through', and thereby resolve the syndrome of feelings that was proposed to accompany a diagnosis of infertility.²⁷ This approach echoed other perspectives that viewed psychological recovery as dependent on active mourning of the many losses – loss of children, loss of identity, loss of imagined future lives – that infertility entails.²⁸ The development of the 'grief and loss' perspective was undoubtedly driven by the very low treatment success rates of the time, which meant that most people using treatment would ultimately have to cope with childlessness. In 1981, the rate of live births following a single cycle of IVF was only 2%. This compares with a 20% success rate in 2004.²⁹ Given these odds, in the 1980s many medical doctors were willing to refer patients to support groups for help with childlessness rather than persist with treatment.

As psychologists, counsellors and social workers became involved in supporting infertile people, the pool of psychological interventions diversified and

models other than grief and loss were used to support couples. Current interventions can be traced to ego and self psychology, developmental and crisis theory, cognitive-behavioural theory, family systems theory and gender-based theories.³⁰ Furthermore, as cumulative live birth rates improved (current live birth rates for three cycles can be 49% or higher) there was a progressive shift away from interventions to help individuals accept their childlessness toward interventions to help individuals better cope with infertility and the challenges of undergoing protracted treatment.³¹ Examples of recent interventions to help couples cope include: mindfulness therapy;³² support telephone calls;³³ a lifestyle change intervention to reduce weight in obese infertility patients;³⁴ and a positive reappraisal coping intervention for the two-week waiting period.³⁵

Overall, the sequelae model of infertility had a highly significant impact on the psychology of infertility by directing attention towards the possible negative effects of infertility and its treatment, and by stimulating the development of psychological interventions for infertile patients. However, the grief and loss model did not sufficiently acknowledge individual differences in reactions to infertility and assumed that all patients needed support. Further, it placed too much emphasis on supporting the emotional grief of childlessness to the detriment of providing practical and/or educational support for infertility, its treatment, and related problem solving, such as opting for other forms of family-building including adoption and fostering.

IN VITRO FERTILIZATION

The proliferation of IVF clinics in the 1980s and beyond is the most important medical event to affect the role of mental health professionals in infertility. Prior to IVF, mental health professionals were not integrated in fertility clinics and their skills were only sporadically called upon, for example to explain medically unexplained infertility. This distant relationship changed with the institution of IVF because its advocates felt that pre-treatment psychological assessment was necessary to select the most suitable couples to receive this cutting-edge, high-technology treatment. This level of scrutiny had never been accorded to older types of fertility treatments such as insemination and ovulation induction, probably because conventional treatments did not require extra-corporeal manipulation of gametes. Psychological scrutiny eventually spread to most forms of fertility treatment, such that IVF can be indirectly credited with provoking long overdue discussions about the psychological impact and ethical and legal implications of all treatments, particularly of those requiring donated gametes (so-called 'third party reproduction').

IVF created a need, and therefore a role, for mental health professionals within fertility clinics. To begin with, this role was mainly focused on pre-treatment assessment and screening, which was fulfilled mainly by social workers with experience in pre-adoption assessment and child welfare issues.³⁶ At the time, the pre-treatment counselling was 'intended to preclude overt

psychopathology'.³⁷ However, research ultimately showed that only about 2% of couples were denied treatment on the basis of psychological factors, owing to generally good mental health amongst treatment-seekers and the reluctance of fertility doctors to act as gatekeepers to treatment or parenthood, a view that remains to this day.³⁸ The tradition of pre-treatment assessment and screening therefore shifted from the selection of couples to supporting couples by discussing the implications of various treatment choices and identifying their emotional needs. Patricia P. Mahlstedt and Dorothy A. Greenfeld, respectively a psychologist and social worker, were the first to emphatically argue that it was time for fertility specialists to acknowledge that conception and family building with donated gametes was not the same as using your own gametes, and to stop pretending that once a couple gave birth they would never again think about how their children were conceived.³⁹ To facilitate clinical discussions they described the critical issues that needed to be discussed with patients in preparation for donor insemination, including secrecy and the attitudes of family members, thereby instigating the type of counselling we now refer to as implications counselling. Implications for numerous treatments have now been described, for example for embryo or oocyte donation, multi-foetal pregnancy reduction, embryo disposition, and treatment for single or lesbian women.⁴⁰ The latest foci of research in implications counselling is on developing decision-support tools that provide relevant treatment information, stimulate discussion between patients and the medical team, and help individuals and couples deliberate about various issues. An example would be the recently developed decision-aid tool to help young women with early-stage breast cancer decide about preserving their fertility.⁴¹

To summarize, the institution and proliferation of IVF and related technologies had a profound effect on the integration of mental health practitioners in fertility clinics. The original role of mental health professionals was to assess potential couples for suitability, but few couples were excluded on psychological grounds. Consequently the work of mental health professionals moved more toward helping couples deliberate the implications of their treatment choices. More recently there has been a move back towards screening, but mainly to identify couples who might need additional support during treatment. In the next section we discuss some of the psychological interventions that have been evaluated.

EVIDENCE-BASED MEDICINE

Numerous psychological interventions were developed during the 1980s and 1990s in response to Menning's recommendation to provide psychological services to all infertile couples. Psychological interventions, most typically infertility counselling, focusing on emotional expression and support in a one-to-one context, were routinely offered to infertile patients with the aim of reducing distress and/or enhancing quality of life during treatment. Considering the strong endorsement for such support, it was surprising to

find that by the start of the new millennium effectiveness studies comprised less than 10% of the total number of studies advocating their use.⁴² Undoubtedly, there was a large gap between clinical recommendation and empirical evidence.

Evidence-based medicine (EBM) evolved from clinical epidemiology during the 1990s. It aimed to encourage a systematic approach to the collection, analysis, and assessment of the best research evidence and was promoted as the basis of all clinical decision-making.⁴³ EBM has progressively shifted therapeutic decision-making from intuition and clinical judgement towards the use of research findings and empirical evaluation.⁴⁴ With strong endorsement for EBM in reproductive medicine, mental health professionals were forced to take a more critical approach to the effects of the interventions they were promoting and delivering. Other factors existed to promote this more reflective and evaluative period, most notably research findings that called into question the need for psychological interventions. First, most studies of psychological functioning failed to support Menning's dire prediction that without professional help, 'Untold millions of infertile couples, the casualties of a very private war', would be condemned to 'languish indefinitely in suspended animation'.⁴⁵ Second, the majority of infertile patients believed they could cope with their infertility and few felt the need to use counselling, even when it was offered free of charge and at convenient times.⁴⁶

Fortunately, mental health professionals and researchers rose to the EBM challenge; more effectiveness studies have been published in the past decade than in the previous 20 years. These have examined, for example, infertility counselling,⁴⁷ cognitive behavioural approaches,⁴⁸ easily accessible community-based interventions like telephone counselling,⁴⁹ support interventions delivered via different formats, for example the Internet,⁵⁰ and even information leaflets and other educational interventions.⁵¹ Systematic reviews and meta-analysis assessing the efficacy of the interventions developed within the field were also conducted, considering different outcomes, from psychological distress and relational issues to treatment outcome (for example, pregnancy rates).⁵²

Overall, this body of research has confirmed the lack of integration between evidence and clinical practice, as on review some interventions proved not to be effective and others varied in their effectiveness. The most effective interventions proved to be group interventions that focused on education and skills training (such as relaxation training), while the least effective were those emphasizing emotional expression and support and/or discussion about thoughts and feelings related to infertility.⁵³ It was observed that, in general, interventions lacked specificity about the therapeutic mechanisms applied (and the underlying psychological theories), the psychological outcomes being targeted (for example, relief of stress or marital satisfaction), the specific group of patients that could benefit from them, and the treatment period or stage at which they should be applied. Researchers and practitioners within the field have been working to tackle these issues.

First, screening procedures have been implemented so that interventions can be directed to those who need and benefit from them most. Numerous tools have been used to achieve this goal, such as the SCREENIVF (which is specific to infertility as a medical condition), by assessing specific variables that were previously identified as risk factors for poor adjustment during treatment.⁵⁴ Other general tools such as personality tests, for example, the Minnesota Multi-Phasic Inventory (MMPI),⁵⁵ and mental-health screening tools, such as the Beck Depression Inventory, or the Hospital Anxiety and Depression Scales,⁵⁶ have also been used for this effect.

Second, interventions have been designed to target specific stages of fertility treatment that patients consider especially demanding. Two examples are a self-administered coping intervention to help women to manage their anxiety levels during the two-week period when they are waiting to know if the treatment was successful,⁵⁷ and a one-page informative leaflet to inform men scheduled for infertility diagnosis (with sperm collection) about the medical procedures they will undergo, how the procedures are organized, arrangements in the sperm collection room, and typical emotional reactions to these procedures.⁵⁸ More effort has also been put into the development and validation of interventions based on clear therapeutic principles, such as mindfulness. It is noteworthy that many of these more recent interventions move away from the standard one-on-one care perspective, as has been the case in other areas of health, to now include multimedia, e-health, and self-administered formats. This means these interventions are more cost-effective for patients, who now make fewer visits to the clinic, as well as for clinics, which do not need to allocate so many consulting rooms.

The other major effect of EBM has been to cause medical researchers to investigate the health and safety of ARTs, including the long-term effects on both couples and the children conceived using the technology. Much of this research has centred on the safety of fertility drugs or the health impacts of multiple pregnancy. However, long-term psychological impacts have also been investigated, especially on the development of children. One of the most prolific researchers in this domain is Susan Golombok, who leads a team at the University of Cambridge. Research from the Golombok team was, and continues to be, important because of its controlled longitudinal designs, diverse assessment methods (including interviews and observations), and systematic investigation of different conception methods and family types (for example, with donated gametes, or solo and lesbian mothers). The publication of the Golombok team's European study, as well as much subsequent research, has laid to rest many of the misconceptions and assumptions made about the parenting skills of previously infertile parents.⁵⁹ For example, beliefs that parents would have unrealistic expectations for their children and/or that parents would be overly involved in parenting have now been disproved.⁶⁰ In addition, this and subsequent psychological follow-up studies have monitored a much wider range of developmental stages and outcomes,⁶¹ and focused on alternative family structures including lesbian and solo mothers.⁶² More

recently, in response to the demographic change in IVF users towards older age groups, follow-up studies have also directed their attention to the experience of older mothers and parents.⁶³

Another recent development in the long-term monitoring strand of psychological research is investigation of psychological outcomes in those who were not successful with treatment. It was clear that patients would go to great lengths to achieve biological parenthood, but there was not a clear understanding about whether patients would be able to adjust to the disappointment of treatment failure. Therefore, several follow-up studies were conducted that compared the wellbeing and mental health status of individuals who underwent unsuccessful versus successful fertility treatment. It was observed that childless individuals reported less favourable wellbeing than individuals who achieved parenthood. Despite this observed difference, overall the data suggested that most individuals were able to adjust to a childless lifestyle,⁶⁴ but that this adjustment period could take up to two years.⁶⁵ The most recent evidence has shown that what really determines adjustment is a person's ability to come to terms with their situation. Individuals who do not let go of their child-wish – who, for example, continue to actively pursue parenthood or maintain a strong, passive longing for children – are more likely to report worse long-term adjustment.⁶⁶ This is also the case for people who have experienced infertility after the birth of a first child. Recent studies have shown that 50% of patients whose treatment failed remained engaged with their parenthood project and therefore were unable to fully adjust, but after ten years this percentage seems to be only 6%, therefore supporting the idea that in the long term most individuals adjust to their unmet parenthood goals.⁶⁷

It is probably too early to fully evaluate the impact of EBM and the knowledge it has created on psychological practice. However, there is already at least one clear and significant indicator that it may decrease the divide between empirical evidence and clinical practice. The European Society for Human Reproduction and Embryology (ESHRE) has recently published the first evidence-based guidelines for psychology and counselling in infertility, which are being implemented across all European fertility clinics.⁶⁸ EBM has also been instrumental in setting the minimum standard that patients should expect from mental health professionals, namely that they should be familiar with existing research and able to critically appraise it in order to make the best clinical decisions, especially in the context of new and/or unfamiliar situations.⁶⁹

THE INTEGRATED APPROACH TO FERTILITY CARE

Very recently a new perspective on the delivery of psychological care in infertility has started to emerge – the Integrated Approach to Fertility Care.⁷⁰ In part, this framework is the consequence of the work described thus far that has highlighted the many challenges patients experience during the treatment

period, and the apparent limitations of existing psychological interventions in addressing these specific needs.

This new framework is also based on insights that research focusing on discontinuation from fertility treatment has brought into the field. It was observed that a significant percentage of patients discontinue treatment prematurely, so without achieving parenthood, and despite having a good medical prognosis and the necessary financial resources to continue with treatment.⁷¹ The proportion of patients that discontinue ART has been estimated to be 22%. Understanding why patients discontinue treatment has become an issue of paramount importance within the field because, if avoided, it is expected that success rates will rise by 15%.⁷² This estimated increase is much higher than any other increase observed with the introduction of technological advances since the introduction of intracytoplasmic sperm injection (the first successful birth by ICSI took place in 1992).⁷³

Research aimed at clarifying why patients discontinue treatment has revealed a multitude of different factors that could be traced to the patient, such as relational problems or rejection of treatment, but also to the medical treatment (for example, the psychological and physical burden of treatment) and the clinics (such as dissatisfaction with care or negative interactions with staff).⁷⁴ This data has once more confirmed the finding that at least some patients perceive treatment to be too demanding, but it has also offered new insights into how the treatment burden should be addressed. More specifically, it has led to the understanding that it is not enough to help patients adjust to treatment demands, and more effort needs to be put into adjusting medical procedures and the way care is organized at clinics to meet the patients' needs. This work has supported the Integrated Approach to Fertility Care, which proposes that these three sources of treatment burden (patient, medical treatment, and clinic) need to be targeted in an integrated way to influence treatment-related outcomes such as patient quality of life and compliance.⁷⁵

This paradigm shift has implications for the way psychological care is organized at clinics. First, it assumes that all clinic staff in direct contact with patients need to be aware of treatment-related psychological issues and involved in the provision of psychological care. As a result, a higher emphasis is being put on training programmes for staff that affect psychological care communication and emotional support.⁷⁶ Second, it places a higher emphasis on targeting clinic and organizational factors. This is in line with the importance that Patient-Centred Care (PCC) has acquired within medicine and consequently in fertility care. Advocates of PCC argue that high quality care cannot only focus on the treatment outcome (the rate of live births) but also on the process (the patients' experiences and quality of life during treatment).⁷⁷ It is therefore essential to ensure that patients' preferences, needs, and values are respected during the treatment period. During recent years, multiple studies have been conducted to increase knowledge about patients' care preferences and to measure the impact of PCC on important treatment outcomes such as discontinuation.⁷⁸ The delivery of PCC is expected to result in better patient

well being and quality of life during treatment and therefore can also be expected to decrease discontinuation.⁷⁹ Although data about the impact of PCC on discontinuation is inconsistent, patients do seem to value clinics that implement it.⁸⁰ In sum, infertility care can potentially be optimized by integrating psychological support in routine care (which should meet the needs of most patients) and targeting specific psychological interventions to the remaining 20% of patients who may actually need and will benefit from them. It is also argued that this approach will help to decrease staff burnout and increase their quality of life, because it should result in both lower workload and decreased stress from working with a less distressed patient population.⁸¹

The recent trend towards focusing on patients' experience of treatment has also influenced how the treatment period is conceptualized within the broader context of the patients' pursuit of parenthood.⁸² It is now acknowledged that many psychological factors operate in advance of the treatment period which influence treatment uptake and success rates. For instance, it is known that only around half of infertile couples currently seek fertility care and that of those who do, 20% wait for more than two years before seeking treatment.⁸³ In addition, negative lifestyle behaviours such as smoking and alcohol consumption that are known to affect infertility have increased significantly during the past decades.⁸⁴ Therefore, there is an increased awareness within the field that although infertility specialists do not have direct contact with patients during these earlier stages, they can undertake measures to promote an optimal experience of treatment, and to encourage a better prognosis. Importantly, this broader view of fertility has also encouraged a focus on prevention of fertility problems through increased fertility education at all ages.⁸⁵ This has stimulated research into such different topics as fertility knowledge and awareness,⁸⁶ fertility preservation,⁸⁷ and delayed help-seeking,⁸⁸ among others.

Finally, it is now also advocated that infertility specialists should not only focus on the treatment outcome per se, but also on supporting patients in coming to terms with unmet parenthood goals. Indeed, if ability to let go of unmet parenthood goals is what most influences adjustment, then more support needs to be offered to help patients in ending treatment and its aftermath.⁸⁹ One of the biggest challenges in achieving this goal is that such support needs to be provided while patients are still undergoing treatment or at the termination phase, because after ending treatment former patients are unlikely to have further contact with infertility specialists.

Whether the field will be able to successfully follow this paradigm shift is a question for the future. It is clear that the challenges are numerous, but publications are starting to appear which focus on the pre-treatment period or provide explicit recommendations about how fertility clinics can incorporate psychological support in routine care.⁹⁰ Similarly, the recently published Psychology and Counselling guidelines sponsored by ESHRE define the minimum quality standard for the delivery of psychological care within Europe by all clinic staff.⁹¹

CONCLUSION

The psychology of infertility has evolved alongside important developments in reproductive medicine during the past five decades. Comprehensive models of infertility have developed, from conceptualizing psychological issues as the cause of infertility to acknowledging that psychological factors are probably the outcomes of the experience of infertility and/or its treatment. Views of infertility have also changed, from the belief that it is a major life crisis that always negatively impacts all domains of an individual's life, to a practical conceptualization that highlights how to address the multiple challenges infertility and its treatment pose. The models underlying the delivery of psychological support at fertility clinics have evolved from a grief-focused model to educational and skills-training programmes. While in the past the delivery of psychological support aimed mostly at helping patients adjust to treatment, models of care today highlight that medical procedures and fertility clinics need to adjust to each patient and his or her specific needs. Accordingly, there has been a shift from general interventions directed at all patients to specific interventions tailored to individual patients' needs and/or treatment stages. Finally, the responsibility for the delivery of psychological care has shifted from being solely the domain of mental health professionals to that of all staff members with direct contact with patients. Simultaneously, the role of mental health professionals is also extending, from only addressing the issues of patients in the health care system, to cover those related to fertility decision-making and wellbeing at any point along the path to parenthood.

NOTES

1. Barbara J. Berg and John F. Wilson, 'Psychological Functioning Across Stages of Treatment for Infertility', *Journal of Behavioral Medicine*, 14 (1991).
2. Allan A. Templeton and Gillian Penney, 'The Incidence, Characteristics and Prognosis of Patients Whose Infertility is Unexplained', *Fertility and Sterility*, 37 (1982).
3. Franz Alexander, 'Fundamental Concepts of Psychosomatic Psychogenesis, Conversion, Specificity', *Psychosomatic Medicine*, 5 (1943).
4. Josef Breuer and Sigmund Freud, 'On the Physical Mechanisms of Hysterical Phenomena: Preliminary Communication', in James Strachey (ed. and trans.), *The Standard Edition of the Complete Psychological Works of Sigmund Freud. Volume 2: Studies on Hysteria* (London, 1955) [first published 1893].
5. Alexander, 'Fundamental Concepts of Psychosomatic Psychogenesis, Conversion, Specificity'.
6. William C. Menninger, 'The Emotional Factors in Pregnancy', *Bulletin of the Menninger Clinic*, 7 (1943).
7. Helene Deutsch, *The Psychology of Women* (New York, 1945); Boris B. Rubenstein, 'An Emotional Factor in Infertility: A Psychosomatic Approach', *Fertility and Sterility*, 2 (1951).
8. I.C. Fischer, 'Psychogenic Aspects of Infertility', *Fertility and Sterility*, 4 (1952).
9. Boris Belonoschkin, 'Psychosomatic Factors and Matrimonial Infertility', *International Journal of Fertility*, 7 (1962).

10. Hubert de Watteville, 'Psychological Factors in the Treatment of Sterility', *Fertility and Sterility*, 8 (1957).
11. Rubenstein, 'An Emotional Factor in Infertility'.
12. M.F. El-Minawi, M. Abdel-Hadi, A.A. Ibrahim, and O. Wahby, 'Comparative Evaluation of Laparoscopy and Hysterosalpingography in Infertile Patients', *Obstetrics & Gynecology*, 51:1 (1978).
13. Robert J. Edelmann and Kevin J. Connolly, 'Psychological Aspects of Infertility', *British Journal of Medical Psychology*, 59 (1986).
14. For example, George L. Christie, 'Some Socio-Cultural and Psychological Aspects of Infertility', *Human Reproduction*, 13:1 (1998).
15. Tewes H. Wischmann, 'Psychogenic Infertility – Myths and Facts', *Journal of Assisted Reproduction and Genetics*, 20 (2003).
16. On the biopsychosocial model, see George L. Engel, 'The Need for a New Medical Model: A Challenge for Biomedicine', *Science*, 196 (1977); Z.J. Lipowski, 'What Does the Word "Psychosomatic" Really Mean? A Historical and Semantic Inquiry', *Psychosomatic Medicine*, 46 (1984).
17. Koen Demyttenaere, P. Nijs, Gerry Evers-Kiebooms, Philippe R. Koninckx, 'Coping and the Ineffectiveness of Coping Influence the Outcome of In Vitro Fertilization Through Stress Responses', *Psychoneuroendocrinology*, 17 (1992).
18. Jacky Boivin, E. Griffiths, and Christos A. Venetis, 'Emotional Distress in Infertile Women and Failure of Assisted Reproductive Technologies: Meta-Analysis of Prospective Psychosocial Studies', *British Medical Journal*, 26 February 2011.
19. Engel, 'The Need for a New Medical Model'.
20. Boivin, Griffiths, and Venetis, 'Emotional Distress in Infertile Women'.
21. Therese Benedek, 'Infertility as a Psychosomatic Defense', *Fertility and Sterility*, 3 (1952).
22. F.M.M. Mai, R.N. Munday, and E.E. Rump, 'Psychosomatic and Behavioural Mechanisms in Psychogenic Infertility', *British Journal of Psychiatry*, 120 (1972).
23. Elizabeth Kübler-Ross, *On Death and Dying* (New York, 1969); Barbara Eck Menning, 'Counseling Infertile Couples', *Contemporary Obstetrics and Gynecology*, 13 (1979).
24. Arthur L. Greil, 'Infertility and Psychological Distress: A Critical Review of the Literature', *Social Science & Medicine*, 45 (1997); Arthur L. Greil, Kathleen Slauson-Blevins, and Julia McQuillan, 'The Experience of Infertility: A Review of Recent Literature', *Sociology of Health and Illness*, 32:1 (2010); Christianne M. Verhaak, J.M. Smeenk, A.W.M. Evers, Jan A.M. Kremer, F.W. Kraaijmaat, and Didi M. Braat, 'Women's Emotional Adjustment to IVF: A Systematic Review of 25 Years of Research', *Human Reproduction Update*, 13:1 (2007); Katherine E. Williams, Wendy K. Marsh, and Natalie L. Rasgon, 'Mood Disorders and Fertility in Women: A Critical Review of the Literature and Implications for Future Research', *Human Reproduction Update*, 13:6 (2007).
25. Frank van Balen and Henny M.W. Bos, 'The Social and Cultural Consequences of Being Childless in Poor-Resource Areas', *Facts, Views and Vision in Obstetrics and Gynaecology*, 1:2 (2010).
26. Fertility Quality of Life Tool: www.fertiqol.com. Accessed 6 December 2016. See also Jacky Boivin, Janet Takefman, and Andrea Braverman, 'The Fertility Quality of Life (FertiQoL) Tool: Development and General Psychometric Properties', *Human Reproduction*, 26:8 (2011).

27. Barbara Eck Menning, 'The Emotional Needs of Infertile Couples', *Fertility and Sterility*, 34 (1980).
28. Patricia P. Mahlstedt, 'The Psychological Component of Infertility', *Fertility and Sterility*, 43 (1985).
29. Jean Cohen, Alan Trounson, Karen Dawson, Howard W. Jones, Johan Hazekamp, Karl-Gosta Nygren, and Lars Hamberger, 'The Early Days of IVF Outside the UK', *Human Reproduction Update*, 11:5 (2005).
30. Linda Hammer Burns and Sharon N. Covington, 'Psychology of Infertility', in Sharon N. Covington and Linda Hammer Burns (eds), *Infertility Counseling: A Comprehensive Handbook for Clinicians*, 2nd edn (New York, 2006).
31. Judy E. Stern, Morton B. Brown, Barbara Luke, Ethan Wantman, Avi Lederman, Stacey A. Missmer, and Mark D. Hornstein, 'Calculating Cumulative Live-Birth Rates from Linked Cycles of Assisted Reproductive Technology (ART): Data from the Massachusetts SART CORS', *Fertility and Sterility*, 94 (2010); Tamara E.M. Verhagen, John C.M. Dumoulin, Johannes L.H. Evers, and Jolande A. Land, 'What Is the Most Accurate Estimate of Pregnancy Rates in IVF Dropouts?', *Human Reproduction*, 28:3 (2008).
32. Ana Galhardo, Marina Cunha, and José Pinto-Gouveia, 'Mindfulness-Based Program for Infertility: Efficacy Study', *Fertility and Sterility*, 100:4 (2013).
33. Christine C. Skiadas, Kathryn Terry, Mary De Pari, Anne Geoghegan, Laura Lubetsky, Sherilyn Levy, Florina Haimovici, and Rachel Ashby, 'Does Emotional Support During the Luteal Phase Decrease the Stress of In Vitro Fertilization?', *Fertility and Sterility*, 96 (2011).
34. Lisa J. Moran, Samantha K. Hutchison, Robert J. Norman, and Helena J. Teede, 'Lifestyle Changes in Women with Polycystic Ovary Syndrome', *Cochrane Database of Systematic Reviews*, 7 (2011).
35. Henrietta D.L. Ockhuijsen, Agnes van den Hoogen, Nickolas S. Macklon, and Jacky Boivin, 'Study Protocol for the PRCI Study: Design of a Randomized Clinical Trial to Evaluate a Coping Intervention for Medical Waiting Periods in Women Undergoing a Fertility Treatment', *BMC Women's Health*, 13:35 (2013).
36. Eric Blyth and Chris Cameron, 'The Welfare of the Child: An Emerging Issue in the Regulation of Assisted Conception', *Human Reproduction*, 13:9 (1998).
37. Mabelle M. Seibel and Susan Levin, 'A New Era in Reproductive Technologies: The Emotional Stages of In Vitro Fertilization', *Journal of in Vitro Fertilization and Embryo Transfer*, 4 (1987).
38. Sandra R. Leiblum and Emma Williams, 'Screening In and Out of the New Reproductive Options: Who Decides and Why', *Journal of Psychosomatic Obstetrics & Gynecology*, 14 (1993); Jacky Boivin and Guido Pennings, 'Parenthood Should be Regarded as a Right', *Archives of Disease in Childhood*, 90:8 (2005).
39. Patricia P. Mahlstedt and Dorothy A. Greenfeld, 'Assisted Reproductive Technology with Donor Gametes: The Need for Patient Preparation', *Fertility and Sterility*, 52 (1989).
40. Jacky Boivin and Heribert Kentenich (eds), *Guidelines for Counselling in Infertility* (Oxford, 2002).
41. Michelle Peate, Bettina Meiser, Benjamin C. Cheah, Christobel Saunders, Phyllis Butow, Belinda Thewes et al, 'Making Hard Choices Easier: A Prospective, Multicentre Study to Assess the Efficacy of a Fertility-Related Decision Aid in

- Young Women with Early-Stage Breast Cancer', *British Journal of Cancer*, 106 (2012).
42. Jacky Boivin, 'A Review of Psychosocial Interventions in Infertility', *Social Science & Medicine*, 57 (2003); Jacky Boivin, 'Evidence-Based Approaches to Infertility Counseling', in Covington and Burns (eds), *Infertility Counseling*.
 43. R. Brian Haynes, P.J. Devereaux, and Gordon H. Guyatt, 'Clinical Expertise in the Era of Evidence-Based Medicine and Patient Choice', *Evidence-Based Medicine*, 7:2 (2002).
 44. Sarah Corrie and Margie M. Callahan, 'A Review of the Scientist-Practitioner Model: Reflections on its Potential Contribution to Counselling Psychology within the Context of Current Health Care Trends', *British Journal of Medical Psychology*, 73 (2000).
 45. Menning, 'Counseling Infertile Couples', p. 101.
 46. Jacky Boivin, L.C. Scanlan, and S.M. Walker, 'Why are Infertile Patients Not Using Psychosocial Counselling?', *Human Reproduction*, 14 (1999).
 47. M. Emery, M-D. Béran, J. Darwish, L. Oppizzi, V. Joris, R. Capel et al, 'Does Counselling Prior to IVF Affect Anxiety and Depression Scores? Preliminary Results of a Randomised Control Trial. Paper Presented at the 17th Annual Meeting of the European Society for Human Reproduction and Embryology', *Human Reproduction*, 16 (2001).
 48. Alice D. Domar, Diane Clapp, Ellen Slawsby, Bruce Kessel, John Orav, and Melissa Freizinger, 'The Impact of Group Psychological Interventions on Distress in Infertile Women', *Health Psychology*, 19 (2000).
 49. Bernadette Bartlam and John McLeod, 'Infertility Counselling: The ISSUE Experience of Setting Up a Telephone Counselling Service', *Patient Education and Counseling*, 41 (2000).
 50. Katja Hämmerli, Hansjörg Znoj, and Thomas Berger, 'Internet-Based Support for Infertile Patients: A Randomized Controlled Study', *Journal of Behavioral Medicine*, 33 (2010); Wouter S. Tuil, A.J. ten Hoopen, Didi D.M. Braat, Pieter F. de Vries Robbé, and Jan A.M. Kremer, 'Patient-Centred Care: Using Online Personal Medical Records in IVF Practice', *Human Reproduction*, 21:11 (2006); Tara M. Cousineau, Traci C. Green, Evelyn A. Corsini, Thea Barnard, Angel R. Seibring, and Alice D. Domar, 'Development and Validation of the Infertility Self-Efficacy Scale', *Fertility and Sterility*, 85 (2006).
 51. Martin Pook and Walter Krause, 'Stress Reduction in Male Infertility Patients: A Randomized, Controlled Trial', *Fertility and Sterility*, 83 (2005).
 52. Boivin, 'A Review of Psychosocial Interventions in Infertility'; Therese M. de Liz and Bernhard M. Strauss, 'Differential Efficacy of Group and Individual/Couple Psychotherapy with Infertile Patients', *Human Reproduction*, 20:5 (2005); Katja Hämmerli, Hansjörg Znoj, and Jürgen Barth, 'The Efficacy of Psychological Interventions for Infertile Patients: A Meta-Analysis Examining Mental Health and Pregnancy Rate', *Human Reproduction Update*, 15:3 (2009).
 53. Boivin, 'A Review of Psychosocial Interventions in Infertility'.
 54. Christianne M. Verhaak, A.M.E. Lintsen, A.W.M. Evers, and Didi M. Braat, 'Who Is at Risk of Emotional Problems and How to Know? Screening of Women Going for IVF Treatment', *Human Reproduction*, 25 (2010).
 55. Harrison G. Gough, 'Diagnostic Patterns on the Minnesota Multiphasic Personality Inventory', *Journal of Clinical Psychology*, 2 (1946).

56. Aaron T. Beck and A. Beamesderfer, 'Assessment of Depression: The Depression Inventory', *Pharmacopsychiatry*, 7 (1976); A.S. Zigmond and R. Philip Snaith, 'The Hospital Anxiety and Depression Scale', *Acta Psychiatrica Scandinavica*, 67 (1983).
57. Deborah Lancaster and Jacky Boivin, 'A Feasibility Study of a Brief Coping Intervention (PRCI) For the Waiting Period Before a Pregnancy Test During Fertility Treatment', *Human Reproduction*, 23 (2008).
58. Pook and Krause, 'Stress Reduction in Male Infertility Patients'.
59. Susan Golombok, Anne Brewaeys, Rachel Cook, M.T. Giavazzi, Diana Guerra, Alberto Mantovani, et al, 'The European Study of Assisted Reproduction Families: Family Functioning and Child Development', *Human Reproduction*, 11 (1996).
60. Catherine A. McMahon, Judy A. Ungerer, Janet Beaurepaire, Christopher Tennant, and Douglas Saunders, 'Psychosocial Outcomes for Parents and Children After In Vitro Fertilization: A Review', *Journal of Reproductive and Infant Psychology*, 13 (1995); Sofia Gameiro, Maria Cristina Canavarró, Jacky Boivin, Mariana Moura-Ramos, Isabel Soares, and Teresa Almeida Santos, 'Parental Investment in Couples Who Conceived Spontaneously or With Assisted Reproductive Techniques', *Human Reproduction*, 26:5 (2011).
61. Lucy Owen and Susan Golombok, 'Families Created by Assisted Reproduction: Parent-Child Relationships in Late Adolescence', *Journal of Adolescence*, 32 (2008).
62. Henny M.W. Bos, Frank van Balen, and Dymphna C. van den Boom, 'Lesbian Families and Family Functioning: An Overview', *Patient Education and Counseling*, 59 (2005).
63. Jacky Boivin, Frances Rice, Dale Hay, Gordon Harold, Allyson Lewis, Marianne M. van den Bree, and Anita Thapar, 'Associations Between Maternal Older Age, Family Environment and Parent and Child Wellbeing in Families Using Assisted Reproductive Techniques to Conceive', *Social Science & Medicine*, 68:11 (2009).
64. Sandra R. Leiblum, A. Aviv, and R. Hamer, 'Life After Infertility Treatment: A Long-Term Investigation of Marital and Sexual Function', *Human Reproduction*, 13:12 (1998); Marianne Johansson, Annsofie Adolffson, Marie Berg, Jynfiac Francis, Lars Hogström, Per Olaf Janson, Jan Sogn, and Anna-Lena Hellström, 'Quality of Life for Couples 4–5.5 Years After Unsuccessful IVF Treatment', *Acta Obstetrica et Gynecologica Scandinavica*, 88 (2009); Tewes H. Wischmann, K. Korge, Horst Scherg, Thomas Strowitzki, and Rolf Verres, 'A 10-Year Follow-Up Study of Psychosocial Factors Affecting Couples After Infertility Treatment', *Human Reproduction*, 27:11 (2012).
65. Judith C. Daniluk, 'Reconstructing Their Lives: A Longitudinal, Qualitative Analysis of the Transition to Biological Childlessness for Infertile Couples', *Journal of Counselling and Development*, 79 (2001); Christianne M. Verhaak, J. M. Smeenk, Marleen J. Nahuis, Jan A.M. Kremer, and Didi M. Braat, 'Long-Term Psychological Adjustment to IVF/ICSI Treatment in Women', *Human Reproduction*, 22:1 (2007).
66. Sofia Gameiro, Alexandra W. van den Belt-Dusebout, Eveline Bleiker, Didi M. Braat, Flora E. van Leeuwen, and Christianne M. Verhaak, 'Do Children Make You Happier? Sustained Child-Wish and Mental Health in Women 11–17 Years After Fertility Treatment', *Human Reproduction*, 29:10 (2014).

67. Verhaak et al, 'Long-Term Psychological Adjustment to IVF/ICSI Treatment in Women'; Gameiro et al, 'Do Children Make You Happier?'
68. Sofia Gameiro, Jacky Boivin, Eline Dancet, Cora de Klerk, Marysa Emery, Claire M. Lewis-Jones, Petra Thorn, Uschi Van den Broeck, Christos Venetis, Christianne Verhaak, Tewes Wischmann, Nathalie Vermuelen, 'ESHRE Guideline: Routine Psychosocial Care in Infertility and Medically Assisted Reproduction – A Guide for Fertility Staff', *Human Reproduction*, 30:11 (2015).
69. Boivin, 'Evidence-Based Approaches to Infertility Counseling'.
70. Jacky Boivin et al, 'Tackling Burden in ART: An Integrated Approach for Medical Staff', *Human Reproduction*, 27:4 (2012).
71. Jacky Boivin, Alice D. Domar, Daniel B. Shapiro, Tewes H. Wischmann, Bart C. J.M. Fauser, and Christianne M. Verhaak, 'Tackling Burden in ART: An Integrated Approach for Medical Staff', *Human Reproduction*, 27:4 (2012).
72. Sofia Gameiro, Christianne M. Verhaak, Jan A.M. Kremer, and Jacky Boivin, 'Why We Should Talk About Compliance with Assisted Reproductive Technologies (ART): A Systematic Review and Meta-Analysis of ART Compliance Rates', *Human Reproduction Update*, 19:2 (2013).
73. David J. McLernon, Abha Maheshwari, Amanda J. Lee, and Siladitya Bhattacharya, 'Cumulative Live Birth Rates after One or More Complete Cycles of IVF: A Population-Based Study of Linked Cycle Data from 178 898 Women', *Human Reproduction*, 31:3 (2016).
74. Sofia Gameiro, Jacky Boivin, Laura A. Peronace, and Christianne M. Verhaak, 'Why Do Patients Discontinue Fertility Treatment? A Systematic Review of Reasons and Predictors of Discontinuation in Fertility Treatment', *Human Reproduction Update*, 18:6 (2012).
75. Boivin et al, 'Tackling the Burden in ART'.
76. Désirée García, Olga Bautista, Laura Venereo, Oriol Coll, Rita Vassena, and Valérie Vernaev, 'Training in Empathic Skills Improves the Patient Physician Relationship During the First Consultation in a Fertility Clinic', *Fertility and Sterility*, 99 (2013).
77. Inge W.H. van Empel, Williane L.D.M. Nelen, Rosella P.M.G. Hermens, and Jan A.M. Kremer, 'Coming Soon to Your Clinic: High-Quality ART', *Human Reproduction*, 23 (2008).
78. Inge W.H. van Empel, Johanna W.M. Aarts, Ben J. Cohlen, Dana A. Huppelschoten, Joop S.E. Laven, Williane L.D.M. Nelen, and Jan A.M. Kremer, 'Measuring Patient-Centredness, the Neglected Outcome in Fertility Care: A Random Multicentre Validation Study', *Human Reproduction*, 25:10 (2010); Eline A.F. Dancet, Williane L.D.M. Nelen, Walter Sermeus, L. De Leeuw, Jan A.M. Kremer, and Thomas M. D'Hooghe, 'The Patients' Perspective on Fertility Care: A Systematic Review', *Human Reproduction Update*, 16 (2010); Eline A.F. Dancet, Thomas M. D'Hooghe, Williane L.D.M. Nelen, Walter Sermeus, Juan A. Garcia-Velasco, Luciano G. Nardo, et al, 'Patient-Centered Infertility Care is a European Concept: Results from an International Multilingual Qualitative Study', *Human Reproduction*, 26:S1 (2011); Aleida G. Huppelschoten, Angelique J.C.M. van Dongen, I.C.P. Philipse, Carl J.C.M. Hamilton, Christianne M. Verhaak, Williane L.D.M. Nelen, and Jan A.M. Kremer, 'Predicting Dropout in Fertility Care: A Longitudinal Study on Patient-Centredness', *Human Reproduction*, 28:8 (2013).

79. Johanna W.M. Aarts, Aleida G. Huppelschoten, Inge W.H. van Empel, Jacky Boivin, Christianne M. Verhaak, Jan A.M. Kremer, and Williane L.D.M. Nelen, 'How Patient-Centred Care Relates to Patients' Quality of Life and Distress: A Study in 427 Women Experiencing Infertility', *Human Reproduction*, 27 (2012); Juliana Pedro, Maria Cristina Canavarró, Jacky Boivin, and Sofia Gameiro, 'Positive Experiences of Patient-Centred Care are Associated with Intentions to Comply with Fertility Treatment: Findings from the Validation of the Portuguese Version of the PCQ-Infertility', *Human Reproduction*, 28:9 (2013).
80. Inge W.H. van Empel, Eline A.F. Dancet, Xander H.E. Koolman, Williane L.D. M. Nelen, Elly A. Stolk, Walter Sermeus, Thomas M. D'Hoooge, and Jan A.M. Kremer, 'Physicians Underestimate the Importance of Patient-Centredness to Patients: A Discrete Choice Experiment in Fertility Care', *Human Reproduction*, 26:3 (2011).
81. Sofia Gameiro, Jacky Boivin, and Alice D. Domar, 'Optimal IVF for 2020 Should Reduce Treatment Burden and Enhance Care Delivery for Patients and Staff', *Fertility and Sterility*, 100 (2013).
82. Gameiro et al, 'Optimal IVF for 2020'.
83. Jacky Boivin, Laura Bunting, John A. Collins, and Karl G. Nygren, 'International Estimates of Infertility Prevalence and Treatment-Seeking: Potential Need and Demand for Infertility Medical Care', *Human Reproduction*, 22 (2007).
84. Health Protection Agency, Table of All New Episodes Seen at GUM Clinics, 1997–2006 (2007). Reproduced in Nicolette Heaton-Harris, *Sexually Transmitted Infections: The Essential Guide* (Peterborough, 2008): <http://www.healthpromotionresources.derby.nhs.uk/HPAC/ClickCounter?action=d&resourceId=13508&url=%27uploads/hpderby/pdf/B096121.pdf%27>. Accessed 6 December 2016.
85. Jacky Boivin, Laura Bunting, and Sofia Gameiro, 'Cassandra's Prophecy: A Psychological Perspective. Why We Need to Do More than Just Tell Women', *Reproductive Biomedicine Online*, 27.1 (2013).
86. Laura Bunting and Jacky Boivin, 'Development and Preliminary Validation of the Fertility Status Awareness Tool: FertiSTAT', *Human Reproduction*, 25 (2010).
87. Dominic Stoop, Julie Nekkebroeck, and Paul Devroey, 'A Survey of the Intentions and Attitudes Towards Oocyte Cryopreservation for Non-Medical Reasons Among Women of Reproductive Age', *Human Reproduction*, 26:3 (2011).
88. Arthur L. Greil and Julia McQuillan, 'Help-Seeking Patterns Among Subfecund Women', *Journal of Reproductive and Infant Psychology*, 22:4 (2004).
89. Wischmann et al, 'A 10-Year Follow-Up Study of Psychosocial Factors'; Gameiro et al, 'Do Children Make You Happier?'; Jacky Boivin, Janet Takefman, and Andrea Braverman, 'Giving Bad News: "It's Time to Stop"', in Nick S. Macklon (ed.), *IVF in the Medically Complicated Patient: A Guide to Management* (London and New York, 2005).
90. Boivin et al, 'Tackling Burden in ART'; Gameiro et al, 'Optimal IVF for 2020'; Jacky Boivin, Laura Bunting, and Sofia Gameiro, 'Cassandra's Prophecy: A Psychological Perspective. Why We Need to Do More than Just Tell Women about Age-Related Fertility Decline and "Delayed" Childbearing', *Reproductive BioMedicine Online*, 27:1 (2013).
91. Gameiro et al, 'ESHRE Guideline'.

RESEARCH RESOURCES

- Jacky Boivin, Janet Takefman, and Andrea Braverman, 'The Fertility Quality of Life (FertiQoL) Tool: Development and General Psychometric Properties', *Human Reproduction*, 26:8 (2011), 2084–91.
- Jacky Boivin, Alice D. Domar, Daniel B. Shapiro, Tewes H. Wischmann, Bart C.J.M. Fauser, and Christianne M. Verhaak, 'Tackling Burden in ART: An Integrated Approach for Medical Staff', *Human Reproduction*, 27:4 (2012), 941–50.
- Linda Hammer Burns and Sharon N. Covington, 'Psychology of Infertility', in Sharon N. Covington and Linda Hammer Burns (eds), *Infertility Counseling: A Comprehensive Handbook for Clinicians*, 2nd edn (New York: Cambridge University Press, 2006), 1–19.
- Helene Deutsch, *The Psychology of Women* (New York: Grune & Stratton, 1945).
- Sofia Gameiro, Jacky Boivin, Eline Dancet, Cora de Klerk, Marysa Emery, Claire M. Lewis-Jones, Petra Thorn, Usti Van den Broeck, Christos Venetis, Christianne M. Verhaak, Tewes H. Wischmann, and Natalie Vermuelen, 'EHSRE Guideline: Routine Psychosocial Care in Infertility and Medically Assisted Reproduction – A Guide for Fertility Staff', *Human Reproduction*, 30:11 (2015), 2476–85.
- Arthur L. Greil, 'Infertility and Psychological Distress: A Critical Review of the Literature', *Social Science & Medicine*, 45 (1997), 1679–1704.
- Z.J. Lipowski, 'What Does the Word "Psychosomatic" Really Mean? A Historical and Semantic Inquiry', *Psychosomatic Medicine*, 46 (1984), 153–71.
- Frank van Balen and Henny M.W. Bos, 'The Social and Cultural Consequences of Being Childless in Poor-Resource Areas', *Facts, Views and Vision in Obstetrics and Gynaecology*, 1:2 (2010), 1–16.
- Christianne M. Verhaak, J.M. Smeenk, A.W.M. Evers, Jan A.M. Kremer, F.W. Kraaimaat, and Didi M. Braat, 'Women's Emotional Adjustment to IVF: A Systematic Review of 25 Years of Research', *Human Reproduction Update*, 13:1 (2007), 27–36.
- Christianne M. Verhaak, A.M.E. Lintsen, A.W.M. Evers, and Didi M. Braat, 'Who Is at Risk of Emotional Problems and How to Know? Screening of Women Going for IVF Treatment', *Human Reproduction*, 25 (2010), 1234–40.
- Tewes H. Wischmann, 'Psychogenic Infertility - Myths and Facts', *Journal of Assisted Reproduction and Genetics*, 20 (2003), 485–94.

The Interplay Between Infertility and Adoption in Policy and Practice in Twentieth-Century Australia

Shurlee Swain

INTRODUCTION

Single girls were just considered wombs for childless, married women. We just happened to be the by-product on the factory floor and were tossed away when empty.¹

This angry accusation was but one of many contained in evidence presented to Australia's national Inquiry into the Commonwealth Contribution to Former Forced Adoption Policies and Practices, accusations which were largely validated in the subsequent report.² Between the 1950s and the 1970s, thousands of babies were taken from single mothers against their will and presented to childless married couples for adoption. As the Inquiry revealed, medical personnel and social workers were complicit in the violation of these mothers' rights. These authority figures coerced single women into giving up their children, or forcibly removed them, partly because they believed the children would be better off with more 'suitable' parents. Many of the accusations levelled at the state, medical institutions, and individuals in the course of the Inquiry drew attention to the link that was drawn between infertility and adoption in the mid-decades of the twentieth century. The link between adoption and infertility became the means by which people with economic, social, and political capital were able to resolve their desire for a child by depriving a less powerful woman of hers.

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The Inquiry was the fourth in a series of national investigations of past welfare practices held since the mid-1990s. All of these inquiries have drawn primarily on survivor testimony as their chief source of evidence, taking written submissions and conducting public hearings across Australia, creating a highly charged atmosphere in which accusations of bad practice, and even corruption, could be put forward.³ It was the culmination of many years of campaigning by groups representing women separated from their children by adoption and adult adoptees. These groups had their origins in the campaign to remove the secrecy provisions encoded in adoption legislation from the 1950s. Beginning in the 1980s, state governments legislated to allow the release of contact information, but it was from the stories shared in the campaign that a new understanding of adoption emerged, questioning the necessity for, and eventually the legality of, relinquishment and calling for action to redress the wrong. Reports of state-specific inquiries were released in Tasmania in 1999 and New South Wales in 2000, but the 2008 national apology to Indigenous people, acknowledging the impact of widespread child removal across the twentieth century, spurred adoption campaigners to seek and eventually achieve a similar national inquiry.⁴

This chapter seeks to relate the rising demand for adoption in Australia to changing understandings of the causes and treatment of infertility, in an attempt to explain why a practice ostensibly designed to serve the best interests of the child was distorted in order to satisfy the demands of the childless. It forms part of a larger study of the history of adoption in Australia which positions the practice as one phase of a continuing market in children which governments have struggled to contain.⁵ Here, I first outline the motivation for early legislation on adoption, the construction of an oppositional relationship between birth mothers and infertile adoptive parents, and the role of social workers in removing children from apparently ‘unfit’ mothers. I then consider how wider attitudes to population decline influenced the medicalization of infertility, and the perception that it was a treatable condition. I argue that in the postwar period prominent psychological theories encouraged the perception of adoption as a ‘cure’ for infertility. Finally, I reflect on the legacy of the ‘adoption as cure’ narrative in contemporary Australia, and suggest that reproductive justice has not yet been achieved.

‘UNFIT’ MOTHERS AND INFERTILE WOMEN: ADOPTION POLICY AND PRACTICE, c. 1920s–1950s

When legislation regulating adoption was introduced across Australia in the 1920s, the need to provide security for infertile parents constructing a family through such means was an important motivating factor. It had been hoped, too, that the legislation would increase the numbers of people applying to adopt, but these expectations remained largely unfulfilled in the early years. The accusations presented to the national Inquiry relate to the post-1945 era, when, despite a rapid increase in the ex-nuptial birth rate, the number of

applicants for adoption started to outstrip the available supply. This section considers shifting attitudes towards adoption in the mid-twentieth century. It outlines how social workers came to see infertile women as more ‘deserving’ of motherhood than other women, and explains how they attained the power to decide whether women should keep their children or not.

In the early years of adoption, the idea of taking a strange child into the family had to be actively sold, with the motivation depicted primarily as benevolent. Eligibility was not dependent on infertility, nor indeed marital status, as agencies struggled to find homes for children who, it was argued, would otherwise end up in institutional care. This justification survived in the adoption boom after the Second World War, but the fact that ever increasing numbers of babies were being removed within hours of their birth suggests that the assumption that adoption was in their best interests was not being adequately tested. Not all mothers fitted the stereotype of the teenager with limited earning potential. Many were educated and financially stable, but their capacity to parent was disregarded in the rush to transfer the infant to its new married parents, who were assumed to be more stable. While potential adoptive parents were meant to undergo financial and psychological assessment, it was primarily their infertility which rendered them deserving of an adopted child in this new market-driven world.⁶

This shift was dramatically illustrated in the testimony given to the Inquiry. Christine Cole, an adoption researcher who describes herself as the mother of a stolen child, argued that the heavy promotion of adoption in the interwar period ‘led to infertile couples believing they had an inherent right to be provided with infants’.⁷ This belief, an anonymous contributor suggested, fitted well with a government policy in the affluent postwar years ‘to remove children from so called “lower classes” and “unfit mothers” to provide children for childless or otherwise infertile married people’,⁸ simultaneously satisfying the electorate and reducing the welfare bill.⁹ These policies, other mothers asserted, created a demand or a market for their children which placed pressure on hospitals and other adoption agencies.¹⁰ Unsupported mothers, Cole argues, were ‘easy prey’.¹¹ The very agencies to which they were encouraged to turn for help were simultaneously under pressure to find more babies to meet the growing demand.¹² Confined in Sydney’s Crown Street Women’s Hospital, one mother felt that ‘the social workers [...] were like vultures hovering over single girls to get their babies’.¹³

Social workers’ training might have suggested that they should have been working with the mothers to ensure the best outcome for their children. However, an ingrained belief that single mothers had less right to parent and limited abilities to provide for their children, and the social workers’ close identification with the generally more affluent prospective adoptive parents, meant that counselling tended to focus on ‘helping the unmarried mother accept the surrender of her child’.¹⁴ Mothers separated from their children by adoption, interviewed in 2011–12 for a survey on past adoption practices, talked of the ‘constant reinforcement [...] that it would be wrong [...] to

keep my baby, that it was best for her – she needed two parents’. The lack of financial support was a constant theme. Without financial aid, mothers were told, they ‘could not raise a baby’ and their child ‘would be better off with someone who could take care of it better than I could’.¹⁵ In retrospect, one mother came to understand social work intervention as being designed to convince her ‘that the baby she was carrying was not hers. She had no right to it, she was not fit to be a mother’.¹⁶ Barbara Maison, who also lost a child to adoption, went further and alleged a conspiracy in which ‘children’s identities were obliterated, and false birth certificates issued to cover up a very lucrative market during the 1950s to the 1980s for white healthy babies for infertile couples, and to hide the shame and scandal for “respectable” families’.¹⁷ It is not only the mothers who feel cheated, but also the children who were traded. As adult adoptee John Lewis told the History of Adoption project: ‘adoption’s main function is to provide children for the infertile, and all the blah blah about the child’s best interests is just that, blah blah’.¹⁸

It is not only in Australia that adoption has been depicted in such oppositional terms. Feminist scholar Margarete Sandelowski observed a similar tendency in international debates on infertility and adoption 20 years earlier. Such an approach, depicting infertile women ‘as benefiting from other women’s tragedies’, is, she suggests, unproductive.¹⁹ What we need to examine is the process by which this rift between women came to be established. This chapter is an attempt to explore the development of that rift in the context of Australia, by analysing the role of the problematization of infertility in constructing the desire for a child and examining the reasons why adoption came to be positioned as *the* solution, thus creating the circumstances from which the market in infants derived its power.

INFERTILITY, TREATMENT, AND FEARS OF POPULATION DECLINE, C. 1900–50s

Sandelowski provides a chronology of the rise in concern about infertility in the USA which is largely paralleled in Australia, as are the theories as to causation. In both countries, interest was aroused by the dramatic, and in some circles alarming, drop in the birth rate in the last quarter of the nineteenth century, a drop which was most striking amongst educated women in urban areas. Hence, the focus was not on medical reasons why women were failing to reproduce, but rather was framed as an accusation that they were choosing not to reproduce, often for reasons described as selfish.²⁰ The New South Wales Royal Commission on the Decline of the Birth Rate, which reported in 1904, focused its attention not on infertility but on family limitation as the central cause of fertility decline, placing the blame firmly on women’s unwillingness to undergo the sacrifices which pregnancy and child-rearing inevitably involved.²¹ While the medical witnesses who came before the Commission addressed the issue of infertility more directly, they too tended to place the blame for the assumed but

untested rise in infertility on changes in women's lives and aspirations, rather than identifiable and treatable medical pathology.²²

In Australia the first public discussions of infertility as a medical problem took place during and after the First World War. While these discussions evolved out of a similar anxiety about 'race suicide', the focus this time was more on possible causes and treatment. The discussion arose as a side-product of public concern about rising rates of venereal disease amongst serving soldiers and the threat this posed to population recovery once the war came to an end. A 1916 call for the introduction of compulsory notification of venereal diseases began by citing a British Royal Commission which had attributed 50% of female infertility to gonorrhoea.²³ By 1918, with the end of the war in sight, the tone was more urgent, with venereal disease being described as 'the most dread scourge of modern civilisation'.²⁴ Although in these campaigns the role of venereal disease in causing infertility was mentioned in passing, by the 1930s it had become more central, and was described as a 'potent cause of sterility' and hence 'deadly [...] from a racial point of view'.²⁵ The focus in such discussions was firmly on the threat that infertility posed to the nation, rather than its impact on individuals. There was no systematic investigation of infertility as a personal, or indeed a treatable, problem. Rather it was understood as a status to be borne, not a condition to be treated or cured.

The Second World War brought yet another bout of population anxiety, but this time the suggested solution was firmly positioned within the medical sphere. A 1944 campaign for action to boost the birth rate urged the government to recognize 'the necessity for providing the facilities for the skilled diagnosis and treatment of all grades of infecundity'.²⁶ One counsellor advised: 'The fertility of every married couple is today so vitally important to the nation that birth clinics with specialists in charge, set up for free investigation and the treatment of all wives and husbands desirous but unable to increase the birth-rate, would amply repay the expense involved'.²⁷ While, by this time, there were private practitioners offering diagnosis and treatment for infertility, the campaign succeeded in having similar facilities established for the general population with federally funded clinics opening in public hospitals across the country by the end of the war.²⁸ The publicity surrounding these clinics was relentlessly optimistic, claiming a success rate of up to 30%.²⁹ At first, infertility continued to be seen as a 'female problem'. The Brisbane clinic reported 'that the majority of patients were servicemen's wives, and very few were leading, or had been leading, a normal married life'.³⁰ However, the focus of publicity surrounding infertility clinics in the postwar years increasingly moved away from the potential mother. Couples were now depicted as 'longing for a child' and emphasis was placed on the need for men as well as women to be tested, as they were almost as likely to be the cause of the problem.³¹ 'A generation ago', a medical advice column assured its readers, 'a woman used to be subjected to all kinds of surgical operations for the cure of sterility. Now we would never dream of doing anything drastic without thoroughly examining both partners first.'³²

The media reports were less forthcoming as to the means by which the clinics achieved the positive results that they claimed. Artificial insemination by donor was in use in some centres by 1946, although it would appear that in most cases the husband was the only acceptable donor.³³ (The same pattern is evident in the British context, as discussed in Gayle Davis's contribution to this volume.) Other reports mention the use of carbon dioxide gas under pressure,³⁴ surgery to remedy minor impediments,³⁵ the adjustment of diet and lifestyle,³⁶ instruction in the rhythmic phases of fertility, and hormone treatment.³⁷ However, it was only with the introduction of gonadotropins in the late 1960s that clinics began to report a substantial increase in their success rates, a trend which culminated with the birth of Australia's first IVF baby in 1980.³⁸

ADOPTION POLICY AND THE CONSTRUCTION OF INFERTILITY AS A TREATABLE PROBLEM

During and after the Second World War, at the same time as infertility began to be constructed as a medical problem, and therefore open to treatment, psychoanalytical theories of infertility were gaining ascendancy. Doctors influenced by Freudian theory began to argue for infertility as a psychosomatic condition, and hence amenable to psychological interventions. Freudian theorists identified infertility as a failure to reproduce, which they explained as the result of an unconscious desire or will.³⁹ Such theories provided a scientific gloss to beliefs, dating from Victorian times, that motherhood was woman's destiny and infertility occurred when that destiny was denied by women who focused on the development of their intellectual rather than their bodily functions.⁴⁰ Doctors who accepted this theory tried to use the language of biochemistry to link female physiology to the psyche.⁴¹ Psychoanalysts, however, explained the connection in terms of unconscious urges, and validated their claims with case examples of women whose infertility was cured by psychoanalysis.⁴²

Medicalization rendered infertility a treatable condition. Women who sought help for their childlessness were now encouraged to consult a doctor who could diagnose its causes.⁴³ However, as part of this diagnosis, a doctor who had kept up with the literature would systematically go through the questions that Freudian analyst Helene Deutsch (1884–1982) had articulated to identify psychosomatic infertility:

Has her fear of the reproductive function proved stronger than her wish to be a mother? Is she still so much a child that she cannot emotionally and consciously decide to assume the responsible role of mother? Is she so much absorbed emotionally in other life tasks that she fears motherhood? [...] Does a deeply unconscious curse of heredity burden all her motherly wish fantasies? And, above all, has the sterile woman overcome the narcissistic mortification of her inferiority as a woman to such an extent that she is willing to give the child, as object, full maternal love?⁴⁴

By the 1950s this theory had permeated even the problem pages of women's magazines. One reader, anxious that her past moral faults might be the cause of her infertility, was reassured but then advised that she should seek medical help with the suggestion that 'it may be your mental attitude that is the root of your trouble, not any physical inability'.⁴⁵

Crucially, it was in the gap which occurred between the recognition of infertility as a treatable condition and the increase in the ability of medicine to guarantee a 'cure' that adoption came to be understood as a possible solution. Although infertility had long provided an important motivation to adopt, from the 1930s US doctors started to report cases in which adoption seemed to act as a cure for infertility, an observation which fitted well with the increasingly influential Freudian theories of psychosomatic causation.⁴⁶ As a 1937 US article observed: 'Certain sterile types have apparently become fruitful by "induction" when they adopt a child [...]. The probabilities are that chronic anxiety of tensions of neurotic conflict origin rather than specific anxieties for children operate to affect the organism'.⁴⁷

This connection entered into folk wisdom despite the repeated failure of statistical research to provide any validation. It was sustained, US adoption historian Ellen Herman observes, 'by anecdote, desperation, eugenics, and popular belief in the psychological forces at play in human fertility'.⁴⁸ The 1950 study by obstetrician-gynaecologists Frederick M. Hanson (1921–2008) and John Rock (1890–1984), which concluded that the rate of conception after adoption was less than the normal rate of spontaneous cure, did little to dent the spread of the belief.⁴⁹ Although subsequent studies were less conclusive, the best they could offer was that the rate of pregnancy after adoption neither disproved nor supported the psychogenic hypothesis, with pregnancy more likely to be explained by the age of the mother or by prior evidence of fertility than by the act of adoption.⁵⁰ Despite such findings, the theory of psychogenic infertility and adoption as cure continued to prove attractive, working together to support the claims to expertise amongst professionals specializing in treating sterility. If, they argued, 'adoption facilitates an emotional reconciliation to the fact of sterility which somehow puts a stop to certain pathological influences upon the ovaries and thus makes pregnancy possible', they could claim to have a cure for those stubborn cases which resisted the techniques they had available.⁵¹ Even if the research failed to support this connection, they claimed, it seemed logical that adoption, by releasing the tension inherent in the process of treatment for infertility, could create an environment in which pregnancy could occur.⁵²

In popular discourse science was replaced by an appeal to anecdote, with stories of pregnancy following adoption told and retold, often enriched by the validation of a doctor who claimed to be relating an experience from his or her practice.⁵³ Popular advice columns regularly recycled the advice that childless couples should proceed to adopt, 'and if Providence should then send along a baby as their own (as has happened more than once), then they are richer by another child and two little souls have found a happy home'.⁵⁴ Shorn of its

harsher woman-blaming implications, the notion that the psyche could interfere with fertility became a commonplace. In 1965 a popular women's magazine concluded an article about pregnancy after adoption with the claim that 'any major change in one's life, even moving to another house, will often result in a woman conceiving'.⁵⁵ Such populist information infiltrated the literature directed at professional social workers, with a 1967 article published in their national journal informing readers that 'in some cases the fear of childbirth may have been the basis of a functional sterility, and this condition may or may not resolve itself [...] after the adoption of a child'.⁵⁶ Randi Epstein has suggested that belief in the psychogenic causes of infertility survived for so long because it helped 'sterility specialists [...] to minimize their "unknown etiology" statistics, and please patients yearning for reasons for their abysmal state'.⁵⁷ However, and crucially for the purposes of this chapter, the critical role which 'adoption as cure' played in proving this connection also created a demand for babies to adopt. As Isobel Strahan, chief medical social worker at Melbourne's major maternity hospital, warned, 'far too often adoption is regarded as a therapeutic measure', creating a situation in which the needs of the prospective adoptive parents had the potential to override the best interests of the child.⁵⁸

Belief in 'adoption as cure' was implicit in Australian sterility clinics from their earliest days. Even the most optimistic reports of the success of infertility treatment had to admit to what were commonly called the 'hopeless cases', couples for whom, despite the best that treatment had to offer, conception proved impossible, but in these cases an immediate solution was at hand.⁵⁹ Sterility clinics were located within hospitals which provided public maternity facilities for the majority of single mothers, and the clinics could therefore refer infertile couples to the social work department which, it was promised, would be able to provide a child. Specialists operating outside the public sector used their connections with private hospitals to provide a similar service. In a smooth transition, couples at the Melbourne clinic were told to 'attend the Women's Hospital', where they would be 'given regular advice over a period of two years'. If they had 'no children in that time', they were 'advised to adopt a child'.⁶⁰ This 'solution' was acclaimed as 'one of the great successes from a community viewpoint' because 'the children were adopted while the foster parents were young and active'.⁶¹

Through this process, infertility replaced benevolence as the key motivation stated for adopting.⁶² Indeed, as demand began to exceed supply, proof of infertility was required of all applicants, with the specialist who made the diagnosis facilitating the adoption arrangements.⁶³ Expert opinion was unanimous: 'When once medical opinion has decided that they are not likely to have children, then the sooner they commence their "adopted" family the better'.⁶⁴ At Melbourne's Women's Hospital, adoption became a service facilitated by social workers to provide babies for infertile patients for whom specialists had been unable to provide a 'cure'. Although social workers fought for the right to evaluate the fitness of such patients to adopt, arguing from the principle of the best interests of the child, hierarchies within the hospital were such that their voices were far less likely to prevail.⁶⁵ It was not surprising, then, that on her

admission to the hospital Dianne Gray felt the presence of ‘a huge mass of people, wealthy people, that couldn’t have children [. . .] people with some power and all this pool of women with no power, that [. . .] were like a labour force of people to donate their children to all the wealthier people’.⁶⁶

The national Inquiry found evidence of concern amongst child welfare workers about the quality of the screening of prospective adoptive parents by the early 1960s.⁶⁷ In subsequent legislative reform, designed primarily to institute consistent adoption laws across the country, the right to arrange adoptions was increasingly focused on social work professionals, but in the context of the large maternity hospitals this did little to change practice standards, given the status which specialist doctors occupied within such hierarchical systems. Although the goal of those who devised the model legislation was to concentrate the power to arrange adoptions within a single non-medical organization, there was only one state, Queensland, in which this goal was met. While, in all the other states, the model legislation did severely curtail the ability of non-social work professionals to arrange private adoptions, the rights of existing adoption agencies, including the major maternity hospitals, were left undisturbed.⁶⁸ The notion that such organizations might have a conflict of interest was never entertained.

CONCLUSION

In 1965 the *Australian Women’s Weekly* published a reader’s story of her struggle to have a child. It recounted how, after infertility treatment had produced no result, ‘the specialist wrote a brief certificate to say “Mrs X is a suitable candidate for adoption”’. Eventually, we received a letter saying that provided our home passed muster we could expect to receive a boy within three years, plus a girl in a further two years’. Ironically, in this instance, the referral was unnecessary as the prospect of adoption was sufficient to produce the required pregnancy and the story ended with the reader happily in possession of a baby of her own.⁶⁹ The belief in ‘adoption as cure’ so neatly encapsulated in this story was deceptive, but it left a tragic legacy. This belief created an imperative within the very agencies to which single mothers were directed for assistance to harvest their babies in order to satisfy an ever growing market demand.

Australia, like many other nations which followed this pattern in the postwar years, continues to live with the aftermath. During its hearings the Senate committee conducting the Inquiry heard the testimony of hundreds of women separated from their children by adoption, a small number of men who experienced a similar fate, and many adult adoptees who struggled with the impact of such early separations. A concurrent online survey by the Australian Institute of Family Studies (AIFS) tapped the views of a further 1,528 individuals, including, significantly, 94 adoptive parents, a group largely missing from the Senate Inquiry evidence.⁷⁰ While, amongst people in both data sets, there was an awareness of the prevalence of the notion of adoption as cure in the postwar years, it was a theory that no longer attracted any believers. Rather, the adoptive parents who

responded to the AIFS study condemned adoption authorities for not assisting them, in the preparation for the adoption, to deal with the grief suffered as a consequence of their infertility, a grief which they saw as impeding the relationship which they were able to develop with their child.⁷¹ Adopted adults resented having been adopted as a response to infertility rather than through a desire to provide a home for a child.⁷² Mothers condemned the use of adoption as cure as a ‘betrayal of trust by those who had a duty to care and protect’.⁷³

When Prime Minister Julia Gillard delivered her apology to victims of former forced adoptions in 2013 she addressed only the last of these concerns. She deplored ‘the shameful practices that denied you, the mothers, your fundamental rights and responsibilities to love and care for your children [...] you were yourselves deprived of care and support [...] betrayed by a system that gave you no choice and subjected you to manipulation, mistreatment and malpractice’. This apology was offered also to ‘the sons and daughters who grew up not knowing how much you were wanted and loved’, and who ‘still experience a constant struggle with identity, uncertainty and loss, and feel a persistent tension between loyalty to one family and yearning for another’. Finally, she expressed the ‘resolve, as a nation, to do all in our power to make sure these practices are never repeated’.⁷⁴ Yet the power imbalances which encouraged the notion that adoption provided a cure for infertility, and in the process created pressure on agencies and individuals charged with the care of single pregnant women to produce an ever increasing supply of children for people whose infertility stubbornly resisted available treatments, remain unaddressed. Until these power imbalances are rectified, the final part of the former Prime Minister’s promise is unlikely to be delivered.

In the early 1970s, a reduction in the stigma around illegitimacy and increasing levels of education amongst young women saw the rise of self-help groups whose activism led to the introduction of improved and accessible social security benefits for single mothers. This strengthened their ability to resist the pressure to ‘relinquish’. The coincidence of these changes with an improvement in infertility treatment, and particularly the availability of in vitro fertilization from the early 1980s onwards, broke the nexus operating in maternity hospitals which underwrote local adoption practice. Infertility, however, has not disappeared, and the desire for a child continues. All too often this desire is transformed into a demand for a child, a ‘right’ now satisfied through inter-country adoption and international surrogacy arrangements that mirror the power imbalances which brought about the injustices of the past.

NOTES

1. Parliament of Australia, Commonwealth Contribution to Former Forced Adoption Inquiry (Adoption Inquiry), Anonymous, Submission 123_v2, 2010–12, pp. 6–7: http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Community_Affairs/Completed_inquiries/2010-13/commcontribformerforcedadoption/submissions. Accessed 6 December 2016.

2. Australia Senate Community Affairs References Committee, *Commonwealth Contribution to Former Forced Adoption Policies and Practices* (Canberra, 2012), p. xvi.
3. The earlier enquiries examined the removal of Indigenous children from their families (1995–97), child migration (1997–98), and the fate of children institutionalized during the twentieth century (2003–4).
4. Parliament of Tasmania, *Joint Select Committee Adoption and Related Services 1950–1988* (1999): <http://www.parliament.tas.gov.au/Ctee/reports/adopt.pdf>; Parliament of New South Wales, *Releasing the Past: Adoption Practices 1950–1998* (2000): <https://www.parliament.nsw.gov.au/committees/DBAssets/InquiryReport/ReportAcrobat/5540/Report.PDF>. Both accessed 6 December 2016.
5. Marian Quartly, Shurlee Swain, and Denise Cuthbert, *The Market in Babies: Stories of Australian Adoption* (Melbourne, 2013).
6. Pauline Kenny, Daryl Higgins, Carol Soloff, and Reem Sweid, *Past Adoption Experiences: National Research Study on the Service Response to Past Adoption Practices (Research Report No. 21)* (Melbourne, 2012), p. 169.
7. Adoption Inquiry, Submission 223, Christine Cole, ‘Why did the Western Australian Government Apologise to Mothers, Fathers and Children Torn Apart by Adoption’, p. 5.
8. Adoption Inquiry, Submission 142_v2, Anonymous, p. 1.
9. Adoption Inquiry, Submission 106_v2, Robyn Turner, p. 1.
10. Adoption Inquiry, Submission 123_v2, Anonymous, p. 7.
11. Christine Cole, ‘Introduction’, in Christine Cole (ed.), *Releasing the Past: Mothers’ Stories of Their Stolen Babies* (Sydney, 2008), p. 2.
12. Adoption Inquiry Submission 129_v2–1, Sue McDonald, p. 18; Submission 223, Christine Cole, ‘Adoptions: Crown St Style and a Case Study’, p. 2; Cole, ‘Introduction’, p. 3.
13. Adoption Inquiry, Submission 123_v2, Anonymous, p. 3.
14. Adoption Inquiry, Submission 171_v2, Lizzie Brew, p. 21; Submission 83_v2, June Smith, p. 6; Cole, ‘Introduction’, p. 2.
15. Kenny et al, *Past Adoption Experiences*, p. 36.
16. Kenny et al, *Past Adoption Experiences*, p. 41.
17. Adoption Inquiry, Submission 14_v2, Barbara Maison, p. 5.
18. John Lewis, ‘Stories about the Adoption Experience in Australia’, History of Adoption Project, School of Philosophical, Historical and International Studies, Faculty of Arts, Monash University, 2010: <http://arrow.monash.edu.au/hdl/1959.1/594669>. Accessed 6 December 2016. Funded by the Australian Research Council, this project collected oral histories to complement archival sources. Its findings form the basis of Quartly, Swain and Cuthbert, *The Market in Babies*.
19. Margarete Sandelowski, ‘Fault Lines: Infertility and Imperiled Sisterhood’, *Feminist Studies*, 16:1 (1990), p. 42.
20. Margarete Sandelowski, ‘Failures of Volition: Female Agency and Infertility in Historical Perspective’, *Signs*, 15: 3 (1990), p. 488.
21. Neville Hicks, *‘This Sin and Scandal’: Australia’s Population Debate 1891–1911* (Canberra, 1978), pp. 22–3.
22. Hicks, *‘This Sin and Scandal’*, p. 35.
23. ‘The Red Plague’, *Argus*, 13 July 1916, p. 5: <http://nla.gov.au/nla.news-article1628856>. Accessed 6 December 2016.

24. 'The Red Plague', *Worker*, 3 January 1918, p. 9 <http://nla.gov.au/nla.news-article72189267>. Accessed 6 December 2016.
25. 'The Social Diseases', *Northern Star*, 6 July 1933, p. 7: <http://nla.gov.au/nla.news-article94222636>. Accessed 6 December 2016. For further discussion of medical responses to sterility induced by venereal disease, see Anne Hanley's contribution to this volume.
26. 'Clinics for the Childless to Boost Birthrate', *Advertiser*, 15 January 1944, p. 3: <http://nla.gov.au/nla.news-article48781449>; 'Doctor's Diary', *Western Mail*, 13 January 1944, p. 15: <http://nla.gov.au/nla.news-article38547228>. Both accessed 6 December 2016.
27. "'The Counsellor' Urges ...', *Courier-Mail*, 6 April 1944, p. 5: <http://nla.gov.au/nla.news-article42034383>. Accessed 6 December 2016.
28. 'Plans for Sterility Clinic at Royal Hospital', *Mercury*, 15 December 1944, p. 7: <http://nla.gov.au/nla.news-article26039030>; 'Birthrate Increase', *Cairns Post*, 8 May 1945, p. 3: <http://nla.gov.au/nla.news-article42452293>; 'Sterility Clinic', *Daily News*, 7 July 1945, p. 28: <http://nla.gov.au/nla.news-article78788299>; 'Clinic Brings 200 Babies', *Courier-Mail*, 22 August 1947, p. 1: <http://nla.gov.au/nla.news-article49325179>; 'Special New Clinic For Childless Couples', *West Australian*, 22 July 1949, p. 21: <http://nla.gov.au/nla.news-article47738001>. All accessed 6 December 2016.
29. 'What is Happening in Your Home State', *Army News*, 8 December 1944, p. 2: <http://nla.gov.au/nla.news-article477070121945>; 'Sterility Clinic Work Favoured', *Courier-Mail*, 23 November 1945, p. 1: <http://nla.gov.au/nla.news-article50253340>; 'Sterility Clinic', *Daily News*, 7 July 1945, p. 28: <http://nla.gov.au/nla.news-article78788299>; 'Australia's Birthrate', *West Australian*, 3 March 1945, p. 4, <http://nla.gov.au/nla.news-article44999689>. All accessed 6 December 2016.
30. 'Brisbane Sterility Clinic has Handled 440 Cases', *Courier-Mail*, 4 May 1945, p. 3: <http://nla.gov.au/nla.news-article48949526>. Accessed 6 December 2016.
31. 'Sterility Clinic Opens Thursday', *Courier-Mail*, 1 September 1944, p. 3: <http://nla.gov.au/nla.news-article48942248>; 'What is Happening in Your Home State', *Army News*, 8 December 1944, p. 2: <http://nla.gov.au/nla.news-article477070121945>. Both accessed 6 December 2016.
32. 'Advice for the Childless', *Advocate*, 7 January 1948, p. 6: <http://nla.gov.au/nla.news-article69066978>. Accessed 6 December 2016.
33. 'Childlessness in S.A', *Advertiser*, 25 July 1946, p. 8: <http://nla.gov.au/nla.news-article35706387>; 'Test-Tube Babies', *West Australian*, 19 January 1948, p. 8: <http://nla.gov.au/nla.news-article46884583>; 'Will Have Second "Test Tube" Baby', *Morning Bulletin*, 12 April 1948, p. 3: <http://nla.gov.au/nla.news-article56814254>. All accessed 6 December 2016.
34. Don Greenlees, 'Here's Hope for the Childless', *Argus*, 7 June 1951, p. 2: <http://nla.gov.au/nla.news-article23059665>. Accessed 6 December 2016.
35. 'The Main Facts', *Australian Women's Weekly*, 4 September 1963, p. 44: <http://nla.gov.au/nla.news-article51972728>. Accessed 6 December 2016.
36. Greenlees, 'Here's Hope for the Childless', p. 2.
37. 'Medical Mother Advises Childless Couples Not to Give up Hope', *Courier Mail*, 31 July 1953, p. 7: <http://nla.gov.au/nla.news-article51092346>. Accessed 6 December 2016.

38. 'Australia's First Test-Tube Baby', *Australian Women's Weekly*, 9 July 1980, pp. 4–9: <http://nla.gov.au/nla.news-article55473228>. Accessed 6 December 2016.
39. Sandelowski, 'Failures of Volition', p. 491.
40. Rita Rhodes and Deborah Valentine, 'Women, Motherhood, and Infertility: The Social and Historical Context', in Deborah Valentin (ed.), *Infertility & Adoption: A Guide for Social Work Practice* (New York, 1988), p. 11; Naomi Pfeffer, *The Stork and the Syringe: A Political History of Reproductive Medicine* (Cambridge, 1993), p. 34.
41. Randi Hutter Epstein, 'Emotions, Fertility, and the 1940s Woman', *Journal of Public Health Policy*, 24: 2 (2003), p. 196.
42. Epstein, 'Emotions, Fertility, and the 1940s Woman', p. 198.
43. 'Cure In Early Stages', *Sunday Times*, 2 March 1941, p. 11: <http://nla.gov.au/nla.news-article59149824>. Accessed 6 December 2016.
44. Helene Deutsch, *The Psychology of Women* (New York, 1949), p. 397.
45. Elizabeth Wyse, 'Have you a Problem?', *New Idea*, 19 September 1956, p. 32.
46. Margaret Marsh and Wanda Ronner, *The Empty Cradle: Infertility in America from Colonial Times to the Present* (Baltimore, MD, 1996), p. 204.
47. Leonard S. Cottrell, Jr., 'Research in Causes of Variations in Fertility: Social Psychological Aspects', *American Sociological Review*, 2:5 (1937), p. 682.
48. Ellen Herman, *Kinship by Design: A History of Adoption in the Modern United States*, (Chicago, IL, and London, 2008), p. 114.
49. Frederick M. Hanson and John Rock, 'The Effect of Adoption on Fertility and Other Reproductive Functions', *American Journal of Obstetrics and Gynecology*, 59:2 (1950), p. 317.
50. Eugene Weinstein, 'Adoption and Infertility', *American Sociological Review*, 27:3 (1962), p. 411; Tewes H. Wischmann, 'Psychogenic Infertility – Myths and Facts', *Journal of Assisted Reproduction and Genetics*, 20:12 (2003), pp. 486–7.
51. Douglas W. Orr, 'Pregnancy Following the Decision to Adopt', *Psychosomatic Medicine*, 3:4 (1941), p. 442.
52. Richard Frank, 'What the Adoption Worker Should Know About Infertility', in Michael Schapiro (ed.), *A Study of Adoption Practice, Volume II: Selected Scientific Papers Presented at the National Conference on Adoption, January, 1955* (New York, 1956), pp. 117–18; J. Kraus, 'Expectancy of Fertility after Adoption', *Australian Social Work*, 29:2 (1976), pp. 23–4.
53. 'Clinics for the Childless to Boost Birthrate', p. 3; 'Doctors Differ on Husbands', *Sunday Mail*, 4 July 1948, p. 5: <http://nla.gov.au/nla.news-article98324520>; Greenlees, 'Here's Hope for the Childless'; 'Make a Friend of Your Doctor', *Australian Women's Weekly*, 6 August 1958, p. 54: <http://nla.gov.au/nla.news-article51776275>. All accessed 6 December 2016.
54. 'Medical Mother Advises Childless Couples Not to Give Up Hope', *Courier-Mail*, 31 July 1953, p. 7: <http://trove.nla.gov.au/newspaper/article/51092346>. Accessed 6 December 2016.
55. 'I Couldn't have a Baby', *Australian Women's Weekly*, 1 September 1965, p. 14: <http://nla.gov.au/nla.news-article46239590>. Accessed 6 December 2016.
56. Marjorie Bull, 'About Adoption', *Australian Journal of Social Work*, 20:1 (1967) p. 6.
57. Epstein, 'Emotions, Fertility, and the 1940s Woman', p. 199.

58. Cited in Christin Quirk, 'Confinement and Delivery Practices in Relation to Single Women Confined at the Royal Women's Hospital 1945–1975'. MPhil thesis, Australian Catholic University, 2011, p. 90.
59. 'Clinics for Childless', *Kalgoorlie Miner*, 6 December 1944, p. 1: <http://nla.gov.au/nla.news-article94806999>; 'Melbourne Sterility Clinic', *Townsville Daily Bulletin*, 9 January 1945, p. 3: <http://nla.gov.au/nla.news-article61943226>. Both accessed 6 December 2016.
60. Greenlees, 'Here's Hope for the Childless', p. 2.
61. 'Clinic Brings 200 Babies', p.1.
62. Herman, *Kinship by Design*, p. 114.
63. 'The Main Facts', p. 44.
64. 'Medical Mother Advises Childless Couples Not to Give Up Hope', p. 7.
65. Quirk, 'Confinement and Delivery Practices', pp. 77–8.
66. Dianne Gray, quoted in Quirk, 'Confinement and Delivery Practices', pp. 75–6.
67. Australia Senate Community Affairs References Committee, *Commonwealth Contribution to Former Forced Adoption Policies and Practices*, p. 164.
68. Australia Senate Community Affairs References Committee, *Commonwealth Contribution to Former Forced Adoption Policies and Practices*, pp. 168–9.
69. 'I Couldn't Have a Baby', pp. 14–15.
70. Kenny et al, *Past Adoption Experiences*, p. xii.
71. Kenny et al, *Past Adoption Experiences*, p. xvi.
72. Kenny et al, *Past Adoption Experiences*, p. 93.
73. Kenny et al, *Past Adoption Experiences*, p. 169.
74. Australian Government National Apology for Forced Adoptions webpage, 2013: <http://www.ag.gov.au/ABOUT/ForcedAdoptionsApology/Pages/default.aspx>. Accessed 6 December 2016.

RESEARCH RESOURCES

Primary Sources

Websites

- Adoption History Project website, 2012: <http://pages.uoregon.edu/adoption/index.html>.
- Australian Government, National Apology for Forced Adoptions webpage, 2013: <http://www.ag.gov.au/ABOUT/ForcedAdoptionsApology/Pages/default.aspx>.
- History of Adoption Project website, 2012: <http://artsonline.monash.edu.au/historyofadoption/>.

Testimony Relating to Forced Adoptions

- Australia Senate Community Affairs References Committee, *Commonwealth Contribution to Former Forced Adoption Policies and Practices* (Canberra: Senate Printing Unit, 2012).
- Christine Cole, *Releasing the Past: Mothers' Stories of Their Stolen Babies* (Sydney: Veljanov Printing, 2008).
- Pauline Kenny, Daryl Higgins, Carol Soloff, and Reem Sweid, *Past Adoption Experiences: National Research Study on the Service Response to Past Adoption*

Practices (Research Report No. 21) (Melbourne: Australian Institute of Family Studies, 2012).

Parliament of Australia, Commonwealth Contribution to Former Forced Adoption Inquiry (Adoption Inquiry), Submissions, 2010–12: http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Community_Affairs/Completed_inquiries/2010-13/commcontribformerforcedadoption/submissions.

Parliament of New South Wales, *Releasing the Past: Adoption Practices 1950–1998*, (2000):http://www.parliament.nsw.gov.au/prod/parliament/committee.nsf/0/56E4E53DFA16A023CA256CFD002A63BC?open&refnavid=CO4_2.

Parliament of Tasmania, *Joint Select Committee Adoption and Related Services 1950–1988* (1999):<http://www.parliament.tas.gov.au/Ctee/reports/adopt.pdf>.

Published Sources On Adoption as a Cure for Infertility

Marjorie Bull, 'About Adoption', *Australian Journal of Social Work*, 20:1 (1967), 2–8.

Richard Frank, 'What the Adoption Worker Should Know About Infertility', in Michael Schapiro (ed.), *A Study of Adoption Practice, Volume II: Selected Scientific Papers Presented at the National Conference on Adoption, January, 1955* (New York: Child Welfare League of America, 1956), 113–8.

Frederick M. Hanson and John Rock, 'The Effect of Adoption on Fertility and Other Reproductive Functions', *American Journal of Obstetrics and Gynecology*, 59:2 (1950), 311–20.

J. Kraus, 'Expectancy of Fertility after Adoption', *Australian Social Work*, 29:2 (1976), 19–24.

Douglas W. Orr, 'Pregnancy Following the Decision to Adopt', *Psychosomatic Medicine*, 3:4 (1941), 441–6.

Eugene Weinstein, 'Adoption and Infertility', *American Sociological Review*, 27:3 (1962), 408–12.

On Psychogenic Infertility

Leonard S Cottrell, Jr., 'Research in Causes of Variations in Fertility: Social Psychological Aspects', *American Sociological Review*, 2:5 (1937), 678–85.

Helene Deutsch, *The Psychology of Women* (New York: Grune & Stratton, 1949).

Secondary Sources

On the History of Adoption

Ellen Herman, *Kinship by Design: A History of Adoption in the Modern United States* (Chicago, IL, and London: University of Chicago Press, 2008).

Marian Quartly, Shurlee Swain, and Denise Cuthbert, *The Market in Babies: Stories of Australian Adoption* (Melbourne: Monash University Publishing, 2013).

On the History of Infertility

Neville Hicks, *'This Sin and Scandal': Australia's Population Debate 1891–1911* (Canberra: Australian National University Press, 1978).

Margaret Marsh and Wanda Ronner, *The Empty Cradle: Infertility in America from Colonial Times to the Present* (Baltimore, MD: Johns Hopkins University Press, 1996).

Naomi Pfeffer, *The Stork and the Syringe: A Political History of Reproductive Medicine* (Cambridge: Polity Press, 1993).

Rita Rhodes and Deborah Valentine, 'Women, Motherhood, and Infertility: The Social and Historical Context', in Deborah Valentin (ed.), *Infertility & Adoption: A Guide for Social Work Practice* (New York: The Haworth Press, 1988), 5–20.

Margarete Sandelowski, 'Fault Lines: Infertility and Imperiled Sisterhood', *Feminist Studies*, 16:1 (1990), 33–51.

On Psychogenic Infertility

Randi Hutter Epstein, 'Emotions, Fertility, and the 1940s Woman', *Journal of Public Health Policy*, 24:2 (2003), 195–211.

Margarete Sandelowski, 'Failures of Volition: Female Agency and Infertility in Historical Perspective', *Signs*, 15:3 (1990), 475–99.

Tewes H. Wischmann, 'Psychogenic Infertility – Myths and Facts', *Journal of Assisted Reproduction and Genetics*, 20:12 (2003), 485–94.

Conditions of Illusion: Agency, Feminism, and Cultural Representations of Infertility in Britain, c. 1960–80

Tracey Loughran

INTRODUCTION

In her descent into madness, Anna Wulf, the heroine of Doris Lessing's *The Golden Notebook* (1962), wonders at the tricks of fortune that govern reproductive experience, the contingency of sperm meeting egg and producing girls or boys: 'How strange, having a baby is where women feel they are entering into some sort of inevitable destiny. But right in the heart of where we feel most bound, is something that's just chance'.¹ Lessing's novel captures the lives of women in a society on the cusp of sexual revolution and the political upheaval of feminism. In the decades that followed, the rhetoric of control and choice replaced this earlier emphasis on fate and chance in discussions of women's reproductive lives. The introduction of the oral contraceptive pill in 1961, and the legalization of abortion six years later, fed into a series of dramatic socioeconomic and demographic shifts that created flux in women's sexual, reproductive, and familial lives. As women were better able to plan and space births, the birth rate plummeted, the average age of first pregnancy rose, and married women's participation in the labour force increased.² Rising rates of pre-marital sex, illegitimacy, and divorce led to fears of the terminal decline

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of the nuclear family.³ When the Women's Liberation Movement (WLM) emerged out of this chaos at the end of the 1960s, opponents viewed this revolutionary new feminism as both symbolizing and propelling further the destruction of traditional social life.

The sense of living through a period of rapid change dominated contemporary social discourse, and perhaps no more so than in the constantly repeated belief that individuals now had 'almost complete control over their behaviour in family planning'.⁴ Sociologists celebrated the 'revolutionary enlargement of freedom for women' and spoke in hushed tones of this '*new situation in the entire history of mankind*'.⁵ Although commentators acknowledged that ethical, social or economic barriers might exist in practice, almost all believed that the pill and abortion made reproductive choice possible in theory. The WLM aimed to seize control of the ownership of the means of reproduction, revealing its assumption that ownership *and* means were there for the taking.⁶ Although there remained serious disparities in access to new contraceptive technology, belief in the ability to choose shaped women's capacity to imagine different futures, and so the illusion of control exerted real influence over their lives – even, and perhaps especially, if these futures did not work out exactly as planned.⁷

In the 1960s and 1970s, emphasis on choice and control meant that public debates, social policy, and political discourse often failed to acknowledge the existence of infertility, and this clearly precluded any serious proposals to tackle the problem. This all changed in 1978, when Louise Brown's birth trained the media spotlight on infertility, simultaneously making the condition socially visible to an extent unparalleled in history and yoking it to issues surrounding the development and use of assisted reproductive technologies (ARTs).⁸ This chapter unravels popular discourses of infertility in this exceptional moment: a time when infertile women, caught between the postwar revolutions in contraceptive and reproductive technology, found themselves ill-adapted to practice the fatalism of their mothers, bereft of the promise of technological solutions to involuntary childlessness, and increasingly unable to access the social solution of adoption.⁹ The pain of infertility must have been especially bitter for those who had grown to adulthood believing in their power to control their reproductive destinies: as one popular birth control guide mused, 'It is very sad indeed when a couple who have been practising contraception throughout their sexual life together decide to have a baby only to find that they cannot conceive'.¹⁰

A comparison of approaches to infertility in mass-market women's magazines and WLM publications illustrates some of the dilemmas infertile women faced in this period, but also some of the challenges infertility posed for feminism. Mass-market women's magazines validated the pain of infertile women, but did so partly by valorizing motherhood and promoting a narrow and oppressive conceptualization of femininity. The WLM, on the other hand, attempted to build a more broadly based conception of female 'nature', but neglected infertile women's experiences. In the 1980s and 1990s, this vacuum was filled by influential feminist scholarship that implicitly or explicitly denied the agency and lived realities of infertile women, and conflated infertility with reproductive

technology. Despite challenges from within the WLM, this scholarship set the terms of feminist debate on infertility for much of these decades, partly because the movement had not developed a coherent, experience-centred position on infertility before IVF changed the parameters of public debates on infertility.

These dilemmas reflect the unique problems that infertility raises for feminism. Infertility underscores 'the biological limits of reproductive freedom for women', and so both undermines the movement's central tenets of 'reproductive choice and control', and complicates feminism's efforts to simultaneously 'celebrate women's unique biologic capacities and reject this uniqueness as defining'.¹¹ Partly as a result of these challenges, feminists have often been 'ambivalent about supporting women who seek infertility treatments because it seems to lend implicit support to conventional gender roles and gendered stratification'.¹² In prominent feminist scholarship of the immediate post-IVF decades, this ambivalence slid into virtual obliteration of the experiences of infertile women. They came to be represented 'less as agents deciding their fates than as trapped among a host of cultural and specifically feminist contradictions concerning the benefits or liabilities of both technology and motherhood for women'.¹³

This scholarship ignored or refused to admit the emotions and capacity for action of flesh-and-blood women. Paradoxically, this stance arose out of some of the central theoretical ideas and practices of the WLM. In the Marxist-feminist analysis underpinning the British WLM, women were crippled by their own false consciousness as much as by external barriers to political, economic, and social freedom. The practice of consciousness-raising enabled women to recognize and so discard oppressive ideologies of femininity, but it also left those women perceived as straying from an ideal feminism vulnerable to accusations of unwitting patriarchal collusion. The WLM's greatest weapon could be turned against deviants within the ranks.

Infertility resists accommodation within some of the defining lines of feminism: promotion of the right to choose, rejection of conventional ideologies of motherhood, and problematization of science and technology. Yet if infertility is the site where feminism's conceptual fault lines intersect, it can also be used to explore feminism's essence and its richest contradictions. My aim in this chapter is to expose the paradoxes of a feminism that can simultaneously enjoin women to speak and render them silent. I end by arguing that we can use the tools feminism provides to write against a tradition that erodes the agency and experience of infertile women. Although the concept of false consciousness could be used to invalidate the hopes and desires of infertile women, the practice of consciousness-raising reveals where we might locate and how we might write feminist histories of infertility.

INFERTILITY IN MASS-MARKET WOMEN'S MAGAZINES

Mass-market women's magazines are an invaluable resource for understanding women's lives in the postwar period. As mass-market productions, magazines could influence the thought and behaviour of millions of people. In the

mid-1960s, weekly women's magazines sold 12.1 million copies per week, and reached at least three times as many readers.¹⁴ These magazines were often politically and socially conservative. Because they were commercial enterprises, magazines could not afford to alienate readers or advertisers, and so women's weeklies tended to reflect popular opinion rather than push ahead of it.¹⁵ This makes magazines an excellent barometer of changing social attitudes, as well as guides to dominant constructions of femininity.

To date, however, little historical research has been conducted on representations of infertility in popular culture. The anthropologist Sarah Franklin's deconstruction of 1980s popular narratives of infertility and reproductive technologies remains the most influential such analysis. Franklin identified 'desperation' as the central aspect of representations of infertile couples, and showed how popular narratives constructed medical science as their only hope. She argued that by defining infertility entirely within the parameters of the traditional nuclear family, popular narratives upheld the social status quo in a period of deep unease about the future of the family.¹⁶ Franklin analysed the social construction of infertility at a macro-level, making little differentiation between types of 'popular sources', their formats, or specific features. In focusing on social constructions of infertility, her analysis sidelined the thoughts and feelings of actual infertile women and men.¹⁷ In the context of prominent feminist scholarship of the time, this analysis unintentionally reinforced the effacement of the experiences of infertile women in favour of focusing on the consequences of reproductive technologies.¹⁸

A very different interpretation of popular representations of infertility is possible if we pay attention to the purpose and contents of different formats and forms of reporting. Women's magazines allowed infertile women to speak, partly because the (marketable) identity of magazines as the reader's 'friend' required high levels of reader input.¹⁹ The voices of women in these forums were carefully selected and edited, but no more so than in feminist publications such as *Our Bodies Ourselves* (discussed later in this chapter). Within women's magazines, infertile women often 'spoke' the lines of recognizable and conservative cultural scripts, but this is no reason to dismiss their testimony. Indeed, convergences of testimony in the very different platforms of mass-market magazines and feminist publications can be read as evidence of enduring aspects of the experience of infertility. Moreover, the dialogue between different voices in the magazine format actually shaped the presentation of infertility within its pages. Before 1978, and even in the immediate aftermath of Louise Brown's birth, this dialogue emphasized the emotional aspects of experiences of infertility and resisted (or at least displaced) the lure of medical and scientific solutions to involuntary childlessness.

Mass-market women's magazines provided extensive coverage of issues relating to physical, psychological, and emotional health. These topics were covered in several different formats (feature articles, interviews, and so on), but most often in specialist advice columns headed by a doctor, nurse, or 'agony aunt'. These experts served as proxies for the health professionals and

psychological counsellors with whom women were increasingly likely to come into contact in the postwar years.²⁰ Advice columns often invited reader input, and so formed a dialogue between readers and authors. Although the figure of the expert dominated, with readers taking the role of supplicants to higher authority, readers' voices were a constant presence within the magazine.

As in the 1980s, desperation was a constant theme in magazine coverage of infertility. In features, readers' letters, and columns, women spoke of infertility as a 'tragedy', a feeling of 'emptiness' or 'unfocused grief', and 'like dying' or being 'dead inside'.²¹ They told of their inability to come to terms with the diagnosis, and their perception of infertility as an irreparable loss:

I keep thinking I've got used to the prospect of having no children (after many tests our marriage has finally been pronounced infertile) and then someone says, 'What, no family yet?' or a friend gets pregnant, and I dissolve into tears. Can a woman ever come to terms with this tragedy? If so, tell me how?²²

Infertility was felt not only as a loss of the expected future, but also of feminine identity.²³ The victim of infertility often described herself as 'not a proper woman'.²⁴ Familial and social pressure accentuated these feelings.²⁵ One 32-year-old woman who had undergone a hysterectomy for a precancerous condition lamented the loss of her dreams of 'a home and a family', and admitted that her childlessness made her feel she was 'of no importance to anyone'.²⁶

This articulation of involuntary childlessness as both personal and social loss was common. In magazines, women stressed the unbridgeable gulf separating infertile women from mothers: 'no woman who's had children without too much difficulty can understand the misery of a woman who can't'.²⁷ Infertile women felt the pain of exclusion from the community of pregnant women and mothers acutely. Twenty-six-year-old Cathy described how she had:

become a very good actress [. . .]. Three girls at my work have left in the last year to have babies, and I fix a perpetual smile on my face when all the time I'm knotted up inside with jealousy and all I want to do is go and lock myself in the loo and howl.²⁸

She recounted standing 'outside Mothercare, looking in the window with tears streaming down my face'.²⁹ One woman had started to 'dread visiting friends who are parents'.³⁰ The 'sight of a mother with a shiny new pram' made Lesley Brown break down.³¹ For her, one of the minor miracles of having a baby was being able to talk to other women with children: 'I know it only sounds a little thing, but I wouldn't have been able to do it before. I felt different to other women because they had babies. Now I feel I'm one of them'.³²

This emphasis on the infertile woman's desperation fitted with the broader worldview of women's magazines, in which motherhood was perceived as

women's natural, and therefore most fitting, role.³³ Interviews and features described maternal devotion as 'love in its purest and most passionate form',³⁴ and childbirth as 'by far the most important and emotional experience in a woman's life'.³⁵ Magazines therefore accepted without question the 'deep tragedy' of a 'motherly girl longing in vain for a baby'.³⁶ The infertile woman was propelled, like all women, by the 'urge to fulfil her biological role in life'; her misfortune was that she could not do so.³⁷ The assumption that motherhood constituted female destiny accumulated irresistible force through constant repetition, in the sheer weight of material aimed at potential or actual mothers: guides to pregnancy and childbirth, knitting patterns for children's clothes, recipes to feed the whole family on a budget, and advertisements warning women of the threat to their children's health and happiness if they did not buy certain baby foods, cleaning products, sticking plasters, or beef extract. This bombardment of images of maternal bliss simultaneously accentuated the infertile woman's loss and legitimated her desires.

However, the infertile woman was not simply a trope. She existed in the real world, and magazines acknowledged this in their inclusion of the voices of infertile women. Accounts of involuntary childlessness most often appeared on the problem pages, rather than in full-length feature articles, and so were presented as a dialogue between readers and experts. In published letters, readers expressed their anxieties about failure to conceive, yearnings for more children, or despair at the diagnosis of infertility. Some longed for children, while their partners refused to start a family.³⁸ 'Older' women in their 30s or early 40s looked for reassurance that they could still conceive.³⁹ Others worried about the length of time it had taken to conceive, or asked how to boost their chances of conception.⁴⁰ Those who felt they had already waited too long, or had been diagnosed as infertile, enquired about adoption.⁴¹ Towards the end of the 1970s, letters demonstrated greater openness about sexuality and bodily functions. Male readers worried about the effects of perceived genital abnormalities or problems in ejaculating.⁴² Women now asked whether orgasm was necessary to conception, if prolonged use of the oral contraceptive pill or abortion affected the ability to conceive, and if female sterilization could be reversed.⁴³ One woman worried that she would not be able to conceive because 'after making love, the semen just runs out of me', prompting the wry response: 'Had Newton been a woman, this might have been the way he would have discovered gravity'.⁴⁴

Although readers' queries became more explicit, advisors continued to dispense the same kinds of advice in these decades: they offered emotional counsel rather than detailed medical information or technological solutions.⁴⁵ The letter-response format limited the amount of medical information that could (or should) be given, and led to greater emphasis on emotional and social responses to childlessness. Authors of published letters on involuntary childlessness divided into two camps: the anxious had-not-conceived-yet, and the already-diagnosed or resigned-to biological infertility. The first group wanted information about the normal length of time it took to conceive, or had specific

queries about potential reasons for their failure to do so. Advisors could quash misconceptions, but could not provide a diagnosis, and so they usually only told readers to consult their own doctors, or perhaps to contact the magazine's health editor for further information.⁴⁶ When agony aunts or nurses did touch on the causes of infertility, they usually focused on its (perceived) potential emotional origins, rather than attempting physical explanations.⁴⁷ This was in keeping with the gendered division of labour in magazines' health coverage, where male doctors provided guidance on physical health, and female advisors provided emotional counselling. At most, agony aunts reassured readers that doctors could offer specialist help (without specifying what this was), or urged them to be persistent if doctors did not take their fears seriously (implying less-than-perfect faith in medical counsel).⁴⁸

Women in the second group asked for help in coming to terms with infertility, rather than for explanations of the condition. Advisors then provided emotional counselling and guidance on social solutions to the problem of involuntary childlessness. Although advisors emphasized the practical difficulties of the process more from the late 1960s onwards, they continued to recommend adoption as an option that could make 'a child happy and secure for life', satisfy women's 'mother-urge', and refresh and fulfil a marriage.⁴⁹ Women were also advised to take up creative activities that could provide another outlet for 'the basic emotions of a woman'.⁵⁰ Above all, they were urged to come to terms with this 'punishing hand of fate', for their own happiness and for the sake of their relationships.⁵¹ The publication of letters from readers who had managed to live happy and productive lives despite their childlessness reinforced this message.⁵² In the late 1970s, advisors even tentatively suggested that women could try to see the benefits of the childless state.⁵³ Readers were thus reassured that they did not 'have to go on feeling unhappy about this for ever', and were pointed towards helpful agencies, services, and books.⁵⁴

Even at the end of the 1970s, magazine advisors remained realistic about the limited applications and accessibility of available ARTs, telling readers that because 'even the newest drugs can't help everyone', many couples still had no choice but to adjust 'to a childless life style'.⁵⁵ This sensible advice reflected the limitations of both medical knowledge and access to new reproductive technologies. However, this sympathetic realism was often undercut by the technological optimism in other magazine formats, especially features reporting on scientific progress or medical breakthroughs. These reports assumed that medical ignorance was never absolute or final; a breakthrough offering 'new hope' to childless couples was always on the horizon.⁵⁶ Magazine features proclaimed the birth of Sheila Thorn's sextuplets in 1968, after 'ten childless years', and 'as a direct result of taking a new type of fertility drug', to be a 'miracle'.⁵⁷ The language of miracles was liberally applied to any birth in which women had struggled to conceive or carry to full term.⁵⁸ Such declarations reached a crescendo with the birth of Louise Brown, which 'represented fresh hope to millions of childless

women'.⁵⁹ Less interactive formats therefore tended to echo the optimism of popular medical handbooks that celebrated recent advances and attempted to reclaim infertility for science.⁶⁰

Within magazines, then, advice columns usually tried to avoid encouraging the hopes of infertile readers, but some forms of reporting undercut this circumspection. It would be unsurprising if some readers maintained their faith in the power of science and medicine against the odds, and against the more cautious voices on other pages. Crucially, however, we do not know what readers took from the articles. Magazines are heteroglossic, multivocal forms. The inclusion of contradictory messages is not just common, but perhaps integral to the format. It is possible to tease out dominant tendencies in texts, but this should not preclude openness to multiple possible interpretations, and the interaction of different layers of meaning. Readers have agency in making meaning out of texts, and this meaning is never self-evident or pre-determined – especially, perhaps, in such kaleidoscopic productions as magazines.

Moreover, just as readers had the ability to interpret what they read in different ways, these texts did not materialize out of thin air. They were produced by magazine journalists with lives and experiences beyond their glossy headshots and taglines. If magazine advisors adopted sympathetic pragmatism in their responses to infertile readers, then this attitude might have arisen out of their own experiences of voluntary childlessness, subfertility, or medical inadequacies. Peggy Makins (1916–2011), better known as *Woman's* 'Evelyn Home', described herself as lacking 'the natural longing to possess [children] which most women are born with', and as learning to accept herself as 'an un-motherly woman who was yet a mother-figure'. Nevertheless, she believed that women's 'basic impulses are maternal', and perhaps viewed her own role as 'mother-figure to millions' as a substitute outlet for these feelings.⁶¹ Marjorie Proops (1911–96), agony aunt for the *Daily Mirror* for more than 40 years, was unable to have more children following complications during the birth of her son in 1941; during her brief stint as a *Woman* columnist, she counselled readers in how to come to terms with their infertility.⁶² Claire Rayner (1931–2010) experienced difficulties conceiving when she decided to start a family in the late 1950s. She drew on her own medical training, contacts, and research, as well as her formidable personality, to prise diagnosis and treatment out of a Harley Street endocrinologist.⁶³ Rayner saw her journalism not only as 'a sustained job of public health nursing and health education', but 'as useful' as her earlier work in the wards. Her mission was to provide her readers (or 'patients', as she saw them) with the tools to understand their bodies and to negotiate the medical system.⁶⁴

Across this period, women's magazines consistently represented infertile women as desperate and tragic, and advisors counselled them in how to negotiate the experience of infertility. The infertile women who wrote to magazines were more than discursive constructs, and the journalists who counselled them were more than ciphers for the dominant feminine

ideology. At the same time, magazines sympathized with infertile women partly because they sustained and promoted a conservative view of female nature as determined by the capacity for maternity. Advisors did not challenge dominant conceptions of the female social role or the ideal family form, because they operated in a politically and socially conservative framework, enforced by magazines' status as commercial enterprises that could not afford to lose readers. However, magazines did not conjure visions of 'desperation' out of thin air. Although refracted through journalistic processes of selection and editing, infertile women claimed this unhappiness in their own voices in letters, interviews, and features. Over two decades, the emotions that infertile women expressed, and that magazine editors and journalists chose to emphasize, stayed the same. We should listen to these voices, for they tell us as much about the experience of infertility as about dominant ideologies of femininity.

INFERTILITY IN THE FEMINIST PRESS

In the 1970s, feminist scholars formulated a powerful critique of mass-market women's magazines as agents of repressive socialization that catered to the needs of the capitalist system by reinforcing oppressive models of ideal femininity, fostering escapist fantasies, and encouraging false consciousness.⁶⁵ This analysis of women's magazines crucially relies on the Marxist-derived concept of false consciousness. According to some Marxist traditions, experience is determined by socioeconomic structures, and no experience can exist outside these structures. Under the capitalist system, all experience is an expression of inauthentic and unjust structures, and therefore a manifestation of alienation and false consciousness. To achieve revolution, it is necessary to smash through the barrier of false consciousness. In the words of Marx, quoted by Michelene Wandor in a 1972 essay on the family under capitalism: 'The call to abandon their illusions about their conditions is a call to abandon a condition which requires illusions'.⁶⁶ A paradox arises from this position: authentic experience is impossible under capitalism, and so in pre-socialist systems all social analysis is the outcome of the same false consciousness – yet to achieve revolution, it is necessary to understand experience as the outcome of false consciousness, and to break its hold.

For the Marxist-feminist WLM, this meant that to cast off their political, economic, and social shackles, women must recognize not only the causes of their oppression, but their psychological collusion in their own subjugation. To achieve the aim of breaking false consciousness, the movement adopted the practice of consciousness-raising, a political technique originating in the US civil rights movement. Consciousness-raising worked through reflection and disclosure about individual oppression at the small-group level, leading to recognition of the shared nature of 'personal' experiences, and analysis of their structural causes and wider consequences. The slogan 'the personal is political' encapsulated this defining ethos of the WLM, and guided its practice

of consciousness-raising at both the grass-roots level and in the national and supranational activities of the movement.⁶⁷ This is perhaps nowhere better illustrated than in the attempts of the feminist press to replicate the methods of consciousness-raising in print form, and especially in the working practices of the WLM magazine *Spare Rib*.

Spare Rib, launched in 1972, aimed to combine the revolutionary spirit of the underground press with the approachability of mass-market women's magazines, to provide a platform for the discussion of women's liberation, and to link up women's groups around the country.⁶⁸ At 20,000 copies sold per month, with each copy reaching about five times as many people, *Spare Rib's* circulation was tiny compared with that of mass-market women's weeklies.⁶⁹ However, unlike other WLM publications, it sold monthly and appeared in high street shops and on newsstands, and therefore became something like the public face of the WLM in Britain. Its editorial collective viewed *Spare Rib* as more than just a magazine: it was a 'consciousness-raising process'.⁷⁰ This description applied both to the non-hierarchical working methods of the collective, and to the relationship they attempted to establish with readers.⁷¹ Readers were invited to contribute content, to attend fundraisers, and even to distribute back copies of the magazine in their local communities.⁷² The collective tried to make the editorial process as visible as possible, both through lengthy explanations within the magazine, and by holding readers' meetings to criticize *Spare Rib* and stimulate new ideas for its future.⁷³ Likewise, the magazine devoted a significant proportion of its total content to ads, events, listings, queries, and to other ways of publicizing feminist activities and organizations in different cities, with the aim of helping readers to get in touch with each other. In all these ways, *Spare Rib* treated its readers as an extension of the editorial collective and approached the magazine as an exercise in levelling and mass consciousness-raising.

The principles underlying *Spare Rib's* health coverage illustrate some of its differences from mass-market women's magazines. The WLM held that women's control of their own bodies was an essential precondition of their liberation. To fight for these rights, women needed the tools to negotiate the patriarchal and misogynist medical establishment – an understanding of the language and methods of medical science, and the courage to dispute its claims. More than this, feminism needed to create new understandings of the body that went beyond the passive acceptance of established systems of knowledge, and to challenge patriarchal oppression through striking at the roots of its ideologically determined definition of female 'nature'.⁷⁴

In practice, this meant rejecting models of expert authority. *Spare Rib* had no resident medical 'expert'; indeed, its employment of Anna Raeburn to answer readers' letters, in a format very like the traditional problem page, lasted only seven issues before the editorial collective published a self-berating explanation for its removal, comparing this kind of top-down counsel to 'a doctor giving valium to a housewife'.⁷⁵ Instead, women's health groups wrote and researched articles on health and illness, or provided commentary on those

produced by members of the editorial collective.⁷⁶ The magazine was heavily influenced by the Boston Women's Health Book Collective's *Our Bodies Ourselves* (1971), the most influential attempt to recreate the experience of the consciousness-raising group in the print format.⁷⁷ In practice, this model meant critiquing medical science, explaining technical terms, using diagrams, illustrations, and colloquial language to make accounts more easily understandable, incorporating women's voices into the text, and asking questions of readers.⁷⁸ Like *Our Bodies Ourselves*, *Spare Rib* actively attempted to include multiple perspectives, decentre authority, and emphasize self-help.

This approach had the potential to yield alternative representations of involuntary childlessness that acknowledged infertile women's pain, but also empowered them by breaking the cast-iron links between motherhood and female identity, and instead celebrating the diversity of women's experiences. At the end of the 1970s and in the early 1980s, some feminist explorations of infertility, discussed in the next section, managed to do just this. However, for almost the entirety of the 1970s, *Spare Rib* was virtually silent on the experience of infertility. Before 1978, the magazine published only two articles that dealt with infertility in any depth. Both focused on wider issues of reproductive health (ectopic pregnancy and salpingitis) and were not flagged within the magazine as primarily concerned with infertility.⁷⁹ Notably absent were the letters from infertile women that spilt across the problem pages of mass-market women's magazines.⁸⁰ In the 1970s, then, infertile women were more or less invisible within public feminist discourse.

This means that any analysis of approaches to infertility within the WLM in the 1970s is primarily an attempt to explain an absence. This invisibility of infertile women is partially explained by the dominant aims of the movement, and especially prominent attitudes towards motherhood. At the first national WLM conference at Ruskin College, Oxford, in 1970, the movement formulated four demands. These included free contraception and abortion on demand, and 24-hour nurseries.⁸¹ The demands established women's control of reproduction and their freedom from sole responsibility for childcare as essential to liberation.⁸² In theory, as feminist medical sociologist Ann Oakley pointed out in 1981, women's freedom to determine their own reproductive destinies depended on both 'the elimination of involuntary reproduction' and 'the cure of involuntary infertility', so that 'all those women who want babies are able to have them'. But in practice, she argued, feminism tended to treat reproduction as 'simply a burden to be dropped, a problem to be excised by preventive medicine'.⁸³ It is difficult to dispute this analysis insofar as infertility is concerned. 'The right to choose' was presented as a matter of access to contraception, abortion, and sterilization rather than as support for the positive choice to have children.⁸⁴ In contrast to the invisibility of infertility, abortion featured in every single issue of *Spare Rib* in the 1970s.

The WLM's stance on reproductive control arose directly from its analysis of motherhood as a coercive social institution. In this view, the belief that maternity determined female nature was used to deny women equal opportunities in

education, work, politics, and social life, and so it had to be challenged.⁸⁵ For some feminists, only a total severing of women's relation to biological reproduction could achieve this aim. In 1970, the New York-based radical feminist Shulamith Firestone (1945–2012) argued that only artificial reproduction could remove the tyranny of sexual division based on biology. Until 'the decision not to have children or to have them by artificial means is as legitimate as traditional child-bearing', women were 'as good as forced into their female roles'. When women were no longer tied to childbearing, other oppressive social and cultural structures such as compulsory heterosexuality, the nuclear family, and the sexual division of labour would crumble.⁸⁶ Firestone insisted that science could obviate the need for the 'barbaric' experience of pregnancy, and that in an era of artificial reproduction, women would indulge in pregnancy 'if at all, only as a tongue-in-cheek archaism, just as already women today wear virginal white to their weddings'.⁸⁷

Although few British feminists rejected the biological experience of pregnancy and childbirth quite so uncompromisingly, the feminist press did actively contest the creed of maternal destiny that implicitly underpinned sympathetic portrayals of infertile women in mass-market magazines. Although – because? – many feminist women were mothers, the WLM directed much energy towards proving that women's lives were not determined by maternity. In a 1975 article, *Spare Rib* promoted better access to sterilization on the basis that many women's ambivalence towards the operation stemmed from the 'deep-seated assumption that *women are here to have babies*'. Women who had freely chosen to be sterilized and had no medical after-effects described it as a liberating experience. Twenty-four-year-old Trish stated: 'Lots of people feel hollow if they don't have kids or the possibility of having them. I don't have that feeling. I now feel in control. I feel whole'.⁸⁸ In this context, the value of the WLM as a space where oppositional sentiments could be articulated and endorsed cannot be denied. However, the need to explicitly formulate the position that women had options other than motherhood, and to keep on repeating it, meant that there was no obvious place for consideration of the needs of infertile women within the movement. It also, as we will see, risked neglecting and devaluing the experience of motherhood.

Despite ambivalence towards the social institution of motherhood, British feminists did not endorse Firestone's call for a transition to artificial reproduction. Many agreed that the 'most crucial political problem of the future' would be 'control of technology', but believed that current scientific ideologies, structures, and practices would be more likely to culminate in hellish dystopia than feminist revolution.⁸⁹ The Women and Science Collective questioned the need for new reproductive technologies such as the creation of 'test tube babies', arguing that 'childbearing is not inherently oppressive'. For this group, the most important aspect of debates on ARTs was 'who would be in control of such technology, and what their aims would be'.⁹⁰ In the view of Jalna Hanmer and Pat Allen, members of the Brighton Women and Science Group, reproductive engineering offered 'a vehicle for the total control of

female reproduction', but its consequences would undoubtedly oppress women if the funding, organization, and commercial exploitation of medical and scientific research remained in male hands. They envisaged a future where women no longer needed for their reproductive capacities were gradually eliminated or bred purely for domestic or sexual traits.⁹¹ These discussions of reproductive technology paid little attention to involuntarily childless women; Hanmer and Allen mentioned the infertile woman only once, to place the notion of her 'right' to a biologically related child on the same footing as her 'right' to choose its sex.⁹²

This effacement of the infertile woman within feminist debates on reproductive technology continued in the 1980s and 1990s. Critiques of reproductive technology paid lip-service to the suffering of infertile women, but denied the reality of their desire for children. Gena Corea, one of the founding members of the Feminist International Network of Resistance to Reproductive and Genetic Engineering (FINRRAGE), acknowledged that infertility caused women 'enormous' suffering, but insisted that this suffering was 'socially structured and inflicted and is therefore not inevitable'.⁹³ The grief of infertile women was caused by patriarchal propaganda that conditioned women's desires as well as their ability to choose. The desire for children represented not a genuine wish, but the fear of barrenness, 'abandonment, loss of love, and nothingness' created by technopatriarchs for their own power and commercial gain. Women were presented as trapped in patriarchal structures, and so not genuinely free to make any choices, including having children.⁹⁴ The solution to the problem of infertility was not to help women to have children, but to find 'ways of dealing with that pain that confront the total situation, the situation of women under patriarchy'.⁹⁵ In other words, infertile women suffered not from childlessness, but from false consciousness; not from the loss of their imagined reproductive futures, but from insufficient feminism.⁹⁶

Here we come to the nub of the problem, arising from the paradox contained within political analyses of experience as a manifestation of false consciousness. If false consciousness is inescapable under capitalism, then this identification of consciousness as false is in itself suspect; so although consciousness-raising is a precondition of revolution, the work of consciousness-raising can never be complete or assured until after revolution has been achieved. Logically, there is no way out of this paradox. In practice, there are always those – the vanguard – who believe that they have arrived at a more perfect (if still imperfect) consciousness than their revolutionary comrades, and so are equipped to diagnose false consciousness in others. This reasoning informed Firestone's technophilic rejection of biological motherhood, Corea's technophobic obliteration of infertile women's hopes and wishes, and *Spare Rib's* consciousness-raising mission alike. It was an inescapable outcome of the intellectual foundations of the WLM.

To understand what this might have meant for infertile feminist women in the 1970s, we need look no further than the most in-depth article *Spare Rib*

published on infertility in this decade, Gillian Lacey's 'Conditioning Goes Deeper Than I Cared to Imagine'.⁹⁷ This illustrates how the WLM provided women with the tools to reach a new, politicized understanding of their emotions and experiences, but could simultaneously cut off other avenues of self-interpretation and negate the value of certain thoughts and feelings. Lacey recounted her experiences of two ectopic pregnancies, resulting in the removal of both fallopian tubes, and reflected on her emotions and responses during treatment, as well as her interactions with the medical system. In a concluding section on 'Feelings as a result of now being sterile', Lacey claimed that she had 'accepted fairly easily my body's reluctance to reproduce without a lot of bother', but only a few paragraphs later suggested that this 'determination not to mind' had made her 'centre my depression on any subject but that of not being able to have kids'. She ended the article by admitting that she 'felt a fear of being sexually rejected because I am no longer able to reproduce. Conditioning goes deeper than I cared to imagine'.⁹⁸ She hardly referred to the emotional effects of infertility itself, even though earlier in the article she had suggested that she wanted children. Lacey's sorrow at infertility was displaced onto fears of sexual rejection, and explained away as the result of conditioning. This analysis incorporates elements of the experience of infertility entirely missing from mass-market women's magazines, and so demonstrates the effects of consciousness-raising; but paradoxically, in her self-diagnosis as a victim of false consciousness, it suggests that Gillian Lacey's feminism would not allow her to acknowledge the reality of all her desires and losses.

In the 1970s, the WLM did not work out how to theorize infertility or how to understand the desires of infertile women and address their needs. In the following decades, amongst the clash and din of voices raised against them, infertile feminists found it difficult to speak, far less to be heard. But if mainstream feminist discourse neglected and even potentially silenced infertile women, it also provided them with the tools to empower themselves. The remainder of this chapter explores feminist articulations of the dilemma of infertility in the late 1970s and early 1980s, and considers how these illuminate the entwinement of specific strengths and weaknesses in second-wave feminism's DNA – what we might think of as the double-helix of empowerment and oppression, or of unity and fragmentation. It ends with some reflections on what this case study of infertility tells us about how the WLM is remembered, and how it might be researched in the future.

AGENCY AND EXPERIENCE, MYTH AND MEMORY

Two powerful experience-centred feminist guides to infertility were published in the late 1970s and early 1980s: Angela Phillips and Jill Rakusen's Anglicized version of *Our Bodies Ourselves* (1978), which included a short section on infertility, and Naomi Pfeffer and Angela Woollett's *The Experience of Infertility* (1983). These texts incorporated the voices of women who had experienced fertility problems. For Pfeffer and Woollett, this was a conscious

attempt to tackle the ‘taboos and silences’ that existed not only in mainstream culture, but within the women’s movement.⁹⁹ They ‘set out to highlight the *experience* of infertility’ so that other ‘infertile women will feel less isolated and will find the support to improve the quality of their lives’.¹⁰⁰ In some ways, this emphasis on experience aligned these texts more closely with representations in mass-market magazines than with later feminist critiques of reproductive technologies. The authors of these experience-centred texts did not conflate infertility with reproductive technology, and took a critical but pragmatic approach which emphasized that women with fertility problems might ‘welcome all the medical technology and see it as comforting insurance and feel angry at the implication that they have been brainwashed’.¹⁰¹

The women who spoke on the pages of these texts voiced their desperation and grief, and the validity of these responses was not denied. They described subjection to familial and social pressures, just as did women in mass-market women’s magazines.¹⁰² Their feminism did not insulate them against experiencing infertility as an assault on their identities. Interviewees said that they no longer felt like ‘a proper woman’ or ‘a true woman’; one feared that ‘nature has passed judgement on me that I’m not fit to be a mother’, and others acknowledged the obsessiveness of their quest for children.¹⁰³ Echoing the testimonies in mass-market women’s magazines, they described their hyper-awareness of other women’s fertility in a world ‘full of pregnant women, in the streets, holding babies, pushing prams. I’m surrounded by pregnant women’.¹⁰⁴ Some felt this as an exclusion not only from the world of mothers, but from ‘the human race’.¹⁰⁵ The replication of this theme of desperation in the very different political contexts of mass-market magazines and the feminist press suggests that desperation was not just a trope: the pain these women described was real, authentic, and should not be ignored.

Of course, there were important differences between articulations of infertility in these contexts. Experience-centred feminist texts actively critiqued medical approaches to infertility, including psychogenic theories of causation, and explained the failures and stresses women might meet with in the medical system.¹⁰⁶ They prepared women for the ageism, sexism, and heterosexism that they were likely to encounter from doctors, social workers, and adoption agencies, warned them of the social conservatism of some prominent support organizations, and enjoined them to take collective action to resolve all these problems.¹⁰⁷ Crucially, they also provided a political analysis of infertility. This acknowledged the ‘great pressure on women to have children, and to concentrate their energies and their identities on their children’, and argued that ‘as long as it is claimed that women’s primary role is as mothers, infertility will undermine the core of their identity’.¹⁰⁸ When balanced with sympathy and understanding, this analysis could help women to seek social solutions to childlessness, and to accept that they could cope with infertility and build productive and happy lives: ‘You are a woman without children, no more, no less’.¹⁰⁹

However, feminist authors had to tread a difficult line. They had somehow to negotiate a balance between acknowledging the pain of infertility, analysing how gendered social structures intensified women's suffering, encouraging them to challenge these structures, and avoiding the reification of motherhood or the implication that 'the only good vagina is a full one'.¹¹⁰ It is no wonder that so few managed it, and that their voices seemed muted against the technophobic clamour of prominent feminist scholarship as the 1980s wore on. But if experience-centred accounts failed to take and hold the centre ground in feminist debates on infertility in the 1980s, this might illustrate some of the strengths and the weaknesses of the WLM. Mass-market women's magazines offered certainties: the biological imperative of the maternal instinct, the value of motherhood as women's greatest social role, and the subsequent tragedy of infertility. The FINRRAGE clan offered certainties of a different kind: the existence of a patriarchal conspiracy, the total social construction of women's desires for motherhood, and the subsequent invalidity of these desires within a truly feminist politics. Against the perfect clarity of these convictions, the WLM of the late 1970s and early 1980s offered uncertainties and ambivalences: a position no less uncompromising than those it must be measured against, but much more difficult to explain and make heard than the simplifications it opposed.

The complexities were endless. Authors tried to avoid retreating to the essentialism of maternalist politics, while maintaining that the politics of reproductive control had to be redefined in order to incorporate the problems of infertile women alongside the accepted emphasis on contraception and abortion. In practice, this could leave them supporting a rhetoric of reproductive choice which drowned out their own claims.¹¹¹ They tried to acknowledge both the pain of infertility *and* ambivalence at the prospect of motherhood. 'Jane' explained that once on the treadmill of infertility investigations, she began to question whether she really wanted children, or just to prove that she was not infertile:

The trouble was, I couldn't remember what I'd been like with kids before I started trying to get pregnant, but after I'd started, I always imagined everyone was watching me and thinking how hopeless I was with kids and why the hell did I want any, and probably, how lucky it was I couldn't produce 'cos I'd be so hopeless with them.¹¹²

Sarah Moore, interviewed by Ann Oakley in the late 1970s, went through a round of infertility tests and unsuccessful treatments before she unexpectedly conceived after stopping treatment. In her four years of infertility, she had thought long and hard about her reasons for wanting children, and admitted that she saw some potential disadvantages to having children, which may have been 'purely selfish', but nonetheless mattered 'a lot'. She explained that when she did become pregnant, she initially had 'a slight anti-feeling about it – a

slight resentment because having worked really hard at work and now I'd got to the point where I was doing what I wanted to do and had just a little bit more authority than I did have', coupled with worry at 'the thought of losing my freedom'.¹¹³

These multifaceted experiences did not fit the model of infertility presented in either mass-market magazines, where women were always unwaveringly committed to motherhood, or in FINRRAGE publications, where they were always completely blinded by the patriarchal myth of motherhood. These revelations of the ambivalence that prospective and new mothers often felt about the task ahead of them should perhaps be considered one of the major achievements of experience-centred feminism.¹¹⁴ This brand of feminism not only scraped away 'the varnish of [. . .] a "Sunday supplement dream" held up to women as a model which leaves each one feeling that she cannot cope as well as all the others', it acknowledged complexity and contradiction as inevitable aspects of human experience.¹¹⁵ However, the refusal to reduce women's experiences to a one-size-fits-all model of ideal femininity or ideal feminism came at a high price. It resisted stereotypes of infertile women, but it could not provide an easily replicable alternative model that could gain equal cultural power.

It is perhaps because the WLM of the 1970s refused to deal in stereotypes that it eventually became the victim of them. The late 1970s and early 1980s witnessed a resurgence of maternalist feminism. In a 1978 *Spare Rib* article, Anna Briggs, a member of the Scarlet Women's Collective, argued that women 'should have more rights in a society' because of their 'reproductive power': 'Because women reproduce and men don't women have different values and priorities, for example, they're more interested in fighting technologies which are a threat to life'.¹¹⁶ This view flowered within feminism in the 1980s, most notably in sections of the Greenham Common Women's Peace Camp. It not only came uncomfortably close to similar claims of female superiority based on maternal instinct propagated by the journalists of mass-market women's magazines,¹¹⁷ but also threatened to exclude women unable or unwilling to reproduce. For Elizabeth Wilson, such attitudes represented a 'sink[ing] back into the stereotyped identities of womanhood that society has held up for us to imitate all along'.¹¹⁸

As maternalist feminism gained strength, it became common for many inside and outside the movement to claim that the WLM devalued motherhood, and had only begun to reassess the importance of maternity when its devotees started to have children.¹¹⁹ This is one of the most persistent myths around the WLM. Some feminist writers have acknowledged an element of truth to the claim insofar as the WLM prioritized campaigns around contraception and abortion over those around pregnancy and childbirth.¹²⁰ However, Lynne Segal's blistering attack on the 'unyielding dogma' that feminists devalued motherhood is a convincing demolition of the wider argument. Segal points out that not only were many members of the movement young mothers, but that the WLM achieved a 'glorious ideological shift' in

successfully undermining ‘the stigma of single motherhood and illegitimacy’, and in creating ‘a sense that men were privileged to be able to relate to children and put time and energy into them’. Feminists ‘fought tirelessly’ for ‘changes in maternity care’, and ‘placed the subject of nurseries, shared parenting, “working” time, children’s health requirements, play space, schooling, mothers’ housing needs, anything else we could think of in relation to women and children, on the political agenda’.¹²¹

How, then, can we explain criticisms of feminist attitudes to motherhood from within the movement? It is not difficult to find such accounts. Anna Davin recalled feeling ‘alienated’ at conferences where her historical research on motherhood was treated as ‘irrelevant’ by other participants.¹²² In 1977, Terry Slater explained her decision to have a baby to readers of *Spare Rib*, and described the reaction of women’s groups who seemed to believe that ‘no woman in her right mind would now actually consciously decide to have a baby – not now that we had realised what a trap and what a con the mother’s role is. From everywhere I got the idea that it was not right to want a baby’.¹²³ Not much had changed two years later, when pregnant Tessa Weare found that some feminist friends treated her ‘with pity, others with amazement that I’d voluntarily chosen to increase my own oppression’.¹²⁴ In the late 1970s, Pat Garland felt that as a pregnant woman with two children, the women’s group at her university had ignored her needs, but that now ‘the people that were in that early group have got children [...] they actually want to talk about completely different things. It’s rather funny’.¹²⁵ Janet Ree described how in the early 1970s she had ‘completely accepted’ the feminist ‘line’ that women must not fall for the ‘myth of motherhood’, even though it clashed with her own ‘conventional aspiration’ for a family life, and led her to spend less time that she would have liked with her young children. She also recounted how two of her consciousness-raising groups had neglected the experiences of mothers, including a distressing incident when she returned to her group shortly after giving birth, and no one asked about her experiences or the baby.¹²⁶

These accounts can be interpreted in several ways. We might argue that these negative experiences are less reflections of actual attitudes within the WLM, and more of many women’s experience of motherhood itself as ‘a contradictory and isolating experience, one which brought frustration and anger as well as joy’.¹²⁷ Equally, we could take the stories at face value, as demonstrating a genuine divide between feminists who were mothers and those without children. Jo Ingram stated that having a child was ‘a consciousness-raising experience for me; it’s shown me tremendously that I’m just one of millions’. As a feminist, she had never accepted that women might feel more connected to the home than work, but now she had a child, she claimed ‘that’s what worries *me* far more than my job conditions [...] what sort of chance he’s getting, nursery facilities and so on’.¹²⁸ In another vein entirely, we might counter these stories with tales of women who found the WLM a supportive environment in which to bear and raise children.¹²⁹ We might also emphasize that criticism of the WLM for devaluing motherhood could be accompanied by paeans to the strength

bestowed by feminism. Tessa Weare thanked ‘the stubbornness I learnt from feminism’ for helping her to cope with the lack of support from her feminist friends during her pregnancy.¹³⁰ Similarly, Janet Ree concluded that despite ‘always feeling it didn’t take on motherhood, I absolutely loved being in the women’s movement [. . .]. The quality of relationship that those meetings and groupings produced is indescribably powerful, and far more important than my relationship with a man was at that time, without question’.¹³¹

These readings are not mutually exclusive, but the existence of contradictory stories and the possibility of multiple interpretations perhaps indicates, more than anything else, one of the strengths of the WLM. The recording of experiences in which feminists seemed to devalue motherhood is important, but it is just as important that these criticisms were voiced within the context of the WLM itself. These criticisms exist because the movement encouraged debate, and spurred action to correct injustice. When Sara Maitland realized that infertile women had ‘been left out of the whole feminist discussion about children’, her response was to write *Daughter of Jerusalem* (1978), a novel imagining and exploring these voices.¹³² Ann Oakley found many feminists ‘distinctly anti-natalist’, and argued that the prominent emphasis on freeing women from reproduction ‘unconsciously echoed the patriarchal view of women; women as sexual objects or subjects condemned by their biology to motherhood’.¹³³ One of her responses to this perceived imbalance was to have a third child, as part of the effort to show that ‘feminism and motherhood are only contradictory aims because of contradictions imposed on women by their culture’, and to ‘re-establish reproduction as authentic and unalienated labour’.¹³⁴ But her other response was to research, write, and publish a series of groundbreaking works of feminist medical sociology which shaped scholarship on gender, health and illness throughout the 1980s and 1990s.¹³⁵ Her response came from within feminism, and strengthened it.

Moreover, it is no accident that we can find so many and varied testaments to different attitudes to motherhood within the WLM. As a grassroots movement based on small group activity, the WLM encouraged the proliferation of different perspectives. Each of the experiences described above represented both the reality of that woman’s encounter with the WLM and the essence of that movement in forgoing the ‘simplistic duality’ of mainstream culture.¹³⁶ For Sue O’Sullivan, the WLM was ‘what enabled me to make sense of the world, enabled me to live with incomplete or contradictory answers, gave me an intellectual and emotional curiosity, sustained me and led me to develop faltering courage in myself and ultimately opened the door to lesbianism for me’.¹³⁷ This refusal to flatten out the diversity of experience was one of the greatest assets of the 1970s WLM; but it also left the movement vulnerable to the accusations of those who insisted on creating the alternative stereotype of a monolithic WLM that devalued motherhood, and to the predatory discourse of a later feminism that traded in tropes and claimed to speak for women, rather than listening to them.

CONCLUSION

In the 1960s and 1970s, cultural representations of infertility were fraught with contradiction and tension. In theory, the WLM was committed to allowing all women to find their voices and to creating spaces in which these voices could be heard. Yet infertile women were consistently marginalized or ignored within the feminist press. The intense desire for children went against the mainstream of the movement in the 1970s, which focused on the right *not* to reproduce, while infertility also undermined the mantra of choice and hinted darkly that biology might be inescapable after all. In this period, the uncomfortable problems that infertility posed for feminism were brushed aside or unacknowledged. In contrast, mass-market women's magazines validated infertile women's yearning for children, sympathized with their pain, and enabled their voices to be heard; but this was because women's magazines implicitly subscribed to and explicitly bolstered a view of female nature as determined by the capacity for reproduction. Although infertile women were acknowledged by mass-market women's magazines, they were also doomed to be viewed as tragic figures, incomplete and excluded from the wider community of wives and mothers. These trends were consolidated in the 1980s as the figure of the infertile woman became a cultural trope, endlessly exploited in soap stories and heart-tugging articles, and as prominent feminist critiques of reproductive technology hardened along lines anticipated in the 1970s, alternately censoring infertile women or portraying them as nothing more than signifiers of a socially constructed set of inauthentic desires.

Historians must somehow find ways of writing the history of infertility, feminism, and motherhood that avoid reducing infertile women to nothing more than the product of discourse, while still challenging the biological determinism that propels maternalism. How, then, can we write a feminist history of infertility, one which stays true to the principles of the movement and creates the space that the WLM seemed to promise all its sisters? In holding that 'the personal is political' and making consciousness-raising its central political technique, the WLM tried to keep individual experience at the heart of all it did, while simultaneously helping individuals realize their implication in broader structures, and their capacities to take control and change these structures. In incorporating the principles of consciousness-raising into writing feminist histories of infertility, we can continue this endeavour and place experience at the heart of these histories again.

The writing and publishing practices of the WLM show us how this might be achieved. When Sara Maitland edited her collection on women's memories of the 1960s, she explained:

I wanted to edit [this book], rather than write it, because one of the most important things of the time was the liberating of individual voices into defining collective experience. It was in part that valuing of the collective over and above private ownership, which even in its silliest forms was an insistent part of the

sixties, which made the women's movement and the other radical political activities of the seventies possible.¹³⁸

Similarly, in her autobiography, Elizabeth Wilson reflected that 'if there is a typical literary form of feminism it is the fragmented, intimate form of confessional, personal testimony, autobiography, the diary, "telling it like it was"'. She argued that feminism urgently needed to develop a form of collective subjectivity that allowed for difference and diversity, a 'powerful sense of identity as both collective and individualised'. In her view, the 'testimony of consciousness raising, and of those "women's" literary forms of diary, autobiography and confession', might achieve this, because they 'do not suggest an identical experience of the world, although the testimony has made possible the identification of points of similarity which have formed the basis for collective politics'.¹³⁹ In memoirs, autobiographies, testimonies, and stories, we will find the history of the experience of infertility that needs to be told, and the way to tell it: by including different voices, offering interpretations in dialogue with past and present, and not overwriting the testimony of our witnesses. New understandings of the historical diversity of infertile women's experiences, and in turn of the extent and the limits of women's agency, will arise only when we separate out women's stories from the subsequent accretions of myth, stereotype, and ideology – not only when women can speak, but when we ensure that they will be heard.

NOTES

1. Doris Lessing, *The Golden Notebook* (London, 1962), p. 540.
2. B. Jane Elliott, 'Demographic Trends in Domestic Life, 1945–87', in David Clark (ed.), *Marriage, Domestic Life & Social Change: Writings for Jacqueline Burgoyne* (London and New York, 1991), pp. 96–7; Elizabeth Roberts, *Women and Families: An Oral History, 1940–1970* (Oxford, 1995), pp. 18–19, 81, 125–7.
3. Jeffrey Weeks, *Sex, Politics and Society: The Regulation of Sexuality Since 1800*, 3rd edn (Abingdon, Oxon., 2010), pp. 321–56; Adrian Bingham, *Family Newspapers? Sex, Private Life, and the British Popular Press 1918–1978* (Oxford, 2009), especially pp. 117–24.
4. John Peel, 'The Hull Family Survey II: Family Planning in the First 5 Years of Marriage', *Journal of Biosocial Science*, 4:3 (July 1972), p. 345.
5. Richard Titmuss, *Essays on 'The Welfare State'* (London, 1958), p. 91; Ronald Fletcher, *The Family and Marriage in Britain*, rev. edn (Harmondsworth, 1966), p. 230, emphasis in original.
6. Sue O'Sullivan, 'Birth Control: Who Controls?', in Sue O'Sullivan (ed.), *Women's Health: A Spare Rib Reader* (London and New York, 1987), pp. 153–4.
7. Hera Cook, 'The English Sexual Revolution: Technology and Social Change', *History Workshop Journal*, 59:1 (2005).
8. Naomi Pfeffer, *The Stork and the Syringe: A Political History of Reproductive Medicine* (Cambridge, 1993), pp. 27–8, 111–41.

9. On adoption rates, see Pat Thane and Tanya Evans, *Sinners? Scroungers? Saints? Unmarried Motherhood in Twentieth-Century England* (Oxford, 2012), p. 103.
10. Michael Smith, *Woman's Own Guide to Birth Control* (Middlesex, 1980), p. 16.
11. Margarete Sandelowski, 'Failures of Volition: Female Agency and Infertility in Historical Perspective', *Signs*, 15:3 (April 1990), especially p. 498.
12. Charis M. Thompson, 'Feminists Theorize Infertility', in Marcia C. Inhorn and Frank van Balen (eds), *Infertility Around the Globe: New Thinking on Childlessness, Gender, and Reproductive Technologies* (Berkeley, LA, and London, 2002), p. 52.
13. Margarete Sandelowski and Sheryl de Lacey, 'The Uses of a "Disease": Infertility as Rhetorical Vehicle', in Inhorn and van Balen (eds), *Infertility Around the Globe*, pp. 42–3; Margarete Sandelowski, 'Fault Lines: Infertility and Imperilled Sisterhood', *Feminist Studies*, 16:1 (April 1990), p. 39.
14. Cynthia White, *Women's Magazines, 1693–1968* (London, 1970), pp. 216–7, 220, 232–5; Ros Ballaster, Margaret Beetham, Elizabeth Fraser, and Sandra Hebron, *Women's Worlds: Ideology, Femininity and the Woman's Magazine* (Basingstoke, 1991), p. 111.
15. Ballaster et al, *Women's Worlds*, p. 109; Sammye Johnson and Patricia Prijatel, *The Magazine From Cover to Cover: Inside a Dynamic Industry* (Lincolnwood, IL, 1998), pp. 112–15.
16. Sarah Franklin, 'Deconstructing "Desperateness": The Social Construction of Infertility in Popular Representations of New Reproductive Technologies', in Maureen McNeil, Ian Varcoe, and Steven Yearley (eds), *The New Reproductive Technologies* (Basingstoke, 1990).
17. Franklin, 'Deconstructing "Desperateness"', p. 215.
18. For a similar critique, see Sandelowski and de Lacey, 'The Uses of a "Disease"', p. 42.
19. Carolyn Faulder, 'Women's Magazines', in Josephine King and Mary Stott (eds), *Is This Your Life? Images of Women in the Media* (London, 1977), p. 177.
20. Roberts, *Women and Families*, pp. 141–9.
21. 'What a Woman Will Go Through to Have a Baby', *Woman*, 21 October 1978; 'Our Miracle Called Louise', *Woman*, 6 October 1979; Joyce Mollet, 'I Went to the Ends of the Earth to Find My Baby', *Woman's Own*, 22 April 1978.
22. Mary Grant [MG], 'Letter: I Can't Have Children', *Woman's Own*, 10 September 1977.
23. See Maggie Jones, *Trying to Have a Baby? Overcoming Infertility and Child Loss* (London, 1984), p. 7.
24. 'What a Woman Will Go Through to Have a Baby'; 'Our Miracle Called Louise', p. 60.
25. Claire Rayner, 'Diary of Hope', *Woman's Own*, 29 October 1977, p. 53.
26. Anna Raeburn [AR], 'Letter: No Importance to Anyone', *Woman*, 21 January 1978.
27. 'What a Woman Will Go Through to Have a Baby'.
28. 'What a Woman Will Go Through to Have a Baby'.
29. 'What a Woman Will Go Through to Have a Baby'.
30. Evelyn Home [EH], 'Letter: Baby-Yearning', *Woman*, 1 January 1966.
31. 'Our Miracle Called Louise'.

32. 'To the World She's a Miracle But to Her Parents John and Lesley, She's Just ... "OUR LOUISE"', *Woman*, 20 October 1979.
33. Ruth Martin, 'Letter: Foster Mum', *Woman*, 2 April 1966; Virgil Damon and Isabella Raves, 'Women, Love, Marriage and Babies', *Woman's Own*, 5 October 1963, p. 43.
34. 'Marlene Dietrich's ABC', *Woman's Own*, 6 October 1962, p. 16.
35. 'The Mystery of Being a Woman', *Woman's Own* pull-out supplement, 4 October 1969, p. 2.
36. EH, 'Response: Wanting a Baby', *Woman*, 2 July 1966; Godfrey Winn, 'What a Baby Can Mean to a Marriage', *Woman*, 1 October 1966. See also Robert Newill, *Infertile Marriage* (Harmondsworth, 1974), p. 14.
37. 'What a Woman Will Go Through to Have a Baby'.
38. EH, 'Letter: Rejection', *Woman*, 5 October 1968; AR, 'Letter: He Changed His Mind', *Woman*, 2 September 1978.
39. EH, 'Letter: There May Be a Chance', *Woman*, 8 July 1961; MG, 'Letter: Too Old for a Family?', *Woman's Own*, 23 April 1977.
40. EH, 'Letter: Babies Wanted', *Woman*, 4 March 1961; 'Your Letters to Matron', *Woman's Weekly*, 6 July 1963; MG, 'Letter: We Long for a Baby', *Woman's Own*, 4 July 1964.
41. EH, 'Letter: Longed-For Baby', *Woman*, 5 October 1963.
42. AR, 'Letter: In the Dark', *Woman*, 1 July 1978; AR, 'Letter: Can I Have Children?', *Woman*, 14 October 1978; Virginia Ironside [VI], 'Letter: Am I Too Small?', *Woman*, 6 January 1979; VI, 'Letter: Can't Ejaculate', *Woman*, 29 March 1980.
43. AR, 'Letter: A New Start But ...', *Woman*, 11 February 1978; AR, 'Letter: Complicated Operation', *Woman*, 18 March 1978; AR, 'Letter: Not Sexy', *Woman*, 17 June 1978; VI, 'Letter: Fertility and the Pill', *Woman*, 7 July 1979; VI, 'Letter: Orgasm for Fertility?', *Woman*, 14 July 1979; VI, 'Letter: Divine Retribution', *Woman*, 26 January 1980.
44. VI, 'Letter: Sex Puzzle', *Woman*, 26 May 1979.
45. In part, this reticence related to concerns about what could and could not be published. In the late 1970s, editors were still wary of potential moral objections to artificial insemination. Peggy Makins, *The Evelyn Home Story* (Glasgow, 1975), pp. 142–4.
46. EH, 'Response: Babies Wanted', *Woman*, 4 March 1961; EH, 'Response: There May Be a Chance', *Woman*, 8 July 1961; 'Your Letters to Matron', *Woman's Weekly*, 6 July 1963.
47. Sister Helen Grove, 'Health Matters: Planning a Baby', *Woman's Weekly*, 7 January 1961; EH, 'Response: Babies Wanted'; Joan Williams, 'Talking about Health: Hoping for a Baby', *Woman*, 8 July 1961; EH, 'Response: Longed-For Baby'.
48. EH, 'Response: Longed-For Baby'; MG, 'Response: We Long for a Baby'; EH, 'Response: Wanting a Baby'.
49. Quotations from EH, 'Response: Wanting a Baby', *Woman*, 2 July 1966 and Godfrey Winn, 'Can You Compromise?', *Woman*, 3 April 1971. See also Ruth Martin, 'Woman-to-Woman Service', *Woman's Own*, 4 October 1969; EH, 'Response: Girl Wanted', *Woman*, 3 January 1970; EH, 'Response: Wanting a Child', *Woman*, 3 October 1970. On the perceived difficulties of adoption, see Pfeffer, *The Stork and the Syringe*, pp. 140, 160.

50. 'The Mystery of Being a Woman', p. 2.
51. Marjorie Proops, 'Counselling-in-the-Round', *Woman*, 14 October 1967; AR, 'Response: A New Start But . . . '.
52. EH, 'Letter: Beating the Handicap', *Woman*, January 7 1961; AR, 'Letter: We're Thankful We Never Had Children', *Woman*, 3 April 1976.
53. AR, 'Response: No Importance to Anyone', *Woman*, 21 January 1978.
54. MG, 'Response: I Can't Have Children'; 'Our "Keep-It-By-You" Service', *Woman's Weekly*, 1 July 1961; Angela Talbot, 'Letter: How It's Done', *Woman*, 5 January 1963; EH, 'Response: Longed-For Baby'; EH, 'Response: Wanting a Baby', *Woman*, 2 July 1966; AR, 'Response: No Importance to Anyone'.
55. Rayner, 'Diary of Hope', p. 53.
56. Joan Williams, 'Talking about Health: A Hopeful New Year', *Woman*, 7 January 1961; Ruth Martin, 'News for the Childless', *Woman's Own*, 3 October 1964, p. 68; Claire Rayner, 'Prostaglandins', *Woman's Own*, 1 January 1977, p. 25.
57. 'Happy Birthday . . . Second Time Around', *Woman*, 3 October 1970.
58. See for example Joyce Robinson, 'Miraculous Joseph', *Woman*, 6 July 1976; 'The Miracle Babies', *Woman*, 6 January 1979.
59. 'Our Miracle Called Louise', p. 42; Fred Austin, 'Test-Tube Baby Doctor: What Drove Him On', *Woman's Own*, 5 August 1978, p. 46.
60. Elliott Philip, *Childlessness: Its Causes and What to Do About Them* (London, 1975), p. 178; Lucienne Lanson, *From Woman to Woman: A Gynaecologist Answers Questions About You and Your Body* (Harmondsworth, 1977), pp. 225, 240.
61. Makins, *The Evelyn Home Story*, pp. 67, 125, 134–5.
62. Angela Patmore, *Marje: The Guilt and the Gingerbread* (London, 1993), p. 57; Proops, 'Counselling-in-the-Round'.
63. Claire Rayner, *How Did I Get Here From There?* (London, 2008), pp. 281–7.
64. Rayner, *How Did I Get Here From There?*, pp. 333–4, 397.
65. Faulder, 'Women's Magazines', pp. 173–4. For analysis of this critique, see Penny Tinkler, *Constructing Girlhood: Popular Magazines for Girls Growing Up in England, 1920–1950* (London, 1995), pp. 6–7.
66. Karl Marx, 'A Contribution to the Critique of Hegel's Philosophy of Right' (1844), quoted in Michelene Wandor, 'The Conditions of Illusion', in Sandra Allen, Lee Sanders and Jan Wallis (eds), *Conditions of Illusion: Papers from the Women's Movement* (Leeds, 1974), p. 207.
67. See Amaya, 'False Consciousness Coops People Up', *Spare Rib* [SR], 30 (December 1974); Sue Bruley, 'Women Awake, The Experience of Consciousness-Raising', in Feminist Anthology Collective, *No Turning Back: Writings from the Women's Liberation Movement, 1975–1980* (London, 1981); Sue Bruley, 'Consciousness-Raising in Clapham: Women's Liberation as "Lived Experience" in South London in the 1970s', *Women's History Review*, 22:5 (2013).
68. Marsha Rowe, 'Introduction', in Marsha Rowe (ed.), *The Spare Rib Reader* (Harmondsworth, 1982), pp. 13, 18; Elizabeth Nelson, *The British Counter-Culture, 1966–73: A Study of the Underground Press* (Basingstoke, 1989), p. 140.

69. Faulder, 'Women's Magazines', p. 191; Janice Winship, *Inside Women's Magazines* (London and New York, 1987), p. 123.
70. Rowe, 'Introduction', p. 19.
71. Marsha Rowe, 'Editorial: How and Why Does *Spare Rib* Work as a Collective?', *SR*, 32 (February 1975); Marsha Rowe, 'Introduction', p. 18.
72. Hilary Wilce, 'How Long Did You Believe That One?', *SR*, 5 (November 1972); 'Invitation', *SR*, 28 (October 1974), p. 33; 'Shaping Things to Come', *SR*, 35 (May 1975), p. 45; 'A Day in the Life of... Ann', *SR*, 60 (July 1977); Ads, *SR*, 44 (March 1976), p. 27.
73. 'News: Meet the Readers', *SR*, 43 (January 1976), p. 28.
74. Barbara Ehrenreich and Deirdre English, *Complaints and Disorders: The Sexual Politics of Sickness* (London, 1973), pp. 9–11.
75. 'Editorial', *SR*, 21 (March 1974), p. 10.
76. 'Self-Examination, Why It's So Important', *SR*, 21 (March 1974); Essex Road London Women's Health Group, 'How to Get an Abortion', *SR*, 38 (August 1975).
77. See Susan Wells, "'Our Bodies, Ourselves": Reading the Written Body', *Signs*, 33:3 (Spring 2008), pp. 703–8.
78. See for example Lin Layram, 'To Lose a Breast Seemed More Terrible Than Dying'; Jill Rakusen, 'The Diagnosis, Treatment and Aftercare of Breast Cancer'; and 'Breast Self-Examination', all published in *SR*, 37 (July 1975).
79. Gillian Lacey, 'Conditioning Goes Deeper Than I Cared to Imagine', *SR*, 23 (May 1974); Archway Women's Health Group, 'Salpingitis', *SR*, 61 (August 1977). See also the description of Lacey's article in 'Back Ribs on Health', *SR*, 63 (October 1977).
80. An exception is Letter from Bidy de Muro, 'Odds and Sods: Conception or Adoption?', *SR*, 39 (September 1975).
81. 'The Four Demands', in Michelene Wandor (compiler), *The Body Politic: Women's Liberation in Britain* (London, 1972), p. 2.
82. For a succinct statement of this view, see Juliet Mitchell, *Woman's Estate* (Harmondsworth, 1971), pp. 107–8.
83. Ann Oakley, *Subject Women* (London, 1982), pp. 189–90, 207.
84. See, for example, 'Editorial', *SR*, 33 (March 1975).
85. Oakley, *Subject Women*, pp. 207–9.
86. Shulamith Firestone, *The Dialectic of Sex* (London, 1979) [1970], quotation p. 190; for a summary of her argument, see pp. 19, 192–7.
87. Firestone, *The Dialectic of Sex*, pp. 188–9, 224.
88. Sue O'Sullivan, 'Sterilization', *SR*, 33 (March 1975), p. 13: Emphasis in the original.
89. Quotation Michelene Wandor, 'Reviews', *SR*, 9 (March 1973), p. 29. See also Michelene Wandor, 'From Tribal Kitchen Sink to Dishwasher', *Red Rag*, 3 (1973); Brigitte Gohdes, 'A Substitute for Nature, Chance and Human Relations?', *SR*, 145 (August 1984).
90. Women and Science Collective, 'Seeing Through Science', *SR*, 39 (September 1975), p. 14; see also Ann Oakley, *The Captured Womb: A History of the Medical Care of Pregnant Women* (Oxford, 1984), pp. 282–3.

91. Jalna Hanmer and Pat Allen, 'Reproductive Engineering: The Final Solution?', in Brighton Women and Science Group, *Alice Through the Microscope: The Power of Science Over Women's Lives* (London, 1980), pp. 226–7.
92. Hanmer and Allen, 'Reproductive Engineering', p. 209.
93. Gena Corea, *The Mother Machine: Reproductive Technologies from Artificial Insemination to Artificial Wombs* (London, 1988) [1985], p. 6; see pp. 327–30 for more on the foundation and aims of FINRRAGE.
94. Corea, *The Mother Machine*, pp. 169–70.
95. Corea, *The Mother Machine*, p. 173.
96. For a thorough critique of this position, see Sandelowski, 'Failures of Volition', especially pp. 498–9.
97. Lacey, 'Conditioning Goes Deeper Than I Cared to Imagine'.
98. Lacey, 'Conditioning Goes Deeper Than I Cared to Imagine', p. 11.
99. Naomi Pfeffer and Anne Woollett, *The Experience of Infertility* (London, 1983), p. 1. Hereafter *TEI*.
100. Pfeffer and Woollett, *TEI*, pp. 54, 147: Emphasis in the original.
101. Pfeffer and Woollett, *TEI*, pp. 99, 118.
102. Boston Women's Health Book Collective/ Angela Phillips and Jill Rakusen, *Our Bodies Ourselves: A Health Book By and For Women*, British edn (Harmondsworth, 1978), p. 497. Hereafter *OBOs*.
103. Pfeffer and Woollett, *TEI*, pp. 19, 23; *OBOs*, pp. 490, 493, 498.
104. Pfeffer and Woollett, *TEI*, pp. 5, 31–2, 43.
105. Pfeffer and Woollett, *TEI*, pp. 17–18.
106. *OBOs*, pp. 489–90, 495–6; Pfeffer and Woollett, *TEI*, pp. 8–9, 14, 37, 42–5, 47, 49–50, 54, 63, 88, 102–5.
107. *OBOs*, pp. 497, 500; Pfeffer and Woollett, *TEI*, pp. 18–19, 40, 43, 140.
108. Pfeffer and Woollett, *TEI*, pp. 15, 100. See also pp. 19, 30, 40, 65.
109. Pfeffer and Woollett, *TEI*, p. 140; see also pp. 107, 138, 141.
110. Sara Maitland in Jean Radford, 'Women Writing', in Feminist Anthology Collective (ed.), *No Turning Back*, p. 262.
111. See Sara Maitland, *Daughter of Jerusalem* (London, 1993) [1978], pp. 49–51, 88–90; Letter from Barbara Jane, 'Infertile Women on Abortion', *SR*, 155 (June 1985), p. 5.
112. *OBOs*, p. 498.
113. Sarah Moore, in Ann Oakley, *From Here to Maternity: Becoming a Mother* (Harmondsworth, 1981), pp. 39–40.
114. Oakley, *From Here to Maternity*, pp. 117, 251–3, 256–7, quotation p. 267; see also Pfeffer and Woollett, *TEI*, p. 121.
115. Sheila Kitzinger, *Women as Mothers* (London, 1978), p. 47.
116. Barbara Charles and Anna Briggs, 'Reproduction Rights', *SR*, 71 (June 1978), pp. 43–6; Kitzinger, *Women as Mothers*, p. 245.
117. Makins, *The Evelyn Home Story*, p. 80.
118. Elizabeth Wilson, *Mirror Writing: An Autobiography* (London, 1982), pp. 138–40.
119. Ann Dally, *Inventing Motherhood: The Consequences of an Ideal* (London, 1982), pp. 165–85; Oakley, *The Captured Womb*, p. 253.

120. Sue O'Sullivan, 'Discussing Childbirth', in O'Sullivan (ed.), *Women's Health*, pp. 303–4.
121. Lynne Segal, *Making Trouble: Life and Politics* (London, 2007), pp. 84–6.
122. Anna Davin, in Michelene Wandor (ed.), *Once a Feminist: Stories of a Generation* (London, 1990), p. 65.
123. Terry Slater, 'Why I Decided to Have a Baby', *SR*, 63 (October 1977).
124. Tessa Weare, 'Round in a Flat World', *SR*, 78 (January 1979), p. 16.
125. Pat Garland, in Jean McCrindle and Sheila Rowbotham (eds), *Dutiful Daughters: Women Talk About Their Lives* (Harmondsworth, 1979), p. 292.
126. Janet Ree, in Wandor (ed.), *Once a Feminist*, pp. 97, 100–1.
127. O'Sullivan, 'Discussing Childbirth', p. 303; Sue O'Sullivan, 'My Old Man Said Follow the Vanguard', in Sara Maitland (ed.), *Very Heaven: Looking Back at the 1960s* (London, 1988), p. 125.
128. Jo Ingram, in Oakley, *From Here to Maternity*, pp. 268–9.
129. Michèle Roberts, *Paper Houses: A Memoir of the '70s and Beyond* (London, 2008), p. 50; Audrey Battersby and Catherine Hall, in Wandor (ed.), *Once a Feminist*, pp. 114–5, 177.
130. Weare, 'Round in a Flat World', p. 17.
131. Ree, in Wandor (ed.), *Once a Feminist*, pp. 102–3.
132. Radford, 'Women Writing', p. 260.
133. Oakley, *From Here to Maternity*, p. 22.
134. Ann Oakley, *Taking it Like a Woman* (London, 1985), p. 129.
135. See Margaret E. Reid, 'A Feminist Sociological Imagination? Reading Ann Oakley', *Sociology of Health and Illness*, 5:1 (2008).
136. Marsha Rowe, 'Up From Down Under', in Maitland (ed.), *Very Heaven*, p. 165.
137. O'Sullivan, 'My Old Man Said Follow the Vanguard', p. 113.
138. Sara Maitland, "'I Believe in Yesterday" – An Introduction', in Maitland (ed.), *Very Heaven*, p. 11.
139. Wilson, *Mirror Writing*, pp. 152–7.

RESEARCH RESOURCES

Primary Sources

Magazines

The mass-market women's magazines discussed in this chapter (*Woman*, *Woman's Own* and *Woman's Weekly*) can be consulted in the British Library. The full run of *Spare Rib* has now been digitized and can be accessed at <https://journalarchives.jisc.ac.uk/britishlibrary/sparerib>.

Autobiographies, Memoirs and Feminist Writing on Infertility

Boston Women's Health Book Collective/Angela Phillips and Jill Rakusen, *Our Bodies Ourselves: A Health Book By and For Women*, British edn (Harmondsworth: Penguin, 1978).

- Feminist Anthology Collective (ed.), *No Turning Back: Writings from the Women's Liberation Movement 1975–80* (London: The Women's Press, 1981).
- Sara Maitland (ed.), *Very Heaven: Looking Back at the 1960s* (London: Virago, 1988).
- Peggy Makins, *The Evelyn Home Story* (Glasgow: Fontana, 1975).
- Jean McCrindle and Sheila Rowbotham (eds), *Dutiful Daughters: Women Talk About Their Lives* (Harmondsworth: Penguin, 1979).
- Sue O'Sullivan (ed.), *Women's Health: A Spare Rib Reader* (London and New York: Pandora Press, 1987).
- Ann Oakley, *From Here to Maternity: Becoming a Mother* (Harmondsworth: Penguin, 1981).
- Ann Oakley, *Taking it Like a Woman* (London: Fontana, 1985).
- Naomi Pfeffer and Anne Woollett, *The Experience of Infertility* (London: Virago, 1983).
- Claire Rayner, *How Did I Get Here From There?* (London: Virago, 2008).
- Michèle Roberts, *Paper Houses: A Memoir of the '70s and Beyond* (London: Virago, 2008).
- Lynne Segal, *Making Trouble: Life and Politics* (London: Serpent's Tail, 2007).
- Micheline Wandor (compiler), *The Body Politic: Women's Liberation in Britain* (London: Stage 1, 1972).
- Micheline Wandor (ed.), *Once a Feminist: Stories of a Generation* (London: Virago, 1990).
- Elizabeth Wilson, *Mirror Writing: An Autobiography* (London: Virago, 1982).

Secondary Sources

- Ros Ballaster, Margaret Beetham, Elizabeth Fraser, and Sandra Hebron, *Women's Worlds: Ideology, Femininity and the Woman's Magazine* (Basingstoke: Palgrave Macmillan, 1991).
- Hera Cook, 'The English Sexual Revolution: Technology and Social Change', *History Workshop Journal*, 59:1 (2005), 109–28.
- Sarah Franklin, 'Deconstructing "Desperateness": The Social Construction of Infertility in Popular Representations of New Reproductive Technologies', in Maureen McNeil, Ian Varcoe, and Steven Yearley (eds), *The New Reproductive Technologies* (Basingstoke: Palgrave Macmillan, 1990), pp. 200–29.
- Ann Oakley, *Subject Women* (London: Martin Robinson, 1982).
- Naomi Pfeffer, *The Stork and the Syringe: A Political History of Reproductive Medicine* (Cambridge: Polity Press, 1993).
- Elizabeth Roberts, *Women and Families: An Oral History, 1940–1970* (Oxford: Basil Blackwell, 1995).
- Margarete Sandelowski, 'Failures of Volition: Female Agency and Infertility in Historical Perspective', *Signs*, 15:3 (April 1990), 475–99.
- Margarete Sandelowski and Sheryl de Lacey, 'The Uses of a "Disease": Infertility as Rhetorical Vehicle', in Marcia C. Inhorn and Frank van Balen (eds), *Infertility Around the Globe: New Thinking on Childlessness, Gender, and Reproductive Technologies* (Berkeley, LA, and London: University of California Press, 2002), pp. 33–51.
- Charis M. Thompson, 'Feminists Theorize Infertility', in Marcia C. Inhorn and Frank van Balen (eds), *Infertility Around the Globe: New Thinking on Childlessness, Gender, and Reproductive Technologies* (Berkeley, LA, and London: University of California Press, 2002), pp. 52–78.

Jeffrey Weeks, *Sex, Politics and Society: The Regulation of Sexuality Since 1800*, 3rd edn (Abingdon, Oxon.: Routledge, 2010).

Susan Wells, “‘Our Bodies, Ourselves’: Reading the Written Body”, *Signs*, 33:3 (Spring 2008).

Janice Winship, *Inside Women's Magazines* (London and New York: Pandora Press, 1987).

The Janus Face of Infertility in the Global North and South: Reviewing Feminist Contributions to the Debate

Sara MacBride-Stewart and Rachel Simon-Kumar

INTRODUCTION

This chapter explores feminist contributions to perspectives on infertility in the global North and global South in the period after the emergence of biomedical techniques (assisted reproductive technologies or ARTs) to overcome infertility.¹ A comparative study of feminist discourses on infertility in these diverse global sites realizes several possibilities. At one level, it offers an account of the historical emergence of infertility critiques in the global North and the global South, especially in the period from the 1970s onwards, corresponding to the development of late twentieth-century feminist consciousness in both regions.² Some feminist approaches have embraced the view that women are empowered by technologies that promote individual rights and choices in overcoming infertility, while others have been critical of the capacity of reproductive technologies to widen local and global divisions, with increasing evidence of an infertility divide. These contradictions in feminist responses to infertility across the globe mirror more fundamental entanglements between feminism and capitalism. Pitched against the

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contrasting waves of the rise and decline of capitalism in the ‘developing’ and the ‘developed’ world, this chapter highlights how the emphasis on a politics of recognition (including in healthcare) that came to dominate later second wave feminism became aligned with neoliberalism. This central thesis of Nancy Fraser’s 2013 account of second wave feminism in its global context is useful for our chapter.³ While a politics of recognition does not represent all strands of feminist activity and influence, Fraser suggests that its dominance over a politics of redistribution and its emphasis on inequalities perpetuates stratifications and inequities between and amongst women in the global North and the global South. From a conceptual point of view, each new development in reproductive technologies has generated a response from feminist scholars, and in feminist responses to these technologies it is possible to see the interplay of key feminist debates within a global context. To that extent, as Thompson has argued, ‘infertility in the age of reproductive technologies has been performed as the perfect feminist text’.⁴

The chapter draws on, as its theoretical scaffold, recent commentary by Nancy Fraser on the ‘dangerous liaisons’ between feminism and capitalism.⁵ Her work traces the evolution of feminism from the 1970s, and charts a parallel trajectory between the transition from state-led capitalism to free-market neoliberalism in the global North and South, and feminism’s congruent obsessions with a politics of recognition in place of a politics of redistribution. Feminism’s neglect of economic and social justice in the 1980s, she argues, reified the stronghold of neoliberalism, which ironically deployed the very vocabularies and critiques of the second wave for its own purposes. What emerged was a rhetoric of individual ‘choice’ aided by the presence of the free-market in a minimally regulated state, opposite to an emancipatory discourse of collectivist action. The appropriation of feminism by capitalism in effect ‘served to legitimate a structural transformation of capitalist society that runs directly counter to feminist visions of a just society’.⁶

In this context, in the global North, medical science progressed as a matter of public concern, with infertility becoming a cause célèbre for reproductive medicine. Scientific progress and emancipatory discourses of work and career aligned feminisms’ own goals with capitalist goals of productivity. Furthermore, a new wave of regulation focused on reproductive rights reaffirmed the alliances between the state and feminisms, as both sought a political and moral stake in reproductive processes. The encounters of women’s rights groups in the global South with capitalism produced similar, although not quite the same, contradictions. Capitalism embedded itself in development discourses and turned its reproductive intent towards antinatalism. Meanwhile, through the 1980s and 1990s, feminists in the global South fought for the recognition of women’s rights in the face of government efforts at population control, while seeking redistribution through fair and just reproductive healthcare provisioning. However, as a ‘new’ strand of neoliberalism emerged which fostered the growth of unregulated markets in fertility and infertility, reproductive rights were increasingly discussed in terms of personal choice rather than collective empowerment.

Capitalist transitions, and their concomitant implications for feminism, are the germane ground on which the contradictions of infertility discourses have been

inscribed, and are central to the argument we make in this chapter. Indeed, the history of late twentieth-century capitalism frames the Janus-faced history of feminist discourses of infertility. By tracing these historical transitions in the global North and South, we intend to use feminist critiques (including those of feminism itself) to examine how the entanglements between capitalism and feminism cause infertility to be ‘read’ onto the bodies of infertile women very differently depending on the wider social and economic context, and produce multiple responses that further compromise a feminist vision of just societies. As Fraser has argued, in the context of accelerating globalization, feminisms’ attention to gender injustice transferred from the ‘maldistribution’ of resources to identity politics and the ‘recognition of difference’.⁷ As the chapter will go on to show, this switch of focus radically undermined attempts to broaden the access of different groups to infertility resources, and generated a series of divisions between and within the global North and South.

The chapter is divided into four main parts. We first profile infertility across the two regions. The chapter then explores feminist contributions to understanding the role of medical technologies in ‘overcoming infertility’ and the consequent revolution in understandings of kinship and conception in the global North. Next, the chapter turns to the global South and summarizes feminist contributions to discussions on gender development and fertility rates, reproductive health services, and population control. Finally, it examines the implications of the diversity of feminist discourses in both regions, focusing on the reproductive stratifications they have engendered in recent history. Our conclusion critically analyses the Janus face of infertility from our perspective of the inequalities generated as feminism moved into the era of advanced global capitalism.

PROFILES OF INFERTILITY: MEDICAL DISCOURSE

Definitions of infertility, the meanings of the terms used to describe it, and mechanisms for recording it vary, making it difficult to reliably compare the incidence of fertility problems on a global scale.⁸ However, attempts to standardize definitions and measurements of infertility enable some judgements about the prevalence of infertility across nations and over time. This matches an incipient goal of the World Health Organization (WHO) to assess ‘the magnitude and geographical distribution of infertility’. Early attempts by WHO to standardize infertility described it as involuntary, related to couples, and distinguishable from childlessness (secondary infertility, for example, relates to subsequent failures to conceive); there was also scope to include pregnancies in which conception did not lead to a live birth.⁹ The WHO definition of infertility emerged onto the international stage just three years before the birth of Louise Brown, the first child conceived through in vitro fertilization (IVF), and was maintained until at least the end of the same decade. Infertility was extensively redefined into the new millennium,¹⁰ although with the first IVF birth, the construction of infertility became linked to medical technologies and the condition was no longer perceived as inevitable.¹¹ Despite an extensive

bibliography of related ideas and terms (described later), WHO secured a standardized medical definition of infertility that describes it as 'a disease of the reproductive system defined by the failure to achieve a clinical pregnancy after 12 months or more of regular unprotected sexual intercourse'.¹²

As early as 1975, WHO declared infertility to be 'a worldwide problem [whose] frequency varies from area to area'.¹³ The first epidemiological studies of infertility prevalence used the average number of children for each woman as a predictor of fertility. Using this data, it has been argued that there was a global increase in fertility rates from the 1950s to the 1960s. Although the global population continued to grow, between the 1960s and the 1980s there was a decline in average fertility in the Third World from six to four children per woman, and overall fertility levels declined.¹⁴ The same period saw a large increase in rates of infertility. Infertility rates stabilized during the 1990s.¹⁵ However, as the number of women reaching reproductive age increased, there was a corresponding increase in infertility.¹⁶ The global infertility rate was estimated to be about 8–12% of reproductive-aged women around the world unable to become pregnant or to carry that pregnancy to full term.¹⁷ In Western populations, estimations of the infertility rate rose to about 14% when they included women who delayed conception until they were older,¹⁸ and excluded women who had opted for sterilization.¹⁹ The infertility rate was also higher in developing countries.²⁰ The Demographic and Health Surveys (DHS) programme reported that between 1995 and 2001 'more than one-fourth of ever married women of reproductive age in developing countries was infertile'.²¹ Infertility prevalence differs between regions and is known to be highest in South Asia, Sub-Saharan Africa, North Africa/Middle East, and Central/Eastern Europe and Central Asia.²² These figures increase to rates of 30% or more in areas of Sub-Saharan Africa.²³

Although we now have a fairly clear picture of global population trends from the second half of the twentieth century onwards, there were actually no large-scale studies of infertility before the 1970s.²⁴ The above figures are known because of the establishment of the World Fertility Survey (WFS) in 1972, with US and United Nations funding.²⁵ The WFS focused its efforts on nine sub-Saharan nations.²⁶ The first large survey specifically on infertility was conducted in six European countries, the USA, and Australia, and published its results in 1999.²⁷ Another important resource for demographers interested in infertility patterns comes from the DHS programme. This collated international data on infertility from 47 surveys in developing countries between 1995 and 2001.²⁸ However, because it was perceived as such a sensitive area, DHS researchers did not pose direct questions about infertility. Instead, the incidence of infertility was determined through analysis of five key questions in a related area.

As this brief discussion of variance in demographic studies suggests, language, meaning, and context are important for determining the prevalence, possible causes, and potential treatments of infertility.²⁹ Standardized biomedical definitions of infertility predominate in the global North. Alongside the WHO definition given above, other clinical studies designate infertility as failure to conceive after one year and up to five years of unprotected sex.³⁰ Rates of

infertility alter if the measure is based on the ‘ability to become pregnant rather than having a live birth’.³¹ Infertility problems are defined differently in various local contexts by different subgroups, or where there is an emphasis on subjective and experiential meanings of infertility, rather than the medicalized definitions discussed so far. It has been noted that while a medicalized definition of infertility predominates in developed societies, in developing societies ‘biomedical interpretations of infertility coexist [. . .] with traditional interpretations’.³² This can make international comparisons of infertility rates and determination of lifetime prevalence uncertain, and also often leads researchers to ‘underestimate the extent of suffering the women (and men) endure as a result of fertility problems’.³³ For feminists, there are important moral and economic differences between medically oriented definitions of the state of not being able to have children (infertility) and more experientially oriented definitions of the state of not having children (in/voluntary childlessness), and therefore these definitions should remain separate.³⁴

From 1970 onward, biomedical developments in infertility escalated. Frank van Balen and Marcia Inhorn describe a shift from the low-tech reproductive technologies used in the 1950s, such as artificial insemination with donated sperm and oocyte induction with hormones, to successful IVF in the late 1970s.³⁵ The 1980s, the first decade of IVF, led to the greater efficiency and increased accessibility of this form of treatment for a wider range of conditions and women. In the following decade, the 1990s, innovations and refinements led to a range of new infertility treatments including intracytoplasmic sperm injection (ICSI), laparoscopy, and egg freezing.³⁶ The success of early forms of IVF cannot – as some commentators argue – be compared to the developments since the early 1990s.³⁷ In the early days of IVF, infertility clinics would continue to manage and treat patients only if there was a realistic chance of success.³⁸ At this stage, before there was such emphasis on the importance of biological ties for parenthood, adoption was a key means of addressing personal infertility.³⁹ As a wider group of people experiencing infertility were treated using these techniques, public perceptions of ARTs shifted. They were no longer seen as experimental, but as a standard and viable option for fertility.⁴⁰

The expansion of reproductive technologies has continued into the current decade, and reflects the reach of these technologies into new populations (new expertise/experts and new patient groups/treatable conditions). The expansion in reproductive technologies has arguably broken down the distinctions between infertility and fertility, as women who were born infertile had the possibility of becoming fertile in their lifetime. As such, the identity ‘infertile’ was not a fixed one. Furthermore, informed patient activists encouraged infertility medicine to participate in (anticipatory) public ethical and social debate around its practices.⁴¹ The revolution in reproductive technologies must be viewed as the result of biomedical, global, and historical processes that are framed by a postmodern and neoliberal context. These developments have determined the possibilities of women’s own participation in shaping their

reproductive futures, in ways contingent on wider social and economic circumstances, with opportunities to engage with or to confront biomedicine often unevenly distributed.

REPRODUCTION AND INFERTILITY DISCOURSES IN THE GLOBAL NORTH

Feminists in the global North initially used the dual theoretical framework of reproductive rights and medicalization processes to understand infertility as a social, cultural, and biomedical enterprise. In the 1970s and 1980s, mainstream liberal feminists saw advances in science, technology, and policy as providing opportunities for women, and consequently supported the development of reproductive technologies.⁴² Despite significant differences between the two strands of feminism in other respects, this tied in with radical feminism's insistence on analysing 'women's reproductive experiences [...] as sources of power as well as subordination', and emphasis on the role of reproductive technologies in overcoming women's economic and physical inequalities, freeing women from the constraints of childbirth.⁴³ New reproductive technologies were initially conceived as enabling women to 'have it all' by way of family and employment or career. The emphasis was on women 'seiz[ing] the means of reproduction', taking control of their bodies and their lives. Radical feminists and socialist feminists agreeing with this stance argued that capitalism is founded on women's participation as both producers and reproducers. In very explicit ways, radical feminists such as Shulamith Firestone (1945–2012) claimed that reproductive technologies could sever the tie of patriarchy through reframing the relationship between reproduction and labour, giving women, amongst other things, the right to not have children.⁴⁴ This approach differed from the socialist-feminist stance of simply reordering the labour divisions inscribed in capitalism. Although liberal, radical, and socialist feminists had very different perspectives on the desirability of capitalism, it can be argued that convergent strands in their philosophies contributed to a situation in which the reproductive health movement in the global North ended up focusing on reproductive rights, choice, and opportunity.

From a First World perspective, infertility had begun to be transformed by scientific medicine, reflecting a narrative of opportunity and choice. As the feminist emphasis on the 'right to choose' gathered momentum through the 1970s and 1980s, a reproductive health agenda that normalized fertility galvanized medical approaches to infertility. As the medicalization of in/fertility proceeded, the condition of infertility came to be defined via the treatments available for it; for example, couples were infertile without treatment but fertile with it.⁴⁵ Over time, other groups once identified in social discourse as non-procreative, for example, same-sex couples, were routinely labelled infertile.⁴⁶ There was also social pressure for infertile couples to seek fertility treatments rather than to accept infertility or choose other options.⁴⁷ This normalization of infertility treatments was reflected in a reduction in numbers of couples

adopting children, although infertility may not be the only reason for this reduction. For example, in the UK the number of children available for adoption fell with the introduction of the contraceptive pill, and with the lessening of the stigma of unmarried motherhood. Formal and informal restrictions on adoption that may have contributed to such a reduction are found in many cultures and societies.⁴⁸ Yet, as critics have noted, the promotion and normalization of ARTs occurred as adoption practices were increasingly constructed as a 'last resort'.⁴⁹ Furthermore, ARTs were promoted with little attention to failure rates, including high numbers of ectopic pregnancy, natural abortion, and foetal abnormalities,⁵⁰ or to financial costs, trauma, or moral and ethical concerns.⁵¹

By the early 1990s, feminists in the global North had raised substantial critical debate over the use of medical technologies and had outlined critiques of the dominance of science, medicine, and technology within approaches to reproductive health. In the late 1970s and throughout the 1980s, feminists developed perspectives on medicalization which emphasized the role of medical control over women's bodies, the depersonalization of patients, and the objectification of their bodies, and the resulting overall disenfranchisement of women in the medical context.⁵² The medicalization critique drew specific attention to the socially constructed nature of medicine, and its tendency to take control over women's reproduction.⁵³ However, because medicine is often framed as a social or personal good, its capacity for social control may not seem obvious. Feminist critiques pointed out that medical procedures that visualized reproductive processes reduced women's bodily interiors to functional parts and promoted the autonomous status of the foetus. These processes regulated women and their fertility by offering explanations and control over knowledge of the mysterious inner workings of the body. In this way, medicine helped to define abnormal and normal bodily functioning.⁵⁴ Feminist critics argued that because medical ideology represented women as passive victims rather than as active agents, it therefore positioned women as having no real choice. However, these critiques of medicalization did not necessarily lead to condemnation of reproductive technology. Feminists who were cautious about the emancipatory nature of infertility treatments and who resisted scientific discourses still believed that, under the right conditions, women could choose whether and how they took up reproductive technologies.⁵⁵

Some authors have argued that the feminist focus on medicalization slowed work on the political and social dimensions of infertility.⁵⁶ Feminist critiques of medicalization often paid little attention to the extent to which new reproductive technologies influenced notions of bodily experience and personhood. Critical feminist analyses of the lived experiences of those treated with ARTs did not occur until the 1990s, as feminist work began to recognize the limitations of neo-Foucauldian poststructuralist discursive theorizations of the body.⁵⁷ A theoretical shift towards embodiment highlighted the extent to which new medical technologies had constructed the infertile body as a

biophysical disruption remediable by means of biomedical treatments. This research drew attention to the potential of infertility treatments to displace technological determinism and blur the so-called nature/culture intersection via the ability to supersede the biological limits of the physical body, providing new opportunities for bodies that had once been rendered permanently infertile by disease and/or by age.

The medicalization thesis was also complicated by both the growth of neoliberalism, which, in a process known as biomedicalization, appeared to offer widening access to infertility treatments through rapid biomedical and technological progress and an emphasis on 'personal choice'.⁵⁸ Descriptions of biomedicalization emphasize the entrenchment of neoliberal values and approaches as well as 'technoscientific changes in the constitution, organization, and practices of contemporary biomedicine'.⁵⁹ Biomedicalization theory proposes that the dramatic progress in infertility treatments in the global North since the mid-1980s occurred as part of a multisided process of scientific and technological progress focused on overcoming infertility via treatment. In this view, the growth of biomedical approaches to infertility was inextricably tied to specific political-economic conditions (privatization, devolution, and rationalization of health services) which produced new biomedical social forms, subjectivities, and practices.⁶⁰ In this context, infertility became linked to individualized and consumerist models of medicine.⁶¹ These processes reflected transformations in infertility and in infertile bodies that paralleled the ideological shifts from second to third wave feminisms towards a more fragmented, individual, and arguably less political approach. From the 1990s onwards, feminist perspectives and advocacy campaigns around women's reproduction emerged out of a politics of recognition, which itself became entwined with processes of biomedicalization. In this period, feminist debates on infertility were also informed by criticisms of biomedicine, by individuals and social movements, which expressed concerns about the extension of medical jurisdiction over infertility.

Sociologists, social theorists, and philosophers interested in infertility were therefore keen to understand how individuals became a target for biomedicalization via practices that constituted patients as consumers.⁶² In the late 1970s and 1980s, consumerist discourses had initially emerged as a means of giving patients choices and autonomy. However, these discourses had unintended effects. More recently, Janet Newman and Ellen Kuhlman have argued that at national and government levels, the ideology of consumer choice had 'positive unsettling effects on the pattern of health care',⁶³ because the consumption of health goods was not initially regarded as compatible with the goals of biomedicine. Subsequent academic analyses of the growth of reproductive medicine that refer to the 1970s and 1980s identify how ideologies of consumer choice shaped the commodification of sperm, ova, and the womb into what has become a global market in infertility.⁶⁴ These early debates and critiques of the commodification of reproductive technologies were especially concerned with surrogacy arrangements.

From the perspective of feminists in the global North, infertility consumers did not achieve the kinds of autonomy or choice they had initially envisioned in the 1980s. In practice, as new reproductive technologies were introduced, consumer practices followed principles of individualized desires and choice, rather than emphasizing collective reproductive rights. Some feminists emphasized the lack of real choice for women, and particularly noted that women's use of ARTs risked reducing them to reproductive commodities.⁶⁵ Some critics noted that the right to choose and the ability to access treatments were constrained by structural and socioeconomic limitations, influenced especially by social class, age, and ethnicity. However, as Deborah Lupton points out, 'The liberal consumerist-orientated view that women should have a right to choose tend[ed] to ignore such structural constraints'.⁶⁶ These authors began to show that infertility treatments were more available to some groups of women in the global North, although this fact in itself did not appear to alter reproductive policy.

In the 1990s and 2000s, academics drew attention to the ways in which infertility treatments had also begun to shape understandings about who or what constituted a person. Discussions about new reproductive technologies considered how they constructed the foetus as separate from the mother, as an autonomous rather than a dependent subject.⁶⁷ These issues of autonomy and dependency related to concerns previously raised in debates about abortion over women's rights to autonomy.⁶⁸ However, some critics argued that the use of new reproductive technologies, like many neoliberal projects, became another means to fashion the self and one's life through engaging in the practices of consumption. The infertile body was no longer ill or diseased but was instead constituted by the ideologies of overcoming dis-ease, self-enhancement and bodily 'optimization'.⁶⁹ This 'optimization of the body' highlights the use of medical technologies to secure the best possible futures for individuals, linked again to the idea that the physical limitations of the body could be superseded. Because discourses of infertility in the global North constituted the condition as often voluntary and caused by socioeconomic choices relating to employment and career, infertility treatments were recognized as providing opportunities for individuals to overcome such effects, including but not limited to the effects of ageing. These discourses constructed infertility as a gendered problem that is preventable and remediable by reproductive health-care and attention. The enterprise of biological parenting generated by the alleviation of infertility arguably did not cause significant problems for feminism in the third wave, because of its own promotion of individualism and achievement.⁷⁰

In addition to early feminist concerns about autonomy and science, feminists became interested in the political effects of the impact of new biomedical identities and subjectivities. One of the more optimistic responses to new reproductive technologies emphasized their capacity to expand notions of kinship. Traditionally, arguments around the medicalization of childbirth, supported by groups such as the Natural Childbirth Movement, had critiqued

many gynaecological and obstetric interventions on the basis that they ‘serve to disempower women and restrict their social and economic mobility’.⁷¹ As feminists in the 1990s turned their attention to the potential of new reproductive technologies to radically alter social arrangements and to reshape understandings of family and kinship, they were interested in how ARTs generated new and diverse family forms. The ART movement expanded the concepts of ‘mother’, ‘parent’ and ‘family’, while emphasis on the rights of individuals gave new groups such as gay fathers access to reproductive services. The reimagining of family forms attendant on the possibilities offered by ART is reflected in an explosion of terms such as ‘birth mother’, ‘egg mother’, and ‘surrogate mother’.⁷² Motherhood came to include genetic, birth, adoptive, and surrogate maternities, and egg donors were recognized as ‘parents’. This language was commensurate with the lack of a distinction between social and biological parenting when people talked about their families. Academics also noted the decoupling of the relationship between parents and their offspring, reflected in a discursive shift from ‘reproduction’ to ‘procreation’. In its place, the emerging discourse of procreation had ‘different connotations’, namely those of intervention and propagation and the loss of women’s autonomy over their reproduction.⁷³ This is partly because new reproductive technologies opened up even more radical opportunities for conception and sexual relations, with the ovum capable of being fertilized outside the womb. For example, in 1986 Ann Oakley raised the science fiction-type scenario of ‘male (abdominal) pregnancy’ or ‘entirely-laboratory made human pregnancy [...] beginning with the glass dish and ending with the neonatal intensive care unit’.⁷⁴ Consequently, infertility treatments were recognized by academics as important for society because they involved a range of social actors and created new narratives and possibilities for (infertile) bodies and parenting.

The question of ethical and moral issues in reproductive rights focused feminist thinking on political and government regulation. Arguably, feminisms in the second wave held the belief that the welfare state would supplement any inequalities in healthcare services, as part of its mission to uphold the rights of all individuals to adequate health provision. Accessibility to IVF had been enabled by permissive legislation in a number of countries in the global North, along with ‘generous reimbursement policies, as well as a general public confidence in IVF’.⁷⁵ Then, as neoliberalist policies began to unpick the welfare state, these feminisms’ attempts to include ethnicity and sexuality in the redistribution of reproductive health was undermined. Subsequently, feminisms turned to identity politics and became enmeshed with the trend towards biomedicalization, which again engendered new debates over reproductive regulation. The UK’s Human Fertilisation and Embryology Act (2008), which sought to preserve the autonomy of women alongside the foetus, is one example of the regulative aspect of feminist and biomedical involvement in reproductive rights. Alongside this was increasing agitation about the effects of neoliberalism and its promotion of biological parenting as a moral enterprise. Notably, the EU reflected these concerns by raising

questions over whether fertility services – when conceived of as a choice – should be regulated at all.⁷⁶

In the global North, campaigning around reproductive rights did not progress from a unified collective movement, as seen in the Third World. Instead, debates on reproductive rights represented and reflected competing feminist perspectives and interest groups. Writers also point to a paradox that while new reproductive technologies expanded and were made accessible, other reproductive rights were coming under attack, such as access to abortion and the contraceptive pill, and welfare rights for children, especially those born to single parents. By virtue of its in-between state, infertility was a site where feminist academics in the First World campaigned with competing interests. The relentless advocacy of feminist goals of autonomy and status paralleled feminist discourses of control over reproduction. Charis M. Thompson argues that the feminist paradox is that ‘feminists are well placed to understand the special burden involuntary childlessness places on women but are ambivalent about supporting women who seek infertility treatments because it seems to lend implicit support to conventional gender roles and gendered stratification’.⁷⁷ Others identify a different feminist paradox: that in the 1980s, criticism of motherhood as establishing barriers to personal development and freedom proceeded alongside the endorsement of technologies that circumvent ‘virtually any obstacle to procreation, including older age’, and therefore effectively revision both the historical category of ‘barrenness’ and the physiological state of menopause.⁷⁸ In brief, by the end of the 1990s, cultural and theoretical debates over infertility had taken centre stage in the global North, and issues such as stratification and injustice had been relegated to the backseat.⁷⁹

REPRODUCTION AND INFERTILITY DISCOURSES IN THE GLOBAL SOUTH

In the Third World, feminist perspectives and advocacy around women’s reproduction emerged out of two interlocking paradigms, both of whose foundations were rooted in capitalism. The first was drawn from a revision of Thomas Malthus’s late eighteenth-century proposition that unless checked by natural or artificial means, population growth will inevitably outstrip resources and negatively affect economic growth. This view has dominated development agendas in the global South from the 1950s, and continues to do so.⁸⁰ Buoyed by twentieth-century development theory and models that argued the potential benefits of low fertility for the economic growth of the nation,⁸¹ neo-Malthusianism gained ascendancy in development policy, especially at the key international forum of the International Conferences on Population and Development (ICPD). Through the 1960s to 1990s, this forum set the scene for the dominant ideology underpinning the institutionalization of family planning programmes in the Third World.⁸² A second paradigm informing feminist debates on reproduction was the emerging context of neoliberalism in the 1980s and 1990s, as nation after nation abandoned socialist pathways to

join those adopting economic liberalization policies, or had such policies mandatorily instituted by the IMF and the World Bank. Neoliberalism was directly responsible for a decline in the availability, range, accessibility, and quality of services, especially at the primary healthcare level affecting reproductive health.⁸³ Significantly, the deregulation of developing economies also heightened the presence of pharmaceutical corporates and the growth of contraceptive and reproductive technologies in developing nations. The rest of this section elucidates how these paradigms contributed to a new Third World discourse on fertility, which in turn informed discourses on infertility.

Feminist academics in the Third World recognized the empirical evidence that seemed to link low fertility to women's autonomy, status, and gender relations, and to development more generally.⁸⁴ While this might seem to suggest a parallel between official neo-Malthusian discourses and Third World feminist discourses of control over reproduction, nothing could be further from the truth. In the 1980s, Third World feminist writings challenged prominent narratives of the beneficial effects of development, instead pointing out the risk that gendered production and reproduction in the global South would be appropriated for development ends.⁸⁵ From a Third World feminist perspective, therefore, population programmes needed to centre on women's autonomy, lest antinatalism become an instrument of capitalist accumulation. Alongside the recognition of coercive practices by developing states to enforce population control, such as China's one-child policy, India's forced mass-vasectomies in the 1970s and quinacrine sterilization in the 1980s, and Indonesia's Norplant implantation programmes, feminists challenged population programmes from a human rights perspective. Population programmes became a site of resistance for Third World feminists, who simultaneously advocated for access to safe contraceptive and abortion services.⁸⁶ Monica Das Gupta, John Bongaarts, and John Cleland summarize the normative feminist perspective of the day:

Micro-studies [...] find that lower fertility is also associated with better child health and schooling, reduced maternal mortality and morbidity, increased women's labour force participation, and higher household earnings. This is quite aside from the intrinsic human right of being able to control one's own fertility.⁸⁷

The campaign for the 'right to control fertility' slowly gathered momentum through the 1970s and 1980s, galvanized by United Nations sponsorship.⁸⁸ The UN Conferences for Women in 1975 (Nairobi), 1985 (Mexico) and 1995 (Beijing), the Declaration of the Decade for Women (1975–85), and the rapidly burgeoning field of women-in-development fostered transnational networks and shared frameworks.⁸⁹ In the lead-up to the 1994 ICPD in Cairo, these coalesced into a loose but formidable coalition of transnational feminist groups campaigning on a platform of reproductive and sexual health and rights.⁹⁰ Relentless and strategic advocacy by the movement through the

1990s succeeded in integrating vocabulary that until then had remained within the feminist movement – such as ‘informed choices’, ‘inviolable’, ‘reproductive autonomy’, ‘gender sensitivity’, and ‘quality of care’ – into the ICPD Programme of Action (POA). This vocabulary entered the discourse of strategic mainstream population policy for the 179 countries that were signatories to the ICPD.⁹¹ The ICPD POA ‘marked the beginning of a new era of commitment and willingness on the part of governments’, and ‘urge[d] the empowerment of women both as a highly important end in itself and as a key to improving the quality of life for everyone’.⁹² The Conference attested that the success of the ICPD goals relied on the provision and maintenance of services – not only those related to family planning, but a broad range of universal primary healthcare, education, and counselling services for women, men and children, including abortion. This Third World feminist perspective was reinforced at the Beijing Conference for Women in 1995. The UN Platform for Action at Beijing noted that ‘the human rights of women include their right to have control over and decide freely and responsibly on matters related to their sexuality, including sexual and reproductive health, free of coercion, discrimination and violence’.⁹³

There was, however, unresolved tension between feminists in the global North and South around the priorities for advocacy. While feminists from Europe and North America stressed abortion rights as fundamental to reproductive rights, this was not a priority for Third World feminists; their main concern was the fight against state-driven antinatalism.⁹⁴ Groups like FINRRAGE (Feminist International Network of Resistance to Reproductive and Genetic Engineering) located women’s reproduction within wider global, capitalist, patriarchal structures and regarded population policies as part of the ‘technopatriarchal’ attempt to dissuade Third World women from ‘breeding more poor children’. Simultaneously, they encouraged women in the global North ‘to breed because they add to consumption demand, which drives capital accumulation’.⁹⁵ Within their ideological frame, new reproductive technologies such as IVF were part of the global system that continued to objectify women’s reproduction. FINRRAGE’s perspective is captured in the words of one of its members, Ute Winkler, who claimed that, ‘We cannot wait until we have convinced all women who are infertile that they should reject IVF [...] IVF is not a solution to infertility. Women are still infertile when they conceive through IVF’.⁹⁶

Overall, the primary focus of the reproductive health movement in the global South was on reproductive rights and population control. Significantly, infertility was marginal in these feminist discourses. Aside from an occasional consideration that access to contraception may not be the most important campaigning goal for all women, as some ‘women may not want to control their fertility at all; they may be confronted with infertility’,⁹⁷ or mention of infertility’s consequences for marriages, there was no specific socio-political analysis of infertility or extended attention to care.⁹⁸ Infertility was not mentioned in the POA at Cairo and only one reference was made to it, within

the context of a discussion on reproductive disease, in the Beijing Platform for Action: 'Cancers of the breast and cervix and other cancers of the reproductive system, as well as infertility, affect growing numbers of women and may be preventable, or curable, if detected early'.⁹⁹ In other places – as for example in the Indian Government's policy documents on the Reproductive and Child Health (1996) programme – infertility was linked to untreated HIV and AIDS, or to the reproductive concerns of older people. Within Third World feminist discourse, then, infertility took a marginal position as part of debates on reproductive rights, reflecting to some extent what Rosalind Petchesky cautioned was a 'fault line' between the right to choose and the drive towards population control that Third World feminists had not quite resolved.¹⁰⁰ Consequently, in the 1980s and 1990s, this discourse constituted infertility as involuntary and caused by medical or social circumstances, such as continued childbirth, lack of ability to negotiate sexual contact, and exposure to sexual diseases. It also constructed infertility as a preventable problem of women that could be remedied by primary reproductive healthcare and attention. Addressing the *causes* of infertility was seen to fall within the realm of primary healthcare services, as part of the wider, population-based, free healthcare structure. Little was mentioned about the actual treatment of infertility in the context of the developing world.¹⁰¹

The Third World feminist response to neoliberalism has been less organized, unequivocal, and consistent than its response to issues around reproductive rights. Indeed, the impact of the liberalization of markets for reproductive health has created or deepened schisms amongst feminist advocates, governments, markets, and individual women as regards their understandings of reproductive rights. By the early 1990s, contraceptives were readily available on the open market, and the state had been upstaged as the primary regulated source of contraception. As commercial enterprises entered the market for contraceptives, a smorgasbord of new and technologically advanced products became more readily available for individual purchase.¹⁰² Interestingly, the growth in fertility control products paralleled the growth in infertility treatment products and services. In many developing countries, the number of private clinics offering ART and infertility services, including surrogacy, mushroomed. Given the lack of regulation of the sector, its commercialization has facilitated the expansion of global, rather than domestic, 'reproductive tourism', especially within Asia.¹⁰³ In a country like India, for example, where there are over 3,000 infertility clinics and the infertility industry is estimated to be worth around US\$400 million, the preferred clientele is foreign nationals.¹⁰⁴ For this reason, in 2010, the Indian state enacted draft legislation to regulate the growth of this sector (for further discussion of 'reproductive tourism' in India, see Daniel Grey's chapter in this volume).¹⁰⁵ Importantly, given the costs of many reproductive technologies, affordability rather than need has become one of the key criteria in determining access to them, and infertility treatment has therefore become stratified as the purview of the affluent.

The transnational reproductive health coalition has largely been silent in response to this emerging trend. Two decades after the ICPD, the movement does not appear to have formulated a clear position or sustained analysis of infertility. In 2009, Adrienne Germain, Ruth Dixon-Mueller, and Gita Sen, stalwarts of the international reproductive health movement, called for the international community to get ‘back to the basics’ of the ICPD 1994, and highlighted areas which demanded focused attention. Infertility does not appear on their list.¹⁰⁶ There is similar absence of reference to infertility in the International Women’s Health Coalition’s comment on the future of the ICPD.¹⁰⁷ Outside of the movement *per se*, feminist scholars from the South have been divided on the issue of ARTs and surrogacy. There are those who see commercialization as encouraging the production of disembodied and fragmented female bodies, thereby compromising women’s self-determination.¹⁰⁸ Their view is supported by academics in the global North who consider cross-border trade and its accompanying exploitation to be a failure of ‘reproductive justice’.¹⁰⁹ How far these views are reflective of the experiences of women in the Third World is a matter of debate, as some first-person accounts from the global South suggest that individual women relish the freedom that reproductive technology affords, despite the risks and costs.¹¹⁰

More recent approaches from supranational organizations recognize infertile women as constituting a special category, and as deserving support with both prevention of fertility problems and treatment for existing problems.¹¹¹ This validates an explicit politics of recognition for infertile women as having rights to bear children. This new politics of recognition is due to the growing acceptance and success of ARTs in the global South, and the reframing of infertility as a problem related to issues of social justice, regardless of population pressures.¹¹² In comparison to the global North, then, the progress towards making infertility a public health issue has been slow.

INCONGRUENT EMANCIPATIONS: INFERTILITY AND ITS STRATIFICATIONS

As our analysis has demonstrated, since the 1970s feminist discourses around infertility have proliferated and so have the contradictions amongst them. Discourses of emancipation that emerged in the global North were either irrelevant to Third World women, or reliant on the appropriation of their bodies and reproductive power; equally the conditions of infertile women in the global South scarcely figured within global discourses of women’s reproductive autonomy. As Faye D. Ginsberg and Rayna Rapp argue, from the 1970s the idea of a ‘politics of reproduction’ – which demanded examination of the multiple levels on which reproductive practices, policies, and politics were enacted – started to dominate feminist discussions. Analyses of the politics of reproduction considered the social, moral, ethical, economic, and religious interests at stake in reproductive technologies from diagnosis to donation as a

set of relationships between multiple actors and agencies: local and global organizations, state and private interests, and different professional groups. Although the differing perspectives revealed by these analyses might be viewed as evidence of ideological fragmentation within feminism, in reality they reflected the multiplicity of feminist perspectives on sociopolitical institutional frameworks which were increasingly underwritten by capitalist interests. In this section, we reflect on the place of emancipation and ‘stratified reproduction’ in feminist conceptualizations of infertility.

Within feminist discourse, the idea of stratified reproduction has been framed in two main ways. At the end of the second wave, it was primarily conceptualized as a means of drawing attention to inequalities in access to reproductive technologies and the importance accorded to infertility between the developed and developing worlds. A body of feminist work from the North and the South highlighted the inequalities in the delivery, accessibility, and affordability of infertility treatments to women in these global regions, concluding that there are ‘two worlds of infertility’, and that the effects of infertility were experienced more severely in the non-Western world.¹¹³ In addressing stratifications in reproductive rights, the focus turned to the exploitative relationships between the two worlds, not merely the gaps between them. ARTs, in particular, were identified as both reflecting and contributing to a widening of local and global divisions. Conceptually, stratification offered a heuristic lens to reflect on distinctions between the moral, legal, and religious handling of ARTs and a range of structural and economic factors that facilitated the procurement by Western women of the technology or surrogates available in the non-Western world.¹¹⁴ In particular, this work described how global policies and practices in healthcare converged with medicalization processes to potentially increase the patriarchal-capitalist appropriation of medical care, so that infertility has become the ‘latest and most powerful instance in which male doctors and “pharmacrats” use biotechnology to usurp female reproductivity’.¹¹⁵ Finally, this body of work has reiterated the imperial intent of biomedicalized capitalism in transferring the cultural emphasis on the importance of biological parenthood from the developed to the developing world.

The conceptual framing of infertility and reproductive technologies as ‘stratified’ was successful within the specific discourse of the First World as being in a state of advanced capitalism, distinct from the Third World and its early-stage capitalism. This dialectic between the First and Third Worlds is what Fraser refers to in her account of the misframing of global justice.¹¹⁶ This traditional North–South dialectic is also what we have identified as the Janus face of infertility. Like Fraser, we argue this dialectic has been undermined by the intertwining of consumerism, capitalism, and neoliberalism within the global infertility market. We discuss the effects of this Janus face below.

The dominant lens of stratification failed to encompass the breadth of inequities beyond the North–South divide, effectively ignoring those marginalized or advantaged within each context. Contemporary feminist debates

established that low-income, minority, and lesbian women within the First and Third Worlds had unequal access to high-tech, expensive ARTs. Furthermore, little attention had been paid to the differently gendered nature of infertility, including the different causes of infertility or the different applications of reproductive technology to men's and women's bodies. Male infertility was hidden due to a combination of factors that included a lack of infertility treatments for men, sensitivities around the collection of sperm, and the conflation of male infertility with impotency and emasculation.¹¹⁷ Additionally, ARTs were recognized as being applied to women's bodies in more invasive ways. These differences point to inequalities that emerged *within* the global North and global South. Economic analyses of reproductive choice in the emergent capitalist and biomedicalized world order of infertility treatment suggest that wealth accumulation and purchasing power were not limited to wealthy Western women in the global North alone but were more widespread as a class issue in both the global North and South. For low-income women, at best infertility received attention only when coupled with reproductive health disease.

In the last decade, wider social transformations that have undermined the dialectic of developed–developing worlds have led to challenges to the dominant narrative of reproductive stratification of the ‘two worlds’. In its place, the global South is revisioned as rapidly prosperous and technologically advanced, a world where an insatiable and newly affluent middle class drives markets, including in medical technologies. As John Comaroff and Jean Comaroff argue, the South no longer seeks to emulate the North – ‘old margins are becoming new frontiers’ – but they also caution that ‘it is the South that often is the first to feel the effects of world-historical forces [. . .] thus to pre-figure the future of the global North’.¹¹⁸ In this revisioning of the dialectic, reproductive stratification is more complicated than many feminist texts initially conceived.

To contextualize our discussion in light of Fraser's argument, we conclude that as the politics of recognition has converged with a consumer-driven demand for medically advanced access to reproductive technologies, reproductive stratifications within the global South have assumed greater significance than long-standing asymmetries between the First and the Third Worlds. Notions of women's emancipation in the global South have taken root within the rhetoric of individual choice and recognition, and in place of a collective response to state-organized programmes and redistribution of resources. The same discourse of emancipation is found in the global North, where infertility treatment is already framed both as an exercise of individual rights and as a lifestyle choice, and has been colonized by private business actors. Infertility is no longer primarily a basis for claims to better public healthcare provision or political accountability. As the state rescinds the responsibilities of a provider, it assumes the role of regulator – often of global biomedical enterprises.

CONCLUSION: THE JANUS FORTUNES OF INFERTILITY DEBATES

In this chapter we have argued that since the 1970s there have been differences in feminist understandings about infertility in the global North and the global South. We have attempted to highlight in equal measure the contradictory and sometimes disabling conceptualizations of emancipation. Feminists, for example, have been generally critical of the impact of reproductive technologies on women, but some have embraced the view that women are empowered by technologies that promote individual rights and choices in overcoming infertility. While in the early years of the second wave, feminism mainly focused attention on Western women's struggles with medicalization, by its end in the 1980s there was a greater appreciation of the different and unequal experiences of women of different ethnicities, classes, sexualities, and ages in the global North. In the 1990s, the debates took on a transnational scope, as scholars sought both to recognize the experiences of infertile women in the Third World and to expose the relationship between the advancement of infertile Western women's rights and the losses of their counterparts in the global South. As feminism moved into the era of advanced global capitalism, neoliberal revisionings of emancipation inflected feminist understandings of infertility. In all, feminist perspectives on infertility have spanned liberal equality arguments, radical scholarship eschewing the patriarchal biomedicalization of women's reproduction, both ethnocentric and post-colonial critiques of justice, and political economy analyses. Such 'disorganized' effects, in Nancy Fraser's words, are not uncommon, and are rooted in the subtle but insidious entanglements between neoliberalism and feminism.¹¹⁹ In light of such history, we note that debates once again have shifted in the new millennium, directed now by the global South into claims for similar rights to reproductive autonomy and recognition.

Although the historical narrative followed divergent, if interconnected, pathways in the global North and South, there are similarities in feminist responses to the kinds of ideas of global justice outlined by Fraser. There was, however, a time-lag. In the global North, feminisms 'sought to question core features of the capitalist modernity that social democracy has naturalised: materialism, consumerism [...] [and] sexual repression'.¹²⁰ To this list we add medicalization, which offered a radical critique of gender exclusions. Fraser's perspective on the ways in which capitalism has 'conscripted' feminism is useful here for understanding the consequent biomedicalized enterprise of infertility. In brief, in the context of neoliberalism, infertile women became subjects for the promotion of new reproductive technologies, and as a result their relationship to a wider struggle over women's reproductive rights became seriously truncated. This reframing of gender justice was part of the zeitgeist which also ignored political concerns about the nature of the globalized reproductive health market, and potential alliances between those in the global North and the global South.

On the other hand, infertile women in the global South were misrecognized in the concerted feminist response to population control programmes, steeped as it was in a redistributive paradigm. This gap was filled by capitalist commodities as

infertility became caught up in the thriving business of medical technology. Drawing on Fraser, we argue that development theorists erred in relying on the idea of gender recognition as essential to achieving parity for infertile women, rather than actively representing them in policy-making processes. For example, if an issue could be represented as an inequality, then policy and process could be formulated to address the injustice. In the global South, fertility was represented well, and reproductive rights were advocated as necessary for redistribution. On the other hand, infertility was neither recognized nor represented, and nor were claims made for redistribution of resources and access to services; responses to infertility were often local and rarely took into account the global context, as we saw in discussions around population control. In Fraser's view, this misrepresentation meant that infertile women in the South went unnoticed (were voiceless) at a crucial period in the 1990s when state-managed capitalism was transitioning into the unfettered market capitalism of the new millennium. Academic misframing of reproductive technologies and experiences of infertility had important implications for how infertility was shaped and managed in the decade that followed. The Janus face of infertility which we have described is therefore not an analysis of a simple dialectic between North and South, but rather is constitutive of a series of misframings both within and between these 'regions', which reflect the entanglements between feminism and neoliberalism within the global context.

Fraser's argument can also be applied to feminist responses to infertility in recent history, which could also be described as Janus-faced. During the decades from the 1970s to the 2000s, there was a cultural and economic shift towards a global politics of neoliberalism. This was matched by a shift in feminist thinking, and in other social and political movements, away from a politics of redistribution towards a politics of recognition. This shift intensified the spread of capitalism in fertility medicine, permitting the intervention of new actors outside of the boundaries of state, and the realization of new, previously invisible identities. What is needed therefore is a new global feminist politics that can navigate a consensual path through incongruent conceptualizations of emancipation and its relation to infertility. In charting new pathways forward, this global feminist politics will have to appreciate, as Fraser argues, 'the role of transnational forces in maintaining gender injustice'.¹²¹ At the very least, this new pathway has to address the misframing and misrepresentation of infertility and reproductive technologies via an integrated feminist politics that combines economics with identity, recognition, and status.

NOTES

1. This chapter uses terms such as global South/global North, First/Third World, developed/developing interchangeably, but with caution. These terms are used in part to reflect the thinking of the time when the scholarship under discussion was produced. In general, global North/First World/developed refer to countries in North America and Europe, while the global

South/Third World/developing world consists of Asia, Africa, and Latin America. These divisions are derived from mid-twentieth-century categorizations based on levels of wealth and poverty. Arguably, in the twenty-first century, the distribution of wealth is not restricted to these boundaries. Asia, particularly, has seen significant wealth increases without a commensurate decline in poverty.

2. In the global North, this was reflected in the rise of the second wave of feminism, while in the global South, there was a concomitant emergence of women-in-development and Third World-led transnational feminism.
3. Nancy Fraser, *Fortunes of Feminism: From State-Managed Capitalism to Neoliberal Crisis* (London, 2013).
4. Charis M. Thompson, 'Fertile Ground: Feminists Theorize Infertility', in Marcia C. Inhorn and Frank van Balen (eds), *Infertility Around the Globe: New Thinking on Childlessness, Gender and Reproductive Technologies* (Berkeley, Los Angeles, CA, and London, 2002), p. 53.
5. Nancy Fraser, *Scales of Justice: Reimagining Political Space in a Globalizing World* (New York, 2009).
6. Fraser, *Scales of Justice*, p. 221.
7. Fraser, *Fortunes of Feminism*.
8. Shea O. Rutstein and Iqbal H. Shah, *Infecundity, Infertility, and Childlessness in Developing Countries: DHS Comparative Reports No. 9* (Calverton, MD, 2004): www.who.int/reproductivehealth/topics/infertility/DHS-CR9.pdf. Accessed 6 December 2016.
9. World Health Organization (WHO), *Technical Report Series No. 582. The Epidemiology of Infertility: Report of a WHO Scientific Group* (Geneva, 1975), p. 6: http://apps.who.int/iris/bitstream/10665/37422/1/WHO_TRS_582_eng.pdf. Accessed 6 December 2016.
10. F. Zegers-Hochschild, G.D. Adamson, J. de Mouzon, O. Ishihara, R. Mansour, K. Nygren, E. Sullivan, and S. Vanderpoel, 'International Committee for Monitoring Assisted Reproductive Technology (ICMART) and the World Health Organization (WHO) Revised Glossary of ART Terminology', *Fertility and Sterility*, 92:5 (2009), 1520–25; WHO, *Reproductive Health Indicators for Global Monitoring. Report of the Second Interagency Meeting, Geneva, 17–19 July 2000* (Geneva, 2001): http://apps.who.int/iris/bitstream/10665/66918/1/WHO_RHR_01.19.pdf. Accessed 6 December 2016.
11. Margarete Sandelowski and Sheryl de Lacy, 'The Uses of a "Disease": Infertility as a Rhetorical Vehicle', in Inhorn and van Balen (eds), *Infertility Around the Globe*, pp. 34–6.
12. Zegers-Hochschild et al, 'International Committee for Monitoring Assisted Reproductive Technology (ICMART) and the World Health Organization (WHO) Revised Glossary of ART Terminology', p. 1522.
13. WHO, *Technical Report Series No. 582*, p. 4
14. Geoffrey McNicoll, 'Changing Fertility Patterns and Policies in the Third World', *Annual Review of Sociology*, 18 (1992), pp. 85–6, 91–2; Ron Lesthaeghe and Guy Moors, 'Recent Trends in Fertility and Household Formation in the Industrialized World', *Review of Population and Social Policy*, 9 (2000), p. 121; Ann Buchanan and Anna Rotkirch, 'No Time for Children? The Key Questions', in Ann Buchanan and Anna Rotkirch (eds), *Fertility Rates and Population Decline? No Time for Children* (Basingstoke, 2013), pp. 5–7.

15. Maya N. Mascarenhas, Seth R. Flaxman, Ties Boerman, Sheryl Vanderpoel and Gretchen A. Stevens, 'National, Regional, and Global Trends in Infertility Prevalence Since 1990: A Systematic Analysis of 277 Health Surveys', *PLoS Med*, 9:12 (2012), pp. 9–10: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3525527/>. Accessed 6 December 2016.
16. Mascarenhas et al, 'National, Regional, and Global Trends in Infertility Prevalence Since 1990', p. 9.
17. Danielle L. Herbert, Jayne C. Lucke and Annette J. Dobson, 'Infertility in Australia Circa 1980: An Historical Population Perspective on the Uptake of Fertility Treatment by Australian Women Born in 1946–51', *Australian and New Zealand Journal of Public Health*, 33:6 (2009), p. 507; Marcia C. Inhorn, 'Global Infertility and the Globalization of New Reproductive Technologies: Illustrations from Egypt', *Social Science & Medicine*, 56 (2013), p.1837; WHO, *Infertility: A Tabulation of Available Data on Prevalence of Primary and Secondary Infertility. Programme on Maternal Health and Family Planning, Division of Family Health* (Geneva, 1991), p. 2: http://apps.who.int/iris/bitstream/10665/59769/1/WHO_MCH_91.9.pdf. Accessed 6 December 2016.
18. S. Fishel, K. Dowell and S. Thornton, 'Reproductive Possibilities for Infertile Couples: Present and Future', in Gillian R. Bentley and C. G. Nicholas Mascie-Taylor (eds), *Infertility in the Modern World: Present and Future Prospects* (Cambridge, 2000), p. 18.
19. David L. Healy, Alan O. Trounson, and Anders Nyboe Andersen, 'Female Infertility: Causes and Treatment', *Lancet*, 18 June 1994; J. Sciarra, 'Infertility: An International Health Problem', *International Journal of Gynaecology and Obstetrics*, 46 (1994), p. 156.
20. Inhorn, 'Global Infertility and the Globalization of New Reproductive Technologies', p. 1837 and p. 1839.
21. Rutstein and Shah, *Infecundity, Infertility, and Childlessness in Developing Countries*, p. 24.
22. Mascarenhas et al, 'National, Regional, and Global Trends in Infertility Prevalence Since 1990', p. 1.
23. J.C. Caldwell and P. Caldwell, 'From STD Epidemics to AIDS: A Socio-Demographic and Epidemiological Perspective on Sub-Saharan Africa', in Gillian R. Bentley and C. G. Nicholas Mascie-Taylor (eds), *Infertility in the Modern World: Present and Future Prospects* (Cambridge, 2000), p. 155; WHO, 'Infections, Pregnancies, and Infertility: Perspectives on Prevention', *Fertility and Sterility*, 47 (1987), p. 964; Rutstein and Shah, *Infecundity, Infertility, and Childlessness in Developing Countries*, p. 24; Sciarra, 'Infertility: An International Health Problem', p. 156; W. Cates, T.M.M. Farley, and P.J. Rowe, 'Worldwide Patterns of Infertility: Is Africa Different?', *Lancet*, 14 September 1985.
24. WHO, *Technical Report Series No. 582*.
25. McNicoll, 'Changing Fertility Patterns and Policies in the Third World', p. 90.
26. Lori Leonard, 'Problematizing Fertility: "Scientific" Accounts and Chadian Women's Narratives', in Inhorn and van Balen (eds), *Infertility Around the Globe*, p. 194.
27. Bertarelli Foundation Scientific Board, 'Public Perception on Infertility and its Treatment: An International Survey', *Human Reproduction*, 15:2 (2000).

28. Rutstein and Shah, *Infecundity, Infertility, and Childlessness in Developing Countries*.
29. Bertarelli Foundation Scientific Board, 'Public Perception on Infertility and its Treatment', p. 334.
30. Rutstein and Shah, *Infecundity, Infertility, and Childlessness in Developing Countries*, pp. 3–5.
31. Mascarenhas et al, 'National, Regional, and Global Trends in Infertility Prevalence Since 1990', p. 9.
32. Greil et al, 'The Experience of Infertility', p. 147
33. Frank van Balen and Marcia C. Inhorn, 'Introduction: Interpreting Infertility: A View from the Social Sciences', in van Balen and Inhorn (eds), *Infertility Around the Globe*, p. 12.
34. van Balen and Inhorn, 'Introduction: Interpreting Infertility', p. 11.
35. van Balen and Inhorn, 'Introduction: Interpreting Infertility', p. 13.
36. Jeff Wang and Mark V. Sauer, 'In Vitro Fertilization (IVF): A Review of 3 Decades of Clinical Innovation and Technological Advancement', *Therapeutics and Clinical Risk Management*, 2:4 (2006).
37. J. Cohen, A. Trounson, K. Dawson, H. Jones, J. Hazekamp, K. G. Nygren, and L. Hamberger, 'The Early Days of IVF Outside the UK', *Human Reproduction Update*, 11:5 (2005), p. 443.
38. van Balen and Inhorn, 'Introduction: Interpreting Infertility', pp. 13–18.
39. Faye Ginsberg and Rayna Rapp, 'The Politics of Reproduction', *Annual Review of Anthropology*, 20 (1991), p. 329.
40. Thompson, 'Fertile Ground: Feminists Theorize Infertility', p. 56.
41. Thompson, 'Fertile Ground: Feminists Theorize Infertility', p. 58.
42. Thompson, 'Fertile Ground: Feminists Theorize Infertility', p. 57.
43. Ginsberg and Rapp, 'The Politics of Reproduction', p. 312; Shulamith Firestone, *The Dialectic of Sex: The Case for Feminist Revolution* (New York, 1970).
44. Michelle Murphy, *Seizing the Means of Reproduction: Entanglements of Feminism, Health and Technoscience* (Durham, NC, 2012), pp. 1–6.
45. Deborah Lupton, *Medicine as Culture: Illness, Disease and the Body in Western Societies* (London, 1994), pp. 155–60.
46. Laura Mamo, *Queering Reproduction: Achieving Pregnancy in the Age of Technoscience* (Durham, NC, 2007), pp. 130–2.
47. Lupton, *Medicine as Culture*.
48. Inhorn, 'Global Infertility and the Globalization of New Reproductive Technologies', p. 1843.
49. Marcia C. Inhorn and Daphna Birenbaum-Carmeli, 'Assisted Reproductive Technologies and Culture Change', *Annual Review of Anthropology*, 37 (2008), p. 182.
50. See Sunita Tandulwadkar, Pooja Lodha and Vineeta Kharb, 'Congenital Malformations and Assisted Reproductive Technique: Where is Assisted Reproductive Technique Taking Us?', *Journal of Human Reproductive Sciences*, 5:3 (2012), for a discussion of this issue.
51. See Ann Oakley, *The Captured Womb: A History of the Medical Care of Pregnant Women* (Oxford, 1986), pp. 281–3; van Balen and Inhorn, 'Introduction: Interpreting Infertility', pp. 13–17; Inhorn and Birenbaum-Carmeli, 'Assisted

- Reproductive Technologies and Culture Change', pp. 183–6; Sarah Franklin, *Biological Relatives: IVF, Stem Cells and the Future of Kinship* (Durham, NC, 2013), p. 155.
52. Oakley, *The Captured Womb*; Helen Roberts (ed.), *Women, Health and Reproduction* (London, 1981); Barbara Ehrenreich and Deirdre English, *For Her Own Good: 150 Years of the Experts' Advice to Women* (London, 1979).
 53. Michel Foucault, *The Order of Things: An Archaeology of the Human Sciences* (New York, 1973).
 54. Lynda Birke, *Feminism and the Biological Body* (Edinburgh, 1999), pp. 56–9.
 55. Lupton, *Medicine as Culture*, pp. 155–60.
 56. Arthur L. Greil and Julia McQuillan, "'Trying" Times: Medicalization, Intent, and Ambiguity in the Definition of Infertility', *Medical Anthropology Quarterly*, 24:2 (2010).
 57. Elianne Riska, 'Gender and Medicalization and Biomedicalization Theories', in Adele E. Clarke, Laura Mamo, Jennifer Ruth Fosket, Jennifer R. Fischman and Janet. K. Shim (eds), *Biomedicalization: Technoscience, Health and Illness in the U.S.* (Durham, NC, 2010), pp.155–6.
 58. Laura Mamo, 'Fertility Inc.: Consumption and Subjectification in U.S. Lesbian Reproductive Practices', in Clarke et al (eds), *Biomedicalization: Technoscience, Health and Illness in the U.S.*
 59. Adele E. Clarke, Janet K. Shim, Laura Mamo, Jennifer Ruth Fosket, and Jennifer R. Fishman, 'Biomedicalization: Technoscientific Transformations of Health, Illness, and U.S. Biomedicine', *American Sociological Review*, 68:2 (2003), p. 161.
 60. Mamo, 'Fertility Inc.'.
 61. Adele E. Clarke, Laura Mamo, Jennifer Ruth Fosket, Jennifer R. Fischman and Janet. K. Shim, 'A Theoretical and Substantive Introduction', in Clarke et al (eds), *Biomedicalization: Technoscience, Health and Illness in the U.S.*
 62. Mamo, 'Fertility Inc.'.
 63. Janet Newman and Ellen Kuhlmann, 'Consumers Enter the Political Stage? The Modernization of Health Care in Britain and Germany', *Journal of European Social Policy*, 17:2 (2007), p. 104.
 64. Mamo, *Queering Reproduction*, pp. 195–9.
 65. Rita Arditti, Renate Duelli-Klein, and Shelley Minden (eds), *Test-Tube Women: What Future for Motherhood?* (London, 1984), pp. 1–7, cited in Lupton, *Medicine as Culture*, pp. 156–7.
 66. Lupton, *Medicine as Culture*, p. 160.
 67. Carol A. Stabile, 'Shooting the Mother: Fetal Photographs and the Politics of Disappearance', in Carol A. Stabile (ed.) *Feminism and the Technological Fix* (Manchester, 1994), pp. 179–200.
 68. Stabile, 'Shooting the Mother', p. 200.
 69. Nikolas Rose, *The Politics of Life Itself: Biomedicine, Power, and Subjectivity in the Twenty-First Century* (Princeton, NJ, 2006), pp. 15–22.
 70. Thompson, 'Fertile Ground: Feminists Theorize Infertility', pp. 61–2.
 71. Lupton, *Medicine as Culture*, p. 156.
 72. Paula A. Treichler, 'Feminism, Medicine and the Meaning of Childbirth', in Mary Jacobus, Evelyn Fox Keller, and Sally Shuttleworth (eds), *Body/Politics: Women*

- and the Discourses of Science* (New York, 1990), cited in Lupton, *Medicine as Culture*, p. 156.
73. Marilyn Strathern, 'Introduction, First Edition: A Question of Context', in Jeanette Edwards, Sarah Franklin, Eric Hirsch, Francis Price, and Marilyn Strathern (eds), *Technologies of Procreation: Kinship in the Age of Assisted Conception*, 2nd edn (London, 1999), pp. 166–8.
 74. Oakley, *The Captured Womb*, p. 282.
 75. Cohen et al, 'The Early Days of IVF', p. 439.
 76. van Balen and Inhorn, 'Introduction: Interpreting Infertility', p. 12.
 77. Thompson, 'Fertile Ground: Feminists Theorize Infertility', p. 52.
 78. Sandelowski and de Lacey, 'The Uses of a "Disease"', p. 34; van Balen and Inhorn, 'Introduction: Interpreting Infertility'.
 79. Thompson, 'Fertile Ground: Feminists Theorize Infertility', pp. 65–8.
 80. Mohan Rao, *From Population Control to Reproductive Health: Malthusian Arithmetic* (New Delhi, 2004), pp. 19–74; Mohan Rao and Sarah Sexton (eds), *Markets and Malthus: Population, Gender and Health in Neo-Liberal Times* (New Delhi, 2010), pp. 1–30; Gita Sen, Adrienne Germain, and Lincoln C. Chen (eds), *Population Policies Reconsidered: Health, Empowerment, and Rights* (Boston, MA, 1994), pp. 27–46 and pp. 47–62; Rachel Simon-Kumar, 'Marketing' *Reproduction? Ideology and Population Policy in India* (New Delhi, 2006), pp. 98–128.
 81. Paul R. Erhlich, *The Population Bomb* (New York, 1968).
 82. J. L. Finkle and B. B. Crane, 'The Politics of Bucharest: Population, Development, and the New International Economic Order', *Population and Development Review*, 1:1 (1975), pp. 89–91; J. L. Finkle and B. B. Crane, 'Ideology and Politics at Mexico City: The United States at the 1984 International Conference on Population', *Population and Development Review*, 11:1 (1985), pp. 3–5.
 83. Hilary Standing, 'An Overview of Changing Agendas in Health Sector Reforms', *Reproductive Health Matters*, 10:20 (2002), pp. 20–5.
 84. S.J. Jejeebhoy, 'Women's Status and Fertility: Successive Cross-Sectional Evidence from Tamil Nadu, India, 1970–80', *Studies in Family Planning*, 22:4 (1991); K. O. Mason, 'The Impact of Women's Social Position on Fertility in Developing Countries', *Sociological Forum*, 2:4 (1987); Ellen Sattar, 'The Demographic Situation', in Women for Women (ed.), *The Situation of Women in Bangladesh* (Dhakar, 1979), cited in Naila Kabeer, *Reversed Realities: Gender Hierarchies in Development Thought* (London, 1994), p. 198; R. Simmons, 'Women's Lives in Transition: A Qualitative Analysis of the Fertility Decline in Bangladesh', *Studies in Family Planning*, 7:5 (1996).
 85. Gita Sen and Caren Grown, 'Development Alternatives with Women for a New Era (DAWN)', *Development, Crises and Alternative Visions: Third World Women's Perspectives* (New York, 1987); Lourdes Beneria and Gita Sen, 'Accumulation, Reproduction, and Women's Role in Economic Development: Boserup Revisited', *Signs*, 7:2 (1981), pp. 284–97; Lourdes Beneria and Gita Sen, 'Class and Gender Inequalities and Women's Role in Economic Development: Theoretical and Practical Implications', *Feminist Studies*, 8:1 (1982), pp. 165–72.
 86. Sen, Germain, and Chen (eds), *Population Policies Reconsidered*, pp. 47–74; Ruth Dixon-Mueller, *Population Policy and Women's Rights: Transforming Reproductive Choice* (Westport, CT, 1993), pp. 29–54; R. J. Cook, 'Human

- Rights and Reproductive Self-Determination', *The American University Law Review*, 44:975 (1995), pp. 984–1004.
87. Monica Das Gupta, John Bongaarts and John Cleland, 'Population, Poverty, and Sustainable Development: A Review of the Evidence', *World Bank Policy Research Working Paper Series, No. 5719* (2011), p. 15.
 88. Sonia Corrêa, *Population and Reproductive Rights: Feminist Perspectives From The South*. (London, 1994), pp. 56–65; Ruth Dixon-Mueller and Adrienne Germain, 'Population Policy and Feminist Political Action in Three Developing Countries', in Jason Finkle and C. Alison McIntosh (eds), *The New Politics of Population: Conflict and Consensus in Family Planning* (New York, 1994); Claudia Garcia-Moreno and Ampero Claro, 'Challenges from the Women's Health Movement: Women's Rights versus Population Control', in Sen, Germain, and Chen (eds), *Population Policies Reconsidered*.
 89. Irene Tinker, 'The Making of a Field: Advocates, Practitioners and Scholars', in Irene Tinker (ed.), *Persistent Inequalities: Women and World Development* (Oxford, 1991).
 90. Sonia Corrêa and Rosalind Petchesky, 'Reproductive and Sexual Rights: A Feminist Perspective', in Sen, Germain, and Chen (eds), *Population Policies Reconsidered*; Dixon-Mueller and Germain, 'Population Policy and Feminist Political Action in Three Developing Countries'.
 91. Seamus Grimes, 'From Population Control to "Reproductive Rights": Ideological Influences in Population Policy', *Third World Quarterly*, 19:3 (1998); Fred T. Sai, 'The ICPD Programme of Action: Pious Hope or a Workable Guide?', *Health Transition Review*, 7:4 (1998); Simon-Kumar, 'Marketing' Reproduction?', pp. 1–4.
 92. 'Foreword', in UNFPA [United Nations Population Fund], *Programme of Action: Adopted at the International Conference on Population and Development* (no place of publication given, 2004), p. iii: http://www.unfpa.org/sites/default/files/event-pdf/PoA_en.pdf. Accessed 6 December 2016.
 93. United Nations, *The Beijing Declaration and the Platform for Action* (no place of publication given, 1995), para. 96: <http://www.un.org/womenwatch/daw/beijing/pdf/BDPfA%20E.pdf>. Accessed 6 December 2016.
 94. Corrêa, *Population and Reproductive Rights*, pp. 10–66.
 95. Kabeer, *Reversed Realities*, p. 199.
 96. Kabeer, *Reversed Realities*, p. 201.
 97. Anita P. Hardon, 'The Needs of Women Versus the Interests of Family Planning Personnel, Policy-Makers and Researchers: Conflicting Views on Safety and Acceptability of Contraceptives', *Social Science & Medicine*, 35:6 (1992), p. 758.
 98. Rutstein and Shah, *Infecundity, Infertility, and Childlessness in Developing Countries*; Karen Hardee, Kokila Agarwal, Nancy Luke, Ellen Wilson, Margaret Pendzich, Marguerite Farrell and Harry Cross, 'Reproductive Health Policies and Programs in Eight Countries: Progress Since Cairo', *International Family Planning Perspectives*, 25 (1999).
 99. United Nations, *The Beijing Declaration and the Platform for Action*, para. 100.
 100. Rosalind Petchesky, 'From Population Control to Reproductive Rights: Feminist Fault Lines', *Reproductive Health Matters*, 3:6 (1995), p. 152.

101. Robert D. Nachtigall, 'International Disparities in Access to Infertility Services', *Fertility and Sterility*, 85:4 (2006), pp. 873–4.
102. Rachel Simon-Kumar, 'Neo-Liberal Development and Reproductive Health in India: The Making of the Personal and the Political', *Indian Journal of Gender Studies*, 14:3 (2007), p. 382.
103. Andrea Whittaker and Amy Speier (2010) "'Cycling Overseas": Care, Commodification, and Stratification in Cross-Border Reproductive Travel', *Medical Anthropology*, 29:4 (2010); Andrea Whittaker, 'Cross-Border Assisted Reproduction Care in Asia: Implications for Access, Equity and Regulations', *Reproductive Health Matters*, 19:37 (2011).
104. Sama-Resource Group for Women and Health, 'Birthing a Market: A Study on Commercial Surrogacy' (New Delhi, 2012), p. 7: http://www.communityhealth.in/~commun26/wiki/images/e/e8/Sama_Birthing_A_Market.pdf; see also Law Library of Congress, *Bioethics Legislation in Selected Countries* (Washington DC, 2012), pp. 42–7: https://www.loc.gov/law/help/bioethics_2012-008118FINAL.pdf. Both accessed 6 December 2016.
105. Ministry of Health and Family Welfare, Government of India, *The Assisted Reproductive Technologies (Regulation) Bill* (New Delhi, 2010): <http://icmr.nic.in/guide/ART%20REGULATION%20Draft%20Bill1.pdf>. See also the guidelines published by the Indian Council of Medical Research, *National Guidelines for Accreditation, Supervision and Regulation of ART Clinics in India* (New Delhi, 2005): http://icmr.nic.in/art/Prilim_Pages.pdf. Both accessed 6 December 2016. At the time of writing this book, the government is in the process of drafting further legislation to regulate surrogacy services in India, banning foreigners, same-sex, and unmarried individuals or couples from accessing these services. See Sushmi Dey, 'Foreigners May be Barred from Commissioning Surrogacy in India', *Times of India*, October 16 2015.
106. Adrienne Germain, Ruth Dixon-Mueller and Gita Sen, 'Back to Basics: HIV/AIDS Belongs with Sexual and Reproductive Health', *Bulletin of the World Health Organization*, 87:11 (2009).
107. Françoise Girard, 'Taking ICPD Beyond 2015: Negotiating Sexual and Reproductive Rights in the Next Development Agenda', *Global Public Health*, 9:6 (2014).
108. For example, Jyotsna A. Gupta and Annemiek Richters, 'Embodied Subjects and Fragmented Objects: Women's Bodies, Assisted Reproduction Technologies and the Right to Self-Determination', *Journal of Bioethical Inquiry*, 5:4 (2008); Manjeer Mukherjee and Sarojini B. Nadimipally, 'Assisted Reproductive Technologies in India', *Development*, 49:4 (2006).
109. George Parker, 'Making Sense of ART Through the Lens of Reproductive Justice', *Women's Studies Journal*, 29:1 (2015), p. 41.
110. Nayantara Sheoran, "'Stratified Contraception": Emergency Contraceptive Pills and Women's Differential Experiences in Contemporary India', *Medical Anthropology*, 34:3 (2015). Sheoran's paper focuses on contraceptive technology rather than infertility technology, but nonetheless reflects the changing mood of a new generation of women who see technology as a means to reproductive autonomy.

111. United Nations, *Framework of Actions for the Follow-up to the Programme of Action of the International Conference on Population and Development Beyond 2014* (New York, 2014), p. 106, p. 114 and p. 235.
112. E. Oluwole Akande, 'Affordable Assisted Reproductive Technologies in Developing Countries: Pros and Cons', *Human Reproduction*, 1 (July 2008); Willem Ombet, 'Global Access to Infertility Care In Developing Countries: A Case Of Human Rights, Equity And Social Justice', *Facts, Views & Vision in ObGyn*, 3:4 (2011); Effy Vayena, 'Assisted Reproduction in Developing Countries: The Debate at a Turning Point', in Frida Simonstein (ed.), *Reprogen-Ethics and the Future of Gender* (Dordrecht, Heidelberg, London and New York, 2009).
113. Arthur L. Greil, Katherine Slauson-Blevins and Julia McQuillan, 'The Experience of Infertility: A Review of Recent Literature', *Sociology of Health and Illness*, 32:1 (2010), p. 146.
114. Parker, 'Making Sense of ART Through the Lens of Reproductive Justice'.
115. Ginsberg and Rapp, 'The Politics of Reproduction', p. 331.
116. Fraser, *Fortunes of Feminism*, pp. 200–8.
117. Inhorn and Birenbaum-Carmeli, 'Assisted Reproductive Technologies and Culture Change'.
118. John Comaroff and Jean Comaroff, *Theory From the South: Or, How Euro-America is Evolving Toward Africa* (Boulder, CO, 2012), cited in Sheoran, "'Stratified Conception'", p. 253.
119. Fraser, *Fortunes of Feminism*, pp. 217–26.
120. Fraser, *Fortunes of Feminism*, p. 3.
121. Fraser, *Fortunes of Feminism*, p. 113.

RESEARCH RESOURCES

- E. Oluwole Akande, 'Affordable Assisted Reproductive Technologies in Developing Countries: Pros and Cons', *Human Reproduction*, 1 (July 2008), 12–14.
- Bertarelli Foundation Scientific Board, 'Public Perception on Infertility and its Treatment: An International Survey', *Human Reproduction*, 15:2 (2000), 330–4.
- Sarah Franklin, *Biological Relatives: IVF, Stem Cells and the Future of Kinship* (Durham, NC: Duke University Press, 2013).
- Nancy Fraser, *Fortunes of Feminism: From State-Managed Capitalism to Neoliberal Crisis* (London: Verso, 2013).
- Françoise Girard, 'Taking ICPD Beyond 2015: Negotiating Sexual and Reproductive Rights in the Next Development Agenda', *Global Public Health*, 9:6 (2014), 607–19.
- Faye Ginsberg and Rayna Rapp, 'The Politics of Reproduction', *Annual Review of Anthropology*, 20 (1991), 311–43.
- Arthur L. Greil, Katherine Slauson-Blevins and Julia McQuillan, 'The Experience of Infertility: A Review of Recent Literature', *Sociology of Health and Illness*, 32:1 (2010), 140–62.

- Arthur L. Greil and Julia McQuillan, “‘Trying’ Times: Medicalization, Intent, and Ambiguity in the Definition of Infertility”, *Medical Anthropology Quarterly*, 24:2 (2010), 137–56.
- Jyotsna A. Gupta and Annemiek Richters, ‘Embodied Subjects and Fragmented Objects: Women’s Bodies, Assisted Reproduction Technologies and the Right to Self-Determination’, *Journal of Bioethical Inquiry*, 5:4 (2008), 239–49.
- Danielle L. Herbert, Jayne C. Lucke and Annette J. Dobson, ‘Infertility in Australia Circa 1980: An Historical Population Perspective on the Uptake of Fertility Treatment by Australian Women Born in 1946–51’, *Australian and New Zealand Journal of Public Health*, 33:6 (2009), 507–14.
- Marcia C. Inhorn and Daphna Birenbaum-Carmeli, ‘Assisted Reproductive Technologies and Culture Change’, *Annual Review of Anthropology*, 37 (2008), 177–96.
- Maya N. Mascarenhas, Seth R. Flaxman, Ties Boerman, Sheryl Vanderpoel and Gretchen A. Stevens, ‘National, Regional, and Global Trends in Infertility Prevalence Since 1990: A Systematic Analysis of 277 Health Surveys’, *PLoS Med*, 9:12(2012): <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3525527/>.
- Manjeer Mukherjee and Sarojini B. Nadimipally, ‘Assisted Reproductive Technologies in India’, *Development*, 49:4 (2006), 128–34.
- Michelle Murphy, *Seizing the Means of Reproduction: Entanglements of Feminisms, Health and Technoscience* (Durham, NC: Duke University Press, 2012).
- Robert D. Nachtigall, ‘International Disparities in Access to Infertility Services’, *Fertility and Sterility*, 85:4 (2006), 871–5.
- Elianne Riska, ‘Gender and Medicalization and Biomedicalization Theories’, in Adele E. Clarke, Laura Mamo, Jennifer Ruth Fosket, Jennifer R. Fischman and Janet. K. Shim (eds), *Biomedicalization: Technoscience, Health and Illness in the U.S.* (Durham, NC: Duke University Press, 2010), 147–70.
- Shea O. Rutstein, and Iqbal H. Shah, *Infecundity, Infertility, and Childlessness in Developing Countries: DHS Comparative Reports No. 9* (Elianne Riska, 2004): www.who.int/reproductivehealth/topics/infertility/DHS-CR9.pdf.
- Sama-Resource Group for Women and Health, ‘Birthing a Market: A Study on Commercial Surrogacy’ (New Delhi, 2012): http://www.communityhealth.in/~commun26/wiki/images/e/e8/Sama_Birthing_A_Market.pdf.
- Charis M. Thompson, ‘Fertile Ground: Feminists Theorize Infertility’, in Marcia C. Inhorn and Frank van Balen (eds), *Infertility Around the Globe: New Thinking on Childlessness, Gender and Reproductive Technologies* (Berkeley, Los Angeles, CA, and London: University of California Press, 2002), 52–78.
- United Nations, *Framework of Actions for the Follow-up to the Programme of Action of the International Conference on Population and Development Beyond 2014 Report of the Secretary-General* (New York: United Nations, 2014): <http://www.unfpa.org/publications/framework-actions-follow-programme-action-international-conference-population-and>.
- Frank van Balen and Marcia C. Inhorn, ‘Introduction: Interpreting Infertility: A View from the Social Sciences’, in Frank van Balen and Marcia C. Inhorn (eds), *Infertility Around the Globe: New Thinking on Childlessness, Gender and Reproductive*

Technologies (Berkeley, Los Angeles, CA, and London: University of California Press, 2002), 3–32.

Effy Vayena, 'Assisted Reproduction in Developing Countries: The Debate at a Turning Point', in Frida Simonstein (ed.), *Reprogen-Ethics and the Future of Gender* (Dordrecht, Heidelberg, London and New York: Springer, 2009), 65–77.

Being Paid to Produce Eggs and Sperm: Gender, Commodification, and the Bodily Experiences of Gamete Donors

Rene Almeling

INTRODUCTION

In the US medical market for eggs and sperm, women and men are paid money to produce sex cells, a practice referred to as ‘donation’ by egg agencies and sperm banks alike. However, egg donation is organized as a gift exchange, while sperm donation is likened to paid employment.¹ In this chapter, I focus on egg and sperm donors’ embodied experiences, paying particular attention to how those experiences are shaped by the gendered framing of paid donation as a gift or a job.

Most of what we know about the physical experience of in vitro fertilization (IVF) is based on studies of infertile women, who turn to the technology in hopes of conceiving a child. In going through the first part of an IVF cycle, egg donors encounter the same regimen as infertile women: they inject the same medications, attend the same monitoring appointments, and endure the same egg retrieval surgery.² Because they are subject to the same technological processes, one might expect that infertile women and egg donors would have very similar physical reactions to the shots and surgery. However, the social context in which these two groups of women experience IVF is very different. Infertile women usually spend tens of thousands of dollars and months, if not years, of their lives trying to become pregnant. Egg donors are young, healthy women who receive thousands of dollars

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to give the 'gift of life'. This raises the question of whether being paid to undergo IVF affects women's physical experiences of the technology.

In contrast, sperm donation does not require participation in risk-bearing medical procedures. Men must simply masturbate on a regular basis in the sperm bank, alternating their deposits with periods of abstinence. Scholars know little about men's experiences of masturbation in contemporary society, so it is an open question whether these are affected by variation in social context, namely doing it for fun in one's bedroom versus doing it for money in the sperm bank. In detailing their activities, egg and sperm donors offer insight into the embodied experience of donating sex cells for money and provide evidence that the social context in which physical experiences occur can produce variation in how the body feels.

THE EMBODIED EXPERIENCE OF EGG DONATION

Research on the experiences of infertile women who are using IVF to conceive children suggests that it can be extremely disruptive to lives, careers, and marriages. The technology is portrayed as 'all-consuming', and infertile women routinely describe feeling like they are on an 'emotional roller-coaster'. In Sarah Franklin's study, many of the infertile women quit their jobs so as to manage the physical and emotional consequences of the treatment. She writes, 'Women [repeatedly] emphasized that they did not realize how demanding the technique would be, how intensely it would affect them, and how much their lives would feel as though they had been "taken over"'. Here is a description from one of Franklin's respondents:

Mary Chadwick: I didn't know what hit me, I honestly didn't know what hit me, I couldn't believe the intensity of the programme . . . All you do is eat, drink, and talk IVF, your dinner conversation revolves around how big your follicles were that day, which side you had your injection in and that sort of thing, you just do, you just live and die IVF.³

In another interview study, Gay Becker finds that as women become immersed in biomedical fixes for infertility, they may experience 'depersonalization' and begin to view their bodies as 'defective'.⁴

The question is whether egg donors offer similar accounts or whether being paid to undergo these procedures and not hoping for a long-awaited pregnancy alters the physical experiences of IVF. In fact, in explaining how the shots and surgery fit into their daily lives, egg donors describe a very different embodied experience of the technology. They use matter-of-fact language to report each step required, from learning how to inject medications to attending medical appointments and recovering from egg retrieval surgery.

Shots and Surgery

The 19 egg donors I interviewed had participated in a total of 42.5 cycles at four US egg agencies.⁵ Most of the women had cycled once or twice, but their experiences varied. Two donors had been matched with recipients but not yet donated, and one woman had already completed six cycles and was matched for a seventh. Two of the women had donated years before, but in most cases, the donation experience was much more recent; six women were in the midst of cycles, and five had cycled within the last two months.

In addition to participating in cycles organized by OvaCorp, Creative Beginnings, Gametes Inc., and University Fertility Services, some women had donated through other commercial agencies and university programmes, and one had donated to a close friend.⁶ Within each programme, women are sent to a variety of physicians, depending on where the recipient is receiving treatment. Thus, those who had signed on with multiple programmes or cycled multiple times could compare their experiences with different programmes and different physicians.

Most of the egg donors had no previous experience with giving themselves shots, so the first step was to learn how to mix and inject the fertility medications. Heather, a senior in college, described how the nurse coordinator at University Fertility Services

showed me how to use the needles. The hormones and all the medicine come in one bottle, and then you have to syringe it out. She had to teach me how to flick all the bubbles out of the needle, how to clean the area, and make sure everything is sanitary.

Several donors indicated that they were nervous about giving themselves a shot the first time, and many turned to roommates or family members for help with the injection.

The once or twice-daily shots required donors to inject a small needle into their stomachs or thighs. Women gave mixed reports about how much the shots hurt. Some said they 'didn't really feel it', others described a 'little pinch', and a few said the shots 'can be painful, especially if you're on a schedule where you're taking several shots a day'. It is very likely that a selection effect is at work here, because these women still decided to become egg donors even after they found out that the process involves daily injections. Indeed, several made a point of saying that they are not scared of needles or that they have tattoos, so the prospect of giving themselves shots was not a 'big deal'.

The medications must be taken at the same time each day, and women reported slightly altering their schedules to do the injections. A few women hid the needles from people in their households. One of the younger donors, Valerie, a 22-year-old college student, kept her entire first cycle a secret while living with her mother. This secret included the fact that she took her first ever airplane trip to an out-of-state retrieval. Susan, a 24-year-old single mother, did not want to do the injections in front of her 4-year old, 'because he doesn't understand that. That's weird to him, and so I'd do it before he got up'. In

addition to making time in their daily routines, several women changed other aspects of their behaviour during cycles in response to requests from staff, including quitting smoking and reducing consumption of alcoholic beverages.

The injection of fertility medications stimulates the ripening of multiple eggs in the ovaries, a process that is monitored in physicians' offices through blood draws and ultrasound. Lisa, a 26-year old in the middle of her second cycle, described how the laboratory technician used ultrasound to view and count the ovarian follicles, which contain the ripening eggs:

They measured me. I was doing the injections for three days, and I went there on my fourth day before I took my fourth injection, and they found like six [eggs] on one [ovary] and seven on the other. They were still getting larger, and when I went today, they found a couple more. They had gotten a lot bigger since Wednesday. They develop quickly.

Several donors thought it was 'neat' to see their eggs, saying that they looked like 'honeycomb' or 'flowers'. These visits are usually scheduled for first thing in the morning, and, as a result, some women arrived late to work or had to arrange childcare because commuting to the appointments took as much as an hour each way. Later in the day, women receive a call from the nurse if they need to adjust the dosage.

When the eggs are mature, donors do a final 'trigger shot', which causes the ovaries to release the eggs. There was universal agreement that this injection is painful, as the medication goes in slowly and burns. Thirty-six hours later is the egg retrieval surgery, an outpatient procedure that usually lasts between 15 and 30 minutes. In most cases, donors recall being prepped for surgery and then waking up in the recovery room. Dana, a 25-year old who had donated four times in the past 18 months, offers a fairly standard account of the day:

You're up extremely early [laughs]. You can't have anything to eat the night before, which is horrible for me because I eat all the time. They put you in a room, have you undress, put on a hospital gown and a little cap to cover your hair. They start your IV and basically just let you sit for a while. They take your blood pressure, check your oxygen level, your saturation, your heart rate, make sure you go to the bathroom. They'll start some fluids and then wheel you into an OR [operating room]. It's not the one you usually see in the hospital, but it's their version in their office. They get you on the bed, knock you out, and then that's it. You wake up, and you're back in the room you started in, and you really don't remember anything.

Women who donate to recipients who live elsewhere will often be asked to travel to the recipient's location for the last few days of the cycle. More than half the women I interviewed had travelled for at least one of their cycles. It is impossible to determine in advance the exact date of the retrieval, because it depends on how quickly the eggs mature, and this layer of uncertainty can add to the difficulty of scheduling time away from work and family. If an egg donor does have to travel,

donation programmes pay for one companion to join her on the trip, and several women considered this an opportunity to explore a new city with family or friends. Megan took her best friend along for a retrieval in the North West, saying ‘I hadn’t gone on a vacation in years’ because she had been working full time and taking a full load of classes at the university. Several Gametes Inc. donors had retrievals scheduled in Orlando, and they took their children along to go to Disney World, describing the trip as a ‘cheap family vacation’. Other women preferred not to travel but had little choice because they lived in small towns. For example, Dana was a very popular donor who often had multiple recipients interested in her at the same time, so she would be asked where she preferred to donate. However, at the end of our interview, she concluded, ‘I don’t mind the shots. I don’t mind the appointments. I just don’t like the travel [laughs]’.

Side Effects

There are potential side effects from the fertility medications and the retrieval surgery. Donors hear about these risks from programme staff and psychologists as well as clinicians at the infertility practices where they are being treated. Before agreeing to donate, many women discussed these risks with relatives who were medical professionals, or consulted their own doctors, and many did research online or in libraries.

As a result, egg donors are more than prepared to experience physical side effects. Of the 17 women who had completed at least one cycle, eight described very mild reactions to the fertility medications and retrieval surgery, five experienced slightly more discomfort, and four described having serious pain. On one end of the spectrum are almost breezy accounts, such as that offered by Erica, a 27-year-old mother of two who had donated twice in the previous year:

Really it’s pretty simple [laughs]. You do a week or so of ultrasounds every day or every other day, depending on the medications, then go [laughs]. It’s general anaesthesia; you feel like you’ve slept for about four days, wake up feeling good. You just have light cramps for a couple days, and it’s over and just back to normal life.

Similarly, Jessica, a 30-year-old nurse, explained:

[Egg donation] really didn’t take up a lot of time. The shots I did at home, and they just took a few minutes. It just didn’t interfere with anything. I actually kept rollerblading and running and doing my regular things. I didn’t have problems with it. They did say that you could have some cramping or bloating or just start to feel different things, and of course if you start to feel very odd, you should go see a doctor. I had a good experience with it, so it was just something that I kind of did and went on, and it never really bothered me, which I was glad. Up until the day we left [for the retrieval], that was actually the first day that I just started feeling like a little cramping feeling, and then for a couple days up until the retrieval and afterwards, but nothing that I can really speak of.

Jessica even referred to the retrieval as pleasant, noting, ‘Everybody was real nice, real pleasant. The doctor actually came in, introduced himself, and said “This is what I’ll be doing”. I was asleep through all of it anyway. I didn’t get nervous. I was ready, just ready. It was a real pleasant experience’.

For some women, recovery took no time at all, and they described going out for lunch or dinner after the retrieval. But others had cramping and bloating for a day or two. Jane explained how, as a result of the fertility medications, ‘you gain five pounds, which I think, if anything, is the part I hate most. You lose it after you get your period’. Her cycle ended right before her sorority’s formal dance. The discomfort from the injections made it difficult for her to practise the dance routine, and the extra weight made her feel self-conscious in her dress.

Olivia, a 23-year old who had completed three cycles, experienced more negative reactions to the fertility medications and the retrieval surgery but only in some of her cycles:

Olivia: The very first time I was fine. I didn’t even think about it. I just took my shots every day. I thought, oh they’re gonna take my eggs, and if she gets pregnant, yay, and if not, then at least I tried. I had no side effects. In fact, after the retrieval, I was up literally running around the office, because the nice head nurse Holly, she allowed me to go watch the retrieval of another woman. My mom had taken me out for lunch right after, I went home, watched TV, I was fine. The second time I did it [laughs] I was moody! I could be really happy one minute and then all of a sudden I would be like roar! Get out of my face!

Rene: Did they change the medication?

Olivia: Same medication. It’s just your body responds differently different times. It’s like a pregnancy. You never have the same pregnancy twice. I was moody, irritable, bloated. My stomach got all big. I had cramps. Bluh! It was horrible. I just went right home and was in bed for two days. And then the third time I was moody, no cramps, my tummy got big. They retrieve the eggs, and then it goes back to normal. I didn’t have to go back to sleep or anything. I was fine.

Olivia was one of two women who reported not being given enough anaesthesia during an egg retrieval. In describing the surgery for her third cycle, she said, ‘I won’t say [it was] like someone stabbing you in your stomach, but if you could just imagine a big needle going into an area that’s really tender and how much that would hurt and then the tender area being your ovaries’. She was even awake enough to tell the doctor about the pain, but the procedure is so quick that there was not time to administer more anaesthesia. However, this negative experience was not enough to deter her from donating again. She signed on for a fourth cycle, which just happened to be with the same physician. ‘I told the nurse, “Next time, they’re going to have to put me all the way under”’.

None of the egg donors I interviewed had severe reactions to the fertility medications or serious complications from the retrieval surgery, but on the far end of the side-effects spectrum for this sample, four women (who were associated with three different donation programmes) described experiencing a great deal of pain during the cycle. Moreover, 'returning to normal' after the retrieval took a week or two instead of just a few days. Heather, who had just finished her first cycle, felt more pain as the cycle went on:

I went to [an ultrasound appointment] in the middle [of the cycle]. The [ovarian] follicles had gotten a lot bigger. That's when I started to actually feel my ovaries. It felt like cramps, not quite as uncomfortable. I was just very sluggish, almost bloated. Toward the end, like right before the surgery, it got really painful. Just sitting down kind of hurt because my ovaries were huge. There's like 23 enlarged follicles in my right one, and then in my left one, there were 17. [The nurse] described it to me: the ovaries sort of sag down a little bit because of all the weight and the fluid. I was like, 'It makes so much sense now' [laughs]. The ultrasound was the neatest part because you got to see everything growing, and I could feel everything that was going on. They were testing my hormone levels, and at the right stage, that night I take a trigger shot. Then I had a day off where it was pretty painful, so I just laid around. It wasn't like overbearingly painful. It was pretty much just cramps. It just felt like there were heavy ovaries.

Although most women reported producing between ten and 25 eggs during their cycles, the four donors who experienced more pain produced considerably more, between 30 and 40 eggs. One woman said that after her first cycle, it 'hurt to bounce or move too much' for several weeks, so she took matters into her own hands to ensure that she did not 'overproduce' during subsequent cycles:

My stomach was really distended. I was very uncomfortable. It was just not a good experience at all, so the second, third, fourth [cycles], I was very adamant about what I would and would not do. I would tell them, 'You can't increase dosages on me, because I overproduce'. The first time, I had 33 eggs, so then they knew we can't go this high. The second time, it went down to 28 eggs. The third time, I started administering on my own, so it was like 22. I had to take care of myself, and I know that's so against the rules. But they don't know how it goes for me. I just have to trust that my body is always going to react the same, which it does [laughs]. So it hovered around 22 the last two times, but that's still a lot of eggs. Some people, it's only like 14 or ten. I would always start off, and they wouldn't be blossoming. By the tenth day, everything would go into overdrive. I didn't respond right away, so they're thinking they should step it up. They always err on the side of caution, which means get as many eggs as you can. So they would step it up from two ampoules to three, and that's when I didn't step it up. I didn't tell them. I just didn't do it. I hate saying this because if I really thought that I was wrong, then I wouldn't have done that because I wouldn't want anybody to be x'd out of their [chances for conceiving], but I couldn't go through the discomfort again. It's like you're pregnant,

but you're not. It's just water, and it's hard. Even after the eggs are out, it doesn't go down right away.

Another donor who cycled multiple times with various agencies before taking a position as a staffer in an egg donation programme echoed this suggestion that some physicians are more interested in generating eggs than in safeguarding donors' health. She explained that the same dose of medication affects women differently, but the number of eggs 'also depends on the protocol the doctor uses. Some are a little more conservative than others, and there's a fine line between getting a good amount of eggs and hyperstimulating'.

It is striking that three of the four women who experienced the most negative physical reactions went on to donate again, and the fourth wanted to have her own family first but would consider donating again in the future. Their subsequent cycles were much less painful, because physicians now knew to prescribe lower doses of medication. For example, Valerie's second cycle, which she described as 'day' to the first cycle's 'night', resulted in 15 eggs instead of 37. In fact, the majority of egg donors – 80% – were willing to do at least one more cycle, and many planned to donate several more times. Nevertheless, several said there was a limit because of concerns they had about the effects of repeated exposure to fertility medications.

Aside from the four women on the far end of the side-effects spectrum, Gretchen reported the most dramatic response to the shots. She was also the only person I interviewed who donated eggs to a close friend before signing up with a donation programme. Her friend Barbara and her husband invited Gretchen to come live with them for the duration of the cycle, and given that Barbara had already tried IVF with her own eggs, she was in a position to tell Gretchen how it was going to go. Gretchen explained:

Now Barbara was used to everything because she had already tried going through the cycle, so she knew what to expect, whereas me, I had no idea. I remember the first day of being on the Lupron as being horrible. I think it was just my body was not used to it. My hormones are going crazy. I was so nauseated I lived on popsicles for two days. I mean that's all that I could stand. And then the second day, I remember getting a really bad headache. I think I popped two ibuprofen, and I was fine. But the funniest was when we were both on the Lupron. Their house is huge, and we kept cranking the air down lower and lower. Both Barbara and I would be walking through going, 'God, is it like four hundred degrees in this house?' And her husband, bless his heart. Here we are in the middle of summer. It's like 95 degrees on a cold day up there. He's in jeans, a long-sleeved shirt, and a jacket, and he's like, 'Are you kidding me?' He's like, 'I can't put it down; you've got it set at 63. You need to suck it up and get past it'. So that was the worst part about it.

It is possible that Gretchen was primed for this more dramatic response, because she was living with a woman who had already been through IVF once before trying to have a baby.

In fact, Lisa, whose 46-year-old mother was using IVF to have a family with her new husband, addressed this point explicitly. Here, she compares her experiences with fertility medications with those of women like her mother:

This particular drug I'm doing gives me a little bit of a red spot where I inject, but it just lasts for about a day. It's not that bad. The first time, I didn't have any side effects. No redness, nothing. I just felt normal. It was strange, because they kept sending me all this paperwork saying 'This could happen, this could happen'. But, no. They mentioned something about depression or euphoria, and I didn't really experience either. I think maybe that is more for people who are trying to get pregnant, because they're so nervous and desperate or whatever. They really want to get pregnant, and they get really emotional about it. I'm not really that emotional about it.

In sum, egg donors do not 'live and die IVF'. In stark contrast to infertile women, the egg donors I interviewed used straightforward, undramatic language to describe the injections and outpatient surgery and reported that cycles were 'easy' or 'quick'. Some women actually used the word 'vacation' to describe travelling for the retrieval surgery, and even those who experienced more serious side effects went on to donate again. Although egg donors hope that recipients become pregnant, they are not nearly so invested in this outcome as infertile women are, because egg donors are not attempting their *own* long-awaited pregnancy. Moreover, they are paid thousands of dollars for the cycle, and they will receive the money regardless of how many eggs they produce. Perhaps this is the reason that so few women referenced the financial compensation when discussing how egg donation fits into their daily lives. This was not at all the case with the sperm donors I interviewed, who, as will be clear in the next section, talked constantly about the money they make at the sperm bank.

THE EMBODIED EXPERIENCE OF SPERM DONATION

Whereas an egg donor is assimilated into a medical practice as a sort of patient, a sperm donor is required to perform a sexual act that has long been cloaked in shame and secrecy. Few scholars have addressed the topic of masturbation in contemporary society, and some of the research that has been done has itself taken on an almost furtive quality. For example, in a landmark study of sexual behaviour in the USA in 1992, Laumann and colleagues deemed questions about masturbation too sensitive to be asked out loud. Instead, the interviewer handed respondents a piece of paper with the questions listed, and respondents marked the answers before folding the paper, placing it in a sealed envelope, and handing it back to the interviewer.⁷

This survey revealed that more than 60% of men had masturbated in the last year, and about a third of the younger men (18–34-year olds) reported doing it at least once a week. Selecting from a predefined list of reasons why they masturbate, men most commonly answered that they wished to relieve sexual tension or experience sexual pleasure. About half the men said they felt guilty about it. The researchers concluded that ‘masturbation has the peculiar status of being both highly stigmatized and fairly commonplace’.⁸ They distinguished it from sex with a partner and noted, ‘in this secluded personal realm, you do not have to pay as much attention to others, and the goal of personal pleasure can become central’.⁹

Laumann and colleagues produced systematic statistics, but they did not collect qualitative data on the embodied experience of masturbation, a topic on which there has been very little contemporary research. In one study of Muslim men in Middle Eastern fertility clinics, Marcia Inhorn found that husbands, who must produce a semen sample timed to their wife’s egg retrieval, experienced a great deal of anxiety, both from the need to perform and from violating religious mores. One man she interviewed explained:

In IVF centres, they say, “Give me the sperm now! After five minutes, I need your sperm. Now, now! Give me, give me!” This is not good. The male encounters problems when they do that. It’s not good. I start thinking about when I will give the sperm, and I feel uncomfortable.

Pointing to the clinic’s semen collection room, which had a door that opened into the small, crowded waiting room, this same man said it was ‘like a prison cell’.¹⁰ In some cases, the anxiety results in failure to produce a sample, and the IVF cycle is for naught.

Comparing the findings from Laumann et al’s survey and Inhorn’s interviews raises the question of how sperm donors experience masturbation. In the USA, the physical act is stigmatized, though not to the degree it is in the Middle East. Moreover, sperm donors are not masturbating on demand for a spouse in the next room who is undergoing complicated and expensive fertility treatments, but donors’ payments *are* predicated on sperm count and semen volume. So do US men producing sperm for money experience masturbation more as paid pleasure or pressured performance?

From Awkward to Routine

Like the egg donors, the 20 sperm donors I interviewed from two large US sperm banks were at various stages in the donation process, from those who had been making deposits for a few months to men who had donated a decade before. On average, men at Gametes Inc. had been producing samples for 22 months, compared to an average 15 months at Western Sperm Bank. Most of the men – 80% – were still actively donating.

Almost all the sperm donors described their first few visits to the bank as extremely awkward, but as they became acquainted with staff and developed familiarity with the procedures, donation became a routine part of their daily lives. Isaac, a 22-year-old college student in a small southeastern town, summarized transitioning from the ‘nerve-wracking’ first visit to getting ‘a little more comfortable with it’:

Coming back to actually donate and not just fill out paperwork was a little nerve-wracking, because you got all these faces around that know exactly what you’re about to do: walk in this bathroom and deposit into a plastic cup. It’s a little unnerving. If you’re not a very open or confident person, you could get easily embarrassed and scared out of it. My first couple times, I would always look in the parking lot, and thankfully there were no other donators coming in, so I knew it was just gonna be me. I’d do my thing, drop it off, and go. Nobody would see me except for [the programme staff]. You think they won’t be able to make eye contact, but it wasn’t like that at all. This is what they do for a living. Basically, I guess it would be like your first day at a new job, except a little bit more uncomfortable. Even now when I’m in a rush, I feel like an idiot going in there, ten minutes later popping out, and dropping off my deposit. [The lab technician] once said to me, ‘Wow, Speedy Gonzales!’ I’m like, ‘Yeah, well, I’m on a schedule’. The impression they get of you sometimes can make you feel not as manly I suppose. I mean, it’s gotten easier just to face everybody and go through it.

In describing his first deposit as akin to starting a ‘new job’, except more ‘uncomfortable’, Isaac is reflecting the sperm bank’s framing of donation as a job as well as the cultural stigma around masturbation.

For some, the discomfort stemmed from religious beliefs. Manuel, a 27-year-old Christian living on the West Coast, was so embarrassed about donating that he did not tell his girlfriend for several months, even though they were living together. Here, he details a ‘transition’ not unlike Isaac’s, but for Manuel, his ‘upbringing’ plays a role:

Manuel: There are just these booths, and it’s not too much between your own privacy and what’s on the outside, just that 1.5-inch piece of plywood. In retrospect, it’s not a big deal. It’s just, coming from a Christian upbringing, it’s like forbidden and taboo. This is doing something that would always have been just very – it felt bad! And I hate that feeling. Something is looking down and judging me for what I’m choosing to do. That’s what I kind of felt at first. I didn’t present that when I’m there. I’m nice, calm, cool. I’m in. I’m out. Take care of my business. No problem. No big deal. But in my mind, I’m thinking I’ve never done anything like this before. It’s not like I’m a little kid, either. You’d think at a certain point I’d be more comfortable with it, but it wasn’t that much easier. So if I tried it at like 18 or 19, when I think they officially start to allow prospects, then it might have been even more uncomfortable.

Rene: So over the full year and a half [you donated], are you saying it never got any easier?

Manuel: It got easier. After maybe a few times, say three or four, it was just routine, because [the staff] were so accommodating, so nice, so receptive.

Like Isaac, Manuel relies on the rhetoric of the workplace in that he ‘takes care of business’ and defines potential donors as ‘prospects’. This description also points to the importance of bank staff in shaping donors’ experiences and establishing donation as routine.

Once men do get into a routine, donating sperm becomes just one more thing on the to-do list. Nathan, a 38-year-old who had started donating in his early 20s, explained how ‘you get into a rhythm, and you just think, oh it’s Wednesday, I got to go down to Gametes Inc. Sometimes you forget. Two weeks go by. You have your lulls, or it just doesn’t happen. You just find yourself putting it into your weekly schedule like getting groceries’. Similarly, Greg, a college student, said that he has

a schedule to come here. In my head I have to work it out. It’s normally either on the way to or from school. So then I just try to figure out what I have to do today, how long I got to get it done, and then when I can fit this in.

Pleasure and Control

Upon arrival at most of the banks, men are buzzed in through secure doors, which is greater security than is in place at egg agencies. Sperm donors sign in and fill out a form with their donor number and answer questions about when they last ejaculated and whether they have had unprotected sex. Gametes Inc. had a new computerized check-in system that would automatically alert men when it was time to provide a urine sample or have their blood drawn. This needed to happen every few months so that the sperm samples could be released from quarantine and posted on the website for sale to recipients. Several men said that they did not look forward to blood-draw day.

The donation rooms in each bank had slightly different decors. At CryoCorp, the founder proudly showed off what he called ‘masturbatoriums’, small rooms with erotic pictures on the walls and flat-screen televisions for watching pornographic movies. Western Sperm Bank, a non-profit, offered larger rooms with a small bed and chair but only provided magazines. Most of the sperm banks had several rooms so that more than one person could donate at a time, but University Fertility Services had a much smaller programme, so men were simply directed to the clinic’s bathroom, where there was a small stash of magazines in the drawer under the sink. Ethan, a 39-year old who had just finished an 18-month stint at Western Sperm Bank, gave the most detailed description of the donation room and his routine:

You go in a room, and they have a chair and a bed. It's comfortable, and they change the sheets, kind of like hospital linen. Even though it may not be clean, it always seemed to be smoothed out. And there's a big wicker basket full of sperm cups with a twist cap, and they're all individually hermetically sealed. A lot of times, they'll pick up one of those and set it in the middle of bed so it looks like no one's been there. It's like this nice hotel touch. First thing in the morning, it's always set up, but if they're really moving through people, especially later in the day, the pillow might be whatever, so you gotta kind of fluff the pillow. Or there might be a pubic hair on the bed. Sometimes I did masturbate thinking about my wife, but it wasn't the same. So I usually just grabbed a magazine to be sure that I would get aroused quick and get out of there. But in the beginning, it was kind of experimental and kind of fun. It was fun all the way through, actually. It became part of my day I enjoyed. It was like a stress release, and I got to look at really beautiful women without my wife going 'I'm not letting you have a subscription to *Penthouse!*' [laughs] Guys were tearing – my favourite pictures would be gone some days, or your favourite magazine would disappear. You got used to your favourite room, because the rooms were decorated a little bit differently. I would get two magazines, especially if I knew them. This girl's really great, and this girl's really great, too. So I would lie down, and I would start masturbating. Then, at some point, you had to make a decision about how you were going to do this clinically. You have to sit up. I would have the cup sitting there, with the cap off and open, because if you were just about to ejaculate and the cap wasn't off, you had to fumble. You could come all over yourself, and that's \$50, a mess. I mean, it could be very embarrassing. It never happened to me. So you have to be conscious of that. It's not this free-flowing sexual activity.

In linking a spilled sample with \$50, Ethan points to men's ever present awareness of the fact that they are paid piece-rate.

About a third of the sperm donors echoed Ethan in saying that donation was pleasurable or fun, as it entailed an approved moment of looking at pornography and having an orgasm. Nevertheless, several agreed that this pleasure was constrained by the need to 'stop and pay attention to that cup'. Andrew, a 28-year-old graduate student, noted how in the sperm bank, masturbation is

not as pleasurable as it would be otherwise, because you have a little beaker thing and need to do a little more aiming [laughs]. I mean, still everything comes out, but it's not as good. You have to make sure everything's in the right place, as opposed to just kind of forgetting about it and letting everything go.

He concluded by joking, 'I get paid for it, so I make sacrifices'.

Of the sperm donors I interviewed, 80% exceeded the bank's minimum requirement of one deposit per week when they first started donating. Most men need about 48 hours of abstinence to ensure a sperm count high enough to meet bank standards, so donating two or three times a week required refraining from sexual activity for four to six days out of every seven. Many of the men engaged in experiments to see how little abstinence they needed or, in the words of one donor, 'how my body worked'. In detailing his donation schedule, Isaac pointed out that the amount of time he spent *preparing to*

donate was much greater than the actual amount of time he spent inside the bank:

I try to make three times a week: Monday, Wednesday, Friday. Basically that means Monday, if I get here in the morning, then I have approximately six to twelve hours to enjoy life with my fiancée [laughs]. Then I have to be abstinent for the next day and a half, normally about 38 to 40, 36 to 44 hours, something like that to be prepared for Wednesday to deposit. Then Friday, I have a nice long day. Saturday about halfway through the day, I gotta be abstinent again. I mean really the biggest pain is probably the abstinence thing. Not because it's lack of sex or anything. It's just because this takes like 15, 20 minutes out of your day, not including time driving, probably 30, 40 minutes depending on where you live. It's cool; you get paid a nice little chunk of money for basically three hours a week. But you're actually working quote unquote like a whole 40-hour week because you have to abstain. You have to make sure you're not doing anything wrong and especially trying to get enough sleep and all that and not getting too stressed, because that can affect the count.

Indeed, the issue of abstinence came up in almost all of my interviews with sperm donors, which probably reflects the need to regulate their sexual activity for such a long period of time. In contrast, very few egg donors mentioned it at all, even though women must refrain from sexual contact for several consecutive weeks because of the high risk of pregnancy associated with fertile women taking fertility drugs.

Many sperm donors echoed Isaac's complaints, and it was especially those men in serious relationships who grouched about having to 'schedule' their sex lives. Some men held firm to the schedule, but others would occasionally skip visits to the bank. Kyle, a 22-year old who lived with his girlfriend, explained:

Every now and then, she has rolled over in the middle of the night. I know I have to come [to the sperm bank] the next day, and she wants to [make love], and I'm thinking to myself that's \$100. Sometimes I do, and I'm like, 'Are you going to pay me \$100 like they do?' Sometimes I don't. I say, 'Well, we have this to pay for'. But it's not a stressful thing. I like it, too, because when we do make love, it's once a week, probably twice a week, and it's just on Friday and Saturday, so it makes it a little better because of the anticipation. She don't complain, because she knows that if she wants that nice couch and the nice bedroom furniture and the nice place, I gotta keep coming here. But it doesn't bother me at all.

Like Kyle, Ryan, a 40-year old who had been donating once a week for the last several years, referenced the money in discussing how he smoothed over the issue of abstinence with his wife, calling it a 'peace offering'.

Other than failing to abstain, donors reported a long list of reasons why their samples might not pass the bank's strict requirements: being tired or stressed, getting sick, exercising right before donating, working outside in hot weather,

drinking too much alcohol, eating poorly, smoking marijuana, and hot-tubbing. Charles, a 29-year-old graduate student who had donated sporadically for the last five years, noted, 'if I haven't been eating exactly as I should have or if I haven't been getting enough sleep, I can tell my body isn't ready to donate. After a while, you kind of get a feel for when you're ready, and sometimes I just don't feel up to it'.

If men had several failing samples in a row, bank staff sometimes enquired if anything had changed or offered pointers. Most donors found this advice helpful and altered their behaviour, which included taking vitamins and other supplements, drinking more orange juice, eating more protein, or reducing alcohol consumption. Greg, a college student who donated twice a week, said he started drinking more beer over the summer and as a result was only passing 25% to 50% of his samples. He asked a donor friend as well as the donor manager and the bank's physician how to improve his pass rate, and, in response to their advice, was 'changing a lot of my eating habits and a lot of my other habits so I can get more money [laughs]'.

In sum, sperm donors certainly do not experience the deep anxiety of men producing samples for their wives' fertility treatments. But their embodied experiences also do not conform to Laumann et al's description of masturbation as occurring in a 'secluded personal realm' where 'personal pleasure' is central. Walking into a sperm bank requires that men overcome the stigma of masturbation, produce a semen sample in a small room, and then hand over the plastic cup to a lab technician, who will run tests to determine whether he will get credit for that deposit. Outside the bank, sperm donors must maintain bodily control, not only in terms of sexual activity, but also in terms of eating, drinking, and sleeping. So, although men do derive some pleasure from the 'sexual release', it is just one small part of what is involved in being a paid sperm donor.

CONCLUSION

Women and men who are paid to produce sex cells must manage their own bodies: women through shots and surgery and men through routine masturbation and abstinence. Although they have very different physical experiences of gamete donation, both egg and sperm donors provide evidence that variation in social context is associated with variation in bodily experience. Egg donors describe the injections and egg retrieval in much less onerous terms than do infertile women, because being paid thousands of dollars and not trying to become pregnant results in a different embodied experience of IVF. Sperm donors portray masturbating for money as requiring a surprising amount of bodily discipline while rendering the orgasm less pleasurable, which leads them to make distinctions between their embodied experiences of masturbation inside and outside the sperm bank.

For some, these findings will make intuitive sense. After all, there is enormous heterogeneity in all kinds of bodily experiences. But there is a strong assumption that IVF is inherently difficult and demanding, which derives in

part from a well-developed feminist critique of the technology. For example, anthropologist Monica Konrad interviewed British egg donors and was shocked to find that they described donation as ‘simple’ and ‘quick’. Even after she read to them from a pamphlet describing the shots and surgery, she was ‘struck by [the donors’] reluctance to comment in any detail on certain aspects of the egg induction process. To an outsider, the process seemed an exceptional commitment, if not an onerous and risky undertaking’. In the end, Konrad steps in with her own assessment when she writes that the donors ‘*downplay* the considerable amount of preparation time that must be invested in the process’ and are ‘*refusing* to acknowledge the pain, discomfort, and risk’.¹¹ Rather than dismissing egg donors’ statements, I suggest another explanation for why their descriptions do not conform to researchers’ expectations, namely that their embodied experiences of the technology are different from those of the infertile women who are most often the subject of research on IVF.

Social scientists have focused on the many ways in which people ‘see’ the body or ‘think’ about the body, but the experiences of gamete donors contribute to a growing literature that suggests there is also variation in how the body *feels*. In the medical market for sex cells, it is the social process of gendered commodification that influences women’s and men’s embodied experiences of donation.

NOTES

1. Rene Almeling, *Sex Cells: The Medical Market for Eggs and Sperm* (Berkeley, CA, 2011).
2. Once the eggs are removed, an egg donor is finished, but an infertile woman must wait a few days to see if fertilization occurs in the laboratory. If it does, the embryos are implanted in her uterus, and she waits to see if pregnancy occurs.
3. Sarah Franklin, *Embodied Progress: A Cultural Account of Assisted Conception* (London, 1997), pp. 130, 114.
4. Gay Becker, *The Elusive Embryo: How Women and Men Approach New Reproductive Technologies* (Berkeley, CA, 2000), p. 55. See also Charis Thompson, *Making Parents: The Ontological Choreography of Reproductive Technologies* (Cambridge, MA, 2005), chapter 6.
5. Additional details about the study are available in Almeling, *Sex Cells*.
6. All programmes and people have been assigned pseudonyms.
7. Edward Laumann, John Gagnon, Robert Michael, and Stuart Michaels, *The Social Organization of Sexuality: Sexual Practices in the United States* (Chicago, IL, 1994), p. 69.
8. Laumann et al, *The Social Organization of Sexuality*, pp. 81–6.
9. See Robert Michael, John Gagnon, Edward Laumann, and Gina Kolata, *Sex in America: A Definitive Survey* (Boston, MA, 1994), p. 155, which reports results from Laumann et al’s 1994 study but is intended for a general audience.
10. Marcia C. Inhorn, ‘Masturbation, Semen Collection, and Men’s IVF Experiences: Anxieties in the Muslim World’, *Body and Society*, 13 (2007), p. 47. See also Thompson, *Making Parents*, chapter 4.

11. Monica Konrad, *Nameless Relations: Anonymity, Melanesia and Reproductive Gift Exchange between British Ova Donors and Recipients* (New York, 2005), pp. 61–6, emphasis added.

RESEARCH RESOURCES

- Rene Almeling, 'Reproduction', *Annual Review of Sociology*, 41 (2015), 423–42.
- Rene Almeling, *Sex Cells: The Medical Market for Eggs and Sperm* (Berkeley, CA: University of California Press, 2011).
- Gay Becker, *The Elusive Embryo: How Women and Men Approach New Reproductive Technologies* (Berkeley, CA: University of California Press, 2000).
- Ann V. Bell, *Misconception: Social Class and Infertility in America* (Brunswick, NJ: Rutgers University Press, 2014).
- Anjani Chandra and Elizabeth Hervey Stephen, 'Infertility Service Use Among U.S. Women: 1995 and 2002', *Fertility and Sterility*, 93 (2010), 725–36.
- Sarah Franklin, *Embodied Progress: A Cultural Account of Assisted Conception* (London: Routledge, 1997).
- Carole Joffe and Jennifer Reich (eds), *Reproduction and Society: Interdisciplinary Readings* (London: Routledge, 2014).
- Thomas W. Laqueur, *Solitary Sex: A Cultural History of Masturbation* (New York: Zone Books, 2004).
- Edward Laumann, John Gagnon, Robert Michael, and Stuart Michaels, *The Social Organization of Sexuality: Sexual Practices in the United States* (Chicago, IL: University of Chicago Press, 1994).
- Ellen Lewin, *Gay Fatherhood: Narratives of Family and Citizenship in America* (Chicago, IL: University of Chicago Press, 2009).
- Laura Mamo, *Queering Reproduction: Achieving Pregnancy in the Age of Technoscience* (Durham, NC: Duke University Press, 2007).
- Emily Martin, 'The Egg and the Sperm: How Science Has Constructed a Romance Based on Stereotypical Male-Female Roles', *Signs*, 16 (1991), 485–501.
- Deborah L. Spar, *The Baby Business: How Money, Science, and Politics Drive the Commerce of Conception* (Boston, MA: Harvard Business School Press, 2006).
- Charis Thompson, *Making Parents: The Ontological Choreography of Reproductive Technologies* (Cambridge, MA: MIT Press, 2005).
- United States Centers for Disease Control and Prevention, *Assisted Reproductive Technology Fertility Clinic Success Rates Report* (Atlanta, GA: US Dept. of Health and Human Services, 2012): <http://www.cdc.gov/art/pdf/2012-report/art-2012-fertility-clinic-report.pdf>.

Representations of Ageing and Infertility in the Twenty-First-Century British Press

Virpi Ylännö

INTRODUCTION

A range of assisted reproductive technologies (ARTs) such as in vitro fertilization (IVF) and conception using donor eggs enables parenting for increasingly diverse populations in terms of sexuality, coupledom status, and age. Postmenopausal reproduction is a topic that is not only newsworthy in the media, but arguably also a controversial concept scientifically, legally, and ethically. It challenges and ‘disrupts’ standard models of gender, ageing, and reproductive milestones and is also a complex topic within the field of ARTs.¹ This chapter focuses on representations of postmenopausal reproduction and infertility in the UK press in order to explore the role of advanced age in current debates surrounding ARTs.

This topic has received little scholarly attention to date, especially in studies of the media. This chapter will explore a corpus of British newspaper articles published between 2000 and 2014 which feature recent cases of postmenopausal mothers (the full corpus is listed in an appendix at the end of this chapter). More specifically, since ARTs now facilitate pregnancies not only for infertile women of a ‘normal’ (pre-menopausal) age but also for those not previously treatable because of their reproductively advanced age, it is important to see if any perceived hierarchies exist among the beneficiaries of new technologies – with postmenopausal women represented as of lower priority,

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for example. The media plays an influential role not only in moulding public opinion about ARTs and their applications, but also in changing potential parents' expectations of what is possible and desirable, for example in relation to parenting/mothering at an older age. Besides media effects, a discursive analysis of mediated representations of postmenopausal mothers and mothering can provide access to societal framings of this topic. A focus on news articles is thus important in uncovering whether (and if so, how) they promote postmenopausal reproduction as an opportunity facilitated by modern medicine or, alternatively, as a threat to societal and lifespan structures. This is all the more topical in the context of the 'growth of medical treatment for infertility, a condition formerly viewed as a social problem but now perceived as a medical condition'.²

Ageing and infertility can be approached from different perspectives. Medical literature tends to emphasize a strong link between ageing and infertility, especially in the case of women, as well as an increase in various pregnancy-related risks, including those affecting the foetus with increasing parental age. Qualitative research in the social and health sciences offers a perspective from individuals and couples themselves about their experiences of infertility and late parenting that transcends pure health concerns. Media-focused research, on the other hand, looks at the representations of ageing and infertility which contribute to our understanding of current societal discourses on the topic. However, this research rarely looks at the language and discourse of those representations in any detail. The original contribution of this chapter, then, is to provide a discursive analysis of media representations of ageing and infertility which will contribute to wider interdisciplinary understandings of current social attitudes towards postmenopausal reproduction.

AGEING AND INFERTILITY IN MEDICAL AND SOCIAL SCIENCE RESEARCH

From a medical perspective, it is often emphasized that women face decreasing fertility and an increase in the risks of miscarriage and chromosomal abnormalities as they pass 40 years. For instance, a woman at the age of 45 has a one in 30 risk of having a child born with Down's syndrome, whereas this risk for a woman at the age of 25 is one in 1,200.³ It has also been suggested that varied risks increase 'dramatically after 40'.⁴ Also, the rate of a premature birth is reported to nearly double when the mother is over 40 years old.⁵ However, as obstetrician-gynaecologist Linda Heffner points out, the majority of women who have children aged 45 and beyond do not conceive naturally but through ARTs, using donor eggs provided by much younger women. Thus, the risks of miscarriages or abnormalities are consistent with the age of the donor rather than the age of the recipient, although an increase in pregnancy-induced hypertension has been reported in women over 50, resulting in complications. However, the women who opt for donor programmes are screened for health

risks to ensure that their bodies are healthy enough for the pregnancy. Thus, pregnancy at the age of 45 and above can be a relatively safe option for those women 'lucky enough to find themselves healthy and sufficiently wealthy enough to pursue' such treatment, since for such women in the UK, private and/or overseas treatments are the only options.⁶

From the very different perspective of medical sociology, Barbara Hanson also questions many of the established scientific 'facts' about the link between maternal age, infertility, and problematic pregnancies. She argues that the belief that infertility derives from high maternal age reflects social constructions of biology in the developed world which 'perpetuate a negative view of female aging' as pathological. Hanson proposes looking at fertility problems as a dynamic interaction of the physiology of the female, the male, and the potential child instead of focusing solely on the female, as fertility problems may be related only tangentially to a female's age.⁷ Qualitative studies within the social sciences as well as reproductive health offer yet another perspective on ageing and infertility. In ethnographic interviews with women who had their first baby at age 35-plus, Abigail Locke and Kirsty Budds found that 'the risk discourses that identified decreasing fertility with increasing maternal age influenced their decision about pregnancy'. Some reported having hurried reproduction in the belief that it would take them a long time to conceive.⁸ Although we might expect an important source of risk discourses of delayed childbearing, including infertility, to be newspapers and media more generally, some studies downplay this influence. Alison Cook, Tracey Mills, and Tina Lavender explored women's views and experiences of delayed childbearing via interviews and suggest that the reasons for late parenting are complex, often due to factors outside women's control, and go far beyond considerations of risks. Their participants did not consider high maternal age per se as a risk factor.⁹

Carrie Friese, Gay Becker and Robert Nachtigall similarly adopted an ethnographic interview methodology to investigate how women who had conceived via donor eggs conceptualized their infertility experience. They identified two different narratives employed by these women. The 'eleventh hour mom' narrative was used to tell the woman's journey from unsuccessful attempts at IVF using her own eggs to successful conception using donor oocytes. In this narrative, the metaphor of 'old eggs' represented the socio-biological context of the 'biological clock' in female reproduction. The 'miracle mom' narrative was used by older women who became pregnant against their previously held beliefs of 'non-reproductive' age. They saw fertility as being extended, in contrast to the 'eleventh-hour mom' view of fertility being curtailed by age.¹⁰ In 2008, Friese, Becker, and Nachtigall conducted a study of the same group of heterosexual couples who had used a donor egg to conceive. This study focused on delayed childbearing as part of the profile of a new middle age and the changing life course. From a symbolic interactionist perspective on identity and stigma, the research showed the careful identity work that the women in particular reported engaging in to manage their personal and social identities as older infertile mothers.¹¹ Destigmatizing

practices included ‘normalizing’ older motherhood by trying to ‘pass’ as a younger mother (for example, via appearance) or by linking older motherhood with discourses of ‘good mothering’. These strategies exemplify the challenges that older mothering poses to ageing individuals’ personal and social identities. We will return to this theme later.

In a later study, Kirstin MacDougall, Yewoubdar Beyene, and Nachtigall interviewed couples to explore the advantages and disadvantages of postponing childbearing, as perceived by parents who had children at a later age via IVF (median age 42 for women and 43 for men). The main advantages reported were enhanced emotional preparedness, financial and career security, and a stable relationship. The main disadvantages included difficulties conceiving and the need for IVF; lack of physical energy as parents; less available lifetime spent with children; and potential stigma as older parents. Although many positive orientations to late parenting were voiced, only 10% of the interviewees believed that the optimal childbearing age was over 40 – as opposed to in the 30s – mainly because of the impact of age-related infertility.¹² Many of these themes recur in my own investigation of newspaper texts, but before discussing this research, I will first review a selection of studies on media representations of ageing, infertility, and parenting to indicate the current state of scholarship in this field.

MEDIA REPRESENTATIONS OF LATE PARENTING, INFERTILITY, AND ASSISTED REPRODUCTION

The media at large is a resource for adults to learn what a parenting role entails and to make ‘judgements on what counts as valid and desirable parenting practices’.¹³ Research on representations of older parents in the UK news media has tended to concentrate on late motherhood, as opposed to parenting.¹⁴ For example, using social constructionist thematic analysis, Budds, Locke, and Vivien Burr identified four discourses in the UK press related to older mothers: older motherhood as a choice; as ‘risky’; older mothers as problem mothers; and as good mothers (see the following section for further discussion of this form of analysis). They focused on how the topics of ‘choice’ and ‘risk’ were handled in discussions of delayed motherhood and found that ‘the media position women as wholly responsible for choosing the timing of pregnancy and, as a consequence, as accountable for the associated risks’; they can therefore be blamed for any adverse consequences. The authors of this study linked the tendency towards blaming women for inadequate risk management to the strength of neoliberal ideologies of autonomous, self-governing individuals.¹⁵

Lucy Hadfield, Naomi Rudoe, and Jo Sanderson-Mann similarly examined representations of motherhood in British print media in relation to choice, age, and fertility. They commented especially on newspapers’ continued scrutiny and criticism of motherhood by teenagers, older women, and those delaying

motherhood, all of whom can be seen to challenge traditional forms of motherhood.¹⁶ On the other hand, more recently Mills, Lavender, and Rebecca Lavender found predominantly positive or at least neutral representations of pregnancy and childbearing in women over 35 in a qualitative thematic analysis of a sizeable sample of British national newspapers, popular magazines, and TV programmes. These sources generally endorsed delayed childbearing, partly because they offered extended coverage of celebrities and mothers who were just below the age of menopause. The social status and age of the women therefore seems to be an important factor in the positive or negative stance towards ageing and reproduction taken by the media.¹⁷

In turn, Rachel Shaw and David Giles found much negative discourse in the coverage of UK news on older mothers, even though a ‘sizeable minority’ included a positive stance. By using Media Framing Analysis (see below for a more extended discussion of this method), they uncovered negative orientations relating to the ‘unnaturalness’ of older mothering but also representations of older mothers as selfish or self-indulgent, enjoying motherhood as a luxury or a privilege. They suggest that ‘notions of “normative” development and the “perfect mother” continue to structure cultural constructions of motherhood’.¹⁸ It can be predicted that the texts under investigation in the current study also rely on – as well as help to shape – readers’ understandings or cultural frames of ‘normative’ and ‘perfect’ mothering.

Research in North America and Canada broadly supports the conclusion of studies conducted in the UK. A quantitative content analysis of North American newspaper articles about ARTs carried out in 2014, which focused on ARTs in general rather than solely on postmenopausal reproduction, found risks as the most often covered issue. This was followed by ethics/morality, with positive outcomes (including postmenopausal mothering, in the form of ‘miraculous accounts’) as the third most common category.¹⁹ Patricia Campbell has also adopted the perspective of media framing, and has looked at a case study of a postmenopausal mother, specifically in relation to ARTs, in the Canadian context. She examines how the use of ARTs by postmenopausal women challenges ‘normal’ reproductive framing and how, consequently, discourses of risk surrounding both the technologies and their users emerge in the media. She argues that different sociotechnical framings both challenge and construct boundaries:

Framed as a cultural ‘other’, the articulation of ARTs and older mothers represents risk to various taken-for-granted boundaries. At the same time, because of this boundary destabilization, negotiation, and construction, the articulation of ARTs and older mothers represents the potential to further the significant socio-cultural and technological change already effected by the ‘routine’ use of ARTs.²⁰

In this view, postmenopausal mothering might be represented – medically, technically, and socially – as a new, albeit risky, opportunity because it challenges previous frames for both parenting and ARTs themselves.

Regarding the continued development of ARTs, the new technique of oocyte cryopreservation (egg freezing) makes age a particularly salient issue in reproductive timings, as it enables young women to preserve their fertility until midlife (and potentially beyond), as well as to overcome fertility challenges posed by various medical factors. Lucy van de Wiel has investigated Dutch and British news media's recent coverage of this practice. Concentrating on two progressive broadsheet newspapers, she discusses the rhetorical divisions in the reporting of women's different motivations for oocyte cryopreservation, namely 'medical' and 'social' (in inverted commas, since the two can be intertwined). She argues that 'the media narratives around these divisions create new subject positions related to reproductive identity through which new aspects of social life come under public and medical scrutiny'. In her analysis, two predominant subject positions emerge in these texts: the single woman who is a victim of circumstance (such as a broken relationship at a reproductively crucial time in terms of the 'biological clock'), and the 'lifestyle freezer' who wants to 'have it all' and whose egg freezing is the symptom of her 'delaying' reproduction as a result of inappropriate partner choices and other lifestyle factors.²¹ This points to the moral tone often found in newspaper coverage of ageing and reproduction.

What emerges from this review of previous studies is that risks and other medical and social controversies in connection with ARTs frequently feature in news and other media coverage. The representations of older and postmenopausal mothers (and/or parents), on the other hand, vary from positive to neutral to negative. It seems therefore crucial to take into account the precise context of representation in the examination of such representations. Quantitative content analysis can inform us of prominent trends and patterns vis-à-vis the content and topics of newspaper coverage of this issue. But it tells us very little about the qualitative aspects of the data and does not answer the question of *how* positivity or negativity is achieved, for example, or how postmenopausal mothers are positioned. In order to do that, one needs to look at news discourse more closely, and I will now move on to describing how this was done in this study.

DATA AND METHODS

The data for this investigation was retrieved from the online news archive Nexis by searching for articles in the UK press on four famous cases in particular (using the women's names as search terms) over the period 2000–14. After duplicate coverage was eliminated, the final number of articles was 30, comprising just under 22,000 words. These articles came from broadsheets (9), tabloids (20) and others (1). Nexis provided only the texts for analysis, not visual or other semiotic elements of the articles, for example. A new Nexis search was carried out for this study, but through a previous study of media representations of older parenting I had familiarized myself with the names and cases of the postmenopausal mothers Elizabeth Adeney (EA), Sandra Lennon

(SL), Patricia Rashbrook (PR), and Susan Tollesfsen (ST).²² The four cases are summarized in Table 1 below.

In the field of communication and media studies, the concept of framing, which originated in cognitive psychology and anthropology, has become a prevalent theoretical tool.²³ One of the most well-known attempts at devising a methodology for framing research in a media context is that by Robert Entman.²⁴ Entman describes the ‘standard definition of framing’ as ‘selecting and highlighting some facets of events or issues, and making connections among them so as to promote a particular interpretation, evaluation, and/or solution’.²⁵ In his model, whilst ‘frames’ reside in texts, any gaps in news framing are filled by the audience, using their existing schemas or ‘interpretive processes’.²⁶ Whereas, from a cognitive perspective, prior knowledge in individuals’ minds mediates the power of frames, a critical perspective examines the links between news frames and hegemonic processes. Constructionist framing research looks for journalists’ creation of ‘interpretive packages’ about topical issues and acknowledges the audience’s active meaning-constructing role.²⁷ My treatment of frames in this analysis draws on social constructionism and acknowledges an important cultural element in frames and framing; news producers and the audience share a ‘cultural stock of frames’ – in this case regarding ageing, infertility, and reproduction – that are used in the production and consumption of news texts.²⁸

Giles and Shaw introduced Media Framing Analysis (MFA) for the psychological study of media, including the way topics are framed and the audience’s

Table 1 Summary of Four Cases of Postmenopausal Mothers

<i>Name</i>	<i>Age when gave birth</i>	<i>Year child born</i>	<i>Other contextual information</i>	<i>Number of articles in corpus</i>
Elizabeth Adeney (EA)	66	2009	Fertility treatment in Ukraine. Divorced businesswoman. First child.	7
Sandra Lennon (SL)	58	2003	IVF in the UK. Husband 11 years younger. Has two children from a previous marriage and four grandchildren. Also includes articles about her considering trying to have another child.	7
Patricia Rashbrook (PR) (also referred to as Patty Farrant)	62	2006	IVF in Russia. Has three adult children from a previous marriage. This child is the first for current husband, who is the child’s biological father. Occupation: psychiatrist.	5
Susan Tollesfsen (ST)	57	2008	IVF in Russia. First child. Two years later newspapers reported her desire to have another child at the age of 60. Occupation: special needs teacher.	13

interpretations directed.²⁹ MFA comprises both a mainly quantitative macro-analysis of a broad dataset and a qualitative microanalysis of selected materials. The first macroanalytic step is screening the selected material for relevance, followed by linking each article to a specific event as the source or origin of the story, followed by the identification of characters in news stories. An analysis of language categories at a macrolevel might focus more on content, but go into a more detailed linguistic analysis at a microlevel, pointing to the possibility of bringing aspects of Critical Discourse Analysis (CDA) into the analysis. Lastly, generalization places news stories within the wider sociocultural context and ongoing debates. MFA is a useful tool for examining news influence: for example, how the media might manipulate the reader towards a specific position on a controversial topic, such as postmenopausal mothers. By looking at various framing devices, such as headlines or visual elements, use of quotes, adjectives and other descriptors associated with characters, MFA helps us recognize whom the reader is invited to identify with.

Besides using MFA, my analysis in this chapter also incorporates a CDA orientation to language or, as here, newspaper texts. Such an orientation recognizes ‘the relevance of the social, cultural, political and economic background against which texts are written and read’ and emphasizes the dialectic between language and the social.³⁰ From a critical perspective, discourse is viewed as an activity and as social practice. Discourse is socially constitutive as well as socially shaped:

it constitutes situations, objects of knowledge, and the social identities and relationships between people and groups of people. It is constitutive both in the sense that it helps to sustain and reproduce the social status quo, and in the sense that it contributes to transforming it.³¹

(News) discourse thus has a circular and reinforcing nature in relation to its production and consumption. CDA has focused on the role of discourse in the production and reproduction of social inequalities, hierarchies, and hegemonies, as well as resistance to these imbalances of power. There is a sizeable body of such work on news texts (although not on late parenting, age, and infertility) since ‘journalism has more power to shape our understanding about events, ideas, people and the relationships between people, than many other forms of communication’.³² In the analysis that follows, I approach the texts under discussion as produced in a specific social context, and examine some of the linguistic/discursive tools that are used to frame and shape the reading of the texts.

In practice, my analysis comprised three stages. The first involved locating the articles via Nexis and screening them for relevance. Second, the articles were manually coded for some basic dimensions. These included the type of publication: as mentioned above, 20 articles appeared in a tabloid newspaper, nine in a broadsheet, and one in another type of publication (media planner for journalists). Another dimension was the main protagonist featured in the article (one of the four women) – this information is presented in [Table 1](#). One article provided equal

coverage of EA, PR, and ST. The most prominent news peg and news value (see below) was also manually coded. These included unexpectedness (13 articles); social debate (12), and superlativeness (high maternal age) (five). A further dimension was the overall stance of the article, namely whether its orientation to these specific postmenopausal mothers, or to postmenopausal mothering more generally, was negative (15); neutral (more balanced treatment of pros and cons) (9); or positive (6). As a positively framed article can also include negative evaluations of postmenopausal mothering, and vice versa, I therefore established an overall stance. The initial coding was carried out independently by a research assistant and complete intercoder consensus was reached for all these basic dimensions after discussion.

The third and main stage of analysis involved a close reading of all the articles to identify what strategies they employed to frame the article and how the stances were achieved. These included noting referring expressions relating to the mothers (how they were referred to); adjectives and evaluative expressions used for the mothers and other characters; use of quotes from mothers and others; predication and transitivity (see below) in relation to what the mothers were depicted as doing and why; and themes in argumentation (what the positive or negative evaluations were based on). This annotation was also done manually. These strategies and features are ones typically examined in CDA,³³ although this list by no means exhausts the possible foci of a CDA analysis. My analysis was selective as I was primarily interested in the framing of the articles and their depiction of the mothers, and therefore I attempted to access the ideological work of the texts. Focusing primarily on the main protagonists was necessary to manage the coding; future developments in MFA incorporating a CDA-type orientation need to also develop clear criteria for coding and foci. My foci (following Giles and Shaw's earlier work) would seem a good starting point for possible expansion in the future, especially if computer-assisted tools are used to complement microanalysis. In the following section, I will exemplify some of the strategies and framing devices that were identified in the texts. As it is possible to focus only on certain key aspects of analysis in the space provided, the examples are chosen as both representative of the strategies/devices themselves and covering the different newspapers and protagonists in the data.

In sum, the theoretical framework of this study combines MFA, CDA, and a social constructionist orientation to ageing and lifespan identity to address some key research questions. First, how do newspaper articles on postmenopausal mothers portray the protagonists positively or negatively? Second, how is the age of the protagonists represented? More specifically, is high maternal age constructed as a problem/risk or, alternatively, as an advantage, and how is this discursively achieved? Third, what stance do newspaper articles on postmenopausal mothers take towards ARTs? Finally, how do these newspaper articles describe postmenopausal mothering: as an opportunity facilitated by modern medicine or, alternatively, as a threat to societal and lifespan structures?

ANALYSIS AND DISCUSSION

News Pegs and Frames

News articles are triggered by specific recent events or current social issues and debates, and commonly centre on an identifiable ‘news peg’. Editorial publication decisions are in turn influenced by stories’ perceived news values.³⁴ These news values might include reference to the power elite; celebrity/ies; entertainment (including human interest); surprise/unexpectedness/superlativeness; good news/bad news; magnitude; follow-up stories; relevance (cultural proximity); and the newspaper’s own agenda, such as its political and ideological stance. The news pegs in this corpus were linked with these news values: unexpectedness; follow-up story; relevance (current social debate). As mentioned above, most of the articles focused on the age of the mother and the unexpectedness related to her advanced age. They also formed human interest stories or offered opinions or comments as part of a current social debate.³⁵

In my previous study of representations of late parenting (not just mothering) in the British press, I found five main frames in the newspaper coverage: the social change frame; the personal frame; the risks frame; the continued (not first time) parenting frame; and the IVF/technology-enabled parenting frame.³⁶ In the social change frame, newspapers presented older parents as a growing trend in society. While advantages of older parenting were sometimes mentioned, and the changing landscape of career structures, especially for women, was offered as a valid reason for delaying parenting, overall the data tended to frame older parenting as both demographically and morally undesirable, particularly in the tabloid press. The personal frame offered a personal perspective on age, ageing, and parenting which was often more positively slanted, although these texts were mostly feature articles, sometimes published in sections devoted to families and/or women, and therefore potentially addressed an in-group audience. The risks frame constructed a biological perspective on ageing in which older parents were represented as (potentially) taking deliberate risks, which needed to be weighed against the desire to parent. The continued parenting frame, in turn, constructed older parents in gendered ways. Older fathers were represented in a generally positive way, as more ‘acceptable’ or unmarked (according to the ‘natural order’), albeit at times with humorous and ageist undertones. The IVF/technology-enabled parenting frame, on the other hand, foregrounded biological and physiological age in comparison to chronological age. In this frame, age-related limitations of diminished fertility could be overcome and older parents emerged as defying nature and as a triumph for science. The frames in the current corpus can be expected to be more limited because here my focus is restricted to articles on postmenopausal mothers and mothering.

Agency

I suggest that the notion of agency is central to investigating how postmenopausal mothers are represented in news texts. It has not been explicitly addressed in previous media-based studies investigating older motherhood (especially using MFA). Agency provides a means to assess the extent to which the protagonists are depicted as driving the decision to become parents and to seek ARTs, for example. Alessandro Duranti defines ‘agency’ as: ‘The property of those entities (i) that have some degree of control over their own behaviour, (ii) whose actions in the world affect other entities (and sometimes their own), and (iii) whose actions are the object of evaluation (for example, in terms of their responsibility for a given outcome).’³⁷ The element of evaluation in the construction of agency, Duranti suggests, is connected to morality and also to performance (in this case, use of language). This links in well with our focus on how postmenopausal women are portrayed, but also on how newspapers portray what they and other protagonists are reported to say.

Agency can be seen as a sociological concept.³⁸ However, agency also relates to the grammatical organization of language. In English, for example, the subject of transitive clauses tends to be the agent. For example in the sentence, ‘The girl picked some blackberries’, *the girl* is the agent noun phrase and the entity responsible for doing the action, and *some blackberries* the object of the action. Agents can also be absent, as for example in passive constructions: ‘the decision had been made’ (although an agent could be added here, for example ‘by the consultant’). Likewise, transitivity is a useful concept in examining (newspaper) representation at a micro-level. The study of transitivity ‘is concerned with how actions are represented, what kind of actions appear in a text, who does them and to whom they are done – in short, the *who* (or what) does *what* to *whom* (or what)’.³⁹ Transitivity thus gives us information about the relationship between participants and the roles they play, as described in newspaper reporting, for example. My primary focus here is not on the grammatical or linguistic aspects of agency, but on agency more broadly defined, as in Duranti’s explanation of the concept.

Headlines Framing Agency

Newspaper headlines often set the scene for agency (and indeed are indicative of the frame for the story) and are therefore a useful focus for my analysis.⁴⁰ In these (example) headlines, the postmenopausal woman is the agent of action:

- (1) ‘Sandra Lennon gave birth at 58’ (*The Sun*, 24.3.2004)
- (2) ‘Oldest mum goes back to work . . . four weeks after giving birth’ (*Mail On Sunday*, 28.6.2009)
- (3) ‘Mum aged 67 takes her one year old for a walk’ (*Daily Mail*, 28.6.2010).

The protagonist as a social actor in each of these headlines is represented personally and either nominated by name ('Sandra Lennon') or by her parental role ('mum') or social role ('oldest mum'). Relating to our earlier discussion of news pegs and news values, it is clear that each of these headlines also refers to the woman's age either explicitly (in years) or in relation to other mothers in the superlative form 'oldest', inviting the reader to adopt some kind of an evaluative stance towards the story at the outset. The second example, in particular, potentially (but not necessarily) invites a negative evaluation, especially by readers with traditional ideas about mothering and childcare practices (likely to be shared by the newspaper, *Mail on Sunday*).

Other headlines formulate personalization via a first person singular pronoun 'I':

- (4) 'I just want to be pregnant again... before I reach 60; Exclusive: on Mother's Day... mum aged 58 planning another baby' (*Daily Mirror*, 21.3.2004)
- (5) 'I'm not too old to be a mother at 62' (*Daily Mail*, 5.5.2006)
- (6) 'I was too old when I had my baby, says IVF mum aged 61' (*Daily Mail*, 7.11.2011)
- (7) 'My critics were right I was wrong to have a baby at the age of 57' (*The Daily Telegraph*, 7.11.2011).

These headlines suggest the woman's agency in the ability to plan the timing of her pregnancy (4), and to evaluate this timing (5, 6, and 7).⁴¹ Interestingly, in the fifth example, there is a presupposition of a previous assertion that 'to be a mother at 62' is 'too old', which the protagonist is reported to deny. Favourable news coverage of controversial social practices can be expected to include justification or defence of those practices and this headline is a good example of this. In the sixth and seventh headline, on the other hand, the agent is positioned as retrospectively agreeing with the above presupposition and, further, in the latter, admitting that her actions were 'wrong' and her critics 'were right'. A personal frame is constructed in these headlines and they also imply an ongoing social debate regarding postmenopausal mothering in terms of what is considered 'too old'.

A social debate regarding older mothering is also implied in the following headlines:

- (8) 'Mothers over 50 "do as well as young women"; Delaying birth until later in life causes no greater stress, say experts' (*Daily Mail*, 23.10.2006)
- (9) 'Old mum beats a daft teen' (*Daily Mirror*, 16.1.2005)
- (10) 'Oldest mum sparks battle of the bulge' (*The Sunday Times*, 24.5.2009)
- (11) 'We are too quick to judge older mothers' (*The Independent*, 21.1.2010)
- (12) 'We should not trick the biological clock' (*The Daily Telegraph*, 17.4.2012).

The eighth and ninth headlines construct an explicit comparison between older and younger, or older and very young, mothers, in which older mothers are represented favourably or as comparable to the outgroup. In the eighth headline, the agents of the evaluation are ‘experts’, who are quoted in the title. The eleventh headline, from a comment column, similarly implies an intergroup ‘us’ and ‘them’ positioning. This invites a positive stance towards older mothers, who are the objects of our judging (‘we’ are the agents of action), as well as a self-critique of the inclusive we/us, referring to society. In the twelfth headline, in contrast, the inclusive ‘we’ of the feature article also includes fertility experts. It transpires in the article that these fertility experts are developing techniques to enable (younger) women to ‘bank’ tissue from their ovaries to be used in the future.

Relating to social debates on changing lifestyles, some headlines preface discussions by representing older and postmenopausal mothering as ‘selfish’ and greedy, as in these examples:

(13) ‘How can a mum be so utterly selfish?’ (*Daily Mail*, 12.1.2005)

(14) ‘IVF mum is really pushing her luck’ (*The Express*, 19.1.2010).

The headlines in the corpus therefore seem to present older mothers as agentic in planning and evaluating their pregnancies, as the objects of others’ evaluations, and as the subjects of a social debate (as in the ‘battle of the bulge’ in the tenth headline). The ARTs or fertility experts only feature in two headlines in these data, so, on that basis, we can predict that these articles place agency predominantly on the postmenopausal mothers.

Besides headlines, an examination of the content of the articles in terms of what the different protagonists are depicted as doing and saying reveals other aspects of agency. The article with the headline ‘We are too quick to judge older mothers’ (11 above), from Liz Hoggard’s comment column in *The Independent*, makes a point about ‘double standards’ regarding older parents, where older fathers are accepted but older mothers are not. Hoggard then has this to say:

I have friends who spent years in the assisted conception unit – or travelling to Spain for cutting-edge fertility treatments. They’re not pretending it’s easy. But you only have to see their radiant faces – and remarkably well-behaved children – to know something is working. Plus they’re keen to break taboos. Their children won’t be ‘special’, with an awkward, shadowy history. Almost from the cradle, they understand that they’re the product of a donor egg or sperm. ‘A very kind man and lady helped mummy and daddy to have you’, they’re told.

The sentiment expressed in the headline, which indicates a defence of older mothers, is followed up by a representation of older mothers as beneficiaries of ARTs (‘cutting-edge fertility treatments’). Immediately before the quoted extract, Hoggard makes reference to the London Women’s Clinic

‘where senior staff voted in favour of treating Susan Tollefson’. The focus here is more generally on the positive representation of older mothers, their successful parenting (‘well-behaved children’; ‘something is working’; being honest about the conception) and their progressiveness (‘keen to break taboos’). And it is the older women who are doing something (being agentic), not the fertility experts (apart from those in the London Women’s Clinic): it is they who have ‘spent years’ in fertility treatment or ‘travelling to [Spain]’.

Characterizing and Evaluating Postmenopausal Mothers

We can now turn to the question of how these newspaper articles represent postmenopausal mothering. Is it as an opportunity facilitated by modern medicine or, alternatively, as a threat to societal and lifespan structures? In addition to headlines, adjectives in the articles serve as framing devices. Adjectives, together with devices such as naming and referring expressions, contribute to the framing of postmenopausal mothering as positive/desirable, or as negative/undesirable, and they contribute towards the broader characterization of the protagonists and the ARTs. In line with previous research, representations of postmenopausal mothers as ‘selfish’ appeared in this corpus too.⁴² These representations echo the ‘have it all’ category identified by van de Wiel (in the following examples, adjectives and adjectival expressions are underlined for clarity):

‘Miss Adeny has been unspeakably selfish’ (EA) (*The Sun*, 30.5.2009)

‘Selfish? Mrs Lennon’s behaviour is much worse than that’ (SL) (*Daily Mail*, 12.1.2005).

Carole Malone (*Daily Mirror*, 16.1.2005), however, takes a different view. She claims that ‘Critics have slated Sandra as being “utterly selfish”’, but distances herself from the ‘critics’ and instead describes SL as ‘smiling, robust and totally committed to being a fantastic mum’. This exemplifies the polarization of opinion and depiction of these mothers in the press. On the negative side, in addition to selfishness, the adjectives or adjectival expressions in some articles imply that postmenopausal mothers have an inaccurate self-image or irrational or unrealistic expectations:

‘Sandra Lennon cannot accept that she is no longer young and fertile’ (SL) (*Daily Mail*, 12.1.2005)

‘She is far from satisfied. For this woman one miracle is not enough. Although now at 59 she’s old enough to be a grandmother, Susan wants to give birth yet again’ (ST) (*The Express*, 19.1.2010).

An article (*Mail on Sunday*, 28.6.2009) focusing on EA is a good example of an accumulation of evaluations that build up to a characterization of her as a suspect candidate for the ‘good mother’ role. Instead, she is depicted as a workaholic, career-minded, strong-willed, and obsessive:

The wealthy businesswoman returned to her job [...] last week leaving little Jolyon in the care of a live-in nanny [...]. Ms Adeney, who is single and divorced [...]. Her decision defies the usual medical advice [...]. Her decision to go back to work so soon [...]. Former employees [...] describe Ms Adeney as a forceful boss [...]. She has long been determined to have children [...]. Her marriage crumbled because she was ‘consumed’ by the idea of children.

EA is attributed with agency both in having a child (although ‘medical experts ruled that she should not be given [...] treatment in Britain’) and in continuing with her career despite being ‘wealthy’. The explicitness of the repeated use of the expression ‘her decision’ also emphasizes her agency.

Other adjectival descriptions that constructed a negative frame for articles in the corpus included references to the perceived likelihood of the mothers’ shorter lifespan; negative reactions from the mothers’ families; and controversy surrounding the employment of ARTs:

‘[w]hen they graduate she will be a frail eighty-something or dead’ (SL; ‘they’ refers to her two youngest children) (*Daily Mail*, 12.1.2005)

‘the poor boys will constantly worry about their mum’s health [...] the boys will be sad and insecure’ (SL) (*Daily Mail*, 12.1.2005)

‘both her elder son and daughter are absolutely furious at what their mother has done’ (SL) (*Daily Mail*, 6.2.2003)

‘even her own children are horrified’ (SL) (*Sunday Express*, 16.1.2005)

‘a controversial IVF birth’ (SL) (*Daily Mail*, 6.2.2003)

‘the controversial hormone treatment needed to aid her pregnancy’ (PR) (*The Daily Telegraph*, 25.10.2006)

‘Susan’s mind-boggling request for further fertility treatment’ (ST’s plans for a second child) (*The Express*, 19.1.2010)

‘IVF and egg-donating are creating a lot of unnatural situations’ (ST) (*Daily Mail*, 7.11.2011).

These evaluations have the effect of boosting the newsworthiness of the articles but, more importantly, they also contribute to the media’s ‘othering’ of older/postmenopausal mothers.⁴³ This creates hierarchies between postmenopausal mothers and younger mothers, as well as between older and younger infertile women. Whereas the desire to parent and overcome infertility tends to be depicted as unmarked and common sense in the media (even in the era of

increasing voluntary childlessness/child-freedom), the legitimacy of this desire seems to be represented with a chronological time-limit in these texts.

Relatedly, the effects of the acts of postmenopausal mothering (the women's acts) centre on the negativity of social uneasiness and ethical and moral dilemmas in some coverage:

'Susan Tollefsen sparked an ethical storm after becoming Britain's oldest first-time mother' (*Daily Mail*, 7.11.2011)

'Elizabeth Adeney provoked a storm of controversy by becoming Britain's oldest mother' (*Mail on Sunday*, 28.6.2009)

'Her decision sparked a national debate over the rights of women to give birth at such an advanced age' (*Daily Mail*, 5.5.2006) (PR)

'Sandra caused furore last year when she gave birth to Joshua [...]. Now she is set to cause uproar again' (*Daily Mirror*, 21.3.2004) (SL).

Negativity was also constructed by making the mothers' ages or their age-related physiognomic cues salient via the adjectives used (or, in the third case below, via membership group categorization). A negative inference relies on the readers' shared assumptions of the normative timing and 'look' of mothering:

'The photo shows a grey-haired woman' (SL) (*Daily Mail*, 12.1.2005)

'She will be over 70 before he goes to nursery school' (EA) (*The Sun*, 30.5.2009)

'A pensioner who became Britain's oldest IVF mum' (ST) (*The Sun*, 7.11.2011).

On the other hand, some articles constructed later motherhood positively by framing the mothers as physically fit and healthy and providing 'good' parenting (although some of the evaluations are reported quotes from the mothers themselves, as in the first two examples below). The second example given below precedes a quote in the article from ST expressing her joy at playing with her daughter:

'Ageing but healthy mum Susan Tollefsen [...]. Susan [...] says she's still full of life and healthy' (ST) (*Daily Mirror*, 19.1.2010)

'Sandra says despite being older than most mums she never gets tired' (SL) (*Daily Mirror*, 21.3.2004)

'Her daughter has made her feel vital again' (ST) (*The Sunday Telegraph*, 6.6.2010)

'Josh seems totally content and happy' (SL; reference to SL's son) (*Daily Mirror*, 21.3.2004)

'She [...] appears to be raising a happy and contented little girl' (ST) (*Daily Mirror* 19.1.2010)

‘Women who give birth in their fifties make just as good mothers’ (PR) (*Daily Mail*, 23.10.2006).

These positive representations tended to appear in feature articles or comment columns rather than news sections. They present the personal views of the writer and feature specific cases of older mothers, as opposed to news stories about changing parenting demographics, for example. Similarly, my previous study of later parenthood found that the personal frame (first-person accounts) in newspaper articles about older parents often coincided with features and were mostly positive representations.⁴⁴ Despite these occasional positive depictions, however, the evidence so far suggests that postmenopausal mothers in these texts are mainly framed negatively, and that this is based on social rather than medical (or risk) factors. I will now offer some additional examples of what advantages and disadvantages of postmenopausal mothering emerge from these data if we look at the story-lines more closely.

Representations of Advantages and Disadvantages of Postmenopausal Mothering

In the case of the women in these articles who were first-time postmenopausal mothers, such as ST, a ‘victim of circumstance’ narrative framing can be identified.⁴⁵ ST is described in a few articles as a devoted daughter who nursed her ‘ailing parents’ when she was in her 30s and 40s, and therefore missed the chance to find a partner to parent with. For example, *The Sunday Times* (30.5.2010) reports of ST that ‘Getting pregnant at 57 wasn’t a lifestyle choice for Tollefsen [. . .], more of an accident of tragic circumstance’. Mothering via ARTs turned tragedy into triumph. In an article that reports ST’s regret at having her daughter when ‘too old’ (*Daily Mail*, 7.11.2011), ST is also reported to appreciate ‘the real value of the time that is left to us’, implying a committed stance to mothering. Her advanced age thus presents both a positive and a negative (limited time) dimension to parenting. In a different article (*Daily Mail*, 5.5.2006), PR is quoted as saying ‘we just want you to know that we take our responsibilities very seriously’, which also connotes commitment to parenting and counteracts any potential perceptions of selfishness. In the same article, PR is also quoted as saying about her pregnancy: ‘a great deal of thought has been given to planning and providing for the child’s present and future wellbeing, medically, socially and materially’. PR’s husband, however, is quoted a few lines later, in reference to parenting, as ‘admitting’ that ‘it is a daunting prospect at our age’, mitigating the article’s earlier positivity.

In some of these articles, postmenopausal mothering is also represented as a ‘gift’, fulfilling ageing parents’ long-held wishes for a child. For example, an article (*The Express*, 19.1.2010) says of ST: ‘She has presented her partner, 11 years her junior, with the child he desperately craved’. The benefits of

parenthood to the couple's relationship are implied. However, reference has already been made to some articles which suggested that these mothers risked their relationships with adult children from previous relationships, who were against their mother's new postmenopausal pregnancy. Postmenopausal mothering is therefore also represented in these texts as endangering the parent–adult child relationship. Dangers to the couple relationship also feature. A good example of such an article focuses on ST (*Daily Mail*, 7.11.2011), who

now admits that she was too old to have a child [. . .]

The pensioner said she had split from Mr Mayer [her partner] in part because of the shock of having a child so late in life [. . .]. The strain exposed problems that already existed in her relationship with Mr Mayer, and she is now bringing up Freya on her own on a tight income [. . .]. 'I've had to pay a heavy price for my dream of being a mother [. . .] it's cost me my relationship'.

In this article, ST is represented not just as regretting that she did not have her daughter earlier ('my mistake was not to have had her sooner') but as admitting that she was 'too old to have a child'. She is reported to regard becoming a mother as 'the best thing [she has] ever done', yet she nevertheless advocates 'an age limit of 50 for IVF treatment for women in the UK'. By quoting ST extensively, the opinions and regrets appear genuine and add weight to the conclusion of the piece in which postmenopausal mothering is portrayed as 'unnatural'. A co-founder of pressure group Comment on Reproductive Ethics is cited towards the end of the article: 'there is very good reason the menopause comes when it does. IVF and egg-donating are creating a lot of unnatural situations'. Here, ARTs are depicted as agents of unforeseen difficulties which do not benefit the child. References to ST's new status as a single 'pensioner' 'on a tight income' add to the representation of potential risks to the child, too. In the same article, ST also comments on her relationships with other mothers, which are depicted as potentially problematic. We are told that 'Mrs Tollefsen also acknowledged the age gap between herself and other mothers at the school gates'. This frames postmenopausal mothering as socio-relationally challenging, for both the mothers and the children.

Despite the occasional positive portrayal, it seems, then, that in these texts postmenopausal mothering is more often depicted as problematic than as an advantage. What about the representation of ARTs? What stance do newspaper articles on postmenopausal mothers take towards ARTs? There are various references to the fertility consultants and the clinics but very few references to the techniques themselves. This is likely to be the case because of the predominant human story and social debate angles of this coverage. In my earlier study, I identified a frame that focused on the IVF technologies themselves in newspaper articles on older parents. They represented advances in ARTs typically in science sections and as positive scientific breakthroughs,

although at times with discussion of associated new ethical dilemmas.⁴⁶ In the current corpus, explicit evaluations of ARTs are rare. At the end of a lengthy article about SL, which takes a critical stance and questions her motives (*Daily Mail*, 6.2.2003), the reader is invited to consider the question: 'is this really what procedures such as IVF are for?' And in an article on EA (*The Sun*, 30.5.2009), Lorraine Kelly is of the opinion that, 'Just because we have the technology does not mean that it is right for old women to have babies'. These examples suggest that other, presumably younger, women are seen as more legitimate, and postmenopausal women as 'illegitimate', beneficiaries of ARTs.

The other references to ART focus on cost, and agency is distributed more evenly between mothers and fertility experts. The high cost of the private IVF that the protagonists used is frequently mentioned. This helps to construct postmenopausal mothers (and their partners) as privileged and therefore as 'others'. In terms of agency, the mothers are represented as beneficiaries of ARTs and fertility clinics. One article on ST (*The Sunday Telegraph*, 6.6.2010) states that: 'Four years later she was pregnant, with the help of a donor egg, IVF [...] and the Alta Vita clinic in Moscow'. In other examples, the clinic is mentioned in a more circumstantial capacity: 'at the advanced age of 57, after fertility treatment at a Russian clinic, she gave birth to Freya' (ST) (*The Express*, 19.1.2010). Fertility experts are also represented as agents, as in this example: 'The couple [...] sought the help of controversial Italian fertility expert Professor Severino Antinori [...]. Prof Antinori [...] sent the couple to a clinic in Russia, which has more relaxed laws' (PR) (*Daily Mail*, 5.5.2006).

The findings of the analysis point to the framing of postmenopausal mothering as itself newsworthy but mainly for its 'shock value' and controversy. Analysis of the headlines, descriptive language, and other framing devices shows that the evaluation of the protagonists' agency tends to be critical more often than sympathetic. Positive framings highlight committed and successful parenting practices by older mothers.

CONCLUSION

Jennifer Parks suggests that arguments against allowing postmenopausal women access to ARTs have been based on several reasons, including: concerns about fairness (postmenopausal women have 'had their chance'); views grounded in traditional feminine roles according to which older women are considered inappropriate mothers; concerns for orphaned children; and scarcity of resources (not enough egg donors).⁴⁷ In these newspaper articles, we have seen the first three of these reasons used to negatively frame postmenopausal mothering. In addition, the emphasis on the women's agency in their parenting decisions and in bringing about their pregnancies foregrounds seeking infertility treatment and childbearing as a personal and privileged choice.

This helps construct representations of postmenopausal pregnancies as the result of selfish actions and it also helps to place the blame for potential risks on the mothers themselves. There are voices in the corpus that speak against negative perceptions, but these are in the minority.

These texts are useful sources of information that contribute to debates about the 'legitimate' use of ARTs and are likely to influence potential (older) parents' views.⁴⁸ It needs to be acknowledged, however, that these articles mainly come from the tabloid press, many of which are more likely to promote pronatalist and traditional views about parenting and family structures. It is, then, perhaps unsurprising to find postmenopausal mothering predominantly framed as a social issue here. The context of representation needs to be taken into account in the interpretations, as do editorial decisions based on news values (such as unexpectedness, which featured prominently here). These, in turn, account for many of the explicit references to the women's chronological ages in the headlines and elsewhere, although they do not diminish the ageist stances in many of the pieces. Further studies in this area might therefore investigate a wider sample of newspapers.

The predominantly negative or critical framing of postmenopausal mothering in these texts is at least partly explained by their main focus on the mothers themselves, as opposed to the reproductive techniques. Postmenopausal motherhood was rarely celebrated, even though some instances of a 'victim of circumstance' discourse were found which invited more sympathetic evaluations of the mother's actions and capabilities. This study has continued the tradition of looking in depth at a small number of cases.⁴⁹ The advantage of looking at the language of representation at a micro-level is that it enables us to move from categorizing *what* is said/written to *how* the representation is discursively achieved. Microanalysis facilitates the examination of the local context of representation (at the level of the newspaper article, but also at the lower level of a headline, for example). The combination of MFA and CDA (an approach which is still developing), in turn, aims to link the language to more abstract levels of representation, such as cultural or cognitive scripts or ideologies.

Through the focus on headlines, adjectives, and other descriptors, terms of reference and argument themes, I have shown how the readers of these texts are invited to view postmenopausal mothers as individuals with agency in dealing with infertility and, as such, as targets of evaluation. Negative framings reinforce the view of older mothers as exceptional, selfish, controversial, and as holding unrealistic expectations and goals. The positive framings in the texts present these older mothers as exceptional in a different way: as healthy, committed, and providing good parenting, counteracting common sense assumptions of older mothers (and/or women), which might in fact reinforce negative perceptions of reproduction at an older age (if they are seen as atypical). The more positive arguments tend to be voiced by female journalists in feature articles, which also

include quotes and positive views from the postmenopausal mothers themselves. This establishes positivity as representing a minority view.

In the area of postmenopausal reproduction and infertility, naturalized traditional ideologies are slowly changing. Newspaper discourses play an important role in shaping the ideological landscape. It seems evident that in the case of postmenopausal infertility, UK newspapers in the early twenty-first century adopt discourses that, at best, promote discussion and debate in the context of more and more advanced technologies, or, more typically, continue promoting discourses and framings of older mothers as marginalized ‘others’ and as a threat to societal and familial lifespan structures.

NOTES

1. Frank van Balen and Marcia C. Inhorn, ‘Interpreting Infertility: A View from the Social Sciences’, in Marcia C. Inhorn and Frank van Balen (eds), *Infertility Around the Globe: New Thinking on Childlessness, Gender, and Reproductive Technologies* (Berkeley, CA, 2003); see also Marcia C. Inhorn and Daphna Birenbaum-Carmeli, ‘Assisted Reproductive Technologies and Culture Change’, *Annual Review of Anthropology*, 37 (2008).
2. Carrie Friese, Gay Becker, and Robert D. Nachtigall, ‘Rethinking the Biological Clock: Eleventh-Hour Moms, Miracle Moms and Meanings of Age-Related Infertility’, *Social Science and Medicine*, 63 (2006), p. 1551.
3. Linda J. Heffner, ‘Advanced Maternal Age – How Old is Too Old?’, *New England Journal of Medicine*, 351:19 (2004), p. 1928.
4. Susan Bewley, Melanie Davies, and Peter Braude, ‘Which Career First? The Most Secure Age for Childbearing Remains 20–35’, *British Medical Journal*, 15 September 2005, p. 588.
5. J. Lansac, ‘Delayed Parenting: Is Delayed Childbearing a Good Thing?’, *Human Reproduction*, 10:5 (1995), p. 1034.
6. Heffner, ‘Advanced Maternal Age’, p. 1929.
7. Barbara Hanson, ‘Questioning the Construction of Maternal Age as a Fertility Problem’, *Health Care for Women International*, 24:3 (2003), pp. 166, 168.
8. Abigail Locke and Kirsty Budds, ‘“We thought if it’s going to take two years then we need to start that now”: Age, Infertility Risk and the Timing of Pregnancy in Older First-Time Mothers’, *Health, Risk & Society*, 15:6–7 (2013), p. 538.
9. Alison Cook, Tracey A. Mills, and Tina Lavender, ‘Advanced Maternal Age: Delayed Childbearing is Rarely a Conscious Choice: A Qualitative Study of Women’s Views and Experiences’, *International Journal of Nursing Studies*, 49 (2012).
10. Friese, Becker and Nachtigall, ‘Rethinking the Biological Clock’, pp. 1553–59.
11. Carrie Friese, Gay Becker, and Robert D. Nachtigall, ‘Older Motherhood and the Changing Life Course in the Era of Assisted Reproductive Technologies’, *Journal of Aging Studies*, 22 (2008). For an example of the symbolic interactionist perspective, see Erving Goffman, *Stigma: Notes on the Management of Spoiled Identity* (New York, 1963). Symbolic interactionism is a sociological perspective that looks at everyday behaviour and human interactions to help explain society

and also at the meanings that people attach to tangible and non-tangible objects and symbols.

12. Kirstin MacDougall, Yewoubdar Beyene and Robert D. Nachtigall, "Inconvenient biology": Advantages and Disadvantages of First-Time Parenting After Age 40 Using In Vitro Fertilization', *Human Reproduction*, 27:4 (2012).
13. Liselott Assarsson and Pål Aarsand, "How to be good": Media Representations of Parenting', *Studies in the Education of Adults*, 43:1 (Spring 2011), p. 78.
14. However, see Virpi Yläne, 'Too Old to Parent? Representations of Late Parenting in the British Press', *Discourse & Communication*, 10:2 (2016) for a focus on late parenting and not solely motherhood.
15. Kirsty Budds, Abigail Locke, and Vivien Burr, 'Risky Business: Constructing the "Choice" to "Delay" Motherhood in the British Press', *Feminist Media Studies*, 13:1 (2013). Quotation p. 132.
16. Lucy Hadfield, Naomi Rudoe, and Jo Sanderson-Mann, 'Motherhood, Choice and the British Media: A Time to Reflect', *Gender and Education*, 19:2 (2007).
17. Tracey A. Mills, Rebecca Lavender, and Tina Lavender, "Forty is the new twenty": An Analysis of British Media Portrayals of Older Mothers', *Sexual & Reproductive Healthcare*, 6 (2015).
18. Rachel L. Shaw and David C. Giles, 'Motherhood on Ice? A Media Framing Analysis of Older Mothers in the UK News', *Psychology and Health*, 24:2 (2009), p. 232.
19. Leonora King, Togas Tulandi, Robert Whitley, Teodora Constantinescu, Carolyn Ells, and Phyllis Zerkowitz, 'What's the Message? A Content Analysis of Newspaper Articles about Assisted Reproductive Technology from 2005 to 2011', *Human Fertility*, 17:2 (2014), p. 128.
20. Patricia Campbell, 'Boundaries and Risk: Media Framing of Assisted Reproductive Technologies and Older Mothers', *Social Science and Medicine*, 72 (2011), p. 270.
21. Lucy van de Wiel, 'For Whom the Clock Ticks: Reproductive Ageing and Egg Freezing in Dutch and British News Media', *Studies in the Maternal*, 6:1 (2014): <http://doi.org/10.16995/sim.4>. Accessed 6 December 2016. Quotation p. 4.
22. Yläne, 'Too Old to Parent?'
23. For further discussion see Baldwin Van Gorp, 'The Constructionist Approach to Framing: Bringing Culture Back In', *Journal of Communication*, 57:1 (2007), p. 60.
24. See, for example, Robert M. Entman, 'Framing: Toward Clarification of a Fractured Paradigm', *Journal of Communication*, 43:4 (1993).
25. Robert M. Entman, *Projections of Power: Framing News, Public Opinion, and U.S. Foreign Policy* (Chicago, IL, 2004), p. 5.
26. Entman, *Projections of Power*, pp. 6, 23.
27. Paul D'Angelo, 'News Framing as a Multiparadigmatic Research Program: A Response to Entman', *Journal of Communication*, 52 (2002), p. 877.
28. Quotation Van Gorp, 'The Constructionist Approach to Framing', p. 62.
29. David Giles and Rachel L. Shaw, 'The Psychology of News Influence and the Development of Media Framing Analysis', *Social and Personality Psychology Compass*, 3:4 (2009).

30. Gerlinde Mautner, 'Analyzing Newspapers, Magazines and Other Print Media', in Ruth Wodak and Michał Krzyżanowski (eds), *Qualitative Discourse Analysis in the Social Sciences* (Basingstoke, 2008), p. 44.
31. Norman Fairclough and Ruth Wodak, 'Critical Discourse Analysis', in Teun A. van Dijk (ed.), *Discourse as Social Interaction* (London, 1997), p. 258.
32. John E. Richardson, *Analysing Newspapers: An Approach from Critical Discourse Analysis* (Basingstoke, 2007), p. 220.
33. Paul Baker, Costas Gabrielatos, Majid Khosravini, Michał Krzyżanowski, Tony McEnery and Ruth Wodak, 'A Useful Methodological Synergy? Combining Critical Discourse Analysis and Corpus Linguistics to Examine Discourses of Refugees and Asylum Seekers in the UK Press', *Discourse & Society*, 19:3 (2008), p. 281.
34. Monika Bednarek and Helen Caple, 'Why Do News Values Matter? Towards a New Methodological Framework for Analysing News Discourse in Critical Discourse Analysis and Beyond', *Discourse & Society*, 25:2 (2014); Tony Hardcup and Deirdre O'Neill, 'What is News? Galtung and Ruge Revisited', *Journalism Studies*, 2:2 (2001).
35. For an extended discussion of human interest stories, see Hayley Andrew's chapter in this volume.
36. Ylänne, 'Too Old to Parent?'
37. Alessandro Duranti, 'Agency in Language', in Alessandro Duranti (ed.), *A Companion to Linguistic Anthropology* (Malden, MA, 2004), p. 453.
38. See, for example, Theo van Leeuwen, 'The Representation of Social Actors', in Carmen Rosa Caldas-Coulthard and Malcolm Coulthard (eds), *Texts and Practices: Readings in Critical Discourse Analysis* (London, 1996).
39. Richardson, *Analysing Newspapers*, p. 54.
40. In the example headlines given in the text, '...' appears as in the original article, [...] indicates that I have omitted material.
41. Laura M. Ahearn, 'Language and Agency', *Annual Review of Anthropology*, 30 (2001), p. 112, defines agency as 'the socioculturally mediated capacity to act', and in her review of approaches to agency comments on the importance of free will and rationality as aspects of agency.
42. Hadfield, Rudoe, and Sanderson-Mann, 'Motherhood, Choice and the British Media', pp. 258–9; Shaw and Giles, 'The Psychology of News Influence', pp. 226, 230.
43. Campbell, 'Boundaries and Risk'; Gayle Letherby, 'Other than Mother and Mothers as Others: The Experience of Motherhood and Non-Motherhood in Relation to "Infertility" and "Involuntary Childlessness"', *Women's Studies International Forum*, 22:3 (1999).
44. Ylänne, 'Too Old to Parent?'
45. See van de Wiel, 'For Whom the Clock Ticks', p. 5.
46. Ylänne, 'Too Old to Parent?'
47. Jennifer A. Parks, 'On the Use of IVF by Post-Menopausal Women', *Hypatia*, 14:1 (1999), p. 77.
48. Campbell, 'Boundaries and Risk', p. 267.
49. Campbell, 'Boundaries and Risk', for example, examines a single case study of a postmenopausal mother.

APPENDIX: NEWSPAPER ARTICLES (FOCUS ON EA, SL, PR OR ST)

Chester Chronicle

5 June 2014: Carmelia de Lucia, 'The older mums debate; how old is too old?' (PR).

Daily Mail

6 February 2003: Paul Bracchi and Neil Sears, 'Her children are furious, her new husband's chatting up other women and she thinks Angel Gabriel told her to conceive . . . so what hope for the baby born last week to a mother of 58?' (SL).

12 January 2005: Cristina Odone, 'How can a mum be so utterly selfish?' (SL).

5 May 2006: Gordon Rayner, 'I'm not too old to be a mother at 62' (PR).

23 October 2006: Jenny Hope, 'Mothers over 50 "do as well as young women"' (PR/PF).

3 June 2009: Allison Pearson, 'A sickening picture that makes me shudder . . . ' (EA).

28 June 2010: Daniel Martin, 'Mother aged 67 takes her one-year-old for a walk' (EA).

7 November 2011: Tom Kelly, 'I was too old when I had my baby, says IVF mum aged 61' (ST).

Daily Mirror

21 March 2004: Zoe Nauman, 'I just want to be pregnant again . . . before I reach 60; Exclusive: On Mother's Day . . . mum aged 58 planning another baby' (features) (SL).

16 January 2005: Carole Malone, 'Old mum beats a daft teen' (features) (SL).

19 January 2010: Sue Carroll, 'So ageist to refuse women a baby at 59' (features) (ST).

Mail Online

21 March 2012: Eleanor Harding, 'I realise now that having a baby at 57 was a mistake, says Britain's oldest new mother' (ST).

Mail on Sunday

28 June 2009: Jo MacFarlane, 'Oldest mum goes back to work . . . four weeks after giving birth' (EA).

Media Planner

28 February 2014: '5th anniversary of Britain's oldest mum giving birth' (EA).

The Daily Telegraph

25 October 2006: Jan Moir, 'Living longer, looking younger, losing the plot' (features; comment) (PR).

7 November 2011: Graeme Paton, 'My critics were right I was wrong to have baby at the age of 57' (ST).

17 April 2012: Bryony Gordon, 'We should not trick the biological clock' (features) (ST).

5 July 2012: Hannah Furness, 'IVF: The older women who have become mothers' (ST, EA, PR).

The Express

19 January 2010: Vanessa Feltz, 'IVF mum is really pushing her luck' (ST).

12 November 2011: Jennifer Selway, 'Too old to be a mother' (ST).

The Independent

21 January 2010: Liz Hoggard, 'We are too quick to judge older mothers' (comment) (ST).

The Sun

6 February 2003: Rikki Brown, 'A wee miracle' (opinion) (SL).

24 March 2004: Jane Moore, 'Sandra Lennon gave birth at 58' (SL).

30 May 2009: Lorraine Kelly, 'USUALLY the birth of a baby fills me with joy' (EA).

7 November 2011: Ben Cusack, 'Don't set age limit over IVF' (ST).

Sunday Express

16 January 2005: Tessa Thomas, 'So when is a woman too old to give birth?' Review (features) (SL).

The Sunday Telegraph

17 May 2009: Laura Donnelly, 'Is this woman too old to have a baby?' (ST)

6 June 2010: Sally Williams, 'It's never too late to: Run around the world Have a baby Become a DJ...' (ST).

The Sunday Times

- 24 May 2009: 'Oldest mum sparks battle of the bulge; Talking points' (news review; features) (EA).
- 30 May 2010: Margarette Driscoll, 'I had my first baby at 57 – maybe it's time for another; as women over 40 enjoy a baby boom, one tells Margarette Driscoll what older mothers can offer a child' (news review; features) (ST).

RESEARCH RESOURCES

Primary Sources

Databases for Accessing (UK) Newspaper Articles

Nexis (or LexisNexis): <https://www.nexis.com/>

British Library Newspaper Archive (subscription-only): www.britishnewspaperarchive.co.uk/

Several UK newspapers have online versions, too.

Secondary Sources

On Media Framing Analysis

Paul D'Angelo, 'News Framing as a Multiparadigmatic Research Program: A Response to Entman', *Journal of Communication*, 52 (2002), 870–88.

Robert M. Entman, 'Framing: Toward Clarification of a Fractured Paradigm', *Journal of Communication*, 43:4 (1993), 51–8.

Robert M. Entman, *Projections of Power: Framing News, Public Opinion, and U.S. Foreign Policy* (Chicago, IL: University of Chicago Press, 2004).

David Giles and Rachel L. Shaw, 'The Psychology of News Influence and the Development of Media Framing Analysis', *Social and Personality Psychology Compass*, 3:4 (2009), 375–93.

Rachel L. Shaw and David C. Giles, 'Motherhood on Ice? A Media Framing Analysis of Older Mothers in the UK News', *Psychology and Health*, 24:2 (2009), 221–36.

On Critical Discourse Analysis

Norman Fairclough, *Discourse and Social Change* (Cambridge: Polity Press, 1992).

Norman Fairclough and Ruth Wodak, 'Critical Discourse Analysis', in Teun A. van Dijk (ed.), *Discourse as Social Interaction* (London: Sage, 1997), 258–84.

David Machin and Andrea Mayr, *How To Do Critical Discourse Analysis: A Multimodal Introduction* (Los Angeles, CA and London: Sage, 2012).

Ruth Wodak and Michael Meyer (eds), *Methods of Critical Discourse Analysis*, 2nd edn (London: Sage, 2009).

On News Discourse

Martin Conboy, *The Language of Newspapers: Socio-Historical Perspectives* (London: Bloomsbury, 2010).

Roger Fowler, *Language in the News* (London and New York: Routledge, 1991).

- Gerlinde Mautner, 'Analyzing Newspapers, Magazines and Other Print Media', in Ruth Wodak and Michał Krzyżanowski (eds), *Qualitative Discourse Analysis in the Social Sciences* (Basingstoke: Palgrave Macmillan, 2008), 30–53.
- John Richardson, *Analyzing Newspapers: An Approach from Critical Discourse Analysis* (Basingstoke: Palgrave Macmillan, 2007).

On Media and Cultural Representations of Ageing

- Mike Featherstone and Andrew Wernick (eds), *Images of Aging: Cultural Representations of Later Life* (London: Routledge, 1995).
- Virpi Ylänné (ed.), *Representing Ageing: Images and Identities* (Basingstoke: Palgrave Macmillan, 2012).

On Media Representations of Late Parenting (and ART/Infertility)

- Patricia Campbell, 'Boundaries and Risk: Media Framing of Assisted Reproductive Technologies and Older Mothers', *Social Science and Medicine*, 72 (2011), 265–72.
- Lucy Hadfield, Naomi Rudoe, and Jo Sanderson-Mann, 'Motherhood, Choice and the British Media: A Time to Reflect', *Gender and Education*, 19:2 (2007), 255–63.
- Leonora King, Togas Tulandi, Robert Whitley, Teodora Constantinescu, Carolyn Ells, and Phyllis Zelkowitz, 'What's the Message? A Content Analysis of Newspaper Articles about Assisted Reproductive Technology from 2005 to 2011', *Human Fertility*, 17:2 (2014), 124–32.
- Tracey A. Mills, Rebecca Lavender, and Tina Lavender, "'Forty is the new twenty": An Analysis of British Media Portrayals of Older Mothers', *Sexual & Reproductive Healthcare*, 6 (2015), 88–94.
- Lucy van de Wiel, 'For Whom the Clock Ticks: Reproductive Ageing and Egg Freezing in Dutch and British News Media', *Studies in the Maternal*, 6:1 (2014), 1–28.
- Virpi Ylänné, 'Too Old to Parent? Representations of Late Parenting in the British Press', *Discourse & Communication*, 10:2 (2016), 176–97.

PART V

Reproductive Technologies
and Imagined Futures

Introduction: Reproductive Technologies and Imagined Futures

Gayle Davis and Tracey Loughran

The troubled historical relationship between man, modernity, and machine has been played out in a variety of arenas. World warfare has been a particularly effective lens through which to explore the interface between these themes, perhaps most notably the First World War, the so-called ‘Great War’, because it so shattered what had gone before. The social upheaval and sacrifice of individual freedom that accompanied this conflict stemmed in large part from powerful fears over the prominence and terrifying capabilities of technology, from machine guns to bomber planes to poison gas.¹ Weaponry aside, wartime mobilization required populations to submit to the demands of autocratic planning, governed by more mundane technologies such as the wristwatch and railway timetable. Newly emerging forms of technology were simultaneously admired for their potential to lead mankind into a landscape of unparalleled progress, and feared as the likely source of our dehumanization and ultimate destruction.

Popular cultural depictions from the science fiction genre – from short stories and novels to the big screen – of this troubled and ambiguous relationship between man and machine abound. Set in futuristic dystopian landscapes, with technological cast members ranging from industrial machines and computers to robots and cyborgs, these stories explore a range of social, political, and ethical issues around what it is to be human, and how we might improve, displace, or destroy ourselves through reliance on this brave new technological

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world. Notably, such ‘futuristic’ depictions tend to be more about the present than the future, that is, the time in which these fictionalized accounts are *created* rather than *set*.

The German film *Metropolis* (1927) establishes a dramatic futuristic dichotomy between the docile ‘workers’ in their squalid underground lair, shuffling in mass formation and enslaved by time and the machinery which they operate, and the idle rich men who enjoy a life of decadent luxury above ground. Fritz Lang’s film in fact reflects the social and political instability of a defeated Weimar Germany, and its citizens’ enthusiastic embrace of US mass consumption, Fordism, and its soul-destroying scientific management of labour.² Other famous cinematic examples include Stanley Kubrick’s *2001: A Space Odyssey* (1968), which depicts the transformation of HAL 9000 from the most reliable computer ever made to a murderously malfunctioning instrument, and Ridley Scott’s *Blade Runner* (1982), where humans hunt down genetically engineered beings who are visually indistinguishable from adult humans but have risen up destructively against their creators. Both films consciously blur the identity of human and machine, the machines seeming more emotionally engaged and exhibiting the most human of instincts: the urge to live.

The relationship between human reproduction and technological innovation has provided a further rich venue for writers and filmmakers to exercise their futuristic imaginings. Still most famously, Aldous Huxley’s classic novel *Brave New World* (1932) is set in a future society where recreational sex is promoted but natural reproduction abolished, and human embryos are instead raised artificially in ‘hatcheries and conditioning centres’. Children are bred and treated chemically to fit one of five ranked castes, maintaining a pleasingly stable and predictable social structure. Once again, the novel reflects contemporary issues and fears from the decade in which it was written, including the social upheaval of the interwar period and fears that individual identity would be lost in a fast-paced world of mass media, mass consumption, and Henry Ford’s degrading and inhuman assembly line.

Genetic manipulation and enhancement feature prominently in this genre, often employed with explicitly eugenic motivations. An early example is H.G. Wells’s novel *The Island of Doctor Moreau* (1896), later adapted into the film *Island of Lost Souls* (1932), where Wells reflects critically on Darwinian and degenerationist theory to imagine an experimentation programme on the island’s animals that produces hybrid human-like creatures. Later examples include the film *Twins* (1988), which explores the aftermath of a eugenic experiment to create the perfect man that produces strikingly different fraternal twins – played by Arnold Schwarzenegger and Danny DeVito – from a ‘sperm milkshake’ of six men’s DNA. These actors reunited for the film *Junior* (1994), to tell the story of a male scientist who manages to impregnate himself with a fertility drug invented in his laboratory. The less comedic film *Code 46* (2003) examines the widespread application of reproductive techniques such as IVF, donor insemination, and cloning, and the resulting medico-social implications in a world where people no longer know to whom they are genetically related.

Governmental concerns over the damaging impact of incest and inbreeding on the gene pool lead to the implementation of a draconian eugenic regulatory system.

Such works explore and problematize an eternal Darwinian struggle to perpetuate and better the species. Their fears are echoed by the media, where there appears to be a growing perception of a looming fertility crisis, attributed to factors ranging from an obesity epidemic and selfish career women's postponement of their maternal destiny through to environmental pollution.³ Pitted against the pressing need to combat infertility are the more creative and controversial possibilities which reproductive technologies tempt, whether it be to 'improve' the quality of our race, to satisfy our selfish preferences, or to serve our most base prejudices. With options such as sex selection, stem-cell research, and animal-human hybrids now within our reach, assisted reproductive technologies (ARTs) can potentially allow us to transcend many of the restraints imposed by nature.⁴ So 'progress' is a double-edged sword: if the future is one increasingly of reproductive uncertainty and dependence on technological mediation, then we must face the threats that technology's 'dark side' poses to our emotional fulfilment, ethical barometer, social stability, and very existence.

Few areas of medicine have witnessed more spectacular advances, but none have raised more ethically complex conundrums than the science of fertility. This final section examines and contextualizes some of those ethical debates generated by the creation of the ARTs. It contrasts those that have shaped the development of research science and mediated access to medical treatment with literary and philosophical imaginings of the potential implications of reproductive technology for infertile individuals and non-fertile couples. These chapters underline the extent to which infertility debates have been grounded in current and historical concerns, but have also involved imagined futures, for individuals and societies.

In 2010, the reproductive health pioneer Howard Jones (1910–2015), the first American to achieve a successful *in vitro* fertilization (IVF) pregnancy and birth, celebrated his 100th birthday by looking not to the past but to the future. As Margaret Marsh's chapter notes, Jones recommended that his younger colleagues adopt a bold new research agenda which might include such controversial possibilities as reproductive cloning and foetal gestation in artificial uteri, ideas which had seemingly come straight from the dystopian fiction genre. Marsh traces historical continuities between cloning and early research into human IVF, another unconventional means to a conventional end, which initially appeared to offer a pronatalist technological miracle but had, by the early 1970s, become an ethical and political minefield of distressing imagined future possibilities. Jones's recent attempts to normalize ARTs as a vehicle to accomplish the 'traditional' and 'natural' objective of having a much desired – and, crucially, genetically related – child are thus contrasted with long-held ethical and social fears over the potential market for such services and

any resulting reinterpretation of normative ideas about family structure, sexuality, and human nature.

Turning to the British context, Duncan Wilson offers further insights into how medical scientists promoted and justified access to IVF treatment, not least by invoking a rights-based discourse to promote this controversial new technology. Thus, Robert Edwards (1925–2013), one of the scientists behind the world's first successful IVF birth, portrayed patients as empowered consumers who had the 'right' to produce children of their own. Yet his motivation was not necessarily one purely of altruism or concern for patient autonomy. In a climate of increasing disillusionment with modern medicine, stimulated by public exposés such as those by the US and British medical ethicists Henry Beecher (1904–76) and Maurice Pappworth (1910–94)⁵ – which revealed how far medical research had become a vehicle for self-advancement rather than an exercise in bettering the patient's condition – activists argued that patient rights could only be safeguarded through new forms of external oversight. Edwards endorsed the rights of infertile patients, Wilson argues, in order to reject calls for oversight and defend his own professional autonomy. He maintained that responsibility for applying IVF must rest with doctors and scientists because external involvement in the development of regulatory standards would delay or jeopardize the infertile couple's right to prompt and thereby effective treatment. This focus on human rights was also used as a tool to refute claims that IVF was an 'unnatural' procedure.

As had his US counterpart Howard Jones, Robert Edwards sought to further normalize IVF by portraying it as a form of treatment which attempted to replicate, rather than challenge, natural biological processes and – by limiting treatment to married heterosexual couples – to reproduce social norms, family values, and kinship structures. Wilson's research reminds us that different groups have sought to police access to infertility treatments according to their own ideas about gender, kinship, scientific progress, and morality, and helps to contextualize more recent controversies over whether single women and lesbian couples should be served equally to heterosexual couples by ARTs.

Such historical examinations of the medico-social politics behind recent developments in this field are approached from a different angle in Fran Bigman's chapter, which takes recent dystopian speculative fiction – or, to use her term, 'reprodystopias' – as its source material. However, rather than focus on the biologically infertile woman, she turns her gaze to another type of involuntary childlessness: the 'socially infertile' woman, denied the experience of motherhood not by her compromised reproductive system but as a deliberate political act by a totalitarian government. The politics of reproduction are thrown into sharp relief in the literary works analysed here, dramatized examples of reproductive injustice which project our deepest reproductive anxieties onto a futuristic world of oppression and technological control. Birth control takes on a sinister quality, subjugating the female body to male technocracy; the separation of sex, love, and reproduction does not liberate women but deprives them of any natural right to

mother. This is the double-edged sword of technology and modernization, explored so extensively within the futuristic dystopian genre. Bigman's chapter also highlights the extent to which reproduction is rarely a purely personal decision, but must be contextualized within a more extensive, complex landscape that balances the needs of the wider community with that of the individual, including a perceived duty to safeguard the quality and very existence of the human race.

Finally, Daniela Cutas transports us to the future of reproductive health and technology in a more literal sense, by exploring some prospective developments in the field – including artificial uteri, ectogenesis (artificial wombs), and human cloning – and considering their possible social and ethical implications. Can access to such reproductive technologies, and thus the ability to procreate, ever become a matter purely of personal choice? Crucially, Cutas argues, these treatment options will remain bound by moral assumptions and ethical judgements, just as access to fertility treatment has in the past. Indeed, the very definition of 'infertility' can be problematized. Infertility is not merely an inability to reproduce, otherwise single women and same sex couples in many countries – whether or not they were capable of reproducing with a(nother) partner – would not be denied access to fertility treatment. We must define the concept of 'eligible' infertility when deciding how to allocate limited and expensive resources, and this concept might be as much about how a society judges social status and sexual orientation as the specific condition or symptomatology of the individual 'patient'.

So however far to the future we feel able to look, it seems that we are likely to remain bound not merely by our scientific capabilities, and their financial implications, but by the social values and prejudices that shape our ethical frameworks. Thus, it seems, the 'right' to reproduce, or to receive technological assistance to do so, will remain mediated by a range of complex factors dependent on the place and time in which decisions are made. Amid our continued fears that a very fine line separates biological progress and Frankensteinian science,⁶ and disagreements over who should judge which is which, the troubled historical relationship between (wo)man, technology, and modernity is likely to remain a dominant trope, in media representations as much as our imaginations.

NOTES

1. See, for example, John Jervis, *Exploring the Modern: Patterns of Western Culture and Civilization* (Oxford, 1998), chapter 8; Brian Ladd, *The Ghosts of Berlin: Confronting German History in the Urban Landscape* (Chicago, IL, 1997), chapter 3; Douglas Mackaman and Michael Mays (eds), *World War I and the Cultures of Modernity* (Jackson, MS, 2000); Angus McLaren, *Reproduction by Design: Sex, Robots, Trees, and Test-Tube Babies in Interwar Britain* (Chicago, IL, 2012).
2. Anton Kaes, *Shell Shock Cinema: Weimar Culture and the Wounds of War* (Princeton, NJ, 2009).
3. See, for example, 'Experts Link Male Obesity to Infertility', *Evening Standard*, 9 July 2008; 'NHS Chief Warns Women not to Wait until 30 to have Baby as

- Country Faces a Fertility Timebomb', *Daily Mail*, 30 May 2015; 'Pollutants Linked to Lower Fertility in both Men and Women', *Time*, 15 November 2012.
4. Jervis, *Exploring the Modern*.
 5. Henry Beecher, 'Experimentation in Man', *Southern Medical Journal*, 6:6 (1959); Maurice Pappworth's *Human Guinea Pigs: Experimentation on Man* (London, 1967).
 6. Jon Turney, *Frankenstein's Footsteps: Science, Genetics and Popular Culture* (New Haven, CT, and London, 1998).

Americans and Assisted Reproduction: The Past as Prologue

Margaret Marsh

INTRODUCTION

In 2010, the American Society for Reproductive Medicine (ASRM) honoured assisted reproduction pioneer Howard Jones (1910–2015) on his 100th birthday. In 1981, he and Georgeanna Seegar Jones (1912–2005), his wife and research collaborator, became the first Americans to achieve a successful in vitro fertilization (IVF) pregnancy and birth. With this achievement, the USA became the third country to have a documented IVF birth, following Robert Edwards and Patrick Steptoe in England, and Alex Lopata and his collaborators in Australia.¹

Jones may have had a long career behind him, but on the occasion of this centenary speech his focus was on the future, not the past. Jones took advantage of the moment to urge his colleagues to take up a series of new initiatives and research priorities. Some of them were more controversial than others, and surely his most jaw-dropping suggestion was that one of the field's goals should be the development of reproductive cloning (which he called 'somatic reproduction'). 'Why in the world do we want to do *this*?' he asked, rhetorically. 'We want to do this', he continued, 'because the use of donor eggs and donor sperm interrupts the genetic continuity which most couples desire'. Eliminating the need for donor gametes, he believed, would settle questions of parentage and render moot the sometimes difficult ethical decisions that gamete donors and recipient parents alike often confront.²

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Assuming that there would be a demand for such a technology in the USA, Jones urged his colleagues to action. But where would the demand come from? By the first decade of the twenty-first century approximately 4 million babies around the world had been born as a result of assisted reproduction (that is, using techniques in which the egg is fertilized outside the body), roughly 500,000 of them in the USA. The vast majority of these babies were born to heterosexual, married, infertile couples in their reproductive years undergoing IVF using their own eggs and sperm. Such couples, who do not make headlines, would not likely be in the market for somatic reproduction but rather for improvements to existing technologies. However, a market for reproductive cloning might come from among single women and men, same-sex and transgendered couples seeking parenthood with a genetic link to one of the partners, or heterosexual couples who now turn to donor eggs because the woman cannot become pregnant using her own. Jones was suggesting that having children with a genetic connection to their parents creates a more ‘natural’ family than those formed using donor gametes, but it is impossible to assert the truth of such a presumption. What *is* true is that for many people, having one’s own biological children is critical to their beliefs about the nature of family, their desire to pass on that family’s love and legacy, and their sense of their place in the community and purpose in life.

Could cloning be an answer to their hopes? Not likely – or at least, not yet. Although Jones received warm applause for his speech, there is currently little support for the use of somatic reproduction either within the ASRM or among the public. In relatively short order the ASRM Ethics Committee reaffirmed its opposition to reproductive cloning, and most Americans appear to share that opinion.³ Jones was aware of these attitudes, yet argued otherwise, viewing somatic reproduction simply as an unconventional means to a conventional end, a procedure that validates even as it reinterprets normative ideas about family and childbearing. Cloning may be new, but the ideas behind it echo back through the generations, with roots that can be traced at least as far back as the early days of research into human IVF in the 1930s, when the US obstetrician and gynaecologist John Rock (1890–1984) first attempted to achieve the earliest stage of assisted reproduction: the fertilization of human eggs ‘in glass’.⁴

‘BOON FOR THE BARREN WOMAN’: JOHN ROCK AND ‘CONCEPTION IN A WATCH GLASS’

In the mid-1930s John Rock was the director of the Fertility and Endocrine Clinic – which he had founded in 1926 as the Sterility Clinic – at the Harvard Medical School-affiliated Free Hospital for Women in Brookline, Massachusetts.⁵ The IVF study was part of a multifaceted research programme in human fertility which he and his collaborators conducted from the 1930s. Its projects included studies on the timing of ovulation, changes to the endometrium (the lining of the uterus) during the menstrual cycle, the earliest stages of

embryo development, and IVF. Together, this work built a foundation on which much of twentieth-century reproductive medicine was to rest.

Rock's early research included a set of discoveries that enabled physicians to establish (at least after the fact) the presence and timing of ovulation, bedrock knowledge which led to the embryo and IVF research that would occupy him for the next 15 years. He first mentioned the idea of human IVF in an anonymous editorial in 1937, published in *The New England Journal of Medicine*. 'The "brave new world" of Aldous Huxley', he said, 'may be nearer realization' as a result of the work of a young Harvard biologist. Gregory Pincus (1903–67) had recently accomplished the birth of a rabbit after fertilizing an ovum 'in a watch glass' then implanting the resultant embryo in another rabbit. More practically speaking, Rock concluded, if this technique could be made to work in humans, 'What a boon for the barren woman with closed tubes!'⁶

An avid reader of contemporary fiction, Rock was unable to resist an allusion to the acclaimed dystopian novel *Brave New World*, where, in Aldous Huxley's futuristic scenario, nearly all humans were fertilized in test tubes and spent their prenatal lives in artificial wombs, fatherless and motherless.⁷ But Rock would surely have refrained from this offhand remark had he known that the IVF rabbit he invoked was about to wreak havoc on Gregory Pincus's career. A *Collier's Magazine* profile of Pincus's work by J.D. Ratcliff, entitled 'No Father to Guide Them', predicted that the young biologist's research could lead to a world in which women would no longer have to depend on men in order to bear children. And when that happened, the author suggested, women might not need men for anything else either. Pincus was denied tenure and his future career was placed in doubt.⁸

In 1938, Rock hired Miriam Menkin (1901–92), who had worked for Pincus before he lost his job. Smart, tenacious, and meticulous, she was perfect for this project and for Rock, who had little patience himself for the tedium of the laboratory. The next step was to recruit volunteers for the project. All in all, nearly 1,000 women agreed to participate.⁹ Most of them were patients in one of Rock's clinics, either the Fertility and Endocrine Clinic, which focused on infertility and reproductive disorders, or the 'Rhythm' Clinic, where women were taught how to understand their menstrual cycles so that they could avoid having intercourse during their fertile periods (rhythm was the only kind of birth control legal in Massachusetts at the time). A smaller number came from Rock's private practice. Many of the infertility patients were receiving a diagnostic procedure or a surgical treatment. Other women were undergoing hysterectomy or a range of more minor surgeries for various gynaecological disorders. All of them were having surgery that involved laparotomy, or the opening of the abdomen, which allowed the ovaries to be visualized.¹⁰

Journalist Joan Younger, reporting on the study in 1945, noted that when Rock 'began asking some of the women who came to the hospital if they would co-operate' in this project, they said yes for various reasons. Some of the infertile women hoped that future generations of women could be spared their suffering. Patients at the rhythm clinic tended to be sympathetic to the

infertile women they had met while waiting for their appointments just down the hall. Still others might have agreed just because Rock or one of his staff asked them. 'Without these women', Younger wrote, 'the knowledge that human ova [. . .] can be handled outside the body might have been delayed another decade, another generation'.¹¹

After six years of failure, Menkin fertilized her first egg in February 1944. By accident rather than design, she altered several of Rock's protocols. Worn out from having been kept awake two nights running by her teething baby, Menkin decided to wash the sperm just once instead of three times and to use a more concentrated suspension. Then, without meaning to, she extended the contact time. 'I was so exhausted', she later recalled, 'that I couldn't get up', and she soon discovered that she had sat for at least an hour, transfixed. In shock when she realized that the experiment had actually worked, she called everyone in the lab to see the results. They all became so excited over the newly fertilized ovum that an argument ensued about the best way to preserve it. In the heat of the discussion, they forgot to photograph the specimen. When the argument was over, and Menkin went back to the microscope to begin the preservation process, she could not find the egg. She was mortified, but Rock consoled her. After all, he said, now they knew it could be done. Still, Menkin had no idea which of the accidental new factors had made the difference, so she incorporated all three into her next experiments. Within a couple of months she was able to fertilize three ova from two women, and each of them was carefully photographed before being preserved. Now, she and Rock felt confident enough to send a report to *Science*, which announced the discovery in August 1944.¹²

By this time Rock had abandoned his Huxleyan flourishes. 'Conception in a watch glass', he now argued, could make it possible for women with blocked or absent fallopian tubes to become pregnant, and indeed tubal disease was responsible for about 20% of the infertility cases encountered in Rock's practice. Some of his colleagues reported even higher figures. Surgery was generally the treatment of choice, but even the best surgeons reported pregnancy rates of only around 7%. *In vitro* fertilization, because it bypassed the tubes, had the potential to make pregnancy possible for a significant proportion of these women. Looked at in this light, IVF was simply an unconventional means to a conventional end.¹³

Most of Rock's scientific and medical peers, including George Streeter, the most distinguished embryologist of that era, were persuaded that Rock and Menkin had indeed achieved IVF (sceptics emerged later). The press, enthralled, had a field day. It sometimes comes as a surprise to contemporary scholars, many of whom are aware of the bitter controversies over IVF in the 1970s, that the reaction to Rock and Menkin's announcement was almost universally positive. True, there were a few reporters, unable to forget the plot of *Brave New World*, who wondered whether Rock's ultimate goal was for babies to begin their lives in artificial wombs, but Rock quickly disabused them: 'Test-tube babies, or even test-tube rabbits, probably never will be developed outside the imagination of fiction writers.'¹⁴

When Rock used the term ‘test-tube babies’, he was referring to artificial *gestation*, which is very different from IVF, where the goal is to implant a fertilized egg into a woman’s uterus so that she herself can become pregnant. As science journalist Robert Bird reported, IVF followed by a natural pregnancy ‘was a present objective of science’. This achievement was not, he quoted Rock, ‘beyond the realm of imagination, and it seems to offer about the only hope for women whose tubes have been destroyed’.¹⁵ Most journalists got the point. ‘Don’t do any thinking [. . .] about growing babies in test tubes’, Joan Younger told readers of *Collier’s* in 1945. The ‘whole idea is fantastic, and scientists have more to do now than to allow their imaginations to roam at large through freakish fields’. Pregnancy via IVF, however, was a different matter. ‘If the many-celled stage of life can be reached’, she wrote, ‘there may be hope that test-tube fertilization will answer the hopes of many childless couples’.¹⁶

Fewer than ten years before, *Collier’s* had invoked Gregory Pincus and his fatherless rabbits as predictors of a future where children came into the world parentless and men could become obsolete. Now the same magazine presented IVF matter-of-factly as a means to help women with fallopian tube disease to have children. The purpose of IVF, the press seemed to agree, was simply to help to solve the ‘problem’ of childlessness. The dystopian anxieties of the 1930s had lost much of their force as the gloomy economy of the Great Depression gave way to wartime prosperity. As the end of the war seemed ever closer, Americans became more optimistic about the future. Furthermore, this was an era that celebrated new scientific and medical discoveries, and few Americans doubted that technological advances would be used to promote the public good. And finally, the wartime upturn in births was about to be followed by a massive baby boom, with men returning from the war to wives and sweethearts, and couples were ‘in a hurry to begin the families so long delayed’.¹⁷ If the hoped-for pregnancy failed to occur as expected, the media reported, medical science would come to the rescue. As a result, IVF was viewed not as a threatening or somehow alien technology but as a possible way to allow women suffering from a common cause of infertility to bear children. IVF pregnancies were not even possible yet, but already the idea was becoming ‘normalized’.

The fact that the first steps toward IVF were credited to a clinician whose looks could have given him the leading role in any Hollywood film about a heroic doctor, and who also had a reputation for uncommon rapport with his patients, might also have played a part in making the prospect of babies conceived in a ‘test tube’ a lot less threatening. Luigi Mastrianni, a prominent reproductive specialist in the late twentieth century who had been one of Rock’s protégés, remembered his amazement at the bond Rock and his patients forged. ‘The way this man communicated with patients was something I’ll never forget’, he told an interviewer. Rock made the women who participated in his studies feel like valued contributors and not simply research subjects. Younger quoted one of them as saying, ‘Gee, I don’t see how you make me so important [. . .]. Sometimes I think it’s almost as good as being a doctor myself.’¹⁸

Women from all over the country read accounts of Rock and Menkin's research in the newspapers and popular magazines. Hundreds of them wrote to Rock directly, asking whether this new discovery could help them become pregnant. The letters began to arrive almost as soon as reports of the *Science* article appeared in local newspapers across the nation. From a small mining town in Pennsylvania, in August 1944, 23-year-old Mrs C. told Rock about the removal of her fallopian tubes 'do [sic] to adhesions' and her distress over the prospect of never becoming a mother. 'After reading on your work I thought perhaps you would help me', she wrote, closing with the affecting phrase 'I remain waiting'. Rock replied promptly. Although he was careful to tell Mrs C. that IVF research was in its early stages and was not yet of 'any clinical value', he did not completely discourage her. 'Fortunately, you are young yet so don't give up hope.'¹⁹ In the initial flush of the successful fertilizations, Rock hoped that clinical application of IVF would be within reach in perhaps a decade or so.

It didn't take too long, however, for his responses to become more tempered. When a few months later Mrs M. wrote about her two ectopic pregnancies that required the removal of both of her fallopian tubes, he told her: 'Fertilization outside the human body, I am sorry to say, has not arrived at any stage in which it can offer any clinical help yet. That it will have sometime, is my ardent hope, in the interests of people just like you, but there is still a tremendous amount of work to be done'.²⁰ As he began to consider the multiple scientific and technical obstacles that remained to be overcome in order to produce an IVF pregnancy, he found the prospects sobering. After all, Gregory Pincus did not have to worry about the health or life of the rabbit into whom he implanted another rabbit's fertilized egg. Nor did he concern himself about the condition of her potential offspring, although the 'normal, healthy bunnies' she produced were surely gratifying.²¹ But if IVF were to be used in humans, the health of both mother and baby would have to be of primary importance.

Rock's answers to the many women who wrote to him over the next five or six years reflected both his hopes for IVF's clinical development and his acknowledgment of the problems that remained unresolved. To Mrs W., who lived in Florida, he wrote, 'Don't get discouraged if you are a "very young woman". Science moves on and the time may easily come, and perhaps sooner than you expect, when something can be done for you'.²² To another woman in her early 20s, he wrote in 1948: 'At age twenty-four, there is no need to accept absolute defeat [...] but at the same time, you want to be very practical'. While IVF might become a reality during her reproductive lifetime, 'there is not sufficient certainty'. He could make no promises and urged her to consider adoption.²³

As the years wore on, Rock continued to attempt, without much success, to dampen down the media's exaggerated predictions. To a writer for *Look Magazine* he explained in 1950, 'We don't know the requirements made by the fertilized egg of its environment, and there are a great many more things we do not know'. Pressed, however, he conceded that 'theoretically, at least - there

are no insoluble problems'. Emboldened by that last sentence, the author – the same writer who had produced the article on Gregory Pincus's 'fatherless rabbits' – proceeded to detail how IVF might allow for 'an egg taken from a woman's ovary [...] [to] be fertilized and incubated outside the body, then implanted in the same woman's womb'. And for those women without a uterus, 'motherhood would still be possible with egg-transfer breeding'. After all, women sell their milk, why not their uteruses? 'Tomorrow, they may offer their bodies as incubators for the babies of women who are denied motherhood.'²⁴

This article brought Rock a new round of letters from women hoping that IVF could help them, which only made Rock more exasperated by these misleading articles that were giving rise to false hopes. Knowing by now how difficult the path to clinical IVF was likely to be, he tried even harder to explain to the women who wrote to him that IVF was unlikely to be available soon enough to help them. 'I regret very much', he wrote to Mrs E.M., 'that work with human eggs has not progressed anywhere near the stage to which [...] it would be of any help to you. It is not too difficult to fertilize the eggs, but [...] to keep them in normal condition until the womb is ready to take them is a major problem on which we must work long and hard.'²⁵ To another enquiring woman, he explained in 1951 'that the matter about which you write is still in the very theoretical stage and has nowhere near approached practicality, nor will it within, I believe, many years'.²⁶

By this time he was no longer actively involved in IVF research. It had become obvious to him that it would likely take decades rather than years before this technique could be used to achieve a pregnancy. Rock, fundamentally a clinician whose main goal was to help his patients, soon turned his attention to what he considered more immediately promising surgical therapies for damaged fallopian tubes as well as to hormonal therapies for ovulatory disorders (in an interesting twist of fate, the latter led to his collaboration with Pincus on the oral contraceptive). In spite of the fact that he abandoned IVF for what he considered sensible reasons, questions later arose about whether he had been pressured to do so, either by Harvard or the Catholic Church. Nearly three decades later, Menkin told journalist Loretta McLaughlin that Rock, a prominent Catholic, had certainly been pressured by the Church and perhaps, more subtly, by Harvard Medical School. She believed it was such pressure that caused him to give up the pursuit of IVF.²⁷ However, the record shows that Rock told others that he had discussed the IVF research with a Catholic theologian before he began and had no qualms about proceeding, and his surviving papers give no indication that he felt constrained either by the Church or by Harvard. It is possible that Menkin's own later recollections had been coloured by the more adverse climate of opinion about IVF in the 1970s.

Menkin herself, however, during the time she spent away from the Free Hospital in the late 1940s, did face difficulties in continuing IVF research. When she and her husband moved to North Carolina soon after the first IVF

reports were published, she hoped to continue this work at Duke. However, she found little support there. One doctor was actually hostile, referring to IVF as ‘rape *in vitro*’.²⁸ Later, when she and her family moved to Philadelphia, she tried again; there, she faced not hostility but indifference. Moreover, Menkin, who had come back to work for Rock in the 1950s and 1960s when he was helping to develop and then rally support for the oral contraceptive, was there to see Rock roundly criticized by some in the Catholic hierarchy for his work on the Pill. She would not have forgotten that controversy and she may have conflated the two in her mind.

After Rock stopped conducting research on IVF, media interest seems to have waned. Landrum Shettles, then a little-known doctor in New York, published several accounts of fertilization in medical journals during the 1950s. His work, however, received little public attention.²⁹ There was a brief media flurry in 1961 when Italian researcher Daniele Petrucci announced that he had succeeded in culturing an embryo for 29 days. Although he defended his work as ethical when criticism from the Vatican greeted the announcement, he may indeed have been silenced by it.³⁰

‘THE END OF THE BEGINNING’: IVF BECOMES A REALITY

The situation changed dramatically in 1969 when, it could be argued, the modern era of reproductive medicine began. In February, Cambridge embryologist Robert Edwards (1925–2013) and his gynaecologist collaborator Patrick Steptoe (1913–88) reported having successfully fertilized human eggs *in vitro*.³¹ For the first time, human sperm was shown in the process of penetrating the egg during IVF. This was different from what Rock and Menkin had done. Working with an earlier technology, the US researchers had produced eggs that had divided – at the time considered evidence of fertilization. Edwards argued, however, that demonstrating egg division was not enough; the only way to prove that fertilization was occurring, he believed, was to show the sperm in the *process* of penetrating the egg. Although Edwards and Steptoe failed to persuade everyone, their methodical research and careful documentation had begun to have an impact. So did their continued progress. In 1970, Edwards and Steptoe grew fertilized eggs to 8 and 16 cells, and in 1971 grew them to the blastocyst stage, an important milestone. A blastocyst – five-day to six-day-old embryo – is not simply an ‘older’ embryo but a more complex one, with one group of cells that will eventually form the foetus and another group that will cause the embryo to implant. However, until a documented IVF birth occurred, some researchers argued, no one could be absolutely certain that a researcher had succeeded, no matter how impressive the evidence. Among these scientists, scepticism remained the order of the day.³²

Others were willing to believe that they had succeeded, and among them almost as many were distressed as pleased. Edwards may not have believed that Rock and Menkin had achieved fertilization, but he would have been thrilled if his own work had been met with the near-universal acclaim that had greeted

theirs. It was not. What Edwards and Steptoe got instead was *Brave New World* revisited. After their first paper appeared, *Life Magazine's* science editor, Albert Rosenfeld, wrote that these 'startling advances in the science of reproductive biology' were about to 'bring about a sweeping transformation in the style of man's life on earth'. Dismayed, he warned that the family as we know it could easily disappear, a sentiment echoed by the magazine's readers. An accompanying poll showed strong disapproval of any reproductive technology that could upset traditional ideas of family life. 'We should not mess around with the laws of nature', said one man in a fairly typical response.³³

Times had indeed changed. John Rock himself was subjected, a quarter of a century after his own IVF experiments, to a much more sinister interpretation of his and Menkin's research. In 1970, readers of the Sunday magazine of the *Boston Herald Traveler* learned that 'if someone had peeked into the Harvard laboratory of Dr. John Rock a few years ago, he would have seen him staring intently at a [...] human embryo, growing in an artificial womb [...]. The embryo died at the end of a week, but the important point is that what Dr. Rock almost achieved – the creation of life outside the human womb – no longer seems impossible of achievement. Indeed, it may be alarmingly close'. The account was nonsense, but other popular magazines sounded similar warnings against the new reproductive technology. When the *Saturday Review* tackled the subject in 1972, for example, the photo illustrating the article featured an anxious-looking baby suspended in a glass beaker.³⁴

During the 1970s, women anguished over their inability to have a baby were likely to be reminded that pregnancy was unattractive or the world was overpopulated anyway. They and their husbands had the same parental longings as the generation who came of age in the 1940s and 1950s, but the context of their experience differed significantly. Men and women trying to have a family had become casualties of a battle over the meaning of family life that raged in the USA during this decade. The cultural universe was changing as the Cold War consensus that applauded nearly every scientific development dissolved. Researchers no longer enjoyed immunity from challenges to the moral and ethical validity of their work.

On the left, opposition to nuclear weapons, disgust with industrial pollutants, and mistrust of the scientific and medical professions sometimes led to fully fledged anti-technological sentiments. On the right, there was a fear of technological interference into what moral conservatives considered the moment when life began. Infertile couples saw themselves as all but invisible in the public discourse. One woman's doctor suggested with a laugh that she would be better off childless. Another woman recalled that in the early 1970s 'there was no support for couples' struggling with infertility. The media paid more attention to the relatively small National Association of Non-Parents (NON) – which at its height never had more than 2,000 members – than it did to the millions – more than 10% of married women – who reported difficulties in conceiving.³⁵

If IVF had appeared to offer a technological miracle in the 1940s, by the early 1970s it was looking more and more like an ethically questionable

endeavour. And it was about to become a political minefield. In 1973, in *Roe v. Wade*, the US Supreme Court declared that a constitutionally protected right of privacy allowed women, in consultation with their physicians, to decide whether – up to the point of foetal viability – to continue a pregnancy.³⁶ Abortion opponents were outraged and began a campaign that has only grown in force and virulence over the past 40 years. After the Supreme Court ruling, several states imposed bans on foetal and embryo research. Soon thereafter, in 1975, the Department of Health, Education, and Welfare (HEW) suspended any federal funding of human IVF research until it could convene a National Ethics Advisory Board.³⁷

Although the conflict over abortion held centre stage, the struggle over abortion rights was just one manifestation of a set of larger conflicts. Who controls a woman's body? What is a family? Is there a morally correct way to achieve pregnancy? Some began to fear that the new technologies being promoted as aids to the infertile might lead to attacks on the traditional family itself. Indeed this conflict has not receded. And because abortion opponents believe that life begins when sperm meets egg, it has become impossible for any national consensus to develop around acceptable limits regarding the use of reproductive technology.

Conservative opinion was coalescing around the idea that IVF, like abortion, showed a lack of respect for human life and represented an alarming decline in moral values. Leon Kass (b. 1939), a physician prominent in the newly emerging field of bioethics, contended that IVF brought human beings one step closer to destroying the biological nature of the family unit.³⁸ Once perfected, he argued, IVF and related technologies would not be limited to assisting infertile married couples to bear their own biological children. Egg and embryo donation as well as the use of 'gestational mothers', he claimed, would soon follow. As a result, any form of assisted reproductive technology, in his view, was detrimental to 'the virtues of family, lineage, and heterosexuality'.

The American Medical Association, which had called for a moratorium on research into human IVF as early as 1972, gave Kass a forum for his views. Specialists who made up the American Fertility Society (now the ASRM), not surprisingly, took the opposite position. In the larger society, among those who would consider themselves liberals, progressives, or radicals, the divide between supporters and opponents of IVF was much more complicated. The radical feminist Shulamith Firestone (1945–2012) argued that in the context of 'a new value system, based on the elimination of male supremacy and the family', new reproductive technologies could liberate women.³⁹ But other feminists, particularly women's health activists, mistrusted the motives of the medical profession. Who, they wondered, would really benefit from these new technologies? Although Americans across the political spectrum had become more critical of science and technology, the most aggressive challenges came from the left. As the sociologist Paul Starr has argued, the 1970s witnessed a new 'health rights movement' that 'challenged the distribution of power and expertise' between doctor and patient. The feminist attempt to 'demedicalize'

childbirth exemplified the pervasive distrust of the methods as well as the motives of the medical specialists who treated women.⁴⁰

As questions arose over the desirability of pursuing controversial areas of reproductive technology such as IVF, infertile couples were caught in the crossfire, assailed by changes in social attitudes and by disagreements within the medical profession itself. When Steptoe and Edwards succeeded in bringing an IVF conception to a successful conclusion with the birth of Louise Brown in 1978, these conflicts were no longer theoretical.⁴¹ The birth of Louise Brown that July also brought attention to Vanderbilt University researcher Pierre Soupart and his gynaecologist collaborator James Daniell. Soupart was a biochemist who had followed Steptoe and Edwards in achieving the earliest stages of human IVF in 1972. He and Daniell, hoping to become the first Americans to achieve a live birth following IVF, applied to the National Institutes of Health (NIH) for a grant to lay the groundwork for such an effort.⁴²

The women who applied to their programme, much like those who had written to John Rock some three decades earlier, were unconcerned with larger ethical controversies. They just wanted to become pregnant. Thirty-one year-old Dianne Grills, for example, had suffered an ectopic pregnancy which required the removal of one tube. The other was blocked, and attempts to reopen it had failed. As she and her husband told *People Magazine*, '[n]ow our only alternative is laboratory fertilization', which seemed no more foreign to them 'than walking around with a stainless steel hip joint or a Dacron heart valve'. Another of Daniell's patients was Mary Patton, an African American medical technician married to a Nashville police sergeant. A ruptured ovarian cyst had caused her tubal adhesions, and reparative surgery was unsuccessful. Sergeant Patton said that his wife would 'see other people having their babies, and it'd make her cry, it hurt her so'.⁴³ As for Mrs Patton, she opposed abortion, she said, but 'I don't believe an egg is a human being [...]. If I get pregnant I'll have a baby to worry about, and that's more important'.⁴⁴ These patients echoed the women who wrote to John Rock requesting IVF during the late 1940s and early 1950s, and they prefigured couples who, in the late twentieth century, sought donor eggs and embryos or gestational surrogates. People who pursued parenthood through assisted reproduction did not overly concern themselves with larger issues. They just wanted to have a baby.

The hopeful couples who volunteered to be part of Soupart's and Daniell's research, however, never had the chance to 'have a baby to worry about'. The two men had assumed that the HEW Ethics Advisory Board, newly created in January of that year, would clear the way for their project's funding. Indeed, after considerable deliberation, the Board declared itself ready to provide directives governing research on early human embryos. However, the Secretary of HEW then quashed the report by simply refusing to act on the Board's recommendations. When in 1980 the Board's charter expired, the funding ban remained. A new National Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research succeeded the Ethics Board and simply refused to take up the issue of IVF or embryo research.

Soupart, who died prematurely in 1981, became known as ‘the scientist who died waiting for a federal research grant that was approved but never funded’.⁴⁵

IVF COMES TO THE USA

In spite of the Federal Government, IVF did come to America when the distinguished reproductive endocrinologist Georgeanna Jones and her husband Howard, a prominent gynaecological surgeon, decided to ignore the federal funding moratorium. Facing mandatory retirement from the Johns Hopkins Medical School in Baltimore, Maryland, the couple accepted positions at the Eastern Virginia Medical School, a small but ambitious institution in Norfolk, Virginia. They had been promised that if they accepted positions there, they could focus on any area of research they chose. Arriving just on the heels of the announcement of Louise Brown’s birth, and having assisted Robert Edwards at an earlier stage of his career, they decided to concentrate on IVF. In 1980, over the objections of anti-abortion activists and others but with the support of their own institution, they opened an IVF clinic.

Among those who disapproved of the clinic was *Washington Post* columnist Richard Cohen, who asked: ‘Why, in a world full of unwanted babies’ would we want to make ‘new ones in a laboratory’? Another *Post* columnist, Ellen Goodman, a reliably progressive voice on many issues, confessed to ‘qualms’ as well. While she was not in favour of an outright ban, she did urge oversight and regulation. As a society, she said, we can ‘no longer accept every breakthrough and every advance as an unqualified good’. As abortion foes mourned in advance the embryos that would be lost during the transfer process, Cohen, who noted that his child had been born the ‘natural’ way, wondered why the infertile could not just adopt, and Goodman worried about where the new technology was leading. The *Washington Post* editorial board agreed with her. The real ‘problem with the clinic’, it argued, was ‘the road down which this procedure and the knowledge associated with it are taking society’.⁴⁶ IVF represented a new – and possibly dangerous – technological intervention into pregnancy and childbirth.

However, the Joneses dismissed such objections and, with a \$5,000 contribution from a former patient, began enrolling patients in March 1980. They donated their own time for the first year, but couples paid for other services, which could cost them as much as \$4,000 (which would be more than \$12,000 today). The first year produced no pregnancies, but the second did. Three days after Christmas, in 1981, Elizabeth Jordan Carr, the daughter of a teacher and engineer, became the first US IVF baby.⁴⁷

Georgeanna and Howard Jones were now, as one headline declared, at the ‘Forefront of [the] Test-Tube Baby Boom’. There was a genuine demand for IVF, the considerable opposition notwithstanding. For infertile women in the USA who suffered from diseased or blocked fallopian tubes, it offered their best – if still slim – hope of bearing children. Once the Joneses defied the moratorium, several leading medical schools, including the University of California,

two medical schools of the University of Texas, Yale, Vanderbilt (too late for Soupart, unfortunately), and the University of Pennsylvania followed their example and opened IVF centres. They also replicated the financial model of the Jones clinic, where the patients funded the advance of the new reproductive technologies. The Federal Government continued to keep its distance; a government embryologist was forbidden to speak at an IVF conference in 1982 on his own time for fear that his presentation might violate the federal funding ban. However, these medical schools and many others soon to be added, as well as increasing numbers for hospital and private IVF practices, forged ahead anyway. Over the next decade, health plans in a number of states began to extend insurance coverage for IVF treatment.⁴⁸

Without ever confronting as a society those ‘down the road’ implications about which Ellen Goodman and others wrote, by the mid-1980s IVF had become an increasingly available, if still controversial, infertility treatment.⁴⁹ There were thousands of women like Mary Patton, who, no matter what their abstract feelings about abortion or even the technology itself, wanted to ‘have a baby to worry about’. Like the scores of women who had written to John Rock more than three decades earlier, they were willing to become experimental subjects in order to bear a child.

Over the next three and more decades, the funding moratorium, the Ethics Advisory Board, and the multiple boards and commissions that followed would all fall short as regulatory tools. The Federal Government had attempted to use its funding power to halt research on the new reproductive technologies until some consensus could be developed, and it failed. Reproductive technologies have multiplied. Conventional IVF, performed for a heterosexual married couple using their own sperm and eggs, once enormously controversial, barely raises an eyebrow today. Donor eggs and gestational surrogacy are expensive but widely available. For-profit egg freezing services are proliferating. Pre-implantation genetic diagnosis, which began as a way for potential parents to choose – for medical reasons – which embryos to implant, is now also employed for elective sex selection. And a global marketplace for eggs, sperm, and uteruses has sprung up and continues to expand, with Americans and others contracting with lower-cost clinics in various countries for a variety of reproductive ‘products’ and services, including gestational surrogacy.⁵⁰

Consensus, however, still eludes Americans. Some in the self-styled ‘pro-life’ community have made an uneasy peace with conventional IVF, even though those who believe that life begins at the ‘moment’ – whenever that is – that a sperm fertilizes the egg must also accept that at least some embryos will be destroyed unless all of them are implanted. Freezing them postpones, but does not solve, their problem. One agency, Nightlight Christian Adoptions, has attempted to reconcile IVF with anti-abortion beliefs by offering an embryo ‘adoption’ programme, which it calls ‘Snowflake’. Embryo donation has been one possible solution to the problem of what to do about frozen embryos left over when a couple has been successful in creating a family through IVF and has had their desired number of children. Through their doctor or fertility

centre, they might offer their 'surplus' embryos to another couple whose attempts have not been successful. Rebranding the practice from 'donation' to 'adoption', Nightlight makes it possible for couples opposed to the destruction of their surplus embryos to have them 'adopted' by like-minded fellow Christians.⁵¹

CONCLUSION

In the mid-1940s, when the public first became aware of IVF as a possible treatment for infertility, the pronatalist consensus, bolstered by an almost unquestioning faith in the power of science to improve the life of society and of medicine to enrich the lives of individuals, led most observers to hail the potential of this new technology to help couples create their desired families. No one worried about cost or access – certainly not Rock, whose practice included women ranging from the poor and near poor to the very well-to-do, including Boston society matrons and film celebrities. He simply assumed that if IVF came to pass, women without means would receive it for free or at a very low cost, and that women with money would pay for it.

However, with the coming of age of the baby boomers in the late 1960s and early 1970s, this postwar consensus – never that stable to begin with – fractured. Conservative ethicists linked IVF to abortion, contraception, and sexual experimentation. When Leon Kass argued in the early 1970s that IVF was detrimental to 'the virtues of family, lineage, and heterosexuality', he was actually referring to an entire constellation of changes in reproductive behaviour and attitudes. The idea of IVF had become far more controversial, and vocal critics appeared from the left and right. During this period, a great divide opened between those who argue that reproductive technology is merely an unconventional way to create a conventional family (and the definition of a 'conventional' family has also changed dramatically) and others who believe that assisted reproduction raises profound ethical and social issues.

Since that time, Americans have been unable to reach an agreement on a whole range of issues surrounding assisted reproduction. If, on the right, objection to such technologies was associated with behaviours that suggest a lack of respect for what they consider 'life', from the left came criticism about the fact that the USA, by default, has agreed to let the market determine access to such technologies and thereby enshrine longstanding racial, ethnic, and socioeconomic disparities. Questions are also raised from multiple points on the political spectrum about the exploitation of egg donors and surrogates.⁵² Should there be limits to the ways in which couples and individuals can pursue assisted reproduction to make their idea of family a reality? Ought decisions about whether and how to reproduce be made by individuals or governed by law or social norms? And if we leave the choice up to individuals

or couples, can we do so without exploiting some groups and excluding others?

These questions do not have definitive answers. The characteristics of families have changed since the 1970s, but the idea of family is as salient as ever. By early 2015, 37 states, containing more than 70% of the population, had issued marriage licences to same-sex couples in a country where disapproval reigned just a decade before. Just a few months later, in June 2015, the United States Supreme Court ruled that the Constitution guarantees the right of marriage to same-sex couples. There is a corollary to this: for many couples, marriage involves children. Today, stepfamilies, families with two fathers and six children or two mothers and three children, single mothers or fathers, and unmarried as well as married heterosexual couples all make up the US family. And we have to remember that most people still want to be parents. Some 80% of US women have children. And among same-sex couples, married or not, before the Supreme Court ruling at least 100,000 were already raising children, a number that will surely grow.⁵³ Many who do not have children want them. We still don't know whether Howard Jones was correct or not when he argued that what people want are genetically related children, and that they would be willing to go to unprecedented lengths to have them. But given the history of American responses to both the idea and reality of assisted reproduction, it is more than possible that the past *is* truly prologue. I would not count Jones's prediction out yet.

NOTES

1. Walter E. Duka, M.S. and Alan H. DeCherney, M.D., *From the Beginning: A History of the American Fertility Society, 1944–1994* (Birmingham, AL, 1994).
2. American Society for Reproductive Medicine, 'ASRM Honors Dr. Jones Upon His Centennial Birthday' (25 December 2010): <http://www.asrm.org/Jones/>. Accessed 6 December 2016.
3. Howard W. Jones, Jr., *Personhood Revisited: Reproductive Technology, Bioethics, Religion and the Law* (Minneapolis, MN, 2013), p. 145; Ethics Committee of the ASRM, 'Human Somatic Cell Nuclear Transfer and Cloning', *Fertility and Sterility*, 98:4 (October 2012), pp. 804, 806; M. D. R. Evans and Jonathan Kelley, 'US Attitudes Toward Human Embryonic Stem Cell Research', *Nature Biotechnology*, 29:6 (June 2011).
4. It may go back further. See Bridget E. Gurtler, 'Synthetic Conception: Artificial Insemination and the Transformation of Reproduction and Family in Nineteenth and Twentieth Century America'. Unpublished PhD thesis, Rutgers University, 2013. Although Artificial Insemination is not 'assisted reproduction' in the technical definition of the term, which refers only to reproduction that begins with the fertilization of an egg outside a woman's body, it was considered quite controversial.
5. The Free Hospital was founded in the late nineteenth century as a charitable institution that specialized in the diseases of women.

6. James M. Snodgrass, John Rock, and Miriam Menkin, 'The Validity of "Ovulation Potentials"', *American Journal of Physiology*, 140:3 (December 1943). The companion study of early human embryos is discussed in Margaret Marsh and Wanda Ronner, *The Fertility Doctor: John Rock and the Reproductive Revolution* (Baltimore, MD, 2008), pp. 92–3; 'Conception in a Watch Glass', *New England Journal of Medicine*, 217 (21 October 1937), p. 678; Miriam Menkin, 'Notes for Lecture, American Association of Anatomists' (1948) Typescript, p. 3. Series VII, Miriam Menkin Personal Records, Box 22, Folder 62, John Rock Papers, Countway Library of Medicine, Harvard University (JR-CLM).
7. Aldous Huxley, *Brave New World* (New York, 2006) [1932].
8. J.D. Ratcliff, 'No Father to Guide Them', *Collier's*, 20 March 1937, pp. 19, 73. This article does not draw a clear distinction between Pincus's IVF experiments, which were controversial enough, and his work on parthenogenesis. See Marsh and Ronner, *The Fertility Doctor*, pp. 141–2.
9. Miriam Menkin, 'Untitled Talk on *In Vitro* Fertilization at Cold Spring Harbor', on either 18 or 28 July (the first number is illegible), 1949, JR-CLM; George V. Smith, 'The Life of a Physician', unpublished memoir, typescript, 1982, p. 84, JR-CLM; Miriam Menkin, 'Figures on Number of Patients Studied' (ova research 1 July 1938 – 30 June 1944), JR-CLM. Ultimately, just 47 of the women produced the 138 eggs that were considered suitable for the insemination attempts.
10. Clinic patients either received free care or were billed on a sliding scale depending on their family income. About 10% of the participants were private patients.
11. Joan Younger, 'Life Begins in a Test Tube', *Collier's*, 10 April 1945, p. 27.
12. Miriam Menkin, 'Cold Spring Harbor', pp. 5–14; John Rock and Miriam Menkin, '*In Vitro* Fertilization and Cleavage of Human Ovarian Eggs', *Science*, 100:2588, 4 August 1944, pp. 105–7; Marsh and Ronner, *The Fertility Doctor*, p. 114.
13. Margaret Marsh and Wanda Ronner, *The Empty Cradle: Infertility in America from Colonial Times to the Present* (Baltimore, MD, 1996), pp. 145, 160.
14. 'Test Tube Babies', *New York Times*, 6 August 1944; Howard W. Blakeslee, 'Ova of Humans Fertilized in Test Tube for First Time', *Washington Post*, 5 August 1944; *Time*, 14 August 1944, p. 75.
15. Robert S. Bird, 'A Human Ovum is Fertilized in Test Tube for the First Time', Clipping in JR-CLM, most likely from the *New York Herald Tribune*, 5 August 1944.
16. Younger, 'Life Begins in a Test Tube', p. 49.
17. Marsh and Ronner, *The Empty Cradle*, pp. 171–186; Younger, 'Test Tube', p. 27.
18. Marsh and Ronner, *The Fertility Doctor*, pp. 95–7, 99–103, 108; Luigi Mastroianni, Interview with Wanda Ronner, July 5, 2007; Younger, 'Test Tube', p. 27.
19. Letter from Mrs C to John Rock, 17 August 1944; Rock's reply, 31 August 1944, JR-CLM.
20. Letter from Mrs M to Miriam Menkin, 9 October 1944; Rock's response, 16 October 1944, JR-CLM.
21. *Time*, 14 August 1944, p. 75.

22. John Rock to Mrs W, 29 November 1945, JR-CLM.
23. John Rock to Mrs P, 30 July 1948, JR-CLM.
24. J.D. Ratcliff, 'Babies by Proxy', *Look Magazine*, 31 January 1950, p. 44.
25. John Rock to Mrs E. M., 5 February 1950, JR-CLM.
26. John Rock to Mrs B. L., 22 June 1951, JR-CLM.
27. Loretta McLaughlin, *John Rock, the Pill, and the Church: The Biography of a Revolution* (Boston, MA, 1982), p. 87.
28. Miriam Menkin, 'Cold Spring Harbor Talk', typescript dated 26 July 1949, JR-CLM.
29. Letter from Miriam Menkin to Dr Delpla (no first name listed), 3 November 1961, JR-CLM.
30. Marsh and Ronner, *The Empty Cradle*, p. 230; Daniele Petrucci Interview, CBC Television News, 9 February 1961: <http://www.cbc.ca/archives/categories/health/reproductive-issues/fighting-infertility/test-tube-baby-experiments.html>. Accessed 6 December 2016. In 1964 there were reports that Petrucci claimed to have overseen 28 IVF births. See *Ottawa Citizen*, 24 September 1964, for one such report.
31. R. G. Edwards, B. D. Bavister, and P. C. Steptoe, 'Early Stages of Fertilization in vitro of Human Oocytes Matured In Vitro', *Nature*, 221, 15 February 1969. See 'In Vitro Fertilization of Human Ova and Blastocyst Transfer: An Invitational Symposium', *Journal of Reproductive Medicine*, 11:5 (November 1973), especially pp. 201–2.
32. R. G. Edwards, P. C. Steptoe, and J. M. Purdy, 'Fertilization and Cleavage in vitro of Preovulator Human Oocytes', *Nature*, 227, 26 September 1970; P. C. Steptoe, R. G. Edwards, and J. M. Purdy, 'Human Blastocysts Grown in Culture', *Nature*, 229, 8 January 1971, pp. 132–3; *Times*, 19 February 1969, p. 9, Letters to the editor; also letter from Lord Rothschild, *Nature*, 221, 8 March 1969, p. 981. M.C. Chang was also sceptical. See 'First Test Tube Fertilization?', *Medical World News*, 7 March 1969, p. 17; Judy Ramsey, 'Controversial Test Tube Conceptions', *Medical World News*, 4 April 1969, pp. 27–8.
33. With apologies to Huxley's later book of that title. Albert Rosenfeld, 'Science, Sex, and Tomorrow's Morality', *Life*, 66:23, 13 June 1969, pp. 39, 50.
34. Nicholas Panagakos, 'Life in a Test Tube: Nearer than you Think', *Boston Herald Traveler*, 11 October 1970, p. 8; 'Invit: The View from the Glass Oviduct', *Saturday Review*, 65, 9 September 1972, p. 68; David M. Rorvik, 'The Test-Tube Baby is Coming', *Look*, 35 (18 May 1971), pp. 83–8; David R. Zimmerman, 'Test-Tube Babies: How Soon?', *Ladies Home Journal*, 87 (September 1970), p. 32.
35. Marsh and Ronner, *Empty Cradle*, pp. 210–12, 214–15, 245.
36. Leslie Reagan, *When Abortion was a Crime: Women, Medicine, and Law in the United States, 1867–1973* (Berkeley and Los Angeles, CA, 1997).
37. Clifford Grobstein, *From Chance to Purpose: An Appraisal of External Human Fertilization* (Reading, MA, 1981), p. 114. Over the past several decades, ethics boards have come and gone, but the funding ban remains in place.
38. Leon Kass, 'Babies by Means of In Vitro Fertilization: Unethical Experiments on the Unborn?', *New England Journal of Medicine*, 285:21, 18 November 1971; Department of Health, Education and Welfare, Ethics Advisory Board, *Report*

- and Conclusions: HEW Support of Research Involving Human In Vitro Fertilization and Embryo Transfer* (4 May 1979). Reprinted in Grobstein, *From Chance to Purpose*, p. 182.
39. Georgeanna Seegar Jones, 'Women: The Impact of Advances in Fertility Control on Their Future – A Presidential Address', *Fertility and Sterility*, 22:6 (June 1971), especially pp. 347, 349; 'Symposium', pp. 192–4; Firestone, *Dialectic of Sex*, p. 197.
 40. Paul Starr, *The Social Transformation of American Medicine* (New York, 1983), pp. 391–2.
 41. Robert Edwards and Patrick Steptoe, *A Matter of Life: The Story of a Medical Breakthrough* (New York, 1980).
 42. Linda Witt, 'Two Nashville Doctors May Help An American Mother Have Her Own Test-Tube Baby', *People Magazine*, 14 August 1978; 'Pierre Soupart, Pioneer in Laboratory Fertilization', *New York Times*, 12 June 1981; Marie-Claire Orgebin-Crist, 'Pierre Soupart, 1923–1981', *Journal of Andrology*, 3:6 (November-December 1982), p. 354.
 43. Witt, 'Two Nashville Doctors'.
 44. 'A Young Couple Await their Test-Tube Baby', *Ebony*, 34:1 (November 1978).
 45. Grobstein, *Chance to Purpose*; Stephen S. Hall, *Merchants of Immortality* (New York, 2003), p. 99.
 46. 'Hearings Asked on Va. Clinic for Test-Tube Babies', *Washington Post*, 15 January 1980, p. B2; also 2 February 1980, p. A3, and 17 May 1980, p. A2; Richard Cohen, 'Test-Tube Babies: Why Add to a Surplus?', *Washington Post*, 3 February 1980, p. B1; Ellen Goodman, 'The Baby Louise Clinic', *Washington Post*, 15 January 1980, p. A15; editorial, *Washington Post*, 19 January 1980, p. A14.
 47. 'Nation's First 'Test-Tube' Baby Due within Days', *Washington Post*, 25 December 1981, pp. A6-A7; *New York Times*, 29 December 1981, pp. 1, C1.
 48. Marsh and Ronner, *Empty Cradle*, p. 238.
 49. 'Government Urged to Actively Support Test Tube Baby Research', *Washington Post*, 4 January 1982, p. A3; 'U.S. Scientist Barred from Speaking at Workshop', *Washington Post*, 14 September 1982, p. C3; 'Norfolk Team in Forefront of Test-Tube Baby Boom', *Washington Post*, 13 September 1982, p. A2.
 50. Debora L. Spar, *The Baby Business: How Money, Science, and Politics Drive the Commerce of Conception* (Boston, MA, 2006).
 51. Nightlight, 'Snowflakes Embryo Adoption and Donation': <http://www.nightlight.org/snowflakes-embryo-donation-adoption/>. Accessed 6 December 2016.
 52. Francine Coeytaux, Marcy Darnovsky, Susan Berke Fogel, 'Assisted Reproduction and Choice in the Biotech Age: Recommendations For a Way Forward', *Contraception Journal* (January 2011). Judith Daar, 'Federalizing Embryo Transfers: Taming the Wild West of Reproductive Medicine?', *Columbia Journal of Gender and Law*, 23:2 (2012), argues that there is sufficient professional regulation and state tort law. However, national regulation is virtually non-existent.
 53. Freedom to Marry, 'Winning in the States': <http://www.freedomtomarry.org/states/>. Accessed 6 December 2016. Adam Liptak, 'Supreme Court Ruling Makes Same-Sex Marriage a Right Nationwide', *New York Times*, 26 June 2015. Natalie Angier, 'The Baby Boom for Gay Parents', *New York Times*, 26 November 2013, p. D4.

RESEARCH RESOURCES

*Primary Sources**Archival Sources*

- Countway Library of the History of Medicine, Harvard University, Cambridge, Massachusetts
 Papers of John Rock
 Johns Hopkins University, Baltimore, Maryland
 Papers of Howard W. and Georgeanna Seegar Jones

Published Primary Sources

- Fertility and Sterility* (the official journal of the American Society for Reproductive Medicine)
Colliers Magazine
Look Magazine
Nature
The New York Times
Newsweek Magazine
The Washington Post

Secondary Sources

- Rene Almeling, *Sex Cells: The Medical Market for Eggs and Sperm* (Berkeley and Los Angeles, CA: University of California Press, 2011).
- Lori Andrews, *Between Strangers: Surrogate Mothers, Expectant Fathers, and Brave New Babies* (New York: Harper and Row, 1989).
- Andrea L. Bonnicksen, *In Vitro Fertilization: Building Policy from Laboratories to Legislatures* (New York: Columbia University Press, 1989).
- Adele Clarke, *Disciplining Reproduction: Modernity, American Life Science, and the Problems of Sex* (Berkeley and Los Angeles, CA: University of California Press, 1998).
- Adele E. Clarke, Laura Mamo, Jennifer Ruth Fosket, Jennifer R. Fishman and Janet K. Shim (eds), *Biomedicalization: Technoscience, Health, and Illness in the United States* (Raleigh, NC: Duke University Press, 2010).
- Susan L. Crockin and Howard W. Jones, Jr, *Legal Conceptions: The Evolving Law and Policy of Assisted Reproductive Technologies* (Baltimore, MD: Johns Hopkins University Press, 2010).
- Cynthia R. Daniels, *Exposing Men: The Science and Politics of Male Reproduction* (New York: Oxford University Press, 2006).
- Walter E. Duka, M.S. and Alan H. DeCherney, M.D., *From the Beginning: A History of the American Fertility Society 1944–1994* (Birmingham, AL: American Fertility Society, 1994).
- Robert Edwards, *Life Before Birth: Reflections on the Embryo Debate* (New York: Basic Books, 1989).
- Robert Edwards and Patrick Steptoe, *A Matter of Life: The Story of a Medical Breakthrough* (New York: Morrow, 1980).
- Susan Faludi, *Backlash: The Undeclared War Against American Women* (New York: Crown Publishers, 1991).

- Clifford Grobstein, *From Chance to Purpose: An Appraisal of External Human Fertilization* (Reading, MA: Addison-Wesley, 1981).
- Susan Markens, *Surrogate Motherhood and the Politics of Reproduction* (Berkeley and Los Angeles, CA: University of California Press, 2007).
- Margaret Marsh and Wanda Ronner, *The Empty Cradle: Infertility in America from Colonial Times to the Present* (Baltimore, MD: Johns Hopkins University Press, 1996).
- Margaret Marsh and Wanda Ronner, *The Fertility Doctor: John Rock and the Reproductive Revolution* (Baltimore, MD: Johns Hopkins University Press, 2008).
- Elaine Tyler May, *Barren in the Promised Land: Childless Americans and the Pursuit of Happiness* (Cambridge, MA: Harvard University Press, 1997).
- Liza Mundy, *Everything Conceivable: How Assisted Reproduction is Changing our World* (New York: Anchor, 1997).
- Naomi Pfeffer, *The Stork and the Syringe: A Political History of Reproductive Medicine* (Cambridge: Polity Press, 1993).
- Leslie Reagan, *When Abortion was a Crime: Women, Medicine, and Law in the United States, 1867–1973* (Berkeley and Los Angeles, CA: University of California Press, 1997).
- Robert O. Self, *All in the Family: The Realignment of American Democracy Since the 1960s* (New York: Hill and Wang, 2012).
- Debora L. Spar, *The Baby Business: How Money, Science, and Politics Drive the Commerce of Conception* (Boston, MA: Harvard Business Review Press, 2006).
- Paul Starr, *The Social Transformation of American Medicine* (New York: Basic Books, 1983).
- Elizabeth Siegel Watkins, *On the Pill: A Social History of Oral Contraceptives, 1950–1970* (Baltimore, MD: Johns Hopkins University Press, 2001).

In Vitro Fertilization, Infertility, and the ‘Right to a Child’ in 1970s and 1980s Britain

Duncan Wilson

INTRODUCTION

This chapter examines how medical scientists invoked the rights of infertile couples in order to promote in vitro fertilization (IVF) techniques during the 1970s and 1980s. It builds on histories of infertility and reproductive medicine that investigate the ways in which doctors and scientists highlighted the plight of childless women to justify new and often controversial procedures during the twentieth century. Historians, sociologists and anthropologists have thus far focused on medical portrayals of infertile women as desperate ‘sufferers’ or ‘victims’ who were prepared to undergo any procedure that gave them a chance of becoming parents.¹ These scholars argue that this ‘monopoly of desperation’ helped successive generations of doctors and scientists to legitimate the development of tubal patency and postcoital tests, hormone treatments, artificial insemination by donor (AID), and IVF; while they also claim it perpetuated a harmful ‘caricature’ of childlessness that increased the social stigma surrounding infertility and reaffirmed traditional gender norms by implying that all women naturally aspire to motherhood.²

But this is not the whole story. John Pickstone argues that to understand the relations between medical innovations and their broader political economies, we need to appreciate how ideas about ‘needs’ as well as ‘products’, ‘problems’ as well as ‘solutions’, change over time and in line with the views of different groups that have a vested interest in their development.³ Since a variety of professional and social groups have sought to shape the development of infertility treatments according to their own ideas about gender, kinship,

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scientific progress, and morality, it should come as no surprise to find that efforts to promote different procedures at specific points in the twentieth century involved far more than an unchanging emphasis on desperate and 'barren' women.⁴

This was certainly the case with IVF. Although Robert Edwards (1925–2013) and Patrick Steptoe (1933–88) often claimed that infertile women 'desperately wanted' children, this was not the main justification for their collaborative work, which began in 1968 and came to fruition with the birth of Louise Brown, the first 'test tube baby', in 1978.⁵ In academic publications and lectures Edwards, in particular, aligned IVF with the needs of infertile patients by drawing on increasingly popular notions of human rights and stressing 'the right of couples to have their own children'.⁶ This tactic linked the promotion of IVF to several broader sociopolitical concerns, including the growing portrayal of patients as empowered consumers who were entitled to demand more of medicine. Examining these debates sheds new light on how and, crucially, why figures such as Edwards invoked the rights of specific patient groups during the late twentieth century. It shows, first, that discussions of rights in reproductive medicine did not always hinge on preventing reproduction through abortion and the Pill, as is often assumed, and were about conception as well as contraception.⁷

Secondly, these debates also show that doctors did not always invoke rights out of a general concern for patient welfare and autonomy. While former colleagues explain Edwards's emphasis on rights by claiming that he drew on the egalitarian climate in the 1960s and 1970s and 'fought the corner of the infertile', just as others stood up for previously marginalized racial, sexual, and disabled groups, this is not the sole explanation.⁸ His stance here also needs to be understood amidst a 'backlash against professional society' in which long-standing traditions of self-regulation came under fire from the 1960s onwards.⁹ Medical researchers were particularly criticized following public exposés of non-consensual experiments on vulnerable populations, both in Britain and the USA, and growing numbers of professional whistleblowers, activists, and 'bioethicists' argued that the rights of patients and research subjects could only be guaranteed by new forms of external oversight. Edwards, however, endorsed the rights of infertile patients in order to defend professional autonomy and reject calls for oversight. He argued that responsibility for applying new methods such as IVF should continue to rest with doctors and scientists, since external involvement in the development of regulatory standards would delay their clinical application and counter the rights of infertile couples.

In stressing the 'right of couples to have their own children', Edwards also refuted claims that IVF was an unnatural procedure that potentially allowed scientists or totalitarian regimes to 'mass-produce' and modify future generations.¹⁰ In a series of talks and papers, he sought to normalize IVF by portraying it as an ethically unproblematic technique that simply replicated a natural biological process, namely fertilization, and thereby helped to reproduce existing 'gender norms, family values and kinship structures'.¹¹ But in order to align

IVF with traditional norms, where having your own child was a natural outcome of marriage, Edwards and Steptoe only discussed it in relation to married heterosexual couples. As with previous innovations in reproductive medicine, such as AID and the Pill, those who did not fit this traditional pattern were deemed unsuitable for treatment.¹² This situation persisted into the 1980s, despite the emergence of 'bioethics' as a recognized term and approach in Britain, in which lawyers, philosophers, and other 'outsiders' claimed to act in the interests of patients and the public by discussing and helping to regulate issues that were previously left to doctors and scientists.¹³ Attention in government inquiries and public debates generally centred on experiments on 'spare' in vitro embryos, while issues that impacted more on childless couples, such as access to IVF treatment, remained in the hands of doctors.

Scrutinizing this history reveals how notions of 'rights' are used strategically by different groups and for different purposes. It also helps to contextualize current debates about access to infertility treatments. Some bioethicists claim today that single women and lesbian couples should be denied IVF treatment and encouraged to adopt in order to reduce the environmental impacts of the 'reproductive technology industry'.¹⁴ This argument reinforces a longstanding moral distinction between deserving 'medically infertile' patients, who are unable to have children due to a medical problem such as blocked fallopian tubes, and undeserving 'socially infertile' patients, who are unable to have children due to their sexual orientation or the lack of a partner. Understanding how this distinction has been negotiated in the past can help us to appreciate why some childless individuals or couples are seen as more deserving today, with some 'rights to have children' viewed as more legitimate than others.

ASSERTING THE 'RIGHT TO A CHILD' IN THE 1970s

Robert Edwards was born in the Yorkshire town of Batley on 27 September 1925.¹⁵ His family relocated to Manchester when Edwards was 5 and, after passing the grammar school exam, he was educated at the Manchester Central Boy's High School. Following national service in the Second World War and a brief job helping organize the new National Health Service (NHS), Edwards entered the University College of North Wales, in Bangor, in 1948 to study agricultural sciences. Deciding he was 'not at all interested in seeds of wheat, seeds of oats or seeds of barley', he switched to a zoology degree in his final year. But Edwards had 'changed direction too late' and only gained an ordinary degree without honours.¹⁶ Just as he was giving up on a scientific career, and much to his surprise, he was selected for a postgraduate diploma in animal genetics at the University of Edinburgh in 1951.

During his diploma, PhD, and postdoctoral research at Edinburgh, Edwards used laboratory mice to study the genetic basis of mammalian development. He moved to the Medical Research Council's (MRC) National Institute for Medical Research in Mill Hill, North London, in

1958 and began to study mice ova under laboratory conditions (in vitro) in order to draw links between chromosomal abnormalities and pathologies in later life. After finding that ova from mice, rats, and hamsters matured easily in vitro, Edwards began research on human ova that had been removed during biopsies at a local hospital.¹⁷ This work was halted by the Institute's director, Sir Charles Harington, but Edwards resumed it after moving to the University of Cambridge in 1963, where he found that ova from humans and other large mammals took longer to mature in vitro than those from common laboratory animals.

Edwards's focus up to this point had been the early study and detection of genetic disease, although he briefly noted that IVF might allow embryos to be transferred into the uterus of women who had 'a faulty fallopian tube' in a 1965 *Lancet* paper on the maturation of human eggs.¹⁸ Alleviating infertility did not become the primary motivation for Edwards until he began collaborating with Patrick Steptoe, who had been a consultant obstetrician at Oldham General Hospital since 1951. Steptoe pioneered the use of a laparoscope in surgery, which he claimed made it easier to observe lesions and acquire material from patients, and Edwards first contacted him in order to establish a supply of ova and spermatozoa for his work on human fertilization in vitro.¹⁹ From April 1968 onwards, Steptoe would ring Cambridge when he was due to perform a hysterectomy. If the patient consented to research, Edwards and his technician, Jean Purdy, drove up to work in a makeshift laboratory at Oldham General, where they mixed sperm and ova in vitro and waited to see if fertilization occurred.²⁰

Edwards and Steptoe claimed the initial aim of this work was to 'examine a microscopic human being – one in its earliest stages of development – and as a result gain new knowledge about the genetics of disorders'.²¹ However, they began to prioritize infertility treatment after they observed human fertilization in vitro, which first occurred in Cambridge after Edwards's PhD student, Barry Bavister, devised a culture medium that allowed spermatozoa to reach the developmental stage needed to successfully penetrate ova. At the conclusion of the brief *Nature* paper that announced this work, published in February 1969, Edwards, Bavister, and Steptoe predicted that 'fertilised human eggs could be useful in treating some forms of infertility'.²²

Human IVF had rarely been considered an infertility treatment up to this point, but this was not because it was a recent achievement. Advances in tissue culture methods had led scientists, journalists, and popular writers to argue that human embryos might be fertilized in vitro, and even fully grown in laboratories, since the early twentieth century. In a 1926 lecture to medical students, for example, the Cambridge pathologist Thomas Strangeways pointed to the cultivation of chick embryos in vitro and claimed that 'the idea of the "test-tube baby" is not inherently impossible'.²³ While Strangeways was using the phrase 'test-tube baby' in reference to a method of IVF, chapters in this volume by Hayley Andrew and Gayle Davis show that the term was also applied to children conceived through AID.²⁴ My focus in this chapter will nevertheless

be on the children whom writers predicted would be conceived and even grown in laboratories following IVF.

Yet while many people believed 'test tube babies' conceived via IVF were feasible in this period, doctors and scientists were more concerned with a differential birth rate and overpopulation among those classes they deemed 'unfit'. Test tube babies were seen as a means of increasing the birth rate among 'supreme types', although these were not necessarily infertile couples, and pronatalist concerns also linked IVF to debates about political suffrage and the changing role of women.²⁵ Whilst commentators agreed that test tube babies signified a dramatic collapse of the boundaries separating the natural from the artificial in reproduction, their political outlooks determined whether they viewed this as an exciting or frightening prospect. Writers in favour of eugenics, for instance, claimed that test tube babies might prevent the gradual decline of civilization, while advocates of political suffrage and 'sex reform' argued that they would liberate women 'from the slavery of child-rearing'. Opponents of political suffrage, by contrast, claimed that they were a dangerous prospect which would render men 'superfluous', while critics of eugenics imagined them as cornerstones of oppressive and dystopian societies.²⁶

By the time Edwards and Steptoe starting collaborating in the late 1960s, however, popular representations of IVF and test tube babies were overwhelmingly negative. Few people were prepared to advocate eugenics following Nazi efforts to 'improve the stock of humankind', which included forced sterilizations and euthanasia, and writers such as the philosopher Bertrand Russell (1872–1970) claimed the existence of nuclear weapons meant that science now threatened human existence.²⁷ A less deferential attitude among broadcasters and journalists contributed to a 'backlash against professional society' in which scientists and doctors were 'no longer seen as the god-like functionaries, beyond questioning much less criticism, they once had been'.²⁸ Public horror at the neonatal disabilities caused by the morning sickness drug Thalidomide, which came to light in 1962, also fostered a belief that medical research was not always beneficial; and this was strengthened later in the decade by the deaths of recipients in early heart transplants and the exposure of non-consensual and often dangerous research on patients in NHS hospitals.²⁹

In this critical climate, IVF and test tube babies became symbolic of the dangers posed by a 'biological revolution' in which scientists had seemingly acquired 'vast control of our physical environment' and were able to manipulate life on an unprecedented scale.³⁰ Popular writers such as Gordon Rattray-Taylor claimed that the ability to control reproduction through IVF posed as great a danger as nuclear weapons and threatened 'nothing less than the break-up of civilisation as we know it'.³¹ The doctor Maurice Pappworth echoed Rattray-Taylor when he warned that human IVF had 'eugenic' possibilities and might be used to 'produce a race of supermen free from physical and mental taints'.

The announcement that Edwards, Bavister, and Steptoe had successfully fertilized human ova in vitro did little to alter these dystopian predictions, and

newspapers claimed that these ‘disturbing experiments’ raised the prospect of a scenario in which totalitarian regimes might use IVF to generate armies ‘without the advent of a mother at all’.³² Some even cited Edwards and Steptoe’s work to call for external controls over biological research. In a column for the *New Statesman*, a weekly current affairs magazine, the medical writer Donald Gould argued that researchers such as Edwards ‘tended to be single-minded enthusiasts, blind to the implications of their work’. Gould concluded that the consequences of IVF were so great that traditional forms of self-regulation were ‘no longer enough [...] and it is time that society took a hand in deciding what is meet [sic] and what is not’.³³

Discussion of IVF also reflected heightened concern for the subjects of biomedical research in the 1960s and 1970s. Following the work of whistle-blowers such as Maurice Pappworth, whose 1967 book *Human Guinea Pigs* provided a list of experiments that had been undertaken without patient consent, a number of journalists, campaigners, and politicians called for greater scrutiny of medical research and new safeguards for patients or experimental subjects.³⁴ Some argued that doctors should work harder to inform patients of experimental procedures and risks, while others, including Pappworth, claimed that research proposals should be scrutinized by new ethics committees that were composed of medical and lay members.³⁵ These concerns were evident when the MRC rejected Edwards and Steptoe’s 1971 grant application for a long-term programme of research on human reproduction. Referees voiced concern at possible risks to infertile women during the removal of oocytes and the implantation of fertilized embryos. They argued that IVF had a negligible chance of success and claimed that Edwards and Steptoe should undertake work on primates before moving on to infertile women.³⁶ The referees also argued that it would be unethical to provide support for research that aimed to produce more children when the world population was growing at an alarming rate and steps were needed to limit reproduction.

Concern for the welfare of experimental subjects was much more pronounced in the USA, where newspapers reported in 1972 that researchers investigating the ‘natural history’ of syphilis had intentionally withheld treatment from over 400 African Americans in Alabama since 1932.³⁷ These revelations appeared at a time of heightened concern about racial discrimination and severely undermined support for self-regulation in science and medicine. Newspapers, civil rights groups, and members of a federal inquiry claimed that external oversight was vital to preventing further abuses, and growing numbers of philosophers, lawyers, and theologians, collectively known as ‘bioethicists’, subsequently played a major role in drawing up research guidelines that prioritized informed consent.

Yet concern over IVF in the USA centred more on risks to developing embryos than patients, reflecting a broader climate where influential pro-life groups opposed research on embryos or foetuses as part of their campaigns against liberal abortion laws. In 1972, the theologian Paul Ramsey stated that since the risks of IVF were unknown and that embryos could not consent, ‘it

constitutes unethical medical experimentation on future human beings, and is therefore subject to absolute moral prohibition'.³⁸ In an argument that resonated with Congress, which prohibited any federal funding for research involving human embryos, Ramsey claimed IVF 'should not be allowed by medical or public policy in the United States – not now or ever'.³⁹

Edwards and Steptoe responded to this widespread criticism by portraying IVF as a medical procedure that met the 'needs' of infertile couples. In a paper at a 1969 conference on 'The Social Impact of Modern Biology', Edwards argued that 'the primary motivation for our work stems from a fundamentally humanitarian view'.⁴⁰ Refuting claims that IVF would foster 'armies of carefully-planned robots', and that he and Steptoe were 'playing at God in the laboratory', Edwards argued that they simply hoped 'to make it possible for some infertile patients to have their own children wherever we believe our help to be valid and meaningful'.⁴¹

Edwards engaged with a longstanding portrayal of infertile couples here when he noted that 'the absence of children can lead to extreme unhappiness and even the breakdown of marriage', and stated that the babies IVF might produce would therefore 'be wanted babies – often desperately wanted'.⁴² He cited this unhappiness to claim that it was 'short-sighted' for those concerned with overpopulation and 'limiting births' to criticize efforts to give infertile couples children. 'The problems of infertility', he argued, 'are often belittled at the same time that the advantages of parenthood are stressed [...]. The infertile cannot be criticised for the sake of the over-fertile [and] surely we should do all we can to produce children for responsible parents'.⁴³ Although Edwards positioned himself and Steptoe as advocates for infertile couples in this paper, he did not explicitly invoke their right to children. The only time he discussed 'the rights of patients' was when he outlined their right to be informed of and safeguarded from any risks associated with IVF and, notably, to 'reach their own decision on an abortion or otherwise', should it become clear that an implanted embryo was 'abnormal'.⁴⁴ While Edwards argued that IVF promised to benefit many infertile couples, he acknowledged that he and Steptoe were aware of concerns surrounding medical research and stressed that 'our primary responsibility at present is to the patients themselves'.⁴⁵

These arguments also underpinned a 1971 *Nature* paper that Edwards co-authored with the American lawyer David Sharpe. The pair claimed that attempts to remove ova and implant embryos into women would be subject to stringent ethical protocols, with all patients consenting to treatment, and that a successful outcome would ensure that 'these women could thereby have their own children, fathered by their own husbands'.⁴⁶ They also argued that widespread 'social concern for over-population' was not a 'rational basis for denying on ethical or other grounds the right of some couples to have children'.⁴⁷ It was only fair, they concluded, 'that a campaign against over-population should be directed to all parents and not enforced on a selected few; it would scarcely seem a justifiable policy to prevent such couples from having their own children'.⁴⁸

This was the first time that Edwards and colleagues invoked the right of infertile couples to have their own children. Their emphasis here aligned discussion of IVF with the emergence of a 'new politics' in the 1960s and 1970s, in which concerns over class identity and economic security were replaced by an emphasis on individual autonomy and human rights. This shift is often associated with the emergence of 'new social movements' that incorporated civil rights and libertarian ideologies to lobby for marginal groups. This was certainly the case with the National Association for Mental Health in Britain, which rebranded itself as MIND under the leadership of the US lawyer Larry Gostin and campaigned for a 'rights-based' approach to mental illness; and it was also evident in the work of the Patients Association, which was founded by the teacher Helen Hodgson in 1963 and campaigned for the rights of patients to choose their own treatment and determine whether or not they were subjected to research.⁴⁹ But efforts to promote IVF show that the emphasis on patient rights did not always emanate from campaign groups, activists, or the US bioethicists who claimed that their work was 'inextricably linked to public protests, teach-ins, and to civil rights, antiwar and pro-feminist activities'.⁵⁰ Doctors and medical researchers also invoked the rights of specific patient groups, albeit for different reasons.

Edwards and Sharpe, as we have seen, appealed to the rights of infertile couples to dispel claims that scientists should concentrate on limiting the 'population bomb' instead of producing more children. In a 1974 paper for the *Quarterly Review of Biology*, Edwards again invoked rights in order to refute additional criticisms of IVF. Citing the Universal Declaration on Human Rights, promulgated by the United Nations in 1948, he claimed that 'the right of married couples to have a child has been established unequivocally'.⁵¹ While the Declaration did not specify that married couples had a right to their own children, Edwards believed that IVF would soon be the best route to a family for infertile couples because other options, such as adoption, were decreasing 'because of contraception, abortion, and the widespread acceptance of the illegitimate child'.⁵² It was therefore unfair, he argued, for critics to use 'irrelevant' misgivings to discriminate against the 'unfortunate minority' of infertile couples who had as legitimate a claim to children as anyone else.⁵³

The first of these misgivings was voiced by Paul Ramsey, who argued that implanting embryos into infertile women was unethical because 'the future child cannot consent beforehand to procedures that might entail risks for itself'.⁵⁴ Edwards claimed that this stance was 'unrealistic in practice because it leads to a total negation – even to denying a mother a sleeping pill, a Caesarean section, or an amniocentesis for fear of disturbing the child'. 'Every medical treatment', he continued, 'from eating aspirin to open-heart surgery carries a risk for each patient, and fetuses are not asked beforehand about their own conception or even their abortion.'⁵⁵ Edwards argued that these factors made Ramsey's position 'difficult to justify' and ensured that 'fertilization in vitro, followed by reimplantation into the mother, does not

pose any moral problems, and the right of couples to have their own children should not be challenged'.⁵⁶

Edwards also invoked the rights of infertile patients in order to reject growing calls for outside involvement in the regulation of new procedures such as IVF. He countered that allowing theologians, philosophers, and others to make 'committee decisions' would delay the clinical application of IVF, since individuals from different professions would have diverse views on issues such as how to treat embryos and 'the chance of a united moral and ethical stance on such questions seems remote'.⁵⁷ Any delay would itself be unethical, he argued, because 'there are the "rights" of the patient to consider'. Edwards believed that the best solution was to continue with the arrangement where 'responsibility for applying new research methods to patients has rested traditionally on the individual doctor, often working in collaboration with scientists', provided they kept patients 'fully informed about the methods contemplated and the probability of success'.⁵⁸ In a line of thought that linked the 'needs' of patients and medical researchers, Edwards claimed that self-regulation was the only way to safeguard the rights of infertile couples. 'Patients have the right to benefit from research', he continued, 'and there is no reason to believe that ethical advice from outsiders about their condition is sounder than their own judgement of it'.⁵⁹

Edwards's antipathy towards outside involvement may have stemmed from a trip to the USA in the early 1970s, where he sat through a conference paper in which Paul Ramsey denounced 'our work as if from a nineteenth-century pulpit'.⁶⁰ It could also have applied to Britain, where growing numbers of 'outsiders' were also beginning to encourage 'trans-disciplinary' discussion of new procedures such as IVF. The main protagonists here were Anglican theologians such as Gordon Dunstan and Ian Ramsey, the Bishop of Durham, who responded to concerns over increasing secularization and advances in biomedical research by arguing that they had a pressing duty to engage with 'medical moral problems'.⁶¹ Yet these theologians saw no problem with IVF. Ramsey stated that his 'immediate and off-the-cuff reaction is not to be too fussed about it', while Dunstan argued that the main concern was to ensure that sperm and egg were brought together responsibly in vitro, which he argued should also underpin AID and the actions of couples looking to conceive naturally.⁶²

These arguments encapsulated Ramsey and Dunstan's broader attitude to medical expertise. In contrast to their US counterparts such as Paul Ramsey, who sought an active role in decision making, they saw themselves as ancillaries who encouraged public debates and made doctors aware of ethical issues. Ian Ramsey maintained that theologians were not looking to 'compromise the physician or surgeon's responsibility', and argued that 'the decision in the end must be taken by the person who is to carry out the action'. It was simply their job, he argued, to enable 'that decision to be better informed, and therefore more responsible'.⁶³

This ‘hands off’ stance was also evident in the 1974 report produced by a British Association working party, whose members included Gordon Dunstan, Robert Edwards, and the Labour politicians Shirley Williams and David Owen. The working party had been established to consider the regulation of ‘breakthroughs’ such as IVF, and toed a familiar line when they considered the role of outsiders. They argued that ‘lawyers, theologians and Members of Parliament need to be closely involved with scientists in discussions of the implications of scientific research’, but maintained that decision making should rest ‘solely with the experimenter, his profession, and the local ethics committee which approve any line of research’.⁶⁴ Their report argued that Edwards and Steptoe should be free to continue developing IVF and voiced ‘no objection’ to its use by infertile couples.⁶⁵

These factors ensured that there was no sustained critique of IVF in Britain by the late 1970s. Scientists such as Robert Edwards continued to have the final say in ethical debates, and newspapers largely endorsed his presentation of IVF as an infertility treatment that posed no moral problems. When Louise Brown was born in Oldham, on 25 July 1978, the *Guardian* noted how Britain lacked the ‘moral and ethical outrage’ that characterized American debates.⁶⁶ The press hailed Louise Brown as the ‘Baby of the Century’ and claimed that IVF represented ‘an important advance in the treatment of certain kinds of infertility’.⁶⁷ In a long article that demonstrates how attitudes had moved on from the 1960s, the *Observer* claimed that IVF was no more ‘unnatural’ than using hormones to stimulate ovulation, and predicted that if it ‘can be proven to be safe, reliable and free of complications, then it will join those other medical techniques which have helped thousands of women become mothers – and men to become fathers’.⁶⁸

‘NORMALIZING’ IVF: REPRODUCTIVE RIGHTS AND THE NUCLEAR FAMILY

Edwards’s emphasis on reproductive rights was a major component of what Charis Thompson calls the ‘normalization’ of IVF.⁶⁹ Focusing on the rights and needs of infertile couples, who were ‘just like millions of others except for their inability to have children’, encouraged media portrayals of IVF as an important medical procedure and countered the predictions of cloned armies that were rife in the 1960s.⁷⁰ But the invocation of rights was not the only factor that contributed to this normalization during the 1970s. Edwards and Steptoe also located IVF within traditional norms surrounding marriage, kinship, and the family. In talks and publications throughout the 1970s they presented the beneficiaries of IVF as ‘married couples’ who could not conceive because ‘the wife has blocked oviducts’ or ‘the husband [...] has too few spermatozoa for normal conception’.⁷¹ Against a backdrop of concern at increasing divorce rates following the 1969 Divorce Reform Act, Edwards and Steptoe even claimed that using IVF to produce ‘desperately wanted’ children would prevent the ‘breakdown of marriage’ among infertile couples.⁷²

Edwards and Steptoe also used concerns about marriage to portray IVF as less problematic than existing infertility treatments such as AID. Edwards noted that many doctors – as discussed more fully in Gayle Davis's chapter in this volume – were 'dissuaded' from AID because the use of donor sperm undermined marriage and raised troubling questions about adultery, paternity, and illegitimacy.⁷³ In a paper at a 1973 conference on the ethics of assisted reproduction, Edwards and Steptoe noted that IVF, by contrast, posed fewer problems as 'it will be used almost exclusively for many years to come to alleviate infertility within a marriage, by giving husbands and wives a chance to have their own children'.⁷⁴ Participants at the conference agreed that IVF differed from AID because it did not 'undermine the integrity of the marital relation'.⁷⁵ Its presentation as critical to a successful marriage also ensured that IVF received support from seemingly unexpected quarters. While the Catholic Church maintained its opposition to all 'unnatural' interference in human reproduction – that is, where children were not directly conceived through intercourse between a husband and wife – the Catholic MP and former lawyer Norman St John Stevas publicly supported IVF provided it was used by married couples and a woman's ovum was fertilized by her husband's sperm in vitro.⁷⁶

The incorporation of IVF within traditional social norms and kinship patterns also underpinned an episode of the *TV Eye* documentary series that was screened in September 1978. John and Lesley Brown proudly introduced their new daughter Louise and recalled how failure to conceive had placed strain on their marriage. Several other infertile couples were filmed during appointments with Patrick Steptoe, who claimed that he and Edwards hoped to provide them with 'something they couldn't have without our help'. The narrator was clear that this 'something' was not simply a child. By providing couples with their own children, he noted, Steptoe and Edwards 'treat a marriage'.⁷⁷

The extent to which IVF was embedded within normalized expectations about marriage and family life further explains the lack of 'moral and ethical outrage' in the late 1970s.⁷⁸ But this positive attitude did not last long, and in a 1982 report on IVF the *New Scientist* noted that 'controversy in England is starting anew – as though people are suddenly seeing the matter in a new light'.⁷⁹ This change can be partly explained by the renewed emphasis on 'traditional' morals that followed the 1979 election of Margaret Thatcher's Conservative Party. Members of the new Government were keen for a 'return to Victorian values' and spoke regularly about the need to reaffirm the social principles undermined by 'permissive' bills on homosexuality, divorce, and abortion that were passed in the 1960s.⁸⁰ Politicians, lobby groups and commentators who were marginal when the Conservatives were in opposition now had the chance to alter 'the rhetoric of British political life', and IVF was soon among their targets.⁸¹

While Steptoe and Edwards had presented the recipients of IVF as married couples throughout the 1970s, supporters of 'traditional' morals now framed the procedure as a threat to the nuclear family. They claimed there was nothing to prevent unmarried women from using donor sperm and having multiple

embryos implanted in one cycle, producing a generation of fatherless children, or even to prevent the birth of ‘orphaned test tube embryos’ that had been stored in freezers and implanted into surrogates after both their natural parents died.⁸² Some even warned of an ‘Oedipus tragedy’ in which a fertilized embryo was implanted into a surrogate and, years later, grew into an adult who unwittingly married his biological mother.⁸³ The Conservative peer Lord Campbell struck a chord with many when he argued that IVF would ‘threaten the welfare of children and destroy the sanctity of family life’, and the *Daily Mail*, which had greeted Louise Brown as a ‘miracle’, withdrew the money it had pledged for the private IVF clinic that Steptoe and Edwards were building at Bourn Hall, near Cambridge.⁸⁴ Newspapers criticized Steptoe and Edwards for seemingly disregarding public concerns and joined politicians in urging the Prime Minister to set up a public inquiry to establish ‘which of the strange possibilities opening up are acceptable, which need controls, and which are unacceptable’.⁸⁵

IVF also came under fire amidst growing criticism of the laissez-faire approach to professional regulation that Edwards had endorsed throughout the 1970s. In a series of academic papers, newspaper columns, radio documentaries, and his 1980 BBC Reith Lectures, provocatively titled ‘Unmasking Medicine’, the academic lawyer Ian Kennedy argued that medicine was ‘pursued in ways that do not always serve the best needs of society’.⁸⁶ Like the bioethicists he encountered while teaching in the USA, Kennedy argued that external oversight involving lawyers, philosophers and others, acting on behalf of patients and the public, was vital to ensuring that ‘doctors conform to standards set down by all of us’.⁸⁷ The rising disquiet over IVF proved to Kennedy that ‘decisions cannot be left to one professional group, whether doctors, lawyers or whatever’.⁸⁸ Writing for the *Observer*, the lawyer Geoffrey Robertson agreed that an inquiry into IVF was urgently needed and that guidelines should ‘not be developed behind a closed door marked “Medical Ethics – laymen and lawyers keep out”’.⁸⁹

These proposals for the approach that Kennedy called ‘bioethics’ echoed Gould and Pappworth’s earlier calls for oversight, but were far more influential thanks to the changing political climate of the 1980s. Whereas politicians in the 1960s and 1970s were reluctant to interfere with the freedom of scientists and doctors, members of Thatcher’s Government believed that professions should be exposed to outside scrutiny in order to remodel them ‘on market lines’ and make them more accountable to end-users.⁹⁰ Norman Fowler, Secretary of State for Health and Social Services, viewed patients and the public as ‘consumers’, and believed that non-doctors should play a major role in developing policies that rendered medical research more publicly accountable. This belief was evident when civil servants prioritized an ‘outside chair’ and ‘four or five non-experts’ for the government inquiry into human fertilization and embryology that was formally announced in July 1982.⁹¹ The committee was chaired by the philosopher Mary Warnock (b. 1924) and, in an unprecedented move

for an inquiry into science or medicine, included more 'non-expert' members than doctors or scientists.⁹²

The Warnock Committee was scheduled to consider written or oral evidence from over 300 individuals and organizations before they issued their recommendations.⁹³ As they heard evidence and considered the issues themselves, committee members soon realized that embryo experimentation was 'the most significant of the moral problems raised by *in vitro* fertilization techniques'.⁹⁴ Although experiments on 'spare' *in vitro* embryos were largely considered unproblematic in the 1970s, they became increasingly contentious in the 1980s thanks to the efforts of anti-abortion groups such as LIFE and the Society for the Protection of Unborn Children (SPUC), which used their growing political influence to demand the prosecution of researchers such as Robert Edwards for 'manipulation of life on a horrifying scale'.⁹⁵ Deciding whether or not to permit research raised fundamental questions about when in development human embryos should be accorded legal protection; and although the majority of committee members believed research should proceed, they disagreed about the developmental stage at which it should be prohibited. As Warnock conceded in 1985, 'all the other issues we had to consider seemed relatively trivial compared with this one, concerned as it is with a matter which nobody could deny is of central moral significance'.⁹⁶ When the Committee's report was published, in July 1984, attention centred on its proposal to allow research up to 14 days after fertilization, which corresponds to the formation of the 'primitive streak' in the early embryo. Opponents of research criticized the proposal as 'amoral' and persuaded the MP Enoch Powell to introduce a Private Member's Bill that would prohibit all research, while supporters of research, including Robert Edwards, warned that 'many fundamental studies of differentiation, human anomalies and other advances may require more days *in vitro*'.⁹⁷

But while it was generally overlooked in the furore over embryo experiments, the Warnock Committee did address questions about who had the right to access IVF. At the start of their report they noted that Articles 8 and 12 of the European Convention on Human Rights, which guaranteed a respect for family life and the right to found a family, might 'create a right to take full advantage of the techniques which are available to alleviate infertility'.⁹⁸ The Committee noted that some groups who submitted evidence believed that this right should include 'the fertile single woman and lesbian couple', but also noted that many others who submitted evidence believed 'that the interests of the child dictate that it should be born into a home where there is a loving, stable, heterosexual relationship and that, therefore, the *deliberate* creation of a child for a woman who is not a partner in such a relationship is morally wrong'.⁹⁹

In contrast to its firm rules on embryo research, the Warnock Committee adopted a more *laissez-faire* attitude when they considered these questions about eligibility and access, arguing that 'hard and fast rules are not applicable' at a time 'when at the present services for the treatment of infertility are at short

supply'.¹⁰⁰ Although the establishment of this 'broad-based' committee was presented as a key moment in bioethics, with Ian Kennedy citing it as 'progress along the lines I advocate', its members nevertheless believed that the solution here was to let doctors decide what constituted an eligible patient.¹⁰¹ Their report argued that 'everyone should be entitled to seek expert advice about their infertility', but supported the continuing arrangement 'where the consultant may, after discussion with professional health and social work colleagues, consider that there are valid reasons why infertility treatment would not be in the best interests of the patient, the child that may be born following treatment, or the patient's immediate family'.¹⁰² The Committee also gave a strong indication of those patients they believed would be prioritized, by defining the recipients of infertility treatments as 'a heterosexual couple living together in a stable relationship, whether married or not', and expressing their belief that 'as a general rule it is better for children to be born into a two-parent family, with both father and mother'.¹⁰³

This part of the report also prompted criticism, though it was not as concerted or high-profile as that which greeted the proposals for embryo research. One correspondent to the *Guardian* claimed that many women would be dismayed by the Committee's preference for 'a traditional and sentimental stereotype of motherhood'. They argued that the report had failed to provide any evidence to support its assumption that 'single women and lesbians make inadequate mothers', and wondered 'why this cost-conscious government did not just pick 20 people off the street to write it, since it embodies every kind of irrationality and popular prejudice scientists and philosophers are supposed to be above'.¹⁰⁴ An article in the feminist journal *Trouble and Strife* noted that participants at a conference on new reproductive technologies had also 'firmly rejected' the proposal that doctors should be allowed to continue 'dividing women into fit and unfit mothers'.¹⁰⁵ And the sociologist Hilary Rose argued that the Committee had overlooked 'a major cause of political and feminist concern' by leaving a male-dominated profession free to 'determine who shall mother and on what grounds'.¹⁰⁶

It soon became clear that doctors were indeed determining who counted as an eligible patient for IVF. *Trouble and Strife* claimed that Edwards and Steptoe only treated married couples at Bourn Hall, while the anthropologist Sarah Franklin noted that although marriage was not a requirement for treatment in the IVF clinic she studied during the late 1980s, 'the medical director had strong views about the naturalness of the reproductive drive, and it is likely unmarried or non-heterosexual women would not have felt welcome'.¹⁰⁷ These attitudes were written into law by the 1990 Human Fertilisation and Embryology Act, which stated that a condition of licences issued by the new Human Fertilisation and Embryology Authority (HFEA) was that clinics should not undertake IVF 'unless account has been taken of the welfare of any child who may be born as a result of the treatment (including the need of that child for a father)'.¹⁰⁸ As a consequence of this ruling, many NHS and private clinics excluded single women and lesbian couples from treatment

altogether, and others created a requirement for minimum length of relationship before they treated unmarried heterosexual couples.¹⁰⁹

The ability to pay also determined access to IVF for many couples. NHS provision throughout the 1980s was uneven, with some health authorities offering no free treatment. NHS clinics, moreover, were generally subsumed within obstetrics and gynaecology departments, had long waiting lists, and refused to see patients from outside the region. Many infertile couples therefore had to seek treatment at private IVF clinics, which often charged £2,000 for inpatient treatment. This was roughly a third of the average household income in the 1980s, though some clinics reduced costs by having the necessary hormone drugs prescribed through a woman's general practitioner.¹¹⁰

By 1990, the Warnock Committee, directors of IVF clinics and government legislation had largely quelled unease surrounding the 'aberrations of the baby revolution' by ensuring that access to IVF was restricted to heterosexual couples.¹¹¹ This meant that the 'right to have children' was restricted to those who were deemed 'suitable' when judged against social rather than purely clinical criteria. But this should come as no surprise. Here, as elsewhere in the history of infertility, the debate about who got to reproduce was 'in essence a debate about values and priorities rather than a debate about what works'.¹¹² As Robert Edwards, Patrick Steptoe, and members of the Warnock Committee realized, IVF would only ever become fully normalized if it conformed to, rather than fundamentally challenged, existing norms surrounding kinship, parenthood, and reproduction.

CONCLUSION

In a 2003 editorial for the *British Medical Journal*, the philosopher Richard Ashcroft claimed 'we should be wary of making reproduction a theme in our national politics'. Attempts to specify who can or cannot reproduce, he argued, 'do not fit easily into the government of liberal democracies'.¹¹³ Thanks to the legacy of eugenics, when states actively interfered with the reproduction of 'undesirable' groups, this belief underpinned various documents that set out fundamental human rights after the Second World War. Some, such as the 1948 Universal Declaration on Human Rights and the 1953 European Convention on Human Rights, supported the 'right to marry and start a family', while others, such as the 1968 Proclamation of Teheran, addressed reproductive rights directly and supported the right of parents 'to determine freely and responsibly the number and spacing of their children'.¹¹⁴

Robert Edwards drew on these declarations to state that 'the right of married couples to have a child has been established unequivocally', but things were not so simple in practice.¹¹⁵ Politicians and the courts have widely interpreted the rights to marry and start a family, and to determine the number and spacing of children, as negative rights that prohibit interference with those who can reproduce naturally. They have been far less prepared to interpret them as positive

rights that compel states or doctors to assist in establishing a family for those who cannot reproduce naturally. This partly stems from the fact that laws such as the 1998 Human Rights Act specify that particular human rights can be restricted by public authorities ‘in the interests of [. . .] public safety or the economic well being of the country [. . .] for the protection of health or morals, or the protection of the rights and freedom of others’.¹¹⁶ This ruling ensures that in countries where public funds are allocated for healthcare, how far assisted conception services are provided, and to whom, remain fundamentally political decisions.¹¹⁷ Healthcare trusts, regulatory bodies, the courts and politicians consequently have the freedom to use issues such as costs and the welfare of future children as grounds for restricting or withholding the provision of IVF to women over a certain age, to single women, lesbian and gay couples, or to married couples with children from previous relationships.¹¹⁸

Sarah Franklin claims we now live in an era ‘after IVF’, where its clinical application has become ‘routine and familiar’, thanks to the births of over 5 million ‘miracle babies’, and where ambivalence now centres more on research that uses IVF as its starting point, such as stem cell science or cloning.¹¹⁹ But recent controversies over whether married prisoners have a legal right to children via IVF, which politicians claim would be a perversion of human rights law, show that questions about access and eligibility continue to provide a critical arena in which the very notion of reproductive rights are rethought and contested.¹²⁰ The ‘normalization’ of IVF is not a process with a defined end point, then, and the issue of exactly who has a ‘right to their own children’ is likely to remain contentious for some time.

NOTES

1. Naomi Pfeffer, *The Stork and the Syringe: A Political History of Reproductive Medicine* (Cambridge, 1993); Sarah Franklin, ‘Deconstructing “Desperateness”: The Social Construction of Infertility in Popular Representations of New Reproductive Technologies’, in Maureen McNeill, Ian Varcoe and Steven Yearley (eds), *The New Reproductive Technologies* (London, 1990).
2. Charis Thompson, *Making Parents: The Ontological Choreography of Reproductive Technologies* (Cambridge, MA, 2005), p. 240; Naomi Pfeffer, ‘Artificial Insemination, In-vitro Fertilization and the Stigma of Infertility’, in Michelle Stanworth (ed.), *Reproductive Technologies: Gender, Motherhood and Medicine* (Cambridge, 1987). Naomi Pfeffer notes that in the 1950s some doctors also used the emphasis on desperation to justify withholding treatments that had a slim chance of success, lest women develop an ‘unhealthy, obsessive longing for a child’. See Pfeffer, *The Stork and the Syringe*, p. 160.
3. John V. Pickstone, ‘Introduction: Why Innovation?’, in John V. Pickstone (ed.), *Medical Innovations in Historical Perspective* (Basingstoke, 1992).
4. Sarah Franklin, *Biological Relatives: IVF, Stem Cells and the Future of Kinship* (Durham, NC, and London, 2013).
5. Robert G. Edwards, ‘Aspects of Human Reproduction’, in Watson Fuller (ed.), *The Social Impact of Modern Biology* (London, 1970), p. 115.

6. Robert G. Edwards, 'Fertilization of Human Eggs in Vitro: Morals, Ethics and the Law', *Quarterly Review of Biology*, 49 (1974), p. 16.
7. Lara Marks, *Sexual Chemistry: A History of the Contraceptive Pill* (New Haven, CT, and London, 2001); Barbara Brookes, *Abortion in England, 1900–1967* (London, 1988).
8. Martin H. Johnson, 'Robert Edwards: The Path to IVF', *Reproductive Biomedicine Online*, 23 (2011), p. 258.
9. Harold Perkin, *The Rise of Professional Society: England Since 1800* (London and New York, 1990) p. 472.
10. Jon Turney, *Frankenstein's Footsteps: Science, Genetics and Popular Culture* (New Haven, CT, and London, 1998), pp. 170–74.
11. Franklin, *Biological Relatives*, p. 221.
12. Pfeffer, *The Stork and the Syringe*, pp. 110–15; Marks, *Sexual Chemistry*, pp. 202–3.
13. Duncan Wilson, *The Making of British Bioethics* (Manchester, 2014).
14. Cristina Richie, 'What Would an Environmentally Sustainable Reproductive Technology Industry Look Like?', *Journal of Medical Ethics*, 41:5 (2015).
15. Johnson, 'Robert Edwards', p. 246.
16. Robert Edwards and Patrick Steptoe, *A Matter of Life: The Story of IVF – A Medical Breakthrough* (London, 1980), p. 17.
17. Johnson, 'Robert Edwards', p. 250.
18. Johnson, 'Robert Edwards', p. 253; Robert G. Edwards, 'Maturation In Vitro of Human Ovarian Oocytes', *Lancet*, 6 November 1965, p. 929.
19. By 1966, Edwards realized that in order to fertilize human eggs in vitro he needed to 'capacitate' sperm, which was a final developmental stage that only took place in the female uterus. While some historians claim that Edwards first contacted Steptoe to acquire human eggs, others claim his initial motivation was 'recovering capacitated sperm from the oviduct'. See Johnson, 'Robert Edwards', p. 256.
20. Patients were not generally asked for their consent to research on tissues or cells that were removed in clinical treatment during the 1960s, but the need for capacitated sperm meant that Steptoe had to approach patients and ask them to have sex with their husbands before the operation. See Edwards and Steptoe, *A Matter of Life*, p. 61.
21. Edwards and Steptoe, *A Matter of Life*, p. 61.
22. Robert G. Edwards, Barry D. Bavister and Patrick C. Steptoe, 'Early Stages of Fertilization *in vitro* of Human Oocytes Matured *in vitro*', *Nature*, 221 (1969).
23. Wellcome Library, London, SA/SRL/A.27, Thomas Strangeways, 'Lecture 1: Tissue Culture' (December 1926).
24. See also Angus McLaren, *Reproduction by Design: Sex, Robots, Trees and Test-Tube Babies in Interwar Britain* (Chicago, IL, and London, 2012).
25. Pfeffer, *The Stork and the Syringe*, pp. 88–92.
26. For more detail on these early portrayals of 'test-tube babies', see Duncan Wilson, *Tissue Culture in Science and Society: The Public Life of a Biological Technique in Twentieth Century Britain* (Basingstoke, 2011), pp. 29–54.
27. Bertrand Russell, *Has Man a Future?* (Harmondsworth, 1961). For more on changing attitudes to eugenics, see Daniel Kevles, *In the Name of Eugenics: Genetics and the Uses of Human Heredity*, 2nd edn (Cambridge, MA, 1995).
28. Perkin, *The Rise of Professional Society*, p. 477.

29. Wilson, *The Making of British Bioethics*, pp. 43–51; Ayesha Nathoo, *Hearts Exposed: Transplants and the Media in 1960s Britain* (Basingstoke, 2009).
30. Robert Sinsheimer, quoted in Wilson, *Tissue Culture in Science and Society*, p. 75. For more on the ‘biological revolution’, see Turney, *Frankenstein’s Footsteps*.
31. Gordon Rattray-Taylor, *The Biological Time Bomb* (London, 1968) p. 21.
32. Turney, *Frankenstein’s Footsteps*, p. 172.
33. Donald Gould, ‘Guinea Pig Code’, *New Statesman*, 12 November 1971, p. 26.
34. Maurice Pappworth, *Human Guinea Pigs: Experiments on Man* (London, 1967).
35. Wilson, *The Making of British Bioethics*, pp. 45–51; Adam Hedgecoe, ‘“A Form of Practical Machinery”: The Origins of Research Ethics Committees in the UK’, *Medical History*, 53 (2009).
36. For more detail, see Martin H. Johnson, Sarah B. Franklin, Matthew Cottingham and Nick Hopwood, ‘Why the Medical Research Council Refused Robert Edwards and Patrick Steptoe Support for Research on Human Conception in 1971’, *Human Reproduction*, 25 (2010).
37. Susan Reverby (ed.), *Tuskegee’s Truths: Rethinking the Tuskegee Syphilis Study* (Chapel Hill, NC, 2000).
38. Paul Ramsey, ‘Shall We “Reproduce”? The Ethics of In Vitro Fertilization’, *Journal of the American Medical Association*, 220:10 (1972), p. 1346.
39. Paul Ramsey, quoted in Barbara Culliton and William Waterfall, ‘The Flowering of American Bioethics’, *British Medical Journal*, 4 November 1978, p. 1270.
40. Edwards, ‘Aspects of Human Reproduction’, p. 110.
41. Edwards, ‘Aspects of Human Reproduction’, p. 100.
42. Edwards, ‘Aspects of Human Reproduction’, p. 118.
43. Edwards, ‘Aspects of Human Reproduction’, p. 118.
44. Edwards, ‘Aspects of Human Reproduction’, pp. 114–15.
45. Edwards, ‘Aspects of Human Reproduction’, p. 113.
46. Robert G. Edwards and David J. Sharpe, ‘Social Values and Research in Human Embryology’, *Nature*, 231 (1971), p. 87.
47. Edwards and Sharpe, ‘Social Values and Research’, p. 87.
48. Edwards and Sharpe, ‘Social Values and Research’, p. 87.
49. Alex Mold, ‘Patient Groups and the Making of the Patient-Consumer in Britain: An Historical Overview’, *Journal of Social Policy*, 39 (2010); Nick Crossley, *Contesting Psychiatry: Social Movements in Mental Health* (Oxford, 2006).
50. Robert B. Baker, ‘From Meta-Ethicist to Bioethicist’, *Cambridge Quarterly of Healthcare Ethics*, 11 (2002), p. 369.
51. Edwards, ‘Fertilization of Human Eggs in Vitro’, p. 16.
52. Edwards, ‘Fertilization of Human Eggs in Vitro’, p. 10.
53. Edwards, ‘Fertilization of Human Eggs in Vitro’, p. 11.
54. Edwards, ‘Fertilization of Human Eggs in Vitro’, p. 14.
55. Edwards, ‘Fertilization of Human Eggs in Vitro’, p. 14.
56. Edwards, ‘Fertilization of Human Eggs in Vitro’, p. 16.
57. Edwards, ‘Fertilization of Human Eggs in Vitro’, p. 19.
58. Edwards, ‘Fertilization of Human Eggs in Vitro’, p. 19.
59. Edwards, ‘Fertilization of Human Eggs in Vitro’, p. 11.
60. Edwards and Steptoe, *A Matter of Life*, p. 113.
61. Ian Ramsey, ‘Christian Ethics in the 1960s and 1970s’, *The Church Quarterly*, 2 (1970).

62. Durham Cathedral, Ian Ramsey papers and archive, Ian Ramsey to Edwin Barker (14 January 1972); Gordon Dunstan, *The Artifice of Ethics* (London, 1974).
63. Durham Cathedral, Ian Ramsey papers and archive, Ian Ramsey, 'Moral Problems Facing the Medical Profession at the Present Time', Inaugural Address to the Annual British Medical Association Clinical Meeting, Nicosia, Cyprus (April 1972).
64. Alun Jones and Walter Bodmer, *Our Future Inheritance: Choice or Chance? A Study by a British Association Working Party* (Oxford, 1974), pp. 40, 132.
65. Jones and Bodmer, *Our Future Inheritance*, p. 41.
66. Anthony Tucker, 'Brave New World of Test Tube Babies', *Guardian*, 27 July 1978.
67. Turney, *Frankenstein's Footsteps*, p. 183.
68. Nigel Hawkes, 'The Making of Baby Brown', *Observer*, 30 July 1978.
69. Thompson, *Making Parents*, p. 82.
70. Turney, *Frankenstein's Footsteps*, p. 186.
71. Edwards, 'Fertilization of Human Eggs in Vitro', p. 16; Edwards, 'Aspects of Human Reproduction', pp. 110–11.
72. Edwards, 'Fertilization of Human Eggs in Vitro', p. 10; Edwards, 'Aspects of Human Reproduction', p. 115. For more detail on the 1969 Divorce Act, see Dominic Sandbrook, *White Heat: A History of Britain in the Swinging Sixties* (London, 2006), pp. 658–60.
73. Edwards, 'Fertilization of Human Eggs in Vitro', p. 19; see also Pfeffer, *The Stork and the Syringe*, pp. 120–5.
74. Robert G. Edwards and Patrick C. Steptoe, 'Biological Aspects of Embryo Transfer', in Gordon Wolstenholme and David Fitzsimmons (eds), *Law and Ethics of AID and Embryo Transfer* (London and New York, 1973), p. 11.
75. Gordon R. Dunstan, 'Moral and Social Issues Arising from AID', in Wolstenholme and Fitzsimmons (eds), *Law and Ethics of AID and Embryo Transfer*, p. 51.
76. Edwards and Steptoe, *A Matter of Life*, p. 105.
77. *TV Eye: To Mrs Brown, a Daughter* (screened 7 September 1978). I am grateful to Peter Williams for providing me with a copy of his documentary.
78. See also Franklin, *Biological Relatives*, pp. 5–7.
79. Clifford Grobstein, 'Coming to Terms with Test-Tube Babies', *New Scientist*, 7 October 1982, p. 16.
80. Eric J. Evans, *Thatcher and Thatcherism* (London, 2004).
81. Michael Mulkey, *The Embryo Research Debate: Science and the Politics of Reproduction* (Cambridge, 1998), p. 15.
82. Katharine Hadley, 'Tinkering with Life', *Daily Express*, 21 June 1984.
83. George Clark, 'Test-Tube Babies "Could Bring Oedipus Tragedy"', *Times*, 9 February 1982.
84. Baron Alan Campbell of Galloway, cited in *Parliamentary Debates: House of Lords*, 432 (9 July 1982), col. 1001. On the *Daily Mail* and Bourn Hall, see Mary Warnock, *Nature and Morality: Recollections of a Philosopher in Public Life* (London, 2003), p. 74.
85. Anon, 'A Matter of Origins', *Times*, 10 February 1982. See also Anon, 'Why We Must ALL Have a Say on Test Tube Babies', *Mail on Sunday*, 20 May 1984.
86. Ian Kennedy, 'Now More than Ever, Wealthier Means Healthier', *Listener*, 13 November 1980, p. 641.

87. Ian Kennedy, 'Medical Ethics are not Separate but Part of Other Ethics', *Listener*, 27 November 1980, p. 713.
88. Ian Kennedy, 'Ethical Guidelines on Fertilization', *Times*, 11 February 1982.
89. Geoffrey Robertson, 'The Law and Test Tube Babies', *Observer*, 7 February 1982.
90. Wilson, *The Making of British Bioethics*, pp. 120–2.
91. National Archives, FD7/2307, Richard Norton, Department of Education and Science, to David Noble, Medical Research Council (13 April 1982).
92. Wilson, *The Making of British Bioethics*, p. 157.
93. Norman Fowler, MP, quoted in *Parliamentary Debates: House of Commons*, Vol. 28 (23 July 1982), col. 329.
94. Mary Warnock, 'In Vitro Fertilization: The Ethical Issues (II)', *The Philosophical Quarterly*, 33 (1983), p. 238.
95. Murray Davies and Ronald Badford, 'Test Tube Baby Doctor Warned Off', *Daily Mirror*, 28 September 1982.
96. Mary Warnock, *A Question of Life: The Warnock Report on Human Fertilization and Embryology* (London, 1985), p. xvi.
97. National Archives, FD7/2332, Robert Edwards to Joan Box, MRC (13 August 1984). For more on responses to this proposal, see Wilson, *The Making of British Bioethics*, pp. 165–70.
98. Warnock, *A Question of Life*, p. 10.
99. Warnock, *A Question of Life*, p. 11. Emphasis in original.
100. Warnock, *A Question of Life*, p. 11.
101. Ian Kennedy, *The Unmasking of Medicine*, rev. and updated edn (London, 1983), p. 152.
102. Warnock, *A Question of Life*, p. 12.
103. Warnock, *A Question of Life*, pp. 10–11.
104. Deborah Cameron, 'Letters to the Editor: Why Warnock's Offspring will Dismay Women', *Guardian*, 24 July 1984.
105. Jalna Hanmer and Elizabeth Powell-Jones, 'Who's Holding the Test-Tube?', *Trouble and Strife*, 3 (Summer 1984), p. 44.
106. Hilary Rose, 'Victorian Values in the Test-Tube: The Politics of Reproductive Science and Technology', in Stanworth (ed.), *Reproductive Technologies*, p. 171.
107. Hanmer and Elizabeth Powell-Jones, 'Who's Holding the Test-Tube?', p. 44; Sarah Franklin, *Embodied Progress: A Cultural Account of Assisted Conception* (London and New York, 1997) p. 81.
108. Human Fertilisation and Embryology Act (London, 1990), Section 13(5), p. 7.
109. Laura Riley, 'Equality of Access to NHS-funded IVF Treatment in England and Wales', in Kirstey Horsey and Hazel Biggs (eds), *Human Fertilization and Embryology: Regulating Reproduction* (Abingdon, Oxon., 2007), p. 86.
110. For more detail, see Franklin, *Embodied Progress*, pp. 79–83.
111. Hadley, 'Tinkering with Life'.
112. Richard Ashcroft, 'In Vitro Fertilisation for All?', *British Medical Journal*, 4 September 2003, p. 511.
113. Ashcroft, 'In Vitro Fertilisation for All?', p. 511.
114. On the Human Rights Act and Reproductive Rights, see Riley, 'Equality of Access to NHS-funded IVF Treatment in England and Wales', pp. 101–5. The Proclamation of Teheran can be accessed online at <https://www1.umn.edu/humanrts/instreet/12ptichr.htm>. Accessed 6 December 2016.

115. Edwards, 'Fertilization of Human Eggs in Vitro', p. 16.
 116. Riley, 'Equality of Access to NHS-funded IVF Treatment in England and Wales', p.103.
 117. Ashcroft, 'In Vitro Fertilisation for All?', p. 511.
 118. Ashcroft, 'In Vitro Fertilisation for All?', p. 511.
 119. Franklin, *Biological Relatives*, p. 1.
 120. Jack Doyle, 'I'll Ban IVF for Prisoners Says Grayling: Justice Secretary Vows to Take on Strasbourg Judges', *Daily Mail*, 28 February 2013; Ben Leach, 'Prisoners "Offered" IVF Treatment', *Telegraph*, 23 November 2008.

RESEARCH RESOURCES

Primary Sources

Archival Sources

Durham Cathedral Library
 Ian Ramsey Archive
 National Archives, London
 Warnock Committee Archive
 Wellcome Library, London
 Strangeways Research Laboratory Archive
 Maurice Pappworth Archive

Published Primary Sources

- Robert G. Edwards, 'Maturation In Vitro of Human Oocytes', *Lancet*, 6 November 1965, 926–29.
 Robert G. Edwards, 'Aspects of Human Reproduction', in Watson Fuller (ed.), *The Social Impact of Modern Biology* (London: Routledge and Kegan Paul, 1970), 108–22.
 Robert G. Edwards, 'Fertilization of Human Eggs in Vitro: Morals, Ethics and the Law', *Quarterly Review of Biology*, 49 (1974), 3–26.
 Robert G. Edwards and Patrick C. Steptoe, *A Matter of Life: The Story of IVF – A Medical Breakthrough* (London: Hutchinson, 1980).
 Robert G. Edwards, Barry D. Bavister and Patrick C. Steptoe, 'Early Stages of Fertilization *in vitro* of Human Oocytes Matured *in Vitro*', *Nature*, 221 (1969), 632–35.
 Alun Jones and Walter Bodmer, *Our Future Inheritance: Choice or Chance? A Study by a British Association Working Party* (Oxford: Oxford University Press, 1974).
 Ian Kennedy, *The Unmasking of Medicine* (London: Paladin, 1983).
 Paul Ramsey, 'Shall We "Reproduce"? The Ethics of In Vitro Fertilization', *Journal of the American Medical Association*, 220 (1972), 1346–50.
 Gordon Rattray-Taylor, *The Biological Time Bomb* (London: Thames and Hudson, 1968).
 Mary Warnock, 'In Vitro Fertilization: The Ethical Issues (II)', *The Philosophical Quarterly*, 33 (1983), 238–49.
 Mary Warnock, *A Question of Life: The Warnock Report on Human Fertilization and Embryology* (London: Basil Blackwell, 1985).

Gordon Wolstenholme and David Fitzsimmons (eds), *The Law and Ethics of AID and Embryo Transfer* (London and New York: Elsevier, 1973).

Secondary Sources

- Richard Ashcroft, 'In Vitro Fertilisation for All?', *British Medical Journal*, 4 September 2003, 511–12.
- Sarah Franklin, *Embodied Progress: A Cultural Account of Assisted Conception* (London and New York: Routledge, 1997).
- Sarah Franklin, *Biological Relatives: IVF, Stem Cells and the Future of Kinship* (Durham, NC, and London: Duke University Press, 2013).
- Adam Hedgecoe, "'A Form of Practical Machinery": The Origins of Research Ethics Committees in the UK', *Medical History*, 53 (2009), 331–50.
- Martin Johnson et al, 'Why the Medical Research Council Refused Robert Edwards and Patrick Steptoe Support for Research on Human Conception in 1971', *Human Reproduction*, 25 (2010), 2157–74.
- Michael Mulkay, *The Embryo Research Debate: Science and the Politics of Reproduction* (Cambridge: Cambridge University Press, 1998).
- Naomi Pfeffer, *The Stork and the Syringe: A Political History of Reproductive Medicine* (Cambridge: Polity Press, 1993).
- John Pickstone (ed.), *Medical Innovations in Historical Perspective* (Basingstoke: Palgrave Macmillan, 1992).
- Michelle Stanworth (ed.), *Reproductive Technologies: Gender, Motherhood and Medicine* (Cambridge: Polity Press, 1987).
- Charis Thompson, *Making Parents: The Ontological Choreography of Reproductive Technologies* (Cambridge, MA: MIT Press, 2005).
- Jon Turney, *Frankenstein's Footsteps: Science, Genetics and Popular Culture* (New Haven, CT, and London: Yale University Press, 1998).
- Duncan Wilson, *Tissue Culture in Science and Society: The Public Life of a Biological Technique* (Basingstoke: Palgrave Macmillan, 2011).
- Duncan Wilson, *The Making of British Bioethics* (Manchester: University of Manchester Press, 2014).

‘The Authority’s Anti-Breeding Campaign’: State-Imposed Infertility in British Reprodystopia

Fran Bigman

INTRODUCTION

Since the 1990s, the biologically infertile woman has become a familiar figure in contemporary British popular culture, from the long-running BBC Radio 4 soap opera *The Archers* (in 1993, 2006, and 2010) through the comedy TV series *Cold Feet* (1997) to the film *Maybe Baby* (2000), based on Ben Elton’s novel *Inconceivable* (1999). Andy Harries, the producer of *Cold Feet*, had personal experience of in vitro fertilization (IVF) along with his wife, the filmmaker Rebecca Frayn, who drew on the couple’s story for her first novel, *One Life* (2007). Other recent literary depictions of infertility include Sarah Rayner’s novel, *The Two Week Wait* (2012), which tells the story of a woman left infertile by cancer.

However, another type of infertile character has long haunted British literature: the ‘socially infertile’ woman, denied the experience of motherhood by a totalitarian government. The classic reproductive dystopia, *Brave New World* (1932) by Aldous Huxley (1894–1963), glosses over the effects of this induced infertility on women, focusing instead on the stories of the male characters; women get only bit parts as sex objects or, shockingly, mothers. Yet how are women supposed to live in a society in which 70% are sterilized and the rest are forced to use ‘Malthusian drills’ to avoid the unthinkable fate of viviparous birth? Hints of discontent bubble up through the story: why else would female characters take a ‘Pregnancy Substitute’, hormonal concoctions that, by mimicking pregnancy, resign the bodies and minds of these women to never actually being pregnant? To give this unease its due focus, this chapter will trace the figure of the socially infertile

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woman through a series of critically neglected works by British women writers. In these texts, the mild discontent expressed by Huxley's female ciphers explodes into the pain and rage of women deprived of motherhood by the state.

CONTEXT AND APPROACH

Britain has long been a prime staging ground for the slow divorce of sex and reproduction. In the 1920s, sex without reproduction was made increasingly possible when Marie Stopes (1880–1958) opened one of the world's first contraceptive clinics in London, and reproduction without sex was imagined by Cambridge geneticist J.B.S. Haldane (1892–1964), whose visions of ectogenesis (artificial wombs) were taken up by his friend Huxley.¹ While Haldane crowed that 'if reproduction is once completely separated from sexual love, mankind will be free in an altogether new sense', female writers – including his wife Charlotte (1894–1969), author of the 1926 dystopia *Man's World*, and his sister Naomi Mitchison (1897–1999), a novelist and volunteer in birth control clinics – wondered if this were true for womankind.² Would technology free women from biology or allow men to seize the means of reproduction?

Many of the writers discussed in this chapter appear to have feared the latter. While some British women's dystopias emphasize the horrors of being cut off from technology and reduced to nature – such as *Swastika Night* (1937) by Katherine Burdekin (1896–1963), set 700 years into a Nazi-controlled future in which women are mere breeders – the works examined here bemoan the horrors of being cut off from nature by technology. Tracing the influences of the interwar period on contemporary fiction will highlight a consistent strain in women's writing on reproductive technologies: its challenge to a male insistence that separating sex and reproduction can only be a good thing.

One of the powers of fiction is its ability to oppose universalizing claims with the specifics of a personal story, while still illuminating social and cultural contexts. Dystopian literature accomplishes this by basing an imagined future society on an exaggerated element of the present, and showing how the systems built up around this element – the surveillance society in *Nineteen Eighty-Four* (1949) by George Orwell (1903–50); censorship in *Fahrenheit 451* (1953) by Ray Bradbury (1920–2012) – affect an individual. I argue here that what I will term 'reprodystopias', which describe imagined future societies worse than our own in which changes to pregnancy, childbirth, and parenting become a main vector of oppression, are an especially good illustration of this power of fiction. They yield valuable and neglected insight into how having a child – often considered a duty in the past, and an atomized 'choice' today – is never purely personal, but always imbricated with these larger contexts. Women's reprodystopias in particular have not only served as a relatively free space for the exploration of ideas about sexuality and gender roles but also illustrate the complex relationship between individual and community when it comes to reproductive technologies, which are both everyday practices carried

out on the (usually female) body and screens for the projection of fears about the survival of humanity.

By highlighting the centrality of reproduction – which, far from being a private matter, foregrounds important broader questions of gender, technology, and race – my critical category of ‘reprodystopia’ provokes rethinking of canonical dystopian texts. Ever since its relatively recent emergence in the early twentieth century, the genre of dystopia has concerned itself with showing how technology, for all its promises, can be misused, thereby endangering all that humanity holds dear.³ When we review past works for reprodystopian aspects, we see how often that misuse of technology relates to the production and reproduction of human beings.

In developing the idea of ‘reprodystopias’, I revise the demographer Andreu Domingo’s concept of ‘demodystopia’, which he defines in a 2008 article based on a longer work in Spanish as ‘dystopias that are brought about by demographic change or that make population matters a salient concern’.⁴ Domingo might classify the texts I will discuss as ‘demodystopias’, but while his term implies a top-down view, I will argue that ‘reprodystopia’ better captures the interplay of the personal with the societal that characterizes reproductive events, as well as continuities between the interwar period and the contemporary eclipsed by Domingo’s focus on the post-Second World War period. Domingo bases his term largely on male-authored narratives of overpopulation, reflecting a critical neglect of women’s dystopias. For example, the historian Angus McLaren argues that interwar works on reproduction and modernity ‘represent an important and as yet unexamined strain in British culture’,⁵ but in attempting to fill this critical gap he still leaves women’s reprodystopian literature largely unexamined.

After a discussion of interwar reprodystopias, I will discuss two recent British examples that demonstrate the persistence of feminist technophobia in twentieth-century fiction: Joanna Kavenna’s *The Birth of Love* (2010) and Sarah Hall’s *The Carhullan Army* (2007). In 2013, the literary magazine *Granta* included Kavenna and Hall on their ‘Best of Young British Novelists’ list, compiled once per decade. These critically acclaimed novelists are turning to dystopian fiction in a trend that reflects our current cultural obsession with reproductive science. I will suggest that Hall and Kavenna’s novels can be read not just as heiresses to previous works of reprodystopia by women, but also as interventions into feminist debates on infertility since the rise of IVF and other assisted reproductive technologies (ARTs). Sociologist Charis Thompson sums up the ‘paradox of infertility’ for feminists when she writes that ‘feminists are well placed to understand the special burdens involuntary childlessness places on women, but they are ambivalent about supporting women who seek infertility treatments because it seems to lend implicit support to conventional gender roles and gender stratification’.⁶ Infertility is and must be a feminist issue, but too great an emphasis on the suffering of involuntary childlessness can seem to underscore essentialist ideas that all women long to be mothers.

Thompson traces the evolution of feminist positions on IVF from the ‘just say no’ approach of late 1980s and early 1990s groups like the Feminist International Network of Resistance to Reproductive and Genetic Engineering (FINRRAGE), to today’s more nuanced outlook. The media theorist José van Dijck has a more pessimistic take: she maintains that in the mid-1990s, radical feminist discourses, with their somewhat paradoxical emphasis on women as victims of technology and reproductive ‘choice’, were co-opted by medical and journalistic discourses depicting women as victims of infertility with a right to ‘choose’ IVF.⁷ Yet, as I will show, radical feminist technophobia lives on in fiction, including Kavenna and Hall’s novels. Both have drawn criticism for their polemicism, and, on one hand, I also find their one-sidedness problematic: not only do the totalitarian states in these two novels deny women motherhood through male-controlled technological means, but in a problematic synecdoche, this denial of motherhood comes to stand in for all oppression.

On the other hand, I want to redeem these novels somewhat by reading them in the light of the classic, if non-British, reproductive dystopia, *The Handmaid’s Tale* (1985) by Margaret Atwood. While *The Handmaid’s Tale* is often thought of as a warning of the horrors of compulsory pregnancy, I will read it against the grain as a mourning over infertility. In conclusion, I will suggest that just as Atwood’s novel can be read as a dramatization of reproductive injustice in the 1980s, Hall and Kavenna’s works dramatize state-imposed infertility in our IVF age.

INTERWAR REPRODYSTOPIA

Interwar Britain was characterized by an intense interest in biofuturism. Angus McLaren argues that ‘a small army of writers tackled the question of what impact modernization might ultimately have on sex and the family [. . .] it was the question of whether births should be planned and controlled that sparked the fiercest responses’.⁸ These debates were spurred by the increasing acceptability of birth control. In 1922, a London health visitor was dismissed for providing birth control information, but in 1930, the Ministry of Health issued a memorandum permitting local authority welfare facilities to give contraceptive advice – for health reasons – to married women, widening access beyond volunteer-run clinics like Stopes’.⁹ This represents what Lesley Hall calls a ‘volte-face of the medical profession’, while ‘public opinion had changed radically and the tide of support was now running in favour of birth control, at least within marriage, to space and limit families’.¹⁰

Letters to Marie Stopes, published in book form as *Mother England* in 1929, make clear that access to birth control devices – namely the female barrier devices available at volunteer-run clinics – was still highly restricted and that abstinence and/or withdrawal remained popular techniques.¹¹ These letters also indicate, however, that people were becoming increasingly aware of birth control from the media, as well as clinics, even if many outlets were still

reluctant to advertise the topic; many of Stopes's working-class correspondents wrote to her after reading her column in the inexpensive popular newspaper *John Bull*. Her influence spread (probably via the music hall) to the school playground, where children chanted 'Jeanie, Jeanie, full of hopes/Read a book by Marie Stopes/But, to judge from her condition/She must have read the wrong edition'.¹² During the 1920s, the *Daily Herald* became the only British national daily to print advertisements for birth control devices,¹³ and in 1926, Julian Huxley mentioned 'birth control' on the radio.¹⁴ Sex without reproduction was becoming increasingly thinkable, as well as discussable, during the interwar period. Even if many Britons could not directly access birth control devices, they became increasingly aware that others could, changing the context for their own sexual lives.

At the same time, Haldane's writings sparked a debate in Britain about the implications of reproductive technologies, whether real or imagined. Haldane even appeared in his friend Huxley's first novel, *Crome Yellow* (1921), as a scientist who brags that 'the means of disassociating love from propagation' has been found and predicts that in a few centuries 'an impersonal generation will take the place of Nature's hideous system. In vast state incubators, rows and rows of gravid bottles will supply the state with the population it requires.'¹⁵ Haldane's work gained notoriety, first through his lectures and then through the 1924 publication of his book *Daedalus: or Science and the Future*, which describes Britain circa 2173 when 'ectogenesis is now universal, and in this country less than 30 per cent of children are now born of woman'.¹⁶ Haldane describes the technique thus: 'we can take an ovary from a woman, and keep it growing in a suitable fluid [...] embryos [can be] grown successfully for nine months, and then brought out into the air'.¹⁷ This is exactly the system used in *Brave New World*, in which Huxley describes 'the technique for preserving the excised ovary alive and actively developing'.¹⁸

Haldane's male narrator expresses a twinge of unease about the end of motherhood, noting that 'the separation of sexual love and reproduction which was begun in the nineteenth century and completed in the twentieth' has not had entirely satisfactory results, as 'the old family life had certainly a good deal to commend it'.¹⁹ Yet this anxiety is quickly buried, as he hastens to add that eugenics has saved the world; 'had it not been for ectogenesis there can be little doubt that civilization would have collapsed within a measurable time owing to the greater fertility of the less desirable members of the population'.²⁰ Haldane concludes that separating sex and reproduction would be liberating.

Since the 1990s, Huxley scholars such as David Bradshaw have argued that *Brave New World* is far more ambivalent about eugenics than had been acknowledged by interpretations of the novel as an anti-eugenic dystopia; reading the novel in the context of Huxley's essays, in which he advances eugenicist ideas, Bradshaw maintains that the novel 'embodies in an absurd and distorted form ideas and opinions that Huxley framed in earnest beyond his novel's satirical parameters'.²¹ If Huxley is read as no longer simply

critiquing the eugenic structure of his invented society, then he can also be read as no longer simply critiquing ectogenesis; indeed, it emerges as a potentially positive technology for its ability to further eugenic goals, an echo of Haldane's writings.

As in *Daedalus*, unease about ectogenesis in *Brave New World* – like female experience in general – is treated only glancingly. Lenina, the novel's most prominent female figure, is important largely because of her relationships with key male characters. One of the few scenes that appears to focus on her is really just an opportunity for Huxley to continue describing how reproduction works in his invented future. Since no women actually bear children, an activity considered important for women's physical and psychological health at the time the novel was written, they must take hormones to mimic the effects of pregnancy.²² The Pregnancy Substitute itself is rather elaborate, testifying to the genius of male scientists who have managed to imitate the body's natural processes and hormones: it consists of 'a row of boxes and labelled phials' containing such chemicals as 'corpus luteum', which is also the name of a temporary structure that develops monthly in the female body to secrete progesterone.²³ Along with the development of artificial wombs that underpins *Brave New World*, the existence of a pregnancy substitute subjugates a female bodily experience to male technological control, reinforcing the old binary of woman as body and man as mind.²⁴

Yet the troublesome body still remains, as Lenina's co-worker Fanny attests when she tells Lenina: 'I've been feeling rather out of sorts lately. Dr Wells advised me to have a Pregnancy Substitute.'²⁵ Lenina objects, 'the first Pregnancy Substitute isn't compulsory till twenty-one', but Fanny assures her, 'some people are better if they begin earlier. Dr Wells told me that brunettes with wide pelvises, like me, ought to have their first Pregnancy Substitute at seventeen.'²⁶ Fanny's wide hips would have once been thought promising for successful childbearing, but in this inverted world, they mark her as someone whose natural fertility is difficult to suppress. The troublesome body, like the troublesome woman, however, is easily pushed aside in *Brave New World*. Fanny does not connect her feeling of maternal deprivation with state oppression. Instead, she is a mouthpiece for conventional views; she chides Lenina for her monogamous tendencies, insisting 'it's not as though there were anything painful or disagreeable about having one or two men besides Henry [...] you ought to be a little more promiscuous'.²⁷ When Lenina says she's intrigued by Bernard Marx, Fanny responds with 'horror' that 'he spends most of his time by himself – alone', and warns Lenina 'one of these days [...] you'll get into trouble'.²⁸ Fanny's maternal urges are easily satisfied with Pregnancy Substitutes, and she vanishes after this brief appearance.

Interwar feminist writers, however, exposed technophilia as a male fantasy by exploring unease about the end of motherhood in their dystopian fiction. Some, like Vera Brittain (1893–1970), described how technology could be reclaimed for feminist ends. Her essay *Halcyon, or the Future of Monogamy*

(1929) is, like *Daedalus*, a history of the future, but one that writes women back into the picture after ectogenesis fails. Brittain's female narrator recounts that the first lab-grown children, although 'selected from the best stock', tragically died due to a lack of mothering, leading 'nearly all twenty-first century parents to return to natural methods of reproduction'.²⁹ In Brittain's utopia, scientific resources were devoted not to eliminating women from reproduction but to making the experience enjoyable; ways of making child-birth painless and pregnancy pleasurable are soon discovered. Brittain does not want to abandon artificial wombs altogether, however, as she believes that in a few cases – for women who must travel frequently, for example – their benefits might outweigh their dangers. She invents a new form of female-friendly ectogenesis that begins and ends with the mother's body: the embryo is removed from the mother a few weeks after conception, grown in the lab, and then returned to the mother.

However, Naomi Mitchison, the novelist and birth control activist – and Haldane's sister – took a more ambivalent attitude to the potential separation of sex and reproduction. She saw the new availability of birth control – especially in her privileged circles – as a sea change that presented new problems as well as opportunities, writing in a 1930 essay, *Comments on Birth Control*, that 'another moral problem which our ancestors did not have to cope with, is this terrible responsibility of the deliberate creation or denial of life'.³⁰ Mitchison argued that birth control was being so easily taken for granted as a good because women's opinions were neglected. While she saw first-hand as a volunteer how working-class women benefited from contraception, she worried that many middle-class women were being pressured into having smaller families than they wanted. For someone of her time and milieu, Mitchison was unusually critical of eugenics, a position evident as far back as 1913, when at the age of 16 she wrote an anti-eugenics play that her friends Aldous and Julian Huxley, as well as her brother, performed in. Her anxiety about the effects of 'propaganda for birth control' on the middle class, therefore, was based not so much on eugenic concerns but rather on a sense that motherhood was undervalued in the modern age.³¹

Another challenge to Haldane's ideas came from close to home: his wife, Charlotte. Her 1926 dystopia *Man's World* is conflicted: while her sympathy for eugenics led her to cast technologies of reproductive control as potentially beneficial, her concern for women deprived of motherhood through these technologies seems to undermine these supposed benefits. The novel is set in a future society controlled by male scientists in which women – 'perfect vessels singled out for the propagation of our race' – are divided into vocational mothers and non-mothers, who are sterilized by inoculation.³² The former must perform pregnancy exercises to ensure the birth of sons and thus eliminate the problem of 'surplus women', a topic of concern in Britain after the First World War.³³

As in *Daedalus*, technocratic control of motherhood is also necessitated by eugenic thinking; otherwise, 'children would be born haphazard everywhere,

would be bred by the pure and the impure [...] it would simply lead to the dirty, bestial breeding of the past again. The race would be doomed'.³⁴ Yet the main female character, Nicolette, rebels by refusing to choose either vocational motherhood or sterilization. Even though Nicolette ultimately becomes pregnant with a eugenically appropriate mate and is co-opted back into society, her rebellious pregnancy relabelled a 'scientific experiment', I would argue that *Man's World* can still be read as a feminist technophobic critique of male usurpation of reproduction. One of the most powerful voices is that of a character who laments:

It is time we women were no longer subjected to such abominable tyranny. Here we are, pushed into their beastly rigid castes and divided off into breeders and non-breeders to serve the race [...] I should like to have a child. But they forestalled me. The most interesting experience of all is denied me.³⁵

Even if female characters fail in their attempts at resistance, they are still radicalized by the deprivation of the right to mother, unlike Fanny and Lenina. This process of radicalization is taken further in contemporary reprodystopias in which the denial of motherhood also leads to radicalization and rebellion.

CONTEMPORARY REPRODYSTOPIAS

Since the 1978 birth, in England, of the world's first 'test-tube baby', Louise Brown, over 5 million babies have been born through IVF and other assisted reproductive technologies (ARTs).³⁶ IVF, a technology conceived to treat women with blocked fallopian tubes, has become naturalized and is now employed by a much wider population, including healthy women with infertile male partners, and gays and lesbians who are infertile not individually but as couples. While our reproductive landscape has changed dramatically since the interwar period, it is the contention of this chapter that concerns over the deprivation of the right to mother that arose because of the new thinkability of contraception and artificial wombs in the 1920s and 1930s have been reactivated in our current IVF age.

These concerns seem largely dormant in reproduction-related dystopian fiction written in the decades before the birth of Louise Brown. Instead of touching on involuntary childlessness or technological attempts to boost fertility, issues which might be scaled up into a story of underpopulation, 1960s and 1970s dystopian literature both reflected and stoked cultural anxiety about overpopulation. I would argue that a framework of understanding derived from this context still shapes theorization of dystopian fiction today, without making allowances for changes in the medical, social, and cultural landscape.

Canonical examples of overpopulation fiction include Harry Harrison's *Make Room! Make Room!* (1966), set in a 1990s New York City overwhelmed by 35 million people (filmed as *Soylent Green* (1973), in which the mysterious foodstuff of the title is revealed to be human meat), and British author John

Brunner's *Stand on Zanzibar* (1968), in which the Earth's population barely fits on the eponymous island. These narratives were part of a cultural movement reflected and spurred on by *The Population Bomb* (1968), in which biologist Paul Ehrlich urged every college professor in the USA to teach the population crisis. Ehrlich added that those teaching English or drama 'may be able to write novels or plays emphasizing near-future worlds in which famines or plagues are changing the very nature of mankind and his societies'.³⁷ Domingo's term 'demodystopia' is based largely on such male-authored stories of overpopulation. His term seems apt for some of the overpopulation novels he describes, such as *Make Room! Make Room!*, in which Harrison critiques the Catholic Church's opposition to contraception, and in which no coercive reproductive control is imposed. Yet, in focusing on general horrors, the term 'demodystopia' does not capture dystopias built around the limitation of individual reproductive choice. For example, Brunner's title *Stand on Zanzibar* is based on a statistic, and his large cast of characters provides a cross-section of his dystopian society. My alternative term, 'reprodystopias', recognizes the centrality of gender in these narratives and highlights crucial questions: If the state begins to crack down on population growth, making pregnancy illegal, who bears the brunt of this repression? When governments attempt to boost a dwindling populace, who is most affected by pronatalist measures?

Domingo does not examine these questions, nor implicate IVF in the growing concern with population shrinkage exemplified by such novels as *The Children of Men* (1992) by P.D. James (1920–2014) and *The Ice People* (1999) by Maggie Gee. Both novels, though written by women, focus on men. The former, set in 2021 in a world of universal male infertility,³⁸ tells the story of Theo, an academic who has accidentally killed his own daughter; he redeems himself and saves England by defeating his despotic cousin and assisting in the birth of a Christ-like child – a boy, of course. The latter tells the story of Saul, who also lives in a world in which infertility has caused social meltdown. Saul recounts the story of his marriage, from its halcyon days to the time when his wife left him for a commune of women and children, taking their son. Although both novels allow for a critique of their sexist male protagonists,³⁹ neither permits much subjectivity on the part of the female characters.

Kavenna's *The Birth of Love* and Hall's *The Carbullian Army* stand out, then, as reprodystopias that focus on female experience. The former can be read as a partial rewriting of *Brave New World* from the perspective of its neglected female characters. While Fanny's misplaced broodiness is suppressed through hormone treatments, Kavenna imagines a protagonist who is radicalized through her unfulfilled maternal ambitions. *The Birth of Love* is an attempt to represent childbirth, which Kavenna believes has long been omitted from literature: three of its strands tell the stories of the nineteenth-century doctor, Ignaz Semmelweis (1818–65), who discovered that doctors were spreading puerperal fever, a novelist in present-day London writing about Semmelweis, and another contemporary Londoner about to have her second child.

In the fourth, the one I will focus upon, the protagonist, known only as Prisoner 730004, is accused of conspiring against the state authority, known as 'Genetix', which controls human reproduction by sterilizing all women and instead employing artificial wombs and eugenically selected donors. The year is 2153. As in *Brave New World*, 'mother' is a dirty word, and women take hormones to quash maternal urges. When 730004's neighbour Birgitta miraculously becomes pregnant, 730004 runs away with her and others to an island where Birgitta gives birth to a son. 730004 and some others are recaptured, and the story is told as a transcript of their interrogation.

730004 confesses that her state-assigned job caring for babies compounded her grief at being deprived of motherhood. Genetix officials point out in clinical language that since her eggs passed the eugenic test, they have 'generated many progeny of the species'.⁴⁰ Yet she tells her interrogators: 'I felt deeply sad that I could not have a child myself [...] I do not mean children that I will never meet and who were generated in a laboratory using sperm from men I will never know. I mean children of my own womb, grown and nurtured from my own body.'⁴¹ 730004 continues, blasphemously:

When I was working at the nurture grounds, each day I would hold these beautiful little babies – 'progeny' you would say – in my arms and feel how monstrous it was that my living body had been rendered barren, that the eggs had been ripped out of my womb when I was merely eighteen and taken to a laboratory somewhere, where I didn't even know, and fertilised without love or passion.⁴²

Her experience of infertility is one of embodied grief; she speaks of suffering 'the yearning of the sterilised body to procreate'.⁴³ Another female escapee echoes her lament: 'at the age of eighteen like everyone of my generation I was stripped of my biological right and deprived of joy'.⁴⁴

Like Morgana in *Man's World*, these characters express a powerful, thwarted longing for children. As in *Man's World*, there is no feminist repurposing of technology, à la Britain; instead, men, science and the state are tied together in a trinity of oppression. *Man's World* is controlled by male technocrats, and some sterilized women work as 'entertainers', or courtesans; in *The Birth of Love*, Prisoner 730004 is brought before a court of 'Protection Scientists [...] half a dozen men [...] the elite guardians of this civilisation'.⁴⁵ Before her escape, Birgitta was forced to work as a comfort woman in the 'Sexual Release Center' where 'she was fucked twenty times a day [...] ritually raped and abused'.⁴⁶ Although some escapees are male, the novel focuses on women's suffering at the hands of men.

The novel ends on a more defiant note than *Man's World*, as 730004 refuses to provide information on Birgitta's baby. State-imposed infertility not only radicalizes 730004 – and others – but perhaps plants the seeds of the state's ultimate destruction; it is implied that even if 730004 and her co-conspirators

are killed, Birgitta and her son may be able to inspire others. At the same time, the failure of the rebellion serves as the ultimate condemnation of the state.

Sarah Hall's novel *The Carhullan Army* bears striking similarities to *The Birth of Love*: both feature a ban on unrestricted births in a world of rationed resources following an eco-disaster, both are told as the statement of a female prisoner who escaped from a totalitarian state, and both use the state's draconian control of reproduction to epitomize its oppressiveness. Since one must win a lottery to have a baby in *The Carhullan Army*, government-mandated contraception comes to symbolize the iron fist of 'the Authority'. The protagonist, known only as Sister, recounts how she requested, but was denied, a female doctor to implant her mandatory IUD and how patronized she felt when the doctor 'attached the device as efficiently as a farmer clipping the ear of one of his herd'.⁴⁷ Afterwards, Sister says, 'I felt awful [. . .] I looked at the plastic pots in which I had tried to grow courgettes and beans the summer before. They hadn't sprouted and in places the soil looked interfered with, as if it had been dug out by an animal.'⁴⁸ This is not merely an image of infertility, but of barrenness created by disruption. Sister's feeling of violation is compounded by the humiliating spot checks for IUD compliance to which all women are subjected.

Most tellingly, Sister's experience with forced contraception brings out the chauvinism in her husband Andrew. Sister used to 'look to him for reason, for a voice', but is radicalized when the state infringes her reproductive rights.⁴⁹ Andrew sees state limitation of motherhood as a necessary measure rather than an oppressive force; one day he shouts at her, 'Why the hell would you want to bring a baby into all this mess anyway, even if your number came up for it? [. . .] Fucking hell, this country is in bits and you're obsessing about your maternal rights! Where are your priorities?'⁵⁰ Child-longing is thus depicted as a desire that is incomprehensible to men but inherent in women, a desire that even grows stronger in women when faced with difficulty.

Andrew insists on having sex after the IUD insertion even though 'everything felt inflamed' and Sister has been advised to wait 24 hours.⁵¹ She recounts: 'I wanted to ask him to stop, it had been too traumatic and there was still some blood, but neither of us had ever said no to the other.'⁵² Sister recalls: 'I could see it in his face, the degree by which he felt the sensation more than usual [. . .] he came quickly, and with more intensity than he ever had.'⁵³ This unwanted sex illuminates the widening gulf between Sister and Andrew, women and men; his enjoyment is heightened because the IUD represents sex without consequences, while for her it represents sex without the possibility of a longed-for baby.

Sister soon runs away from Andrew to a women-only farm called Carhullan, where she has her IUD removed, a sign of her liberation from male oppression. Sister muses: 'Since the regulator had been fitted I'd felt a sense of minor but constant embarrassment about myself, debilitation almost, as if the thing were an ugly birthmark.'⁵⁴ Now 'the device felt exactly as it was: an alien implant, an invader in my body [. . .] I was not wrong to hate it'.⁵⁵ The IUD removal is the

opposite of its insertion; a folksy medical practitioner offers Sister emotional support and herbal remedies handed down from a long history of women's medicine. Sister starts a sexual relationship with another Carhullan woman, further illustrating her liberation from patriarchy.

Yet this female utopia is doomed, as its charismatic leader Jackie, wants to turn Carhullan into an army. She uses Sister's story to inspire revolt, asking her 'how bad does a situation have to be before a woman will strike out, not in defence, but because something is [. . .] worth fighting for?'⁵⁶ All Carhullan's inhabitants left before 'the Authority's anti-breeding campaign' was implemented, and Sister's testimony is turned into a consciousness-raising show-and-tell; the hated coil is passed around, becoming a symbol of the evils of the male-dominated state as Sister tells the women of her failed marriage, her 'humiliation at the hands of the doctor', and 'the deprivation, sickness, the Authority abuses'.⁵⁷ Jackie asks her, 'when you went in to get that tag fixed up your tuss, why didn't you fight then? [. . .] Suppose you had that old gun I've fixed up. Would it make any difference, that gun?'⁵⁸ Sister's value as a witness to Authority oppression shapes the rest of the novel, including her acceptance into the army. Like Kavenna's, Hall's novel ends on a note of defiance. Sister insists: 'I am second in council to the Carhullan Army. I do not recognise the jurisdiction of this government'.⁵⁹ Rebellion has multiple purposes in dystopian fiction: if it fails, it serves as an indictment of the repressive state that passes the responsibility of resistance on to the reader, but whether it fails or succeeds, it shows that resistance is possible. In *The Carhullan Army* and *The Birth of Love*, seeking reproductive freedom is a form of resistance.

CONCLUSION

In a *Guardian* review of Kavenna's novel, Ursula Le Guin complained: 'a semi-mystic Virgin-birth rigmarole featuring science as the villain is only the stuff of rant [. . .] few [governments] even now are trying to encourage birth control. So why a sermon in defence of something quite unthreatened, the uncontrolled excess of which may be the greatest threat we face?'⁶⁰ I partly identify with this sense of annoyance. In Kavenna and Hall's novels, the lost chance at motherhood stands to epitomize all the horrors inflicted by the state. This emphasis on the violated ability to mother as the keystone of dystopia neglects other aspects of repression, casts women as the ultimate victims, and naturalizes child-longing as feminine. The state's abuse of power and intrusion into the most private aspects of people's lives is symbolized by its complete co-option of reproduction; motherhood is thus valorized as the supreme expression of the self, the most tragic thing to lose and thus the perfect symbol for the repressive nature of the state.

In a 2007 article, Rachel Bowlby identified a shift since 1960s feminism, within which 'the emphasis was on the right for women not to have children – on pregnancy and motherhood as burdens [. . .]. Motherhood, at this time,

was really not much of an issue in feminist debate [...] other than negatively, as what not to do or to be'.⁶¹ Now, Bowlby argues:

Where previously the new cultural focus was on the right not to have babies, it is now [...] much more on the right and the positive wish to be a parent [...] where before [that wish] might have been seen by many as a normative ideological imposition on women, now it is almost always presented as a natural desire.⁶²

Cultural depictions of reproductive technologies often enhance an essentializing connection between womanhood and motherhood, a connection particularly revealed in the negative – that is, when womanhood does not automatically lead to motherhood or is even forcibly decoupled from it by infertility, whether biologically or socially imposed. *The Birth of Love* and *The Carhullan Army* collude in this naturalization of maternal desire. Yet instead of dismissing these novels as technophobic nonsense, I will ask what other cultural work they attempt by reading them against the grain, in the context of the best-known women's reprodystopia, Margaret Atwood's *The Handmaid's Tale*.

The Handmaid's Tale is most often read as a cry against compulsory motherhood in the context of the repressive Reaganite years. The novel is set in a neo-biblical future in Gilead, an American Christian theocracy (imagined, of course, by a Canadian author) in which ecological disaster has rendered most people infertile. Anyone deemed a 'sinner', like the narrator, who married a divorced man in pre-Gilead times, is forced to become a 'handmaid' and bear children for higher-ranking couples; since Fred is her assigned Commander, the narrator is known as Offred. Abortionists are publicly hanged. Offred notices that on one hooded figure 'there's blood, which has seeped through the white cloth, where the mouth must have been. It makes another mouth, a small red one, like the mouths painted with thick brushes by kindergarten children. A child's idea of a smile.'⁶³

This child-centred metaphor offers a way into the flip side of *The Handmaid's Tale*, which captures not the mandating of motherhood but its deprivation. The reader finds out, obliquely at first, that Offred's daughter was taken away three years ago, when she was only 5. Offred recalls: 'She's in good hands, they said. With people who are fit. You are unfit, but you want the best for her. Don't you? They showed me a picture of her [...] holding her hand was a woman I didn't know. You've killed her, I said. She looked like an angel'.⁶⁴ Offred's trauma is illustrated through a recurring nightmare: 'I'm running, with her, holding her hand [...]. She's too young, it's too late, we come apart, my arms are held [...]. I can see her, going away from me [...] holding out her arms to me, being carried away'.⁶⁵ Everyday memories like the aroma of bread baking remind Offred of 'former times, when I was a mother'.⁶⁶

In fact, Offred is doubly deprived of motherhood: her Commander is probably infertile, although infertility is blamed on women and handmaids

who fail to get pregnant are classed as ‘unwomen’ and shipped off to labour camps. Atwood draws on a biblical story of infertility by having Offred echo Rachel’s plea to her husband Jacob: ‘Give me children, or else I die’, which for the handmaidens of Gilead has acquired a horrifically literal meaning. *The Handmaid’s Tale* contains powerful images of infertility. Offred laments:

I become the earth I set my ear against, for rumors of the future. Each month I watch for blood, fearfully, for when it comes it means failure [. . .] I used to think of my body as an instrument of pleasure, or an implement for the accomplishment of my will [. . .] now I’m a cloud, congealed around a central object, which is hard and more real than I am [. . .] every month there is a moon [. . .] It transits, pauses, continues on and passes out of sight, and I see despair coming towards me like famine. To feel that empty, again, again.⁶⁷

Just as Offred can no longer experience the delight she once took in her body – wearing slinky dresses, dancing, enjoying non-procreative sex – the pleasure she took in her body as athletic and powerful has been taken away. Not just forced surrogacy but also infertility has reduced her to a womb. Offred is, of course, coercively subjected to the Commander’s attempts at impregnation, and if she were to have a child, it would be taken away. Yet I would argue that this representation of the pain of infertility slips free of its immediate context to serve as a more universal lament, especially when considered alongside Offred’s mourning for her lost daughter.

The Handmaid’s Tale is often read as a reaction to the rise of American Christian right-wing political movements, most notoriously the organization founded in 1979 by Jerry Falwell, the ‘Moral Majority’. In January 1980, the Moral Majority described women who visited Planned Parenthood, America’s largest provider of reproductive health services, as ‘women who want, but can’t afford, to kill their babies’. In 1981, the group labelled abortion a ‘biological holocaust’, like slavery and Nazi death camps.⁶⁸ Atwood’s novel powerfully resists the campaign against contraception and abortion still prevalent in America. Yet to read the novel only in this vein is to flatten out its complexity. I will conclude by suggesting that in its defence of a woman’s right to mother, *The Handmaid’s Tale* can be read as a mother text for *The Birth of Love* and *The Carhullan Army*.

I assert this genealogy even though the technophobia of these recent reproductive dystopias seems to be called into even sharper relief by comparison with *The Handmaid’s Tale*. In Kavenna’s and Hall’s novels, women are cut off from nature by the technology of the state. In Atwood’s, women are cut off from technology by the state and treated as ‘natural resources’.⁶⁹ Offred’s troubles begin when her cash card stops working and she, along with her female co-workers, loses her job digitizing books. ‘Just leave the machines’, her male boss orders.⁷⁰ Offred’s Commander insists: ‘All we’ve done is return things to Nature’s norm’.⁷¹ Yet as I have shown, Atwood’s story of forced surrogates stripped of their own children is

double-sided. The novel is capacious enough to contain both the fear that restricted access to contraception and abortion will create regimes of compulsory motherhood, and the fear that some women will be deemed unfit to mother.

In response to Le Guin's rhetorical question – 'Why a sermon in defence of something quite unthreatened?' – I would like to suggest that *The Birth of Love* and *The Carhullan Army* are responding to an aspect of state-imposed reproductive control that does feel threatening: ways in which the state might selectively withhold motherhood. In *The Birth of Love*, the government selects whose genetic material is used for the next generation, a eugenic decision-making process that is vilified as arbitrary. *The Carhullan Army* exposes this process as completely arbitrary: one must win a lottery.

The idea that a lottery could be used to determine whether or not a woman is able to have a baby, however, is not merely the stuff of fiction. These novels, in dramatizing the state imposition of infertility, are responding to a world of unequal access to reproductive technologies, a world in which there are actually IVF lotteries. In order to generate publicity, some twenty-first-century American clinics raffle off IVF treatments, sometimes inviting women to compete by submitting 'the most emotional or entertaining essays and homemade amateur videos'.⁷² In the UK, the infertility website *To Hatch* recently attempted to organize a lottery in which people would pay £20 for a ticket to be in with a chance to win £25,000 of fertility treatment. Depending on the winner, the prize could include IVF, donor eggs, or even gestational surrogacy. The treatment would take place at an overseas clinic, and the winner would also receive 'the ultimate pampering and Concierge Service', including all travel and accommodation costs, a chauffeur, and a 'Luxury Fertility Hamper'.⁷³

In fact, *To Hatch's* IVF lottery, planned for 2011 after being licensed by the Gambling Commission, was postponed because of an investigation by the Charity Commission. The UK's Human Fertilisation and Embryology Authority stated that it believed 'using IVF as a "prize" in a lottery is wrong and entirely inappropriate [...] It trivialises what is for many people a central part of their lives'.⁷⁴ The businesswoman behind the idea, Camille Strachan, retaliated by pointing out that the NHS has different criteria for IVF eligibility in different areas, creating what is often termed a 'postcode lottery'. The bioethicist Anna Smajdor also defended the raffle, noting that primary care trusts 'may withhold treatment from women who are single, who are overweight, who smoke, who have previously had children [...] these people have been unwittingly entered into a postcode lottery [...] arguably the explicit adoption of a lottery mechanism is more open, and less discriminatory, than today's morass of IVF eligibility criteria'.⁷⁵

I would suggest that by generalizing this unfairness to the entire population, by making everyone – not just those too poor to afford private treatment – subject to a lottery that determines who can have a baby, these novels articulate pressing contemporary fears about the state's power to

decide who gets access to reproductive technologies. Unlike many dystopian protagonists, who tend to be insiders, or characters with important roles who know how the system works – think Bernard Marx, an Alpha in *Brave New World*, or Winston, who works at the Ministry of Truth in *Nineteen Eighty-Four* – these heroines are working-class. Sister is assigned to factory work, and Prisoner 730004 is assigned to a childcare facility. The use of marginalized heroines in these state-imposed infertility narratives may be another attempt to symbolize the perceived power differential between IVF researchers and practitioners on one hand, and patients and hopefuls on the other. The message is that all women could be in the same boat, and since – in the problematic but resonant logic I have identified in these novels – women stand to lose the most when denied parenthood, women need to stick together.

As I have argued, reproductive technology is vilified in these novels in problematic ways that serve to naturalize women's longing for children. Yet to read these novels as technophobic screeds is to lose their complexities. Just as *The Handmaid's Tale's* critique of enforced motherhood can be magnified into a call for reproductive justice, the attack on state-imposed infertility in both Hall's and Kavenna's novels can be read as broadening into a condemnation of the state that deprives women of the right to mother by any means: the state that applies its own criteria to determine who is a proper parent, the state that allows a lottery to decide who has the chance to reproduce and who does not. Abortion, and non-reproduction in general, are often construed as radical and oppositional, as in readings of *The Handmaid's Tale* as a critique of compulsory motherhood. Atwood's novel, however, is also concerned with women deprived of motherhood, and Hall and Kavenna extend that idea by casting pregnancy as protest.

These contemporary female-authored reprodystopias, then, belong to a lineage of women's writing which challenges the idea that severing sex from reproduction would be a universal positive. Like their predecessors, *The Birth of Love* and *The Carhullan Army* call attention to the complex interplay of individual and community in issues of reproduction. In the 1920s and 1930s, having children was often cast as women's contribution to the nation and 'British race'. One mother of seven children asking Stopes about birth control wrote: 'I do not think I am asking advice before I have at least Done my Duty as a woman'.⁷⁶ Yet *Man's World* explores the other side of this relationship: what happens to women when the state intervenes to stop them having children.

Today, when and whether to have children is often considered a purely personal matter, but Hall and Kavenna call attention to the ways in which these seemingly individual acts are bound up with wider forces that continue to discourage, or even prevent, certain woman from having children. The sociologist Maureen McNeil argues that 'since the 1980s British and North

American cultures have tended to construe biological barriers as challenges, while the social and political imaginary for addressing other kinds of problems (particularly in the area of reproduction) has become impoverished'.⁷⁷ Through their creation of dystopias in which the state's most pronounced repressiveness – its denial of motherhood – gives rise to its most powerful challenge, Hall and Kavenna employ the genre of dystopia in an attempt to replenish this socio-political imaginary, prodding us to realize that contemporary rhetoric about freely-made 'choices' obscures broader questions about a lack of social and political support for motherhood that must be asked in order to form alternatives to the status quo.

NOTES

1. Lesley Hall, *Sex, Gender and Social Change in Britain since 1880* (Basingstoke, 2000).
2. J.B.S. Haldane, *Daedalus: Or Science and the Future* (London, 1924), p. 42.
3. Fatima Viera, 'The Concept of Utopia', in Gregory Claeys (ed.), *The Cambridge Companion to Utopian Literature* (Cambridge, 2010), p. 18.
4. Andreu Domingo, "'Demodystopias": Prospects of Demographic Hell', *Population and Development Review*, 34.4 (2008), p. 725.
5. Angus McLaren, *Reproduction by Design: Sex, Robots, Tree and Test-Tube Babies in Interwar Britain* (Chicago, IL, 2012), p. 2.
6. Charis Thompson, *Making Parents: The Ontological Choreography of Reproductive Technologies* (Cambridge, MA, 2005), p. 52.
7. Jose van Dijck, *Manufacturing Babies and Public Consent: Debating the New Reproductive Technologies* (Basingstoke, 1995).
8. McLaren, *Reproduction by Design*, p. 10.
9. Hall, *Sex, Gender and Social Change in Britain since 1880*, p. 103.
10. Hall, *Sex, Gender and Social Change in Britain since 1880*, p. 116.
11. Marie Stopes, *Mother England: A Contemporary History Self-Written by Those Who have had no Historian* (London, 1929).
12. Clare Debenham, *Birth Control and the Rights of Women: Post-Suffrage Feminism in the Early Twentieth Century* (London, 2013).
13. Adrian Bingham, *Gender, Modernity, and the Popular Press in Inter-War Britain* (Oxford, 2004), p. 156.
14. Krishna Dronamraju, *Haldane, Mayr, and Beanbag Genetics* (Oxford, 2011), p. 117.
15. Aldous Huxley, *Crome Yellow* (London, 1921), p. 47.
16. Haldane, *Daedalus*, p. 42.
17. Haldane, *Daedalus*, p. 41.
18. Aldous Huxley, *Brave New World* (London, 1932), p. 3.
19. Haldane, *Daedalus*, p. 42.
20. Haldane, *Daedalus*.
21. David Bradshaw, 'Huxley's Slump: Planning, Eugenics, and the "Ultimate Need" of Stability', in John Batchelor (ed.), *The Art of Literary Biography* (Oxford, 1995), p. 168. The revelation of the 'Hidden Huxley', as Bradshaw puts it in his

- 1994 book of that same title, is too large a topic to go into here; for a useful account, see Joanne Woiaak, 'Designing a Brave New World: Eugenics, Politics and Fiction', *The Public Historian*, 29.3 (2007).
22. See, for example, Mitchison's note in *Comments on Birth Control* (London, 1930) that a conservative writer she largely disagreed with, Mr Ludovici, 'produces one valuable contribution [...] that the normal woman's sexual cycle is emotionally incomplete without pregnancy and lactation' (p. 23).
 23. Bingham, *Gender, Modernity, and the Popular Press in Inter-War Britain*, p.156.
 24. Huxley, *Brave New World*, p. 32.
 25. Huxley, *Brave New World*, p. 32.
 26. Huxley, *Brave New World*, p. 32.
 27. Huxley, *Brave New World*, p. 37.
 28. Huxley, *Brave New World*, p. 37.
 29. Vera Brittain, *Halcyon, or the Future of Monogamy* (London, 1929), p. 77.
 30. Naomi Mitchison, *Comments on Birth Control* (London, 1930), p. 14.
 31. Mitchison, *Comments on Birth Control*, p. 7.
 32. Charlotte Haldane, *Man's World* (London, 1926), p. 51.
 33. Samuel Hynes, *A War Imagined: The First World War and English Culture* (London, 1990), p. 380. See also Vera Brittain's 1920 poem 'The Superfluous Woman', which ends with the line: 'But who will give me my children?'
 34. Haldane, *Man's World*, p. 127.
 35. Haldane, *Man's World*, p. 188.
 36. Geoffrey Adamson, M. Tabangin, M. Macaluso, and J. de Mouzon, 'The Number of Babies born Globally after Treatment with the Assisted Reproductive Technologies', *Fertility and Sterility*, 100:3 (2013).
 37. Paul Ehrlich, *The Population Bomb* (New York, 1968), pp. 191–2.
 38. The film strikingly departed from the book in blaming women rather than men for the infertility epidemic, perhaps for the comfort of male audiences.
 39. See Sarah Dillon, 'Literary Equivocation: Reproductive Futurism and The Ice People', in Sarah Dillon and Caroline Edwards (eds), *Maggie Gee: Critical Essays* (Canterbury, 2015).
 40. Joanna Kavenna, *The Birth of Love* (London, 2010), p. 112.
 41. Kavenna, *The Birth of Love*, p. 112.
 42. Kavenna, *The Birth of Love*, p. 117.
 43. Kavenna, *The Birth of Love*, p. 113.
 44. Kavenna, *The Birth of Love*, p. 247.
 45. Kavenna, *The Birth of Love*, p. 297.
 46. Kavenna, *The Birth of Love*, pp. 262–3.
 47. Sarah Hall, *The Carhullan Army* (London, 2007), p. 28.
 48. Hall, *The Carhullan Army*, p. 28.
 49. Hall, *The Carhullan Army*, p. 25.
 50. Hall, *The Carhullan Army*, p. 33.
 51. Hall, *The Carhullan Army*, p. 28.
 52. Hall, *The Carhullan Army*, p. 29.
 53. Hall, *The Carhullan Army*, p. 29.
 54. Hall, *The Carhullan Army*, p. 90.
 55. Hall, *The Carhullan Army*, p. 90.

56. Hall, *The Carhullan Army*, p. 117.
57. Hall, *The Carhullan Army*, p. 119.
58. Hall, *The Carhullan Army*, p. 118.
59. Hall, *The Carhullan Army*, p. 207.
60. Ursula Le Guin, 'Review, *The Birth of Love* by Joanna Kavenna', *Guardian*, 4 June 2010.
61. Rachel Bowlby, 'Generations', *Textual Practice*, 21:1 (2007), p. 2.
62. Bowlby, 'Generations', p. 3.
63. Margaret Atwood, *The Handmaid's Tale* (New York, 1985), p. 42.
64. Atwood, *The Handmaid's Tale*, p. 49.
65. Atwood, *The Handmaid's Tale*, p. 85.
66. Atwood, *The Handmaid's Tale*, p. 57.
67. Atwood, *The Handmaid's Tale*, p. 84.
68. David Snowball, *Continuity and Change in the Rhetoric of the Moral Majority* (New York, 1991), p. 112.
69. Atwood, *The Handmaid's Tale*, p. 93.
70. Atwood, *The Handmaid's Tale*, p. 186.
71. Atwood, *The Handmaid's Tale*, p. 232.
72. Douglas Quenqua, 'Clinic Raffles Could Make You a Winner, and Maybe a Mother', *New York Times*, 20 October 2012, p. A1.
73. Tazz Gault, 'The New Lotto Motto – "I Want to Win a Baby"', *The Buzz*, 20 March 2012.
74. Human Fertilisation and Embryology Authority, 'Statement on IVF Lottery' (2011): <http://www.hfea.gov.uk/6511.html>. Accessed 6 December 2016.
75. Anna Smajdor, 'The IVF Lottery,' *BioNews*, 619 (2011): http://www.bionews.org.uk/page_104184.asp. Accessed 6 December 2016.
76. Stopes, *Mother England*, p. 11.
77. Maureen McNeil, *Feminist Cultural Studies of Science and Technology* (Abingdon, Oxon., 2007), p. 81.

RESEARCH RESOURCES

Reprodystopian Fiction

Those interested in reproductive politics and dystopia may want to read more widely around Aldous Huxley's *Brave New World* (London, 1932), which is often insufficiently contextualized. A list of interwar 'reprodystopias' would have to include Charlotte Haldane's *Man's World* (London, 1926), in which women are forced by a male technocratic society either to become vocational mothers or to undergo sterilization; Diane Boswell's *Posterity* (London, 1926), a critique of state professionalization of motherhood; and Katherine Burdekin's *Swastika Night* (London, 1937), set in a Nazi-controlled future in which women are mere breeders. More recent reprodystopias include Kazuo Ishiguro's *Never Let Me Go* (London, 2005), Sarah Hall's *The Carhullan Army* (London, 2007), Joanna Kavenna's *The Birth of Love* (London, 2010), and Jane Roger's *The Testament of Jessie Lamb* (London, 2011).

For more titles and additional background on these literary works, researchers may wish to consult Andreu Domingo's article 'Demodystopias: Prospects of Demographic Hell', *Population and Development Review*, 34:4 (2008), 725–45, which contains an especially helpful overview of overpopulation narratives, while referencing a few underpopulation or infertility narratives, such as P.D. James's *The Children of Men* (London, 1992). Some infertility narratives which he does not mention include Pat Frank's *Mr Adam* (New York, 1946), the story of the last fertile man on earth, Brian Aldiss's *Greybeard* (London, 1964), and Richard Cowper's *The Twilight of Briareus* (London, 1974). Lionel Shriver's article 'Population in Literature', *Population and Development Review*, 29:2 (2003), 153–62, details three 'terrors': fear of population excess, fear of population decline, and fear of population professionals, illustrated by her own novel *Game Control* (London, 1994). Susan Merrill Squier was one of the first literature scholars to examine British biofuturism, and her study *Babies in Bottles: Twentieth-Century Visions of Reproductive Technology* (New Brunswick, 1994) is a rich resource. Sarah Gamble's article 'Gender and Science in Charlotte Haldane's "Man's World"', *Journal of Gender Studies*, 13:1 (2004), 3–13, also provides further background on Haldane's novel.

Utopian and Dystopian Imaginings

Reproduction became an obsession during the interwar period, a time when dystopia was in the ascendancy as a genre. A wealth of period thinking on the future of mankind can be found in the 'To-day and To-morrow' series published in London between 1924 and 1931, starting with J.B.S. Haldane's essay *Daedalus* (1924) and continuing on to *Lysistrata, or Woman's Future and Future Women* (1924) by Anthony Ludovici, who worried that artificial wombs would allow women to take over the world and keep only a few men around for breeding purposes; J.D. Bernal's *The World, The Flesh, and The Devil* (1929), which referred to 'cyborgs' before the term was coined; and Vera Brittain's *Halcyon, or The Future of Monogamy* (1929). A collection of letters to Marie Stopes, the palaeobotanist, women's rights campaigner and agony aunt, published as *Mother England* (London, 1929), can be read as a picture of the dystopian present, from which only the utopian practice of contraception can save humanity. Naomi Mitchison's *Comments on Birth Control* (London, 1930), which challenges Stopes's assumption that birth control is a universal good, begins pragmatically and segues into utopian thinking only in its final pages, even imagining a world in which women could control their bodies with their minds. These books are unfortunately out of print but can be found in the British Library.

Histories of Reproductive Technology

Stimulating histories of interwar birth control include Clare Debenham, *Birth Control and the Rights of Women: Post-Suffrage Feminism in the Early Twentieth Century* (London, 2014), and Angus McLaren, *Reproduction by Design: Sex, Robots, Trees and Test-Tube Babies in Interwar Britain* (Chicago, IL, 2012). Adrian Bingham explores public discourses around contraception in the same period. See *Gender, Modernity and the Popular Press in Inter-War Britain* (Oxford, 2004), and *Family Newspapers?: Sex, Private Life, and the British Popular Press, 1918–1978* (Oxford, 2009).

For debates around more recent reproductive technologies, a counterpart to Bingham's studies is Jose van Dijck's *Manufacturing Babies and Public Consent: Debating the New Reproductive Technologies* (Basingstoke, 1994). Other recommended accounts of IVF include Naomi Pfeffer, *The Stork and the Syringe: A Political History of Reproductive Medicine* (Cambridge, 1993); Maureen McNeil, *Feminist Cultural Studies of Science and Technology* (London, 2007), Chapters 5–6; and Sarah Franklin, *Biological Relatives: IVF, Stem Cells and the Future of Kinship* (Durham, NC, 2013).

Infertility, Ethics, and the Future: An Exploration

Daniela Cutas

INTRODUCTION

Not being able to fulfil one's desire to become a parent has caused a lot of suffering throughout history. This volume addresses many of the ways in which infertility has impacted upon people's lives, and the efforts made to overcome it. A variety of methods are currently in use throughout the world in the effort to battle infertility, and research is ongoing towards developing many more. Artificial insemination has been practised privately for a long time. In the last four decades it has been complemented by technologies such as in vitro fertilization (IVF), with or without gamete donation, testicular sperm extraction (TESE), and intracytoplasmic sperm injection (ICSI), a procedure which allows males with very limited fertility to become genetic fathers. The first uterus transplants have already been undertaken and have led to successful births. According to recent estimates, over 6 million children have now been born worldwide with the help of reproductive technologies such as IVF and ICSI.¹ In the future, further technologies will become available; these may include human reproductive cloning, in vitro-created gametes, and artificial wombs.

This chapter will explore such prospective technologies and some of their likely implications for reproductive and family ethics and for policy making. It will first consider current definitions of infertility, and briefly review some of

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the currently available technologies and research endeavours that are relevant to its treatment. It will subsequently present some of the ways in which current and prospective developments are changing what we mean by words such as ‘infertility’, ‘mother’, ‘father’, and even ‘man’ and ‘woman’. The relationship between reproduction and parenting will also be explored, and the ways in which one affects the other. As much of the chapter focuses on prospective developments, there is little that one can say by way of conclusions: it remains to be seen which new developments will prove successful and can be implemented. What we *can* do is to use these examples to reflect on the rationale behind current ethics and policies in the area of infertility, and to consider how they can be improved.

WHAT IS INFERTILITY AND WHAT DO INFERTILITY TREATMENTS TREAT?

Assisted reproductive technologies (ARTs) are also known as ‘fertility treatments’.² This is because their purpose is to treat or counter the effects of infertility. However, defining infertility proves to be a much more difficult task than it may seem. One might be tempted to say simply that infertility is the inability to reproduce. But whose inability would that be, and what counts as an inability to reproduce? Is a single woman who lacks ovaries infertile? Should she try to access ARTs, in many countries her request would be denied. This is because in those legislatures, or inside those professional groups, (eligible) infertility is strictly a condition of (heterosexual) couples. For example, according to French law:

the object of reproductive medical assistance is to remedy the infertility of a couple or to avoid the transmission to the child or a member of the couple, of a disease of particular gravity. The pathological character of infertility has to be medically diagnosed. The man and the woman have to be alive, of reproductive age, and had previously consented to the embryo transfer or the insemination.³

Likewise, Italian law restricts eligible infertility to infertility in heterosexual couples. The purpose of ARTs is to ‘help solve the reproductive problems caused by human sterility or infertility [. . .] when there are no other therapeutic means to remove the causes of sterility or infertility’.⁴ However, the law specifically stipulates that access to such technologies is limited to ‘adult couples of different sex, married or cohabiting, of reproductive age, both living’.⁵

Thus, inability to reproduce is not enough to qualify as ‘eligible infertility’ for treatment in countries such as France and Italy. Defining infertility is thus not a mere conceptual issue, but can be very much a normative one. The single woman who lacks ovaries is unable to reproduce without assistance, either on her own or with a partner. However, if she has a partner (of the *right* kind), she may be eligible. If her reproductive capacities are fine, but her (male) partner is unable to reproduce, she may be allowed access to ARTs, if other conditions are also fulfilled. For example,

according to the Italian legislature, treatment is available as long as gamete donation is not required, as gamete donation is not allowed (cf. Art 4.1). However, in the two legislative examples above, if the man who is unable to reproduce partners with another man instead, he is disqualified because of the sex of his partner. Thus although a same-sex couple is infertile as a couple, because they are not reproductively compatible, they do not satisfy the legal requirements of eligible infertility in those legislatures. Individual capacity to reproduce does not count: one or both male partners may, for example, lack sperm or, conversely, one or both female partners may lack ovaries or uteri or be otherwise unable to reproduce. Yet because of the type of relationship they are in, they will not be eligible.

Although ARTs are claimed to remedy incapacity to reproduce, depending on the legislature they may specifically target particular types of incapacity to reproduce – often regardless of actual individual reproductive capacity, however medically diagnosed that may be. According to the International Committee for Monitoring Assisted Reproductive Technology (ICMART) and the World Health Organization (WHO), the clinical definition of infertility is ‘a disease of the reproductive system defined by failure to achieve a clinical pregnancy after 12 months or more of regular unprotected sexual intercourse’.⁶ Whether or not any problems can be identified with the reproductive capacities of individual members of a couple, if reproduction does not take place, the couple is infertile according to this definition. Therefore, we might conclude, same-sex couples are clinically infertile. However, as in the two examples shown above, national legislatures may make sexual dimorphism explicit when defining eligible infertility. According to recent data, the proportion of unexplained infertility is around 25%.⁷ Each member of the couple might be able to reproduce with other partners, and indeed in some cases they may have already reproduced with previous partners; thus, their inability to reproduce might be solely dependent on their choice of partner. This choice can qualify their case as clinical infertility, and help to make them eligible for fertility treatment. In contrast, a single woman lacking eggs or ovaries, or a single man lacking sperm, is not infertile and, thus, not eligible. The clinical definition of the ICMART and WHO, therefore, is also about choice of partner, and not necessarily about any specific clinical symptoms or conditions of individuals.

One could argue that the choice to define infertility as a condition of couples is based on some understanding of the interests of children; that is, that children should begin their lives with more than one parent, or specifically with a female and a male parent. Yet the majority of children are conceived without medical assistance, and many of them are raised in monoparental families. Moreover, when the socioeconomic hardships of single parenting are controlled, it does not appear to be intrinsically bad for children to be parented by one, as opposed to two, people.⁸ Some of these socioeconomic hardships are due to loss of the other parent – to death, abandonment, or otherwise estrangement – and to the remaining parent having to deal with an unplanned and unexpected situation. These factors do not figure when one embarks upon single parenthood from the outset. Moreover, having become a

parent on one's own says nothing about how many people will eventually parent the child, and there is research that indicates that some women choose to undergo fertility treatment to give themselves time to find a partner with whom to complete their family.⁹

If a couple accesses fertility treatments in order to become parents because, for example, the male partner has no sperm and sperm donation is required, he is as incapable of reproducing as he was before the 'treatment'. Furthermore, he will not have reproduced at all. Thus, it is not his incapacity to reproduce that is treated in such cases (where it *is* treated: in Italy, as we saw above, gamete donation is forbidden), but the couple's wish to become parents. What leads to the giving or withholding of access to fertility treatments is not necessarily medical in nature, therefore, just as being medically diagnosed as unable to reproduce does not necessarily provide one with access to treatment.

If it is the wish to become parents that is being treated, there seems to be no reason why a heterosexual couple's wish is more worthy of treatment than that of a single individual, or of a same-sex couple, or of two people who wish to parent together but not to have sexual intercourse with each other. There is nothing that a woman without eggs or ovaries or an azoospermic man can do to reproduce without assistance, whether or not they have regular unprotected sexual intercourse, and regardless of with whom. Furthermore, so long as access to other means of becoming parents, such as adoption, is also limited or only available to couples, they do not have those choices either. In this case, their (in)ability to become parents is dependent on regulations. Perhaps the azoospermic man has *some* sperm that can be used in reproduction in the course of a fertility treatment. Perhaps there is some measure that could help the woman without eggs or ovaries to reproduce (such as in vitro-created gametes, as we will see further in this chapter). Or perhaps what a woman wishes from reproduction, besides parenting, is being pregnant and giving birth, for which assistance, if she is given it, might be successful, provided she has (or is given) a uterus. Thus, in addition to ascertaining the cause(s) of infertility, it is necessary to disentangle what makes up the desire to become a parent.

Until recently, most children in Western Europe were born to and raised by their (presumed) biological parents,¹⁰ who were married to each other (the so-called 'nuclear family'), but this is no longer the case. According to Eurostat data, in 2010 more than half of the births in several European countries occurred outside marriage, and out-of-wedlock births have increased in most European states.¹¹ Even when children are born *within* marriages, increasing divorce rates and general instability in romantic relationships between adults increase the variety of situations in which children grow up with other adults in addition to their biological parents, or with other people instead of one or both of their biological parents. Uptake of fertility treatments with donor gametes, elective single parenting (which does not always consist of single mothers but also single fathers¹²), and same-sex parenting make attempts to apply the 'mould' of the nuclear family unrealistic as well as unfair. It is unrealistic because it subjects people to standards which are less and less commonly

realized, and it is unfair because it penalizes some people and rewards others for their relationship status, for no apparent good reason.

One argument for applying the standard of the nuclear family has been that it is the default situation in which children fare best, and that the more a family setting diverges from this, the worse it is for the child and perhaps for other parties involved. However, this argument does not seem to be supported by empirical research. Numerous studies, undertaken by different research teams, concur that what matters most for children's emotional wellbeing is not family structure (such as the number of parents, their sex, sexual orientation, and whether or not they are genetically related to the children) but the quality of family relationships.¹³ Indeed, some researchers find slightly better results when there is no genetic link between parents and children.¹⁴ Finally, and perhaps most interestingly, results have been slightly better when the parents are lesbian couples or adoptive gay father families.¹⁵ The latter study (Golombok et al. 2014) found less parental stress, higher levels of expressed warmth, more interaction with the child, greater responsiveness, and less hyperactivity in the children raised in gay father families than in children raised in heterosexual parent families. This result is perhaps the most surprising, as it goes against strongly held and widespread assumptions about mothers being essential to children's wellbeing.

SCIENTIFIC PROGRESS AND 'THE END OF INFERTILITY'

Numerous media reports in recent years have spoken of the impending end of infertility, brought about by advances in reproductive genetics.¹⁶ Most of these reports have been inspired by ongoing work taking place in several labs across the world towards obtaining functional gametes from other types of cells – either human embryonic stem cells (ESC) or, more recently, induced pluripotent stem cells (iPSC). Such in vitro-created gametes have also been called artificial or synthetic gametes. Progress, including live births, has been made in mice¹⁷ though scientists disagree as to what is achievable in the future.¹⁸ Should it become possible for humans to reproduce with eggs created from cells from males, and with sperm created from cells from females, a significant innovation in human reproduction would arguably be introduced for the first time: that of men as genetic mothers and women as genetic fathers. Some scientists even claim that one day we might become able to obtain gametes from a person's non-reproductive cells, and use them in reproduction with gametes from the same person,¹⁹ achieving what might be called the ultimate single reproduction: reproduction with gametes from only one person, who would thereby become the genetic father *and* mother. Should such applications become possible, it has been suggested that they would 'end infertility'.

However, as we have seen above, fertility and infertility are not necessarily about biological possibilities of reproduction, but also about choice of partner, sexual activity, and legal regulations. That there is a technology that could create gametes from (and for) single individuals – women without eggs or

ovaries or who are postmenopausal, or azoospermic single men – does not mean that they will be able to use it. In some countries, they are not (eligibly) infertile anyway. So long as infertility is defined as a condition of (certain kinds of) couples, technologies such as creating gametes in vitro do not change anyone's fertility state, though it might enable some people who do satisfy the definition to (try to) become biological parents.

The prospect of solo reproduction,²⁰ raised by research with in vitro-created gametes, is reminiscent of the fairly recent, but by now already much deflated, debate on human reproductive cloning. The failure to successfully use somatic cell nuclear transfer (SCNT), the procedure through which Dolly the sheep was created, in human cells, together with lack of state funding or a complete ban on human cloning research, has dampened public interest in cloning. Recent news of success with creating human embryonic stem cells via SCNT might reawaken interest in this area though.²¹ Human reproductive cloning raised specific worries due to its promise to create a human being almost genetically identical to another human being. In this, solo reproduction via in vitro-created gametes differs from solo reproduction via cloning: even if all the genetic material used comes from one person, the genetic make-up of the offspring will be different, because of the reshuffling of genes that takes place at fertilization.

Reducing the number of genetic connections to a child from two to one is a possible consequence of new technologies. Another consequence is multiplying the number and types of genetic connections. A controversial treatment that has received international attention in recent years is that of replacing the mitochondrial DNA in an egg with that of a donor egg, so that children do not inherit genetic conditions that are passed through the mitochondria from their mothers. The egg thus engineered can then be fertilized with the male gamete. While thereby avoiding the passing of the faulty genes, the technique creates a situation in which children will be created using genetic material from three adults, which is what raised public attention. This is evidenced by the impressive number of returns mentioning mitochondrial DNA transfer that one gets upon Googling terms such as 'three-parent IVF' and 'three-parent baby'; mitochondrial replacement has very frequently been reported in this way by the international media. The cause of much of this attention has been the legislative process recently completed in the UK towards allowing mitochondrial transfer. On 24 February 2015, the House of Lords confirmed the decision by the House of Commons to allow the use of the technology.²²

Because physical and psychological traits are not transmitted via mitochondrial DNA, to speak of three genetic parents in such cases is to greatly overstate the contribution of mitochondrial DNA.²³ This procedure does introduce a genetic contribution from a third party, but it is minuscule: about 0.1 per cent of the child's DNA will come from the mitochondrial donor,²⁴ and this contribution is transmittable to further generations. This innovation and its implications are not wholly a future prospect. Children have already been born who were conceived using eggs injected with healthy ooplasm from donor

eggs.²⁵ These children are ‘three-parent babies’ to the same extent as the prospective children of mitochondrial replacement.

Biological contributions to reproduction are not only genetic in kind. Pregnancy also creates biological connections. Separating genetic and gestational female contributions to reproduction has greatly complicated discussions about motherhood, and indeed has already created children with three biological parents: the genetic father, the genetic mother, and the gestational mother. These may or may not coincide with the child’s legal parents. With or without biological connections being mapped in this way, there are already children who have three legal parents. In 2007, in Ontario, Canada, a boy became legally the son of three parents: his biological mother, the biological mother’s female partner, and his biological father.²⁶ In British Columbia, three or more people can be registered as a child’s legal parents (and some have already done so²⁷), and changes to regulations to allow for this eventuality have also been considered by legislators in other parts of the world, such as New Zealand and the US state of California.²⁸

Surrogate motherhood has been for decades an area of controversy.²⁹ The inability to carry a pregnancy to term is a reason why some women cannot reproduce, and of course men and same-sex male couples also have this problem. Ectogenesis, the development of foetuses to term outside women’s bodies, is a prospect with ethical and policy implications that have been discussed for some time.³⁰ The use in reproduction of artificial uteri would solve at least some of the ethical difficulties around surrogacy, whether these are intrinsic (that women’s bodies should not be used to give birth to children for other people) or contextual (in terms of the injustice and exploitation that are often involved in surrogacy).

The prospect of ectogenesis looks even less promising than the successful use in human reproduction of in vitro-created gametes or human cloning. Apart from research that may take place intentionally to develop ectogenesis for human reproduction, work with in vitro fertilization, on the one hand, and neonatal care, on the other, might indirectly lead to it.³¹ Should full ectogenesis be at all possible in humans, several questions follow: is it ethical to invest resources explicitly in actualizing this prospect? If, directly or indirectly, the possibility is actualized, should it be offered to prospective parents? If it should, to whom should it be offered, and according to which criteria?

Pregnancy and birth are risky and painful, falling almost solely upon women (a few cases of male pregnancy and birth will be discussed later in this chapter). Therefore, it has been argued that if there is the possibility to externalize pregnancy, not only is it ethical to pursue it, but we should develop it and make it available as a matter of justice and equality.³² According to Anna Smajdor, the fact that pregnancy is a condition that causes pain and suffering, but that only women experience, whereas men are naturally spared, is a natural inequality that we should aim to correct. The costs of natural reproduction are much higher for women because of pregnancy. Thus, if natural inequalities are candidates for redistributive justice, this natural inequality should also be

addressed as a matter of justice. Smajdor suggests that this requires prioritization of research into ectogenesis.

Ectogenesis might indeed be a solution to this inequality, at least in principle. Another aspect here is that, although pregnancy is burdensome for women, it is also an enriching experience that many women desire and enjoy, and to which men do not naturally have access. Male pregnancies could be another way of altering the distribution of the impact of reproduction. How would we describe the connection between a child and the man who carried and gave birth to her?

MOTHERS AND FATHERS

What a woman is and what a man is, as well as what a mother is and what a father is, are questions that do not have straightforward answers. Some examples of challenging relationships include the famous Thomas Beatie case,³³ and more recent media reports from Germany and Israel.³⁴ In all three cases, men have given birth to babies because they had transitioned from female to male, and had had this transition accepted legally, but had retained their reproductive potential. In many countries,³⁵ legal recognition of the transition from one sex to another obligatorily requires sterilization, which helps legislatures to avoid situations in which men can give birth. Such legal provisions were recently (in 2013) removed from Swedish and Dutch regulations.

One way around the claim that men have given birth to babies is to dispute the fact that they are men, as an Arizona judge did when he refused to grant a divorce to Thomas Beatie. According to the judge, because he had preserved his capacity to bear children, Beatie was not a man, regardless of his gender reassignment having been recognized legally prior to the marriage; and since same-sex marriages were illegal in that state, the judge did not recognize the marriage. In short, Beatie was not a man because men cannot bear children.³⁶ Yet not all would agree with the statement that men cannot bear children. According to Robert Winston, writing about IVF almost two decades ago, male pregnancy is in fact possible, and without a uterus. This could be achieved with hormonal treatment and the transferring of an embryo into the man's abdominal cavity, followed, at the end of the pregnancy, by caesarean section.³⁷ Another way in which men may carry pregnancies is by having uterus implants. Uteri have already been transplanted into women. There is a trial currently taking place in Sweden, and several births have already resulted following such transplants.³⁸ Years before transferring the procedure from animal experiments to interventions on humans, the lead expert involved, Mats Brännström, stated that transplanting uteri to men was also technically possible.³⁹

In line with the definition of the judge quoted above, should men acquire the ability to bear children, they will no longer be men. Deciding on the meaning of 'man' need not be the only terminological issue here. The meaning of 'mother' is also multifaceted. In some ways, men can be, and to an

increasing extent already *are*, mothers. Furthermore, some have claimed, men *should* be mothers. If male pregnancies enable men to become gestational mothers, and reproduction with in vitro-created gametes might enable them to become genetic mothers (the person from whom the egg originated), parenting style might qualify them as functional or social mothers. Someone's mother may be said to be the person who fulfils the parenting role typical of a mother, someone who cares for and mothers a child socially. Martha Fineman has criticized the status quo in which the caring burdens are placed primarily upon women, and proposed that motherhood 'should not be confined to women but be a societal aspiration for *all* members of the community'.⁴⁰ Indeed, expectations both *from* and *of* fathers have changed dramatically in recent decades, in the sense that more hands-on involvement with their children is now normal regardless of the relationship between the parents.⁴¹ Thus fathers *are* already becoming mothers.

REPRODUCTION AND PARENTING

Theorists of the right to reproduce have argued that the claim that people must be allowed to reproduce, or to have assistance in their reproductive projects, has a biological component.⁴² people have a right to reproduce biologically. For those who hold this view, the possibility of becoming a genetic parent strengthens the claim to be allowed access to fertility treatments. This is further encouraged by an intuition that fertility treatments should only be offered to those who *should*, in the natural course of events, reproduce, but for some reason cannot. Same-sex couples, for example, cannot reproduce together. Postmenopausal women can no longer reproduce. Heterosexual couples 'of reproductive age' *should*, in principle, be able to reproduce together; they are (presumably) doing, together, what it takes to reproduce but reproduction does not take place. They, therefore, should receive support in their endeavours, even if they will not both thereby become *genetic* parents.

In other words, *even if* there are or there could be the means for someone to reproduce, the fact that the person, in her current circumstances (same-sex relationship, single, or postmenopausal), cannot reproduce, is a reason to withhold these means from her. This rationale would amount to a naturalistic fallacy, inferring from a person's inability to reproduce in a certain setting that she should not reproduce. This would be unfair because the fact that she cannot reproduce due to her choice of partner, relationship status, or age is used against her when she asks for help in her reproductive endeavour. Members of heterosexual couples of reproductive age might also be capable of reproducing with other partners, and yet this is not held against them when they want to access fertility treatments.

Should there be a way for same-sex couples, postmenopausal women, or single men and women to reproduce in their current situation, this might help strengthen their case to be allowed access to technologies that make it possible.

If there is a positive right to reproduce – that is, a right not only to not be prevented but also to be supported in our reproductive endeavours – then perhaps this also means that we should work towards actualizing that possibility. This would necessitate the allocation of resources towards those research endeavours aimed at helping such people to reproduce. This is, after all, the rationale behind fertility treatments having been developed in the first place.

However, questions such as whether there is a right to reproduce, who has it and why, what it demands, of whom, and who bears which correlative duties, do not have clear-cut or uncontroversial answers, and their clarification is an ongoing endeavour.⁴³ In its most basic, negative form, of not being prevented from reproducing (for example, through sterilization or enforced abortion), the right to reproduce naturally garners wide agreement and support. It becomes more controversial the more we move towards a positive interpretation of the right, the facilitation of reproduction. Access to fertility treatments is also about allowing people to reproduce, and allowing others to assist them in that process. However, a positive right to reproduce which entails the expenditure of public funds towards fertility treatment is a much more demanding claim. If one's reproductive plans are to be supported in such a way, there must be good criteria for selecting who is entitled to it, and there must be good reasons behind these criteria. Whether or not funding of fertility treatment is provided, selection criteria for access to fertility treatments also require a clear rationale.

An important motive for upholding the right to reproduce is enabling people to have children to rear. Without the intention and the capacity to rear children, some have argued,⁴⁴ there is no right to reproduce. Both reproduction and parenting can be strongly valued by many. We have seen above that whether there is a genetic link between parents and children does not determine family outcomes. However, this need not invalidate people's case for assistance to reproduce. There are many reasons why one could legitimately prefer to become a parent by having reproduced, if at all possible. For example, some difficulties associated with the child having other genetic parents would be avoided; there is no need to have difficult conversations with the child about these other parties, no need to cope with her wishing to identify, contact, and have a relationship with these other parties, and so on. Being one's own child's genetic parent is easier from these perspectives. Furthermore, it may be that other ways of becoming a parent are more difficult or inaccessible. One may live in a society in which there are no (or not enough) children available for adoption. One may be ineligible for adoption (regulations on adoption do not always share the same criteria as those on fertility treatment). One may object to gamete donation on ethical grounds, because it amounts to instrumentalization of other people, or because of the burden that gamete donation imposes on the female donors. One might desire to experience pregnancy and birth, which are strongly valued experiences in many cultures. All of these support the case for allowing people to try to become parents via reproduction, regardless of whether it is possible to successfully argue for their right to reproduce biologically.

The fact that women who cannot experience pregnancy are permitted to access technologies aimed at allowing them to acquire that capacity may motivate some men to also claim access. On what grounds could this be denied to them if it is allowed to women? Like women born without a uterus, men are typically born without uteri. Once uterus transplants are a treatment option, people of whatever gender who lack uteri have an equal claim to it, in principle, though there may be medical reasons that justify barring men from it. Lacking such medical reasons, then perhaps once the treatment is available, people regardless of gender ought to be allowed access to it.

Because one's genetic parents and one's social or legal parents are not necessarily the same, solo reproduction or three-parent reproduction need not determine how many people might eventually parent a child. The solo parent might find someone with whom to share parenting; three parents can devise decision-making strategies to help them exercise their parenting. How the children were conceived need not have a significant impact on their lives; indeed, many who are conceived *naturally* are not aware of, nor are they seeking information about, details of their conception.

CONCLUSION

Technological innovations can provide the means to more egalitarian reproduction by enabling people to become parents without recourse to reproductive sex, in a way more in line with their own sexualities or relationship choices or circumstances. Single individuals or same-sex couples can hope to have *their own* children even if they do not have, or are not assumed to be having, the appropriate kind of sexual intercourse in the appropriate kind of circumstances. Given that reproduction and parenting are highly valued components of life for many, do natural inequalities create an obligation to develop means to enable those who for whatever reason cannot become parents to do so? Should it become technically possible for everyone to reproduce, claims to fertility treatments might increase exponentially. Given limited resources, how much should be done to facilitate the ability to reproduce of those who desire it, and how should we fairly discriminate between prospective recipients?

Fertility treatments have created new types of connections, and have expanded the number of cases in which children grow up in families in which they are unrelated genetically to at least one of their parents. IVF has allowed the splitting of biological motherhood into two: the genetic and the gestational mother. Some women have had uterus transplants and some of them will successfully carry pregnancies in them (some already have). In vitro-created gametes may in the future allow men to become genetic mothers, and women to become genetic fathers. Men have carried pregnancies. Perhaps other men, who have not been born with a uterus, will also carry pregnancies. Perhaps some fetuses will develop to term in vitro and not inside anyone's body. Perhaps some children in the future will only have one genetic parent, while

others share genetic connections with three or more. Whichever of these (or other) scenarios are eventually confirmed, considering them beforehand can help to clarify some of the current difficulties in defining and regulating infertility, reproduction, and parenting.

Beyond technological innovations, increasing uptake, visibility, and acceptance of family formation strategies that depart from the standard of one mother, one father, and their naturally conceived children create further challenges in terms of both ethics and policy making. Traditional roles within the family, such as the providing male father, the nurturing female mother, and their naturally conceived biological offspring, which have been seen as natural and normative in some countries, are also changing. Ethics and policy will have to acknowledge and address all of these changes.

NOTES

1. ESHRE, '6.5 Million IVF Babies since Louise Brown' (2016): <https://focusonreproduction.eu/2016/07/05/6-5-million-ivf-babies-since-louise-brown/>. Accessed 11 May 2016.
2. In this section, I wish to thank Anna Smajdor for permission to draw on our previous collaborative research.
3. France: LOI n° 2011-814 du 7 juillet 2011 relative à la bioéthique, art. 33: www.legifrance.gouv.fr. Accessed 6 December 2016. Author's translation.
4. Legge 40, 19 February 2004, art. 1: www.camera.it/parlam/leggi/040401.htm. Accessed 6 December 2016. Author's translation.
5. Legge 40, art. 5.
6. Fernando Zegers-Hochschild, Geoffrey D. Adamson, Jacques de Mouzon, Osamu Ishihara, Ragaa Mansour, Karl Nygren, Elizabeth Sullivan, Sheryl Van der Poel for ICMART and WHO, 'International Committee for Monitoring Assisted Reproductive Technology (ICMART) and the World Health Organization (WHO) Revised Glossary of ART Terminology', *Fertility and Sterility*, 92:5 (2009), p. 1522.
7. National Institute of Clinical Excellence (NICE), 'Fertility: Assessment and Treatment' (2013): <https://www.nice.org.uk/guidance/cg156>. Accessed 6 December 2016.
8. Susanna Graham, 'Choosing Single Motherhood? Single Women Negotiating the Nuclear Family Ideal', in Daniela Cutas and Sarah Chan (eds), *Families – Beyond the Nuclear Ideal* (London, 2012); Susan Golombok and Shirlene Badger, 'Children Raised in Mother-Headed Families from Infancy: A Follow-Up of Children of Lesbian and Single Heterosexual Mothers, At Early Adulthood', *Human Reproduction*, 25:1 (2009); Fiona Maccallum and Susan Golombok, 'Children Raised in Fatherless Families from Infancy: A Follow-Up of Children of Lesbian and Single Heterosexual Mothers at Early Adolescence', *Journal of Child Psychology and Psychiatry*, 45:8 (2004).
9. Graham, 'Choosing Single Motherhood'.
10. Mark Bellis, Karen Hughes, Sara Hughes and John Ashton, 'Measuring Paternal Discrepancy and its Public Health Consequences', *Journal of Epidemiology & Community Health*, 59 (2005).

11. Eurostat, 'Marriage and Divorce Statistics' (2015): http://ec.europa.eu/eurostat/statistics-explained/index.php/Marriage_and_divorce_statistics. Accessed 6 December 2016.
12. David Crary, 'Via Surrogacy, Some Men Opt to Become Single Dads', *The Journal Times* (1 September 2013): http://journaltimes.com/lifestyles/relationships-and-special-occasions/via-surrogacy-some-men-opt-to-become-single-dads/article_2dfdc2c-0f2d-11e3-a58f-0019bb2963f4.html. Accessed 6 December 2014; Nicholas Blincoe, 'Why Men Decide to Become Single Dads', *Guardian*, 2 November 2013.
13. See, for example, Susan Golombok, *Modern Families: Parents and Children in New Family Forms* (Cambridge, 2015); Marc H. Bornstein (ed.), *Handbook of Parenting: Vol. 1: Children and Parenting* (Mahwah, 2002); Michael Lamb, 'Mothers, Fathers, Families, and Circumstances: Factors Affecting Children's Adjustment', *Applied Developmental Science*, 16:2 (2012); Joanna Scheib and Paul Hastings, 'Donor-Conceived Children Raised by Lesbian Couples: Socialization and Development in a New Form of Planned Family', in Cutas and Chan (eds), *Families – Beyond the Nuclear Ideal*.
14. Laura Hamilton, Simon Cheng and Brian Powell, 'Adoptive Parents, Adaptive Parents: Evaluating the Importance of Biological Ties for Parental Investment', *American Sociological Review*, 72:1 (2007).
15. Nanette Gartrell and Henny Bos, 'US National Longitudinal Lesbian Family Study: Psychological Adjustment of 17-Year-Old Adolescents', *Pediatrics*, 126:28 (2010); Susan Golombok, Laura Mellish, Sarah Jennings, Polly Casey, Fiona Tasker and Michael E. Lamb, 'Adoptive Gay Father Families: Parent-Child Relationships and Children's Psychological Adjustment', *Child Development*, 85 (2014).
16. See, for example, Zev Rosenwaks in Helen Pearson, 'Making Babies: The Next 30 Years', *Nature* (2008): www.nature.com/news/2008/080716/full/454260a.html. Accessed 6 December 2016; Sarah Boseley, 'End of Infertility Within a Decade, Say Doctors', *Guardian*, 25 July 2003.
17. Katsuhiko Hayashi, Hiroshi Ohta, Kazuki Kurimoto, Shinya Aramaki, and Mitinori Saitou, 'Reconstitution of the Mouse Germ Cell Specification Pathway in Culture by Pluripotent Stem Cells', *Cell*, 146: 4 (2011); Katsuhiko Hayashi, Sugako Ogushi, Kazuki Kurimoto, So Shimamoto, Hiroshi Ohta, and Mitinori Saitou, 'Offspring from Oocytes Derived from In Vitro Primordial Cell-Like Cells in Mice', *Science*, 338: 6109 (2012); Karim Nayernia et al, 'In Vitro-Differentiated Embryonic Stem Cells Give Rise to Make Gametes that can Generate Offspring Mice', *Developmental Cell*, 11 (2006).
18. David Cyranoski, 'Stem Cells: Egg Engineers', *Nature*, 21 August 2013; Hinxton Group, 'Consensus Statement: Science, Ethics and Policy Challenges of Pluripotent Stem Cell-Derived Gametes' (2008): www.hinxtongroup.org/au_pscdg_cs.html. Accessed 6 December 2016; Roger Highfield, 'Sperm Cells Created from Female Embryo', *Telegraph*, 31 January 2008.
19. Saitou in Cyranoski, 'Stem Cells: Egg Engineers'.
20. Daniela Cutas and Anna Smajdor, "I am Your Mother and Your Father!" In Vitro Derived Gametes and the Ethics of Solo Reproduction', *Health Care Analysis* (2016), online first: <http://link.springer.com/article/10.1007/s10728-016-0321-7/fulltext.html>.

21. Masahito Tachibana et al, 'Human Embryonic Stem Cells Derived by Somatic Cell Nuclear Transfer', *Cell*, 153: 6 (2013).
22. 'UK Approves Three-Person Babies', BBC, 24 February 2015: www.bbc.com/news/health-31594856. Accessed 6 December 2016.
23. Nuffield Council on Bioethics, 'Novel Techniques for the Prevention of Mitochondrial DNA Disorders: An Ethical Review' (2012): www.nuffieldbioethics.org/mitochondrial-dna-disorders. Accessed 6 December 2016.
24. Wellcome Trust, 'Q&A Mitochondrial Donation' (2015): <https://wellcome.ac.uk/sites/default/files/mitochondrial-donation-faqs-wellcome-aug14.pdf>. Accessed 6 December 2016.
25. Jason Barritt, Steen Willadsen, Carol Brenner and Jacques Cohen, 'Cytoplasmic Transfer in Assisted Reproduction', *Human Reproduction Update*, 7:4 (2001); Jacques Cohen et al, 'Ooplasmic Transfer in Mature Human Oocytes', *Molecular Human Reproduction*, 4:3 (1998).
26. AA v BB. 2007 ONCA 2: www.samesexmarriage.ca/docs/abc030107.pdf. Accessed 6 December 2016.
27. Abigale Subdhan, 'Vancouver Baby Becomes First Person to Have Three Parents Named on Birth Certificate in B.C.', *National Post Canada*, 11 February 2014: <http://news.nationalpost.com/2014/02/10/vancouver-baby-becomes-first-person-to-have-three-parents-named-on-birth-certificate-in-b-c/>. Accessed 6 December 2016.
28. New Zealand Ministry of Justice, 'Government Responds to Law Commission Report: "New Issues in Legal Parenthood"' (March 2006): <http://www.beehive.govt.nz/release/government-responds-legal-parenthood-report>. Accessed 6 December 2016; California: SB-1476 Family Law: Parentage: https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=201120120SB1476. Accessed 6 December 2016.
29. Rachel Cook, Shelley Day Sclater and Felicity Kaganas, *Surrogate Motherhood: International Perspectives* (Oxford, 2003).
30. See, for example, Peter Singer and Deane Wells, *Making Babies: The New Science and Ethics of Conception* (New York, 1985); Anna Smajdor, 'The Moral Imperative for Ectogenesis', *Cambridge Quarterly of Healthcare Ethics*, 16 (2007); Timothy Murphy, 'Research Priorities and the Future of Pregnancy', *Cambridge Quarterly of Healthcare Ethics*, 21 (2012).
31. Stephen Coleman, *The Ethics of Artificial Uteruses: Implications for Reproduction and Abortion* (Burlington, VT, 2004); Singer and Wells, *Making Babies*.
32. Shulamith Firestone, *The Dialectic of Sex: The Case for Feminist Revolution* (New York, 1971); Smajdor, 'The Moral Imperative for Ectogenesis'; Anna Smajdor, 'In Defense of Ectogenesis', *Cambridge Quarterly of Healthcare Ethics*, 21:1 (2012).
33. 'US "Pregnant Man" has Baby Girl', BBC, 3 July 2008: <http://news.bbc.co.uk/2/hi/7488894.stm>. Accessed 6 December 2016.
34. Guido Kleinhubbert, 'Birth Fathers: Trans Parenthood Tests Berlin Authorities', *Spiegel Online*, 10 September 2013: <http://www.spiegel.de/international/zeitgeist/transsexual-parenthood-a-challenge-to-government-agencies-in-berlin-a-921350.html>; 'Transgender Israeli Mother Recognized as "Father"', *JTA: The Global Jewish News Source*, 16 September 2013: www.jta.org/2013/09/16/news-opinion/israel-middle-east/israel-recognizes-two-men-as-babys-biological-parents. Both accessed 6 December 2016.

35. In 2010, the European Union Agency for Fundamental Rights counted 17 European countries that required sterilization, including France, Poland, Greece and Finland. In some countries (Denmark, The Netherlands, Portugal), law-makers were at that time discussing removing this requirement. The report, 'Homophobia, Transphobia and Discrimination on Grounds of Sexual Orientation and Gender Identity, 2010 Update, Comparative Legal Analysis', is available at fra.europa.eu/sites/default/files/fra_uploads/1759-FRA-2011-Homophobia-Update-Report_EN.pdf. Accessed 6 December 2016.
36. Jamie Ross, "'Pregnant Man" Can't Get Divorced in Arizona', *Courthouse News Service*, 1 April 2013: www.courthousenews.com/2013/04/01/56254.htm. Accessed 6 December 2016.
37. Robert Winston, *The IVF Revolution: Definitive Guide to Assisted Reproductive Techniques* (London, 1999).
38. 'First Womb-Transplant Baby Born', BBC, 4 October 2014: <http://www.bbc.com/news/health-29485996>. Accessed 6 December 2016; 'Baby Born from Grandmother's Donated Womb', *Guardian*, 25 August 2015.
39. Ian Sample, 'Womb Transplant Babies "Within Three Years": Scientists in Sweden Offer Alternative to Surrogacy', *Guardian*, 2 July 2003.
40. Martha Fineman, *The Neutered Mother, The Sexual Family, and Other Twentieth Century Tragedies* (London, 1995), p. 235.
41. Patrick Parkinson, *Family Law and the Indissolubility of Parenthood* (Cambridge, 2011); Richard Collier and Sally Sheldon, *Fragmenting Fatherhood: A Socio-Legal Study* (Oxford, 2008).
42. John Robertson, *Children of Choice* (Princeton, NJ, 1994).
43. Alison Diduck and Felicity Kaganas, *Family Law, Gender and the State: Text, Cases and Materials* (Oxford and Portland, 2012), chapter 4; Daniela Cutas, 'Sex is Overrated', *Human Fertility*, 12:1 (2009); Lisa Bortolotti and Daniela Cutas, 'Reproductive and Parental Autonomy: An Argument for Compulsory Parental Education', *Reproductive Biomedicine Online*, 19:1 (2009).
44. Bonnie Steinbock, 'Rethinking the Right to Reproduce', *Harvard Working Paper Series*, No. 98.05 (1998).

RESEARCH RESOURCES

- Justine Burley and John Harris (eds), *A Companion to Genethics* (Malden, MA: Blackwell, 2002).
- Ruth Chadwick (ed.), *Ethics, Reproduction and Genetic Control* (London: Routledge, 1994).
- Stephen Coleman, *The Ethics of Artificial Uteruses: Implications for Reproduction and Abortion* (Burlington, VT: Ashgate, 2004).
- Richard Collier and Sally Sheldon, *Fragmenting Fatherhood: A Socio-Legal Study* (Oxford: Hart Publishing, 2008).
- Daniela Cutas and Sarah Chan (eds), *Families – Beyond the Nuclear Ideal* (London: Bloomsbury Academic, 2012).
- Dena Davis, *Genetic Dilemmas: Reproductive Technology, Parental Choices, and Children's Futures* (New York: Oxford University Press, 2001).
- Ruth Deech and Anna Smajdor, *From IVF to Immortality: Controversy in the Era of Reproductive Technology* (Oxford: Oxford University Press, 2007).

- Alison Diduck and Felicity Kaganas, *Family Law, Gender and the State: Text, Cases and Materials* (Oxford: Hart Publishing, 2012).
- Martha Fineman, *The Neutered Mother, The Sexual Family, and Other Twentieth Century Tragedies* (London: Routledge, 1995).
- Susan Golombok, *Parenting: What Really Counts?* (London: Routledge, 2000).
- Susan Golombok, *Modern Families. Parents and Children in New Family Forms* (Cambridge: Cambridge University Press, 2015).
- John Harris and Soren Holm (eds), *The Future of Human Reproduction* (Oxford: Oxford University Press, 1998).
- Helga Kuhse and Peter Singer (eds), *A Companion to Bioethics* (Oxford: Basil Blackwell, 2009).
- Patrick Parkinson, *Family Law and the Indissolubility of Parenthood* (Cambridge: Cambridge University Press, 2011).

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a *Arnaldo do Espírito Santo* (2013); and ‘Os partos distócicos em Amato Lusitano e em Rodrigo de Castro: fontes, doutrinas e terapias greco-romanas’ (‘Dystocia in Amato Lusitano and Rodrigo de Castro: sources, doctrines and Greco-Roman therapies’), in A. M. L. Andrade, C. de Miguel Mora and J. M. N. Torrão (eds), *Humanismo e Ciência: Antiguidade e Renascimento* (2015).

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