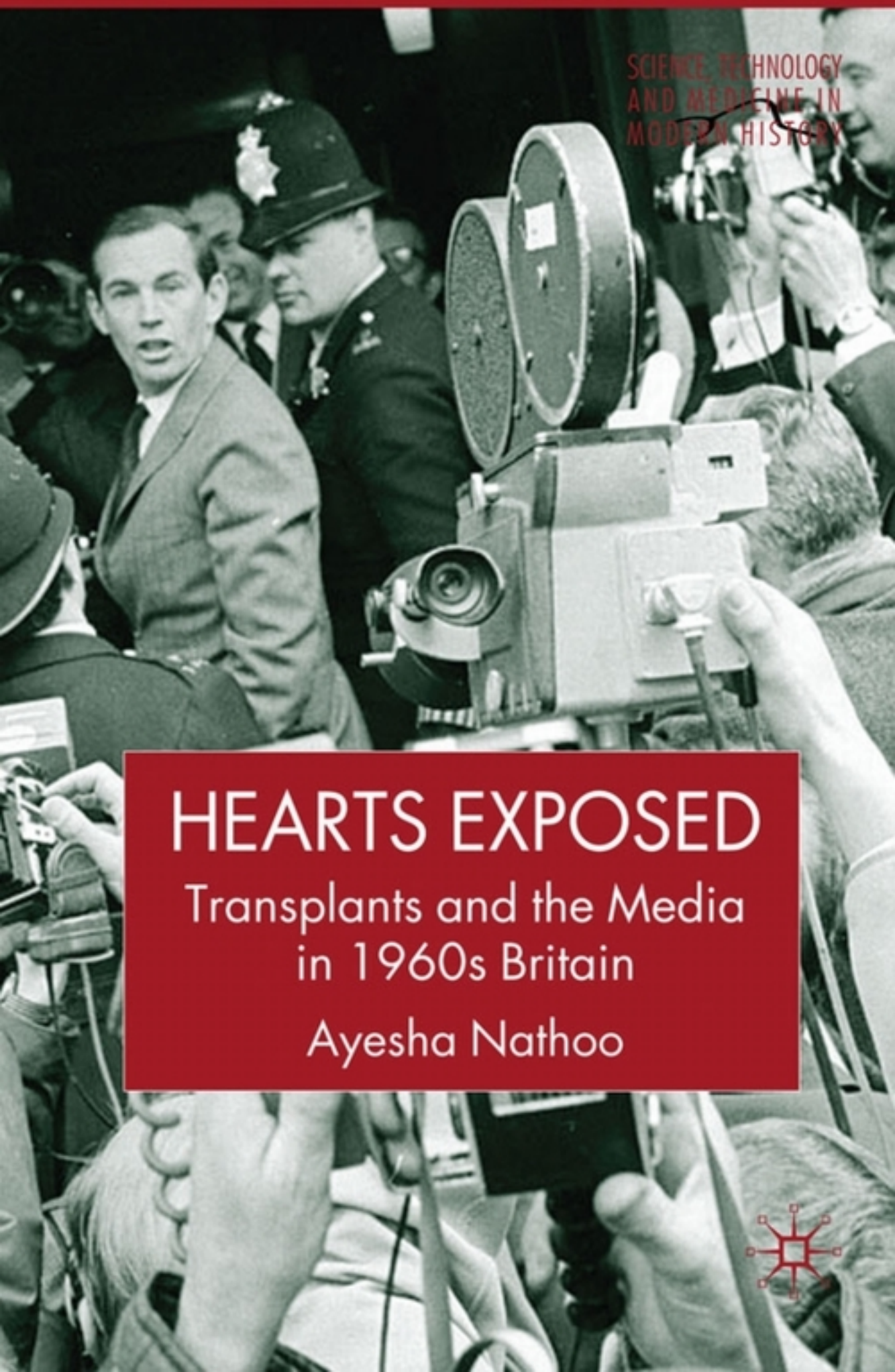

HEARTS EXPOSED

Transplants and the Media in 1960s Britain

Ayesha Nathoo

Science, Technology and Medicine in Modern History

General Editor: **John V. Pickstone**, Centre for the History of Science, Technology and Medicine, University of Manchester, England (www.man.ac.uk/CHSTM)

One purpose of historical writing is to illuminate the present. At the start of the third millennium, science, technology and medicine are enormously important, yet their development is little studied.

The reasons for this failure are as obvious as they are regrettable. Education in many countries, not least in Britain, draws deep divisions between the sciences and the humanities. Men and women who have been trained in science have too often been trained away from history, or from any sustained reflection on how societies work. Those educated in historical or social studies have usually learned so little of science that they remain thereafter suspicious, overawed, or both.

Such a diagnosis is by no means novel, nor is it particularly original to suggest that good historical studies of science may be peculiarly important for understanding our present. Indeed this series could be seen as extending research undertaken over the last half-century. But much of that work has treated science, technology and medicine separately; this series aims to draw them together, partly because the three activities have become ever-more intertwined. This breadth of focus and the stress on the relationships of knowledge and practice are particularly appropriate in a series which will concentrate on modern history and on industrial societies. Furthermore, while much of the existing historical scholarship is on American topics, this series aims to be international, encouraging studies on European material. The intention is to present science, technology and medicine as aspects of modern culture, analysing their economic, social and political aspects, but not neglecting the expert content which tends to distance them from other aspects of history. The books will investigate the uses and consequences of technical knowledge, and how it was shaped within particular economic, social and political structures.

Such analyses should contribute to discussions of present dilemmas and to assessments of policy. 'Science' no longer appears to us as a triumphant agent of Enlightenment, breaking the shackles of tradition, enabling command over nature. But neither is it to be seen as merely oppressive and dangerous. Judgement requires information and careful analysis, just as intelligent policy-making requires a community of discourse between men and women trained in technical specialities and those who are not.

This series is intended to supply analysis and to stimulate debate. Opinions will vary between authors; we claim only that the books are based on searching historical study of topics which are important, not least because they cut across conventional academic boundaries. They should appeal not just to historians, nor just to scientists, engineers and doctors, but to all who share the view that science, technology and medicine are far too important to be left out of history.

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Hearts Exposed

Transplants and the Media in 1960s Britain

Ayesha Nathoo
Research Fellow, Clare Hall, University of Cambridge, UK

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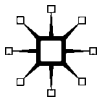

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In loving memory of my father, Karim Nathoo.

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I have benefited immensely from all those who have shared their thoughts and expertise with me and helped this work to develop. I am most grateful to Soraya de Chadarevian, Kelly Loughlin, Nick Hopwood, Jim Secord, Simon Schaffer, Tom Treasure and John Pickstone for taking the time to critically read through versions of this work in its near entirety, and I thank Emm Barnes for her encouragement at all the right times. Jerry Kutcher, Deborah Thom, Anne Digby, Tatjana Buklijas, Leila Nathoo, Sadiah Qureshi and Sasha Mudd helpfully commented on various parts and drafts. Any remaining oversights, however, are entirely my own.

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Archival access has been foundational to this project, and I extend my greatest appreciation to the librarians and archivists who have assisted me, including Lesley Hall from the Wellcome Library for the History and Understanding of Medicine, Kathleen Dickson from the British Film Institute, Christine Heydenrych from the Transplant Museum, Groote Schuur Hospital, Monica Thapar from the BBC Written Archives Centre (WAC), Dawn Moutrey and Tim Eggington from the Whipple Library, Department of

History and Philosophy of Science, Cambridge. Obtaining access to and permissions for images which are so central to my analysis has been no mean task, and I am extremely grateful to Dr Simon Joseph for greatly aiding this process by allowing me to reproduce a number of pertinent photographs he had taken in 1968 when Resident Surgical Officer at the National Heart Hospital in London.

Lastly, I wish to profoundly thank my mother, Razia, my brother, Irfan, my sister, Leila, and my beloved grandparents; Katie Hughes and my other dearest friends; and my soon-to-be husband, Mark Salim Maclean, for supporting, understanding and providing all that is most important in my life.

* * *

A note on sources

This book is a cultural history of the first human heart transplants in late 1960s Britain. It draws heavily on primary archival sources, most of which have not been used before by historians. My analytical framework is the relationship between medicine and the media in 1960s Britain, with 'medicine' representing 'high-tech' hospital medicine and its elite consultants, and 'media' primarily encompassing newspapers, magazines, journals and television.[1] Many extraordinarily rich hospital and government records held at the National Archives from the 1960s and 1970s have only recently become publicly available and have proved invaluable.[2] The BBC WAC also provided a wealth of important sources including news and programme transcripts, audience research and internal documentation. Only a fraction of audio-visual material has survived, but after years of perseverance, I was able to access some key television footage. Archives from the British Medical Association, the Institute of Cardiology and the Medical Journalists' Association, and papers left by the late Keith Ross, a member of the first British heart-transplant team, held at the Wellcome Trust's Archives and Manuscripts collection in London, have all greatly enriched this study.[3]

The transcript of a 'Witness Seminar' on 'Early heart transplant surgery in the UK' (Tansey and Reynolds, 1999) proved to be especially illuminating, coupled with the Seminar's uncatalogued archives. The event, held at the Wellcome Trust, London, in 1997, brought together a number of key medical figures, and I was fortunate enough to meet some of the participants during my period of research. In particular, Tom Treasure, the Seminar's Chairman, and Simon Joseph provided exceptional generosity with their time, sharing their insights into the institutions and professional environments most relevant to this study. Through Simon I had the pleasure of meeting his wife, Jacqueline, who had worked at the National Heart Hospital as an anaesthetist in the late 1960s, and I was also introduced to Jane

Somerville, Eunice Lockey and Donald Longmore, all of whom were directly involved in Britain's first heart-transplant operation. At a recent symposium in Cambridge, I had the opportunity to meet the renowned surgeon Sir Roy Calne who had pioneered liver transplantation in Britain. It was an unforgettable experience to meet these key protagonists with whom I had only previously been acquainted through copious documents and archives.

My work is also informed by a number of informal interviews I conducted with journalists who covered the transplant stories from the 1960s: Alan Massam, medical correspondent for the *Evening Standard*; Alf Browne, science editor for the Press Association news agency; James Wilkinson, science correspondent for the *Daily Express* (and later the BBC); and Ronald Bedford, science correspondent for the *Daily Mirror* and *Sun*. I also spoke to the South African photographer Don Mackenzie who closely assisted Christiaan Barnard. The richness of these unique, personal accounts has been of great value, providing important insights and perspectives that would otherwise have been lost. Unlike the medical professionals, journalists involved in the 1960s heart-transplant stories have rarely documented their own experiences.[4] As well as interesting recollections, the journalists also gave me advice, leads and access to other sources and contacts.[5] I rarely directly quote from my interviews, but the knowledge and experience I gained have provided me with a significantly greater understanding of the events of the time, and of the pioneering work and personalities that comprise the medical and journalistic terrains integral to my narrative.

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organ—Dr Barnard faces his critics', the *Listener*, 15 February 1968, and quotations of BBC staff and presenters from 1960s' programme archives and transcripts.

Every effort has been made to trace rights holders, but if any have been inadvertently overlooked, the publishers would be pleased to make the necessary arrangements at the first opportunity. All websites which are referenced were available at the given web addresses at the time that this book went to print.

Notes

1. Primarily for access reasons, but also to limit the otherwise endless sources, my research focuses on printed media and television, but largely excludes other sources such as cinema, newsreel and radio. I have generally omitted analysis of and reference to fictional sources – a major project in its own right – to focus on news and real medical practice.
2. Government records at the National Archives, located in Kew Gardens, are closed for a period of 30 years. Therefore documents from the late 1960s and early 1970s have only recently become accessible. I was granted permission to view one invaluable archive, 'National Heart Hospital: Relations with the press', a year before its public release. See references for a full list of archives used.
3. Unfortunately, there were archives which I eagerly sought that were not made available to me, for example those of the British Heart Foundation, and papers from Westminster's Coroners' Court detailing the coroner's inquest into the death of the first British heart-transplant recipient.
4. Transplant surgeons were interviewed by journalists at the time of the first heart transplants, and since then their stories have been told in autobiographies, speeches, documentaries, and more recently at the Wellcome Witness Seminar (Tansey and Reynolds, 1999). Although the media's involvement in the early heart transplants is constantly referenced in the Wellcome Witness Seminar, no journalists were invited to participate in this event. Gould (1985) and Thistlethwaite (1997) are exceptional in documenting journalists' own experiences at this time in relation to heart-transplant coverage in Britain.
5. Alf Browne arranged for me to meet with Alan Massam, who in turn allowed me access to his vast collection of *Evening Standard* clippings. Also of notable interest was an extract from Ronald Bedford's unpublished personal diary and an opportunity to speak to his wife, Thelma, who was a press officer for the British Medical Association in the 1960s.

Abbreviations

ABSW	Association of British Science Writers
BBC	British Broadcasting Corporation
BBC WAC	BBC Written Archives Centre
BHF	British Heart Foundation
BMA	British Medical Association
BMJ	*British Medical Journal*
CIOMS	Council for International Organizations of Medical Sciences
CMO	Chief Medical Officer
DHSS	Department of Health and Social Security
ECG	Electrocardiogram
EEG	Electroencephalograph
GMC	General Medical Council
GP	General Practitioner
ISD	Information Services Division
ITA	Independent Television Authority
ITN	Independent Television News
ITV	Independent Television
JAMA	*Journal of the American Medical Association*
MJA	Medical Journalists' Association
MoH	Ministry of Health
MRC	Medical Research Council
NHS	National Health Service
PR	Public Relations
PRO	Public Relations Officer
UCT	University of Cape Town
WHO	World Health Organization
WMA	World Medical Association

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Introduction

> 'Barnard Faces His Critics', 9.00 P.M., 2 February 1968, BBC 1
>
> Well, sixty-two days ago, a new phrase hit the world headlines – heart transplant. At Groote Schuur Hospital in Cape Town, the world's first surgical operation to transplant a human heart was performed, by a surgeon virtually unknown except to a handful of other surgeons. After the praise came the criticism. At first it was no more than a murmur. Today it can be heard round the world .... As well as secular and religious protest, there were those which came from medicine itself. Soon it became clear that the medical world was divided .... The split is widest of all in Britain. Tonight, in London, before a gathering of doctors, lawyers, churchmen and journalists, Professor Barnard meets some of his critics.[1]

And so began a special episode of the BBC's *Tomorrow's World* programme, 'Barnard Faces His Critics', which changed the future of British medical–media relations. It was simply an unprecedented occurrence for a gathering of over 100 people, comprised mainly of medical professionals, to participate in a televised studio debate discussing the technical, social and ethical implications of a recent medical innovation. The issue at hand was one of the most controversial and famous operations of the twentieth century – human heart transplantation – first performed by the South African surgeon Christiaan Barnard on 3 December 1967.

Popular twentieth-century histories often single out this surgical endeavour as a great or defining moment in world history, as important as the moon-landing of 1969.[2] On a par with space travel, it has been frequently used to symbolize human ability and medical achievement. Yet, for all this recognition, the academic literature lacks a historical analysis of this celebrated medical feat in its wider cultural context.

Barnard's operation inaugurated 'the year of the heart transplant', in 1968, when over 100 transplants were conducted in 18 different countries.[3] The first heart transplant in Britain took place in May 1968. Around 300

operations are now performed in Britain each year and while economic factors of course affect policy decisions, the most significant, publicly stated, limiting factor is the shortage of donor organs.[4] Doctors, health authorities and charities persistently urge the public, through vast media campaigns, to sign donor cards to give others the 'gift of life', with the heart often portrayed as the greatest gift of all.[5] However, the transition from experimental surgery to routine therapy was neither smooth nor inevitable. After the initial burst of activity in the late 1960s, with most of the early recipients dead within weeks of their surgery, human heart transplantation was all but abandoned for a decade. This book takes a close look at the first wave of heart transplants, between 1967 and 1969, and asks what made these operations possible and then why they stopped.

The first heart transplants were as much media as medical events. As the transplant surgeon Roy Calne wrote in 1970, 'The first heart grafts were covered by press, radio and television on a scale equivalent to the news of the outbreak of a major war.'[6] That they received unprecedented coverage for a medical undertaking has been frequently noted, but there has been no prior attempt to synthesize medical and media histories.[7] The media involvement in the heart transplants has generally been considered to be a mere supplement to a primarily medical story, rather than an integral and influential part of the history.

Some doctors retrospectively blame the intense, initial celebratory reporting for creating 'national surgical chauvinism and an ego epidemic' amongst heart surgeons, leading to the 'flurry of transplantations' in 1968.[8] Later critical media coverage is also often mentioned, as well as the fact that there was a moratorium, but no connection is made between the two. The initial high mortality rates are assumed in themselves to have been enough to discourage surgeons from continuing with the operation.[9] Yet a different explanation seems to be warranted given that many other types of cardiac surgery, as well as other transplant operations, prior to heart transplantation, had similarly high initial mortalities but continued as justifiable therapies.[10] The role of the media here seems critical. The media made the first heart transplants so symbolic and brought the actors and issues fully into the public arena: it created surgeon and patient celebrities, framed the ethical and socio-economic questions and, I argue, was central to bringing about the moratorium.[11]

The extensive reportage not only had a profound effect on the heart-transplant programme, but, conversely, the operations significantly impacted on medical communication more generally. They affected how, where and by whom medicine was debated. Professionalized medicine received exceptional exposure and has never since been able to retreat out of the public eye. Nowadays doctors are willing and expected to deal with continual, often critical, media interest and commentary on the social, ethical, economic and therapeutic implications of medical innovation, and public

involvement in medical debate is assumed. Expectations and demands of both medical and media consumers significantly changed in the late 1960s and the heart transplants were not only indicative but also constitutive of those transformations.

Despite being an era in the West of increasing affluence, consumerism, education, economic stability and social liberalism, the late 1960s were politically volatile years when post-war optimism was already giving way to a sceptical, anti-authoritarian individualism. While people across the social spectrum could afford and accepted domestic technologies such as televisions, fridges and washing machines, this period also witnessed growing public disillusionment with an increasingly 'high-tech' society. Given that transplantation was symbolic of high-tech medicine as a whole, and heart transplantation was the 'ultimate' surgery, this book demonstrates the need for a greater historical recognition of the operation's social and political significance.[12] The first wave of heart transplants marked a decisive period in post-war history, when the public's trust in their doctors was significantly undermined and when medicine was held publicly to account as never before.[13]

The history of heart transplantation is international but each country has its particularities, and the focus here is on Britain. By the late 1960s, the National Health Service (NHS) was well established within the welfare state and expectations of medicine were high. Britain was home to many world-class cardiac and transplant surgeons with international reputations. The British national press and public service broadcasting were also globally respected at a time when television was becoming an increasingly pervasive part of everyday life. The heart-transplant controversy was fought out in the international arena, among a divided medical world, but as the opening of 'Barnard Faces His Critics' revealed, British medical opinion was especially polarized. Given the significance of British media and medicine at a time when both fields were becoming increasingly internationally connected, the focus on Britain contributes to building up a broader picture, with local medical–media relations, intricacies and negotiations representing the wider scene.

By the 1960s the media had become an exceptionally important component of the contemporary social and political fabric.[14] This was an increasingly media-conscious era offering immediate information and entertainment; protests and wars became more and more visible and the media provided a platform for issues to be raised and opinions heard by vast and disparate audiences. Yet medical communication at this time has barely been looked at historically.[15] The relatively small range of historical literature on medicine and the media that does exist is mainly focused on the United States;[16] none focus on heart transplantation except some journalistic accounts which tend to contain rich narratives but lack analytical rigour.[17]

Most existing histories of heart transplantation are written by doctors and generally focus exclusively on technical achievements (and occasional setbacks) in a linear and progressive manner.[18] If the media is mentioned at all, it tends to be seen as an unfortunate by-product of the extraordinary surgical undertaking, and little attention is paid to social or political contexts, patient experiences, public responses or wider social consequences. It is through considering situations involving real communities, contexts and implications that anthropologists have produced some of the most insightful studies of organ transplantation thus far.[19] This book brings Britain into the picture, providing a useful comparison to work mainly conducted on the United States, whilst giving a historical analysis that complements existing ethnographies. *Hearts Exposed* provides a revised history of early heart transplantation that takes medicine and the media as products of the same, specific socio-cultural milieu of the late 1960s, thereby understanding media processes and events as an inseparable dimension of the medical history.

* * *

Chapter 1 starts by unfolding and interpreting the technical, institutional and conceptual shifts, which allowed the human heart to become a transplantable organ by 1967. It is a medical historical account which, while acknowledging the technological and clinical advances prior to heart transplantation, differs from standard, teleological histories of cardiac transplantation. The formation of cardiology as a discipline, the emergence of cardiac surgery and the eventual transplantation of a human heart were not inevitable developments. They were the result of a time-specific set of attitudes and conditions that generated optimism and confidence in 'heroic' surgery, giving surgeons and patients alike, as Fox and Swazey (1974) remark, the 'courage to fail'.[20] By the mid-1960s, *Time* magazine could run a lead article on surgery announcing to its readers: 'If they can operate, you're lucky'; and cardiac surgeons could claim that human heart transplantation was a surgical possibility and near reality.[21]

Quantitative research has shown that over the last 30 years medical science has increasingly become paradigmatic of all scientific enterprises in contemporary media reports, with biomedical news being the dominant form of science news.[22] Much of the academic literature on medical and science communication does not distinguish between the two – medicine is generally considered part of science reporting and not a special case.[23] However, as Chapter 2 demonstrates, medical and science reporting have quite different histories, constraints and issues, pertaining to professional ethics and the doctor–patient relationship. The context of medical news-making has varied significantly throughout the twentieth century. There have been changes regarding who reports news, what is considered news, how and

through whom information is managed and acquired, medical and media consumer expectations, and types and uses of available communication forms and medical technologies. It is precisely such contextual differences that much of the existing 'health studies' and 'cultural studies' literature tends to bypass, but that a medical historical approach seeks to highlight.[24] The second chapter therefore explores changes in the media landscape in Britain that facilitated and shaped coverage of heart transplantation. I show how organizational changes within the media, new styles of reporting and new media influenced medical news-making – including the creation of specialist medical journalists, the increasing use of investigative journalism and the rise of domestic television.

Even though the recipient of the first human-to-human heart transplant, Louis Washkansky, survived only 18 days, his operation of 3 December 1967 was simultaneously hailed in the media as historic and a success. Chapter 3 seeks to understand what made the Cape Town operation into such a media wonder and how Barnard and Washkansky were transformed into international celebrities. How did the coverage follow or break with previous trends in reporting medical 'breakthroughs' and how did it inform subsequent expectations of medical news reporting? This chapter aims to show how and why the first human heart transplant was made into one of the most famous events of the twentieth century.

Criticisms of heart transplantation began to emerge in the British media after three transplants in the United States left the patients dead within days, and a second transplant in South Africa which controversially used a 'coloured' donor for a white recipient. Opponents claimed that the transplants were premature, that immunological knowledge was lagging behind surgical ability, that inappropriate publicity had attended the operations and that major ethical issues needed immediate attention. Analyses of the ethics of transplantation have generally been the terrain of 'bioethicists' who have focused on issues such as identity, selfhood, allocation of organs, the nature of death, individual and societal rights, duties and consent.[25] As Cooter (1995) has noted, histories of ethics compose only a tiny fraction of the vast mainstream bioethical literature,[26] mainly because philosophical logic is often used by bioethicists to help resolve universal moral rights and wrongs that are by definition ahistorical.[27] Chapter 4 situates the early concerns about heart transplantation in their historical context through a micro-study of the *Tomorrow's World* studio debate in February 1968, 'Barnard Faces His Critics'. The chapter analyses the background to, and the content and reception of, this unique programme, highlighting major concerns as to where medicine should be debated, and who should take part. This programme, I suggest, shaped the ensuing heart-transplant debate in Britain, broke down traditional rules regarding doctor anonymity, and helped to shift the focus of medical programming to explore social and ethical implications of medical innovation.

Chapter 5 analyses the interface between medical and media worlds at the time of the first British heart transplant in May 1968. As the heart operation was made into a media drama and human interest story, the surgeons' mismanagement of the publicity became part of the news story itself, forcing media–hospital relations to the top of the agenda. This was the first time that British hospital doctors gave a post-operative press conference. How did the issues framed in the press relate to the disparate professional interests and ethics of doctors and journalists? How did the public and private worlds of the media and hospital intersect and interact? This chapter argues that the transplant stories played a powerful part in defining the media's role in this internationally tumultuous time, and challenges some of the surgeons' own accounts that describe the media involvement as entirely unwelcome and imposed.

Chapter 6 looks at the formation of committees, the hiring of Public Relations (PR) firms, the informal meetings and international conferences, all aimed at regulating and controlling the heart-transplant enterprise, and, most importantly, trying to combat the growing public distrust of the medical profession. Of the first 100 heart-transplant patients in 1968, two-thirds were dead within three months of their revolutionary surgery. Was heart transplantation high-tech medical progress or human experimentation? Was taking out a beating heart in fact an act of murder given that the beating heart was the traditional signifier of life and death?[28] The need for image management became increasingly apparent as doctors tried to contain the heart-transplant controversy. The first heart transplants were not, of course, the first time that medical authorities lacked consensus or that a new medical procedure had a high initial mortality rate. The difference here was the degree and duration of media attention that exposed the medical divide and made the deaths of heart recipients headline news, rather than just statistics in medical journals.

After three unsatisfactory attempts at heart transplantation in Britain, in 1969 the operation was essentially stopped for a decade as part of a more general international clinical moratorium. Heart transplantation was no longer seen as a sign of hope and a brilliant medical achievement, but a premature, desperate attempt to prolong the life of a few individuals. There were diverse reasons for this abandonment, including a lack of donors and high mortality rates of recipients, but I foreground the crucial role of the media in bringing to a close the first wave of human heart transplantation in Britain.

1
Making the Heart Transplantable

How, by 1967, had human heart transplantation become conceivable, desirable and practicable? Even in the mid-1950s, it was not obvious that the heart could be transplanted, or indeed that it should be. The organ had to become a distinct object of study with corresponding institutional, financial and intellectual support and to be conceptualized as not just repairable but also replaceable. Performing the operation required not only surgical ability but also a certain heroic attitude and a new relation to technology that was present amongst surgeons in the post-war era. Of equal importance, and inextricably linked to technical innovations, were institutional and cultural shifts that made human heart transplantation achievable. In the early twentieth century, a new set of establishments, practices and professionals formed the field of cardiology based on a functional understanding of the human heart; but only after the Second World War did therapeutics significantly change, with cardiac surgery emerging as a discipline distinct from cardiology, and new technologies such as the heart–lung machine allowing surgeons the time and means to operate on the heart.

The heart–lung machine, also known as the 'pump–oxygenator', embodied the dominant medical model of the heart, conceptualized in terms of its function as a 'pump'. Yet, surgeons were aware of widespread resistance to the notion of the heart as a mere 'pump' and at times acknowledged the limitations of this reductionist analogy. However, by focusing on this functional aspect, a diseased heart could be understood as just a failing pump which could therefore be replaced with something functionally similar. This was the impetus for 'spare-part' surgery which incorporated artificial organs, xenotransplantation (animal-to-human) and human-to-human organ transplantation.

The history of cardiac transplantation must also be placed in the wider context of organ transplantation, post-war surgery and immunology, and the attitudes, influences and aspirations of surgeons of the time. The first dog heart was transplanted into the neck of another dog in 1905; but although influential, an inevitable extrapolation cannot be made from this

experiment to late twentieth-century routine therapeutic heart transplantation using 'brain-dead' human donors, as some histories would suggest. Many of the early experiments aimed to further physiological understanding rather than having any directly therapeutic goal in mind. By the early 1950s, certain researchers did have primarily therapeutic aims, yet transplanting the human heart was still considered 'a fantastic dream'. By the mid-1960s this dream was deemed by leaders in the field to be 'just around the corner', although not without resistance amongst the medical profession and the wider public as the idea was disseminated.

The heart-transplant pioneers were poignantly aware that the shift from animal experiment to human clinical procedure was an enormous step, ethically and psychologically, as well as technically, and there was no consensus even within medical circles that heart transplantation should be attempted. In 1964, when the American surgeons Norman Shumway and Richard Lower felt confident that the procedure was feasible, their key reservation was the societal response to such an audacious act. In the mid-1960s, heart disease was regularly presented as the 'number one killer', in the Western world; and at a time of high expectations of medical and scientific innovations, the public were familiar with reports of surgical advance. However, it was not until November 1967 that cardiac surgeons publicly declared that human-to-human heart transplantation was not only possible but imminent. This chapter thus traces how the heart was made transplantable by the end of 1967: transformed from a vital organ that could not be surgically touched, to a replaceable 'pump' – transplantable from one human being to another.

The 'pump': Its disciplines, institutions and professionals

By the end of the nineteenth century, physicians were reconceptualizing the heart in terms of its functional capacity as opposed to its anatomy. With increasing technological means, nineteenth-century experimental physiology created the 'living heart' whereby cardiac disease could be measured and diagnosed in terms of changes in function rather than structure.[1] Built on earlier instrumentation, electrocardiogram (ECG) recordings became *the* medically symbolic representation of the beating heart, showing function and dysfunction, allowing harmful rhythmic abnormalities to be differentiated from harmless disturbances.[2] Making electrocardiography a dominant method for investigating and treating heart disorders contributed to establishing the hospital as the principal site for medical treatment, part of a larger story that included, for example, the introduction of X-ray imaging and antisepsis in hospitals.[3]

In the years building up to the First World War, cardiology formed as a discipline in its own right. It was consolidated during the war, becoming a respectable speciality by the 1920s. Notably, the condition 'soldier's heart',

previously DaCosta's syndrome, was determined and resolved using the new cardiology. Symptoms that had been considered indications of heart disease, such as chest pain and palpitations, were reframed as psychological problems treatable through graded physical exercise.[4] From 1922, when the Cardiac Club was founded, Britain had a club, a journal (*Heart*, formed in 1909), and a hospital dedicated solely to patients suffering from heart disease.[5] Founded in 1857, the eight-bed 'Hospital for Diseases of the Heart' was the first in the world solely for patients with heart conditions.[6] In 1914 it moved to Westmoreland Street, London, and expanded to 42 beds, becoming a centre for First World War recruits with heart problems. During the mid-twentieth century it grew into one of the leading international cardiac centres and in 1968 would be the site of Britain's first heart-transplant operation.

In the 1920s, this specialized institution, combined with specialized technology, journals and clubs helped to form cardiology as a coherent intellectual discipline.[7] The medical historian Christopher Lawrence has argued that the very concept of a 'heart attack', a phenomenon that was subsequently designated a primary killer in Western societies, was constructed in the 1920s by specialist practitioners furthering their field. They negotiated a consensus over how their instruments could be interpreted so as to objectify and define disease.[8] A particular interpretation of an ECG recording thus became the objective indicator of a 'heart attack' and by the early 1930s, coronary thrombosis (clotting of the heart's arteries) had become an unambiguous disease entity.

In the Aristotelian view, the heart was not only the seat of the soul but also a privileged organ that did not suffer disease.[9] With the development of cardiology as a discipline, the belief that the heart could not suffer disease had clearly given way; however, what remained into the early twentieth century was the conviction that the heart could not be surgically touched, and the patient survive, given its essential, determinant role of maintaining life with each beat. Leading late-nineteenth-century surgeons maintained that surgery of the heart would always remain impossible;[10] surgery of the brain, in contrast, was already quite well advanced by the early twentieth century,[11] as the basal function of the central nervous system was sufficient to keep essential physiological control of respiration and circulation, provided the heart and lungs were in working order. The converse was not true: failure of circulation and/or oxygenation brought death within minutes.

Against the prevailing climate of opinion, the London surgeon Henry Souttar wrote in 1925, 'the heart is amenable to surgical treatment as is any other organ', reporting on an isolated operation he had conducted on a patient suffering from mitral stenosis (the narrowing of the valve leading to the left ventricle, the main pumping chamber of the heart).[12] Although the patient lived for several years after the operation, Souttar's colleagues scorned the very idea of operating on the heart, considered the valves to be of little importance to heart disease, and referred him no more similar

cases.[13] Meanwhile, in Boston during the 1920s, the surgeon Elliot Cutler led a series of nine operations for mitral stenosis, using a different method to Souttar, but almost all the patients died within days of their surgery, discouraging Cutler from continuing with the procedure. Nonetheless, these operations marked the start of 'blind' or 'closed-heart' surgery, initiated before the use of blood transfusions and antibiotics, and abandoned not because patients died of haemorrhage or infection, but due to the general lack of belief in and support for operating on the heart.[14]

Cardiac surgery did not properly commence until the 1940s; the Second World War was the major impetus for change, as adventurous surgeons attempted experimental surgery on the numerous and varied war injuries of otherwise 'fighting fit' young men. The US Army surgeon Dwight Harken, based at a military hospital in Cirencester, West of England, notably reported in 1946 over 130 cases in which he had removed shrapnel and bullets lodged in and around the heart (13 within the heart's chambers), without a single death recorded.[15] Wartime operations therefore definitively proved that the heart was in fact a resilient organ that could be interfered with, damaged and mended. Closed-heart operations began to be performed with increasing frequency and success during the 1940s, and by the early 1950s, with the development of perfusion techniques and hypothermia, open-heart surgery became technically feasible. The heart could now be accessed, seen and operated on, rather than being exposed for the first time during autopsy in its static, often diseased, state. The development of antibiotics, new technologies of imaging and measurement, and advances in blood coagulants and transfusions contributed greatly to increased surgical survival rates. Although experimented with even in the nineteenth century, and undertaken during the First World War, blood transfusions only became a co-ordinated, safe and effective procedure in Britain when the National Blood Transfusion Service was established in 1946.[16]

After the Second World War, the Hospital for Diseases of the Heart was designated as a postgraduate teaching hospital, renamed the National Heart Hospital and assigned its own Board of Governors. The Institute of Cardiology was founded in 1947, attached to the hospital for purposes of postgraduate education and research.[17] Cardiology had become an institutionalized and respected field, making increasing demands on Medical Research Council (MRC) funding in the post-war years. But dissatisfied with the amount of money, members of the British Cardiac Society and the Chest and Heart Association initiated the British Heart Foundation (BHF), officially established on 20 July 1961. The Chest and Heart Association had developed from the late-nineteenth-century National Association for the Prevention of Tuberculosis, but as heart disease took over from TB as a greater threat to Western lives in the 1950s, the association changed its focus.

The BHF was set up to raise funds primarily to 'undertake and promote medical and scientific research relating to diseases of the heart and

circulation . . . and to promote postgraduate medical training in cardiology'. The secondary objective was to 'promote through the Association . . . the welfare and rehabilitation of patients who have suffered from heart disease, and health education in subjects relating to the heart and circulation'. Public education, however, was sidelined, at least in the first few years, perhaps since there was an initial agreement that the Chest and Heart Association would undertake this task and also due to 'uncertainty over what it was appropriate to tell the public'.[18] On 11 June 1963, the Foundation launched its high-profile public appeal with a press conference held at the headquarters of the Royal Society. An article in *New Scientist* magazine two days later asserted that 'the MRC are not giving enough . . . we [the BHF] are therefore compelled to appeal directly over the head of government to the interested and charitable public for a large amount of help with a problem of great magnitude and of great personal importance to everybody'.[19]

By the 1950s, cardiac surgery had formed as a distinct field, separate from cardiology, developed mainly by thoracic surgeons who had originally been involved in treating tuberculosis. In 1947 the Brompton Hospital, which specialized in pulmonary disease, appointed its first pure cardiologist. That same year, Thomas Holmes Sellors initiated cardiac surgery at Harefield Hospital in Middlesex (which had also originally been built as a chest hospital primarily for tuberculosis) and Guy's Hospital opened a thoracic surgical unit. These London hospitals were some of the world's leading centres, making headway with diagnostics and treatments for valvular, ischaemic (blood-obstructing) and congenital heart disease.[20]

After the war, surgery became increasingly specialized yet also collaborative. Artificial replacement therapy, for example, required collaboration not only across the experimental sciences but also with electronics and materials industries.[21] Both cardiac surgery and transplant surgery also relied heavily on a constellation of medical techniques and disciplines. A 1965 speech by Holmes Sellors on 'The genesis of heart surgery' pointed out that cardiac surgery had been virtually unknown 25 years previously. He described the rise of post-war surgery of the heart with aggressive language, as a 'therapeutic weapon' which emerged with almost 'explosive violence', but acknowledged that the growth of the field was due to team efforts and the culmination of work in various medical areas from haematology to anaesthesia to nursing. The talk ended dramatically: 'Man – the surgeon – is no longer a demi-god in complete control. He is the leader and co-ordinator of a complex. No one unit, no one country, has the sole credit for the evolution of this fascinating branch of surgery.'[22] Such an explanation is indicative of the post-war notion of a bio-medical complex, where groups, networks and centralised co-ordination and funding were seen as the desired format for medico-scientific development. This mentality followed on from the success of the large-scale, highly co-ordinated development and manufacture of

penicillin, the 'magic bullet', seen as medicine's equivalent to the Manhattan Project.[23]

Holmes Sellors was the first consultant surgeon appointed at the National Heart Hospital in 1957 (also lecturer at the associated Institute of Cardiology), but surgical practice did not commence at the hospital until 1962 when two operating theatres were built at the Westmoreland Street site.[24] During the 1960s it became a world famous cardiological institution; its moment of greatest exposure was to come in May 1968 when the first British heart-transplant operation was performed there by Donald Ross and his team. Ross was born in South Africa, but moved to Britain in the early 1950s where he spent his entire professional life. He joined the National Heart Hospital in 1963 and became perhaps Britain's most eminent cardiac surgeon, renowned particularly for his work on valve replacement.[25] In the 1950s and 1960s, London's Hammersmith Hospital also led the way in cardiac surgery in Britain, particularly due to the work of the surgeon William Cleland and clinical physiologist Denis Melrose. In 1953 they developed a heart–lung machine, probably the most significant technical contribution to open-heart surgery, that took over the circulation and oxygenation of the blood.[26] Two years later they succeeded in performing an elective cardiac arrest. Significantly, the non-beating heart was here not a marker of death, but a transitory and intended event, which enabled its surgical repair.[27]

Mid-twentieth-century medical terminology can be seen to reinforce the mechanistic notion of the body that dates back to the Cartesian concept of the body as a machine.[28] With the heart seen as analogous to a pump, much of the 1950s medical literature referred to the heart–lung machine as a 'pump–oxygenator'. However, it was not clear what type of a pump the heart was, as can be shown by the array of different heart–lung machines that were developed. There was the Gibbon–Mayo machine that used 'roller pumps' and another device which used 'sigmamotor pumps'.[29] Oxygenators could be of the 'rotating disc' type or 'bubble oxygenators'. Pumps could be disposable or non-disposable, portable, of different sizes and efficiencies, in need of cleaning and sterilization. But regardless of the designs, the function was essentially the same: pumping and oxygenating blood – the basic functions of the heart and lungs.

Unlike the heart and lungs, however, the pump–oxygenators damaged blood cells. Despite the overwhelmingly positive reception of heart–lung machines, it was widely acknowledged in the 1960s that they caused numerous post-operative complications.[30] The foreword to Melrose's paper, written by another Hammersmith consultant, Ian Aird, stated that in lab experiments, animals can rarely survive indefinite time spans on an extracorporeal heart–lung circulation, and openly claimed that 'the natural lung may have other functions than oxygenation'.[31] Perhaps then too, the heart had other functions than pumping.

The function of the heart as a 'pump' is conventionally traced back to William Harvey, who explained in 1628 that blood circulated through the body, leaving from and returning to the heart.[32] Although Harvey used analogies between water pumps and the heart, he did not actually conceive of the heart in purely mechanistic terms. He asserted: 'the heart is the tutelary deity of the body, the basis of life, the source of all things, carrying out its function of nourishing, warming, and activating the body as a whole'.[33] Alongside the mechanistic heart, the heart as part of a more complex and interactive system that could respond and adapt to physical and emotional change is also found in the 1960s, for example in a popular book, *Spare-Part Surgery*: *The Surgical Practice of the Future*, by Donald Longmore, a cardiac surgeon and key advocate of heart transplantation at the National Heart Hospital:[34]

> It is this rich interconnection of nerve, muscle and conducting tissue that gives the heart such a subtle pattern of response. Heat, cold, exertion, certain smells and sounds, pressure on the eyeballs, letters from tax collectors, passions of every kind – the heart responds to them all.[35]

In a later book, *The Heart*, he explained:

> As long as we think within a simple, mechanistic framework and call the heart . . . a 'simple pump', we will gain little new knowledge about its function . . . . The heart is a community of complex cells; it is surrounded by other such communities of equivalent complexity. Together they add up to the total complex system of a human being who, in turn, is a member of the complex community of mankind that survives in a complex environment. Such a system is total.[36]

He continued, 'The subtlety of its construction and the diversity of its response to changes within this system do not belong to . . . the story [of the heart as a pump]'.[37] The heart is 'partly a learning system; certainly it is adaptive'.[38] These statements therefore display a much more subtle medical understanding of the heart than as a 'mere pump' even by a key protagonist of heart repair and replacement.

Nevertheless, by focussing exclusively on the mechanistic model of the heart, certain researchers thought it possible to replace the organ fully with a man-made pump. In the 1930s the French surgeon Alexis Carrel and the aviator Charles Lindbergh devised various mechanisms temporarily to mimic the functions of the heart and lungs. In 1935 a *New York Times* journalist used the term 'artificial heart' for the first time, to describe the Lindbergh–Carrel perfusion pump. Even though the meaning and purpose of an 'artificial heart' significantly changed over time, the term stuck.[39] J.B.S. Haldane's *Science and Everyday Life* (1939) stipulated: 'Since the heart is a pump . . . it is

possible in theory to replace it', and predicted that 'the problem of the artificial heart will be solved in the next fifty years'. He went as far as saying that 'a few centuries hence artificial hearts may be as common as artificial teeth'.[40] Creating an artificial heart appeared all the more viable after the successful application of the heart–lung machine, which seemed to indicate that the heart function could indeed be simulated mechanically. This work commenced in the 1940s and 1950s, but the project came to fruition in 1963 in the United States with the launch of an artificial heart program sponsored by the National Heart Institute (part of the National Institutes of Health).[41] Following other successful highly co-ordinated post-war projects, funding bodies and researchers believed that enough money, great minds and systematic research would solve what seemed to be just a complex engineering problem: to create an artificial pump to substitute the human heart. The initial target was to develop a fully implantable total artificial heart by Valentine's Day 1970.[42] This displays the complexity of concurrent meanings and associations of the heart: aiming to produce a mechanical heart (since it is only a pump) but to do so by the day most closely associated with the heart and all its cultural symbolism.

Medics were more than aware of popular perceptions of the heart and the symbolism attached to it. During the first year of human heart transplantation in 1968, at a conference in Cape Town, one of the speakers, Walton Lillehei, argued, 'It is clear to most of us here that the heart is nothing more than a mechanical pump, and there is certainly no conceivable reason why we can't develop an effective means of long-term mechanical assistance for it.' Yet shortly afterwards, another leading pioneer, David Cooper, declared:

> The heart has always been considered to be unlike any other organ in the body. It is the seat of the soul; the seat of our emotions and so on. Love songs, ballads and poetry are written about the heart. No one ever writes a love song about his kidneys or his liver, it always has to do with the heart.[43]

These conversations exemplify medics' own acknowledgement of the symbolic relevance of the human heart, a point I return to in Chapter 3. Moreover, the symbolism of the heart played a part in attracting surgeons to the field in the first place as illustrated in a history of cardiac surgery written by a surgeon in the late 1960s: 'Cardiac surgery . . . is the most intensely dramatic [surgical speciality] due in part to the wide variety of intricate operations and the complicated apparatus needed, and in part to the emotional symbolism of the heart, rooted deep inside us all.'[44] Nonetheless, the making of cardiology as a discipline in the early decades of the twentieth century was based on a functional understanding of the heart, and from this starting point, post-war cardiac surgeons could focus on the repair and eventual replacement of this pump.

'Spare-part surgery' and human heart transplants

Histories of cardiac transplantations are often written by surgeons themselves.[45] Schlich (1995) and Lawrence (1992b) have both criticized the results: progressive histories of individual heroes making breakthroughs leading to the predetermined common goal of transplanting the heart. Given professional interests, many of the surgeons' histories reinforce the status of their field by stipulating that organ transplantation was the medical miracle of the twentieth century, a claim seemingly supported by the disproportionate number of Nobel Prizes awarded to the pioneers of transplantation.[46] Progress is seen as steady and co-ordinated and the goal apparent from ancient times.

Schlich uses the Latourian concept of enrolling allies to describe how great names in medical history such as William Harvey and John Hunter are made to seem part of the path towards the ultimate goal of cardiac transplantation.[47] This is true for medical accounts from the 1960s and 1970s and also in most of the present-day historical literature written by doctors. Legends and even the Bible are enrolled in making cardiac transplantation seem not only an obvious but also a deep-rooted goal. One account, for example, quotes from Ezekiel Chapter 36: 'Thus sayeth the Lord God. "A new heart also will I give you, and a new spirit will I put within you; and I will take away the stony heart out of your flesh, and I will give you a heart of flesh." '[48] The majority of surgeons' historical accounts of transplantation re-tell the legend of the Saints Cosmos and Damian, depicted in Renaissance paintings, whereby they performed the miracle of replacing the diseased leg of a white man with that of a recently deceased 'blackamoor'. Hence surgeons can claim that 'to cure disease by restoring the function of a diseased organ by a biological graft is an ancient concept'.[49] Chinese legend is also widely utilized in the form of the surgeon Pien Chi'iao in 300 BC, who, the story goes, interchanged the hearts and stomachs of two visiting travellers: the first 'heart transplant' on record.

Language and metaphors are also used in surgeons' accounts to show the cultural grounding of transplantation goals. As Holmes Sellors began a talk in 1968: 'Acquisition of an organ or tissue belonging to someone else has always been man's ambition .... The "heart of a lion", the "eye of an eagle" and the "wings of a dove" are elementary examples of these aspirations.'[50] The sphinx and the mermaid are also used as examples of 'the dream of the ancients from time immemorial' to conjoin 'portions of different individuals, not only to counteract diseases but also to combine the potentials of different species'.[51] These accounts fail to address the very specific contexts of medical innovation by isolating technical developments from social determinants. How, instead, can we understand cardiac transplantation history in terms of socio-technological change? What were the attitudes, goals,

restrictions, opportunities and expectations of the surgeons of the time and how were they situated?

Some of the earliest transplantation work involving humans started in the 1880s and 1890s when surgeons made the radically new claim that defective organs could be functionally replaced.[52] Prior to this time, additions of external body parts had been experimented with, for example artificial limbs and false teeth, but this was of course medically, practically and conceptually different from tissue transplantation. In 1883, the Swiss surgeon Theodor Kocher attempted to reverse the effects of having completely removed a patient's thyroid gland, by transplanting thyroid tissue from another patient.[53] This operation promoted experimental transplantation of various other endocrine glands to restore physiological function.[54] However, most standard histories of organ transplantation omit the early surgical endocrinology experiments and crown the French surgeon Alexis Carrel the 'father of organ transplantation'. Carrel and physiologist Charles Guthrie worked together at the University of Chicago in the early 1900s transplanting and replanting various animal organs including the lung, kidneys, thyroid, ovaries, limbs and the heart, having devised new methods of sewing blood vessels together. Their seminal 1905 paper, 'The transplantation of veins and organs', for the first time made reference to a 'transplanted heart' and in 1907 Carrel described his technique of heart transplantation in a dog.[55] Carrel and Guthrie transplanted ovaries and kidneys into the correct sites of the recipient animals (homotopic or orthotopic transplantation), but the other organs, including the heart, were transplanted into the necks and abdomens of recipient animals in order to make physiological, pharmacological and pathological discoveries. The method of suturing together blood vessels made transplantation of organs technically viable but as Schlich points out, this was an improvement of an already existing method and did not lead directly to therapeutic transplantation.[56] There were significant barriers and a linear trajectory should not be drawn from Carrel to Barnard. Opposition by anti-vivisection groups to animal transplantation experimentation was harsh and Carrel himself foresaw many difficulties with eventually extending the work to human therapeutics. In his 1907 paper, Carrel acknowledged that 'the question of the transplantation of organs in man is difficult and very far from settled'. He was concerned about the length of time that an organ would be able to survive in another body and also the problem of finding organs suitable for transplantation in humans. He encouraged researchers to examine further the feasibility of hetero-transplantation (using animals) on which 'the future of transplantation of organs for therapeutic purposes depends'.[57]

The excitement of the early twentieth-century transplantation experiments waned due to the fact that transplants from one individual to another were invariably unsuccessful as the transplanted organ stopped functioning.

Scientists and surgeons recognized that individual species seemed to have their own biological identity that 'rejected' foreign tissues, but were unable to understand or overcome this barrier. The first attempt at a human kidney transplant was in 1906, when a pig's kidney was transplanted into a patient's right arm. Other isolated experiments on human recipients followed in the next two decades using kidneys of goat, monkey and lamb, but these early attempts left the patients dead within days. The Russian surgeon Yu Yu Voronoy dared to abandon animals in favour of a human cadaver in 1936. He did not consider it ethically acceptable to take from a living donor, and so transplanted a dead man's kidney into a 26-year-old woman. She died two days later.[58] Human transplantation did not properly commence until researchers had a greater understanding of how and why organs were rejected when grafted into a foreign body. The field of transplantation immunology, which addressed these issues, was not firmly placed on the map until the 1940s, following the pioneering work of a British-Lebanese professor of zoology, Peter Medawar.

During the Second World War, given the lack of effective means for dealing with severe burns, the MRC asked Medawar, whose interest in burn treatment was widely known, to research skin grafts. At the National Institute for Medical Research in London during the 1940s, he showed that skin grafts were rejected due to an immunological reaction whereby the body fought the graft as it would a disease, given the graft's status as 'not-self'. By the end of the 1950s the same mechanism responsible for skin graft rejection was shown also to be the cause of organ rejection. Medawar demonstrated that skin graft rejection could be almost entirely avoided if foreign cells from donors were introduced into the fetal or neonatal recipient.[59] His work was foundational for the field of transplantation immunology and led to the important development of tissue typing.

Work on organ transplantation developed in parallel to the increasing immunological understanding, but was also a result of changing attitudes and ways of doing surgery. In the early decades of the twentieth century, with growing professional prestige and wars encouraging greater experimentation and therapeutic confidence, surgeons attempted increasingly audacious and radical operations. Both the public and practitioners perceived surgery to have overtaken physic in therapeutic ability.[60] The surgeon was considered to be a heroic, bold and courageous figure; a frontiersman, an explorer.[61] Tonsillectomies and hysterectomies became commonplace and were conducted, often unnecessarily (as we would now see it), in their hundreds of thousands. Radical operations such as lobotomies and leucotomies for psychiatric disorders, radical mastectomy for breast cancer and removal of large sections of the gut even for constipation, were considered appropriate and effective.[62] But in the 1950s and 1960s there was a general shift in the nature of surgical intervention from extirpation to restoration and replacement surgery, marked by a proliferation of work on transplantation,

artificial organs and prostheses.[63] Heart-valve surgery, alongside techniques for pacing and defibrillating the heart were significant markers of this new phase.[64] The more subtle and complex, but no less daring, surgery of repair and replacement further elevated the status of the surgeon. In this optimistic environment, transplantation was widely recognized by surgeons in the 1950s as being one of the most exciting areas of the field, then and for the future.

Consistently successful human corneal grafting commenced in the early 1950s, a time when kidney transplants were again attempted. Whereas corneas had an 'immunological privilege',[65] rejection was still a major issue for kidney transplantation and access to human kidneys also posed a serious problem. Doctors in both France and the United States were racing to succeed in renal transplantation and the French surgeons resorted to using kidneys of freshly executed prisoners. Several transplants were conducted in France and the United States in 1951 and 1952, but each time the organs failed through rejection.[66] In 1954, the Boston surgeon Joseph Murray conducted the first successful kidney transplant between identical twins; his patient, Richard Herrick, survived eight years with his brother's kidney. Murray had also started his research career working on burns and skin grafts in the Second World War, and with increased immunological understanding he investigated transplanting kidneys between identical twins as a means of sidestepping the rejection phenomenon. He furthered this work by performing kidney transplantation between non-identical twins and also using cadaver kidneys, trying irradiation and then immunosuppressive drugs to combat rejection.

Murray's work was considerably enhanced by his co-worker, the British surgeon, Roy Calne who took up an 18-month fellowship to work at the Peter Bent Brigham Hospital in 1960. During this period Calne proved that the cancer drug, azathioprine, was extremely effective in preventing rejection; clinical trials soon followed in the United States and in the UK. Other than on identical twins, the first few years of clinical kidney transplantation had resulted in high patient mortalities, especially before the use of azathioprine when irradiation was the preferred method to prevent rejection.[67] The introduction of immunosuppressant drugs resulted in greatly fluctuating survival rates: some transplant patients lived for years and others died after days. In 1960, the Edinburgh surgeon Michael Woodruff performed the first kidney transplant in Britain on identical twins; his first operation using a cadaver kidney was in 1965.[68] As kidney transplants moved into the clinical setting in Britain, the 1952 Corneal Grafting Act was replaced in 1961 with the Human Tissue Act. This regulated all cadaver transplants and also covered the use of body parts for medical education and research. Under this Act, body parts could be removed as long as there was no reason to believe that the deceased had expressed an objection and that the 'surviving spouse or any surviving relative' did not object.

In 1963, researchers working on kidney transplantation met in Washington, DC, to compare experiences and results. On average fewer than 10 per cent of patients lived longer than three months after surgery;[69] nonetheless by the mid-1960s kidney transplantation had become an accepted therapy, a contrast to the heart transplantation trajectory that I expound in later chapters.[70]

Heart transplantation had a number of different implications and complications from kidney transplants, not least because it is not a 'paired' organ like the kidney. Also, in the mid-twentieth century a failed kidney-transplant operation had dialysis to fall back on, whereas no equivalent equipment existed for the heart. Even so, cardiac transplants in animals were attempted with increased frequency from the 1930s to the 1960s. The various techniques, developed by different individuals around the world, in hindsight tend to be used to compose a linear historic record, but their work was not necessarily cumulative with a common goal in mind. Much of the early cardiac-transplant research on animals was concerned with understanding physiological or immunological processes in individual organs without the aim of replacing a diseased heart. Transplantation experiments also took very different forms from replacing one organ with another similar organ in the same place: adding to, rather than replacing an organ, or positioning the transplanted organ in an abnormal anatomical position in the recipient body (heterotopic transplantation).[71]

It was not until the 1950s that researchers had a more uniformly therapeutic goal in mind. Marcus, Wong and Luisada at the Chicago Medical School are credited with devising techniques for cardiac transplantation per se, publishing the first of several papers in 1951.[72] Although their own experiments dealt only with heterotopic transplantations, they speculated that a human diseased heart might be replaced, but stated that this 'must be considered at present a fantastic dream'.[73] In 1953, the first orthotopic heart transplantation was carried out in the United States.[74] By the end of the 1950s, such experiments were being performed in various centres with greater success using hypothermia and pump–oxygenators to enable the total replacement of the heart: excision of the old and implantation of the new. The idea of therapeutic heart transplantation was becoming more widespread amongst specialists.

The heart was one of the last organs to be subjected to the scalpel, and operations almost necessarily dealt with matters of life and death. Thus, post-war cardiac surgery epitomized the image and attitude of the heroic surgeon and developed at an impressive pace. In 1957, *Time* magazine ran a 10-page feature opening up the heart and the practices of cardiac surgeons to the public.[75] The front cover pictured the Philadelphia surgeon Charles Bailey who proclaimed in the accompanying article inside that 'nothing is impossible in surgery'.[76] *Time* carried another leading article on surgery in 1963, featuring the Boston surgeon Francis Moore on the front page.

The associated 11-page article celebrated surgical advance since the war and stated that currently 'surgeons are virtually unanimous in believing that the most exciting and promising new area now being opened to them is the field of transplantation'. The piece included a surgeon's own description of what it meant to be 'great': 'To be great . . . a surgeon must have a fierce determination to be the leader in his field. He must have a driving ego, a hunger beyond money. He must have a passion for perfectionism. He is like the actor who wants his name in lights.'[77] Cardiac surgeons and their patients had, as Fox and Swazey (1974) described in their ethnography of early transplant surgery in the United States, 'the courage to fail'. They had the confidence to experiment with different surgical solutions despite obtaining extremely high initial mortality rates for most of the pioneering heart operations.

The willingness to experiment with cardiac surgery was not technologically determined; it required a certain attitude and belief in technology that was largely a product of the post-war era. This was an optimistic time for doctors that generated immense therapeutic innovation, and by the 1960s the space-race further added to an attitude of limitless progress and conquest. The ideologies of space science, as well as its associated theories and technologies, influenced medicine at this time and surgeons often drew parallels between the two fields. A 1962 article in *New Scientist* magazine reported on a design by the US National Aeronautics and Space Administration for a miniature heart–lung machine to be permanently strapped to the belt of an astronaut and linked to the arteries and veins with short plastic pipes. The hope was that this could also potentially be a great stride towards 'underwater life', creating a 'new human species, *Homo sapiens aquaticus*'.[78] The following year, the 1963 *Time* article on surgery stated:

> Under the bright lights that illuminate the surgical incision with brutal clarity, the achievement of the surgeon and his assistants becomes one of the greater glories of science. Man may strain ever farther into space, ever deeper into the heart of the atom, but there in the operating room all the results of the most improbable reaches of research, all the immense accumulation of medical knowledge are drawn upon in a determined drive toward the most awesome goal of all: the preservation of one human life.[79]

The artificial-heart makers often compared their ambition to that of space travel, even turning to the space technologies for use in their project.[80] *New Scientist* reported that the Texas cardiac surgeon Michael DeBakey, working on the artificial heart, had made a

> sharp comparison between the money being spent on getting to the Moon and the funds available for perfecting an artificial heart. He and other workers in the field are likely to have to continue to manage with a

> good deal less support than the space men but, even so, the signs are that before too long a bad heart may be a matter of nearly as little consequence as a bad tooth.[81]

Regarding 'the pump of life', a late-1960s American book, *New Parts for People*, explained that 'with the help of space scientists, a mechanical control system is being designed to make the artificial heart pump blood in the same pattern as the real one'.[82] Transplant surgeons also made associations with space travel, demonstrated compellingly at the 1966 CIBA Foundation meeting when the kidney-transplant pioneer Joseph Murray postulated:

> It is conceivable that for the needs of space travel, completely unanticipated physiological requirements may be met by the grafting of accessory organs, such as extra adrenal glands to overcome the stress of the environment on the moon, accessory lungs to accommodate the atmospheric conditions on Venus, or accessory extremities with which to crawl around Jupiter.[83]

The *Time* article included only American surgeons, and perhaps embodied a predominantly American attitude, but these surgeons were leaders of the field, influencing and attracting surgeons from abroad. The American surgeons believed that since the 1930s the United States had overtaken Europe in medical and surgical know-how. Before this time, 'an American who aspired to greatness in surgery went to Europe for training'. After the war it was largely the other way round, although several of the British hospitals continued to attract surgeons from around the world.[84] Surgery, more than any other branch of medicine, required practitioners to travel to various centres, learning skills from one another and acquiring tacit knowledge. As the Guy's surgeon, Hedley Atkins, wrote in 1965, surgical 'travelling clubs and socio-surgical groups have no counterpart amongst the medical fraternity'. He suggested that this was to some extent due to the 'gregarious nature of surgeons as people' but also because surgeons needed to see other surgeons at work so that the 'finer points of technique' could be appreciated, reproduced and improved. Physicians on the other hand could 'more readily enlarge their horizons by the written word'. Because of this, surgeons had become great travellers:

> From Tokyo and Sydney, from San Francisco and Sao Paulo, from New York and Montreal, Paris and Moscow, surgeons return stimulated by new ideas that they have heard and discussed and new techniques that they have witnessed. Not all of these new ideas will be regarded with favour but at least they have been ventilated and so the great tide of surgical advance creeps forward, each nation contributing to it according to its

> capacity and the whole united in a brotherhood which it would be hard to match in any other sphere in the world.[85]

Fox and Swazey found in their study of transplant surgeons in the United States that a particular constellation of medical schools and hospitals dominated transplant surgery and most leading transplant surgeons had been trained in or were associated with them.[86] The 'progenitor pattern' and 'social circles' phenomenon meant that this inner circle often shared attitudes and values which were then transmitted to younger colleagues.[87] Two nearby centres in the United States were particular magnets for cardiac surgeons in the 1950s: the Mayo Clinic in Rochester, Minnesota, where John Kirklin was working, and the surgical department in Minneapolis, 90 miles away, set up by Owen Wangensteen and where Lillehei and Richard Varco pioneered heart surgery. Le Fanu (1999) claims that 'in the 1950s and 1960s every aspirant cardiac surgeon in the world flew to Minneapolis to watch first Walton Lillehei at work, then hired a car or bought a train ticket and travelled south to see John Kirklin'.[88] Another surgeon recalled, 'Minneapolis was the place where it was "all happening" in heart surgery at that time.... The only other centre providing any competition was the Mayo Clinic... where John Kirklin and his team were performing similar pioneering work.'[89] Intensified by their geographic proximity, Kirklin and Lillehei were in competition, but this was not unusual. The ethos of learning from one another and collaboration went alongside an underlying competitiveness and independence, amongst nations, institutions and individuals, and the optimistic fast-paced, post-war atmosphere encouraged competition for surgical 'firsts'.[90] One of the early cardiac-transplant surgeons, Adrian Kantrowitz, recalled that in the late 1960s medical science had reached 'an extraordinary but not rare moment when several groups were *independently* preparing to introduce a new therapy'.[91] This new therapy was human heart transplantation, a prized surgical undertaking.

In Britain, Cass and Brock from Guy's Hospital were the first to report experimental cardiac transplantation in animals.[92] Their 1959 paper opened, 'At first sight an attempt to transplant the heart appears almost fantastic but more leisured thought indicates that this is not necessarily so. The basically simple function of the heart as a pump invites the possibility.'[93] They perceived the obstacles as being merely technical and biological: being able successfully to excise and replace the heart and for the transplanted heart to survive in the new body. Their experiments were used to show that the technical side was achievable, leaving aside immunological problems and evading conceptual and ethical issues by stipulating that the heart is but a replaceable pump. Their paper marked a significant shift from heart transplantation as a 'fantastic dream' to a fantastical but potential reality.

Cass and Brock's procedure was taken up by the Stanford surgeons Richard Lower and Norman Shumway, who later achieved greater success.

By the 1960s, Shumway's technique became the agreed standard and existing histories regularly refer to Shumway as the 'father of clinical cardiac transplantation'.[94] In 1960, Lower and Shumway published their seminal paper on orthotopic transplantation based on a presentation by Lower at the annual meeting of the American College of Surgeons.[95] Although the work was technically highly significant, there were very few listeners that day and it failed to make much of an impact on other surgeons.[96] By 1964, when Lower presented long-term results at the Annual meeting of the Society of University Surgeons, there was substantially greater medical interest. Shumway and Lower were then confident enough to state: 'it seems logical to conclude that cardiac homografts are just around the corner'.[97]

Reviews of the field of cardiac transplantation in early 1960s medical textbooks and journals tend to give more cautious assessments of the clinical viability. For example, in 1962, an editorial of the official journal of the American Heart Association, *Circulation*, concluded in an overview of the field:

> It is not likely that homografts of the heart will be of any clinical importance in the foreseen future. However, it is probable that some fundamental knowledge can be gained from a careful study of the correlation between the progression of homograft reaction and the metabolism of the transplanted heart.[98]

The second volume of a 1965 standard British medical textbook, *Cardiovascular Pathology*,[99] merely mentioned that transplantation of the heart was being attempted but, referring to the article from *Circulation*, maintained that it was unlikely to succeed at present. The third edition of another core medical textbook, *Diseases of the Heart*, stated in 1966 that the 'homograft replacement of the diseased heart is still essentially an experimental procedure'. Whereas autotransplanted hearts had been documented to survive extended periods (more than two years in dogs), homotransplanted hearts rarely survived more than a few hours. The author gave manifold reasons why successful transplantation of the heart was not obtainable: besides immunological rejection, acquiring donor hearts and preserving them between excision and transplantation would be problematic.[100]

Although heart transplantation was not accepted as a near reality within the general medical community, several centres in the United States took an interest in developing the technique, encouraged by the results of Lower and Shumway and by developments in renal transplantation. By 1964, the New York cardiac surgeon Adrian Kantrowitz had achieved the longest recorded survival of a heart transplant, using puppies, which lead him to propose an immunological 'privilege', in the newborn.[101] Research was also underway at the Mississippi Medical Centre by James Hardy and colleagues, starting in 1956. In June 1963, Hardy had conducted the world's first lung transplant, in

which the patient, a prison inmate, survived for 18 days before dying from kidney failure.[102] After discussion with other physicians as well as laypeople, the Medical Centre gave the go-ahead for a cardiac transplant on the condition that 'no member of the transplant team was to grant any interview, release any illustrative material, or be photographed, except under the formal auspices of national medical meetings'.[103]

Hardy contemplated that 'transplantation of the heart would involve basic emotional factors that could be exceeded only by those of the brain .... The donor heart presumably would be derived from a relatively young patient dying of brain damage and the recipient must be a patient dying of terminal myocardial failure'.[104] His own ethical standpoint was that he would not be willing to stop the ventilator supporting the potential donor. In January 1964, Hardy performed what he has subsequently labelled 'the first heart transplant in man'.[105] A 68-year-old man was admitted to the hospital pulseless and comatose and referred to the team as a potential heart transplant candidate. Elsewhere in the hospital lay a potential donor, a young patient dying of irreversible brain damage. However, the recipient went into terminal shock at a time when the death of the potential donor was not imminent. Given that Hardy was not prepared to stop the ventilator, a decision was made to transplant the heart of a chimpanzee instead. The operation worked technically, in that the primate heart restarted in the body of the recipient. Nonetheless, the small chimpanzee heart was unable to cope with the circulatory load of the man, and the patient died after an hour.[106]

The first statement released to the press did not specify that a chimpanzee's heart had been used and so a revised statement was issued by the Centre to include this point. Hardy speculated that the transplantation of a chimpanzee heart was likely to arouse more public controversy than the transplantation of a human heart, but the media quickly lost interest and the news had little impact. Reflecting on this point in 1969, the surgeon-historian Robert G. Richardson suggested, with hindsight:

> The reason why this failed to create an upheaval in the outside world is simple and significant: the donor heart came from a chimpanzee, not from another human being. Mr Everyman could still sleep soundly without the irrational fear of his heart being cut from his body while he still had life.[107]

He reasoned that the public was more fearful of premature termination of the donor's life than of the psychological implications of an animal heart inside a human body. Two years after Hardy's operation, in May 1966 at the Medical College of Virginia, Lower performed a reverse experiment where a human cadaver heart was resuscitated in a primate. The chest could not be closed because the heart was too big for the body, but circulation was maintained for hours and then electively stopped. Although well known to

several surgeons working on cardiac transplantation, this experiment was never reported in the medical literature. However, it proved for the first time that the *human* heart could be successfully stopped, removed, resuscitated and transplanted.[108]

In Britain, in the mid-1960s, Anthony DeBono at the Hammersmith Hospital and Donald Longmore at the National Heart Hospital were researching cardiac transplantation.[109] In 1963, the year he was appointed Consultant Surgeon and Clinical Physiologist at the National Heart Hospital and when Donald Ross joined as Consultant Cardiac Surgeon, Longmore was granted £6425 from the BHF to research 'Technical methods leading to transplantation of the human heart and lungs'.[110] Between 1963 and 1966, Holmes Sellors, Ross and Longmore were awarded a further £5000 for 'Research into tissue and organ transplantation'.[111] This work was also supported by the Wellcome Trust and by smaller grants from the Institute of Cardiology.[112] Most of the research was done on dogs, but they also experimented with cross-species transplants between dogs, sheep and pigs.[113]

Unlike other teams worldwide, Longmore's research was concerned with heart–lung transplants rather than the heart alone. He reasoned: 'In any one individual, the heart and lungs have grown up together; they are mutually adapted.' Furthermore, he believed that 'the distinction between "heart" and "lung" is something of an anatomical convenience; physicians and surgeons do well to think of a single heart–lung complex'.[114] Even though many of the early cardiac surgeons were originally trained in thoracic surgery, this is still a surprising statement, given that cardiology had developed as a field based on the heart as a discrete organ. Articles in medical textbooks and journals usually depicted the heart detached from the rest of the body as a unit in its own right, and not as the complex described by Longmore. However, functionally, the heart and lungs were commonly considered as dependent organs, demonstrated by work on the heart–lung machine: 'We can look at the heart as a pump and the lungs as bellows', argued Richardson; 'the heart and the lungs in this context are a physiological unit'.[115] Despite the obvious difference between heart and heart–lung transplantation, the fundamental goals and attitudes were the same. The body was a collection of parts that could be replaced by other functionally similar parts. Surgeons had the technical know-how, status, drive and ambition to push forward.

Preparing doctors and the public

By the mid-1960s organ transplantation was becoming an increasingly coherent sub-speciality, with a journal, *Transplantation*, founded in 1964, and conferences and symposia bringing together individuals and their ideas.[116] Even so, in February 1967, the concluding remarks of a symposium on tissue and organ transplantation, organized by the Royal College of Pathologists in London, expressed concern over resistance to organ

transplantation within the medical profession. One of Britain's leading kidney-transplant surgeons, Michael Woodruff, stressed that the 'sympathetic understanding of our colleagues including both clinicians and pathologists' was an essential factor in pursuing the field. He criticized the 'many ill-informed critics of transplantation, some of whom say it is not worthwhile because it does not make people live long enough, while others seem to fear that it may make people live too long'.[117]

A 1965 article, 'Heart transplantation: Past, present and future', in the specialist *Journal of Thoracic and Cardiovascular Surgery*, was written with the intention of 'altering the perspective on this hitherto impossible task'.[118] The final remark was: 'The ultimate in organ transplantation, when the heart of one individual sustains the life of another, is perhaps no longer a visionary concept.'[119] In June 1967, the first international congress of the recently formed Transplantation Society concluded that lung, liver, heart and endocrine gland transplantation all appeared feasible, and the heart was considered the 'least difficult'.[120] However, by no means all medics working outside the field of organ transplantation believed that human heart transplantation was even technically achievable in 1967. And both within and outside the specialist group, there were many who thought that even if it could be done, it should not be done. Speaking in 1997, Longmore recalled how when he and Holmes Sellors applied for their research grant, they were told that 'roars of laughter could be heard two or three blocks away'.[121] There was certainly not unanimous support for such research even within the National Heart Hospital. Longmore also claimed that the Royal Veterinary College, where he conducted most of the early canine experiments, was initially unaware of the work in progress on transplantations, but when the administration did find out, it tried to shut down the research programme.[122]

Although medical histories written by practitioners claim that in popular culture the concept of cardiac transplantation is grounded in mythology and language, the actuality was unfamiliar to the public until researchers started achieving positive surgical results on animals. As the media reported on various scientific and medical 'breakthroughs', including open-heart surgery, kidney transplantation and a partial artificial heart, the possibility of human heart transplantation started to be mentioned alongside these surgical realities. The first reference that I have found in the mass media is in the 1957 *Time* magazine feature on heart surgery discussed above. The article ended: 'Bailey looks forward to the day when an entire heart may be taken from a man killed in an accident and grafted into another whose heart is diseased. Fantastic? "Merely a matter of time" says Surgeon Bailey.'[123] The following year, a book on the history of surgery written for a non-specialist audience in Britain included a chapter, 'New hearts for old', which ended: 'Perhaps one day it may even be possible to graft new hearts for old.'[124] However, in the mainstream British media the clinical aim and practicability of heart transplantation remained a story untold until the 1960s. The first mention

I have found in a British newspaper of the real clinical viability of heart transplantation is in a December 1962 report from Moscow in *The Times*: 'Human heart to be transplanted'.[125] The article reported an announcement by the Russian surgeon Demikhov (the same year as his early work was translated into English) that he hoped to give a human being a second heart in the next year. The initial operation would leave in place the patient's original heart and removal would be considered if the second heart worked well. This operation did not in fact take place. The following year, the *Time* magazine's lead story on surgery included extracts of an interview with Norman Shumway and mentioned his successful surgical experimentation on animal hearts. It reported Shumway tentatively answering 'yes' to the question: 'would anybody in his right mind dream of cutting out a human heart?'[126] The next mention of cardiac transplantation in British newspapers was in *The Times* in July 1964, with an account of the MRC's annual report, stating that attempts to transplant the human heart were foreseen although 'it could not necessarily be assumed that any attempt was imminent'.[127]

The aspirations of the artificial heart makers also reached British newspapers in the mid-1960s, even though most of the research was confined to the United States. In September 1964, *The Times* reported on a conference lecture, 'To live without heart and kidneys', by Willem Kolff.[128] Here Kolff declared: 'I believe that the symbol of life, the site of love and the habitat of the soul – the human heart – may be replaced by a mechanical pump.'[129] A few months later, members of the NIH-funded project boasted that an artificial heart could be possible within three years.[130] By mid-1965, the medical correspondent of *The Times* was explaining to readers, in an article on 'New hearts for old', the possibilities 'held out by the modern Aladdins of medical research'. Although to the layman the artificial heart 'may seem fantastic' and 'must sound almost incredible', the artificial heart was no longer a 'figment of the scientific imagination': 'Looked at objectively . . . the heart is fundamentally a mechanical pump and there is therefore no good reason why an artificial substitute should not be produced.'[131]

A minority of physicians developing artificial organs were also involved in organ transplantation, but there were significant differences in the expertise required and in the medical and social implications of the two, despite the common conceptual premises. Transplant surgeons were aware that human-to-human cardiac transplantation had particular ethical, legal and financial implications that would have to be addressed to make the operation publicly acceptable. Shumway and Lower's main reservations concerning the viability of human heart transplantations that were 'just around the corner' in 1964 were not in fact medical: 'Perhaps', they said, 'the cardiac surgeon should pause while society becomes accustomed to the resurrection of the mythological chimera'.[132] Although not actually published until 1968, Longmore states that the reason for writing his book *Spare-Part Surgery* in 1966 was to prepare the public for transplantation: 'I wrote a jolly, popular book, which

was the vehicle for the last chapter which explored the moral, ethical, legal and financial arguments.'[133] It also forewarned the reader that 'by the time this book is published, heart–lung transplant operations will probably have been started in England' and that 'within the next five years, heart–lung and heart transplants will become routine'.[134]

In March 1966, the CIBA Foundation held a symposium in Portland Place, London on 'Ethics in medical progress with special reference to transplantation'.[135] One of the speakers proposed that it was not only the biological problems that needed to be resolved to progress with transplantation, but also that doctors must 'create a mentality favourable to this new concept of treatment'.[136] In a talk on legally acceptable procedures in transplantation, David Daube, Professor of Law at Oxford University, expressed deep concern that the symposium attendees were seriously underestimating 'the feelings of the public concerning the inviolability of the body'. He speculated that unease about tampering with the dead body may historically be due to the belief in resurrection, and continued, 'Even at this meeting we speak of the respect always due to the body, of certain consents needed for its disposal: but why, if the body is nothing?'[137] Several participants stressed the importance of educating the public, but one speaker warned of the dangers of the public being 'counter-educated': 'One sensational press article could damage the desirable position very much.' Interestingly, publication of CIBA symposia had been a point of debate itself over the previous decade. Before 1950, they were not published on the grounds that some contributors might be inhibited from speaking their minds and that publication would involve excessive work.[138] The first symposium was published in 1950 and this marked a shift towards increasing public access to symposia content. The meetings were essentially 'closed', though, and journalists were not invited until the late 1970s when the foundation acquired a new director.

What the public had been widely exposed to, especially since the foundation of the BHF, was the threat of heart disease as one of the nation's biggest killers. A BHF advertisement in *The Times* in 1963 demonstrates this well (Figure 1.1). This was one of a series of similar advertisements consistently placed in newspapers during the 1960s. Heart disease was a killer of both men and women and could affect people of all ages. In June 1964, *The Times* headlined 'Heart ailments as major killer. High rates in U.S. and Britain'. The article reported a study published that day by the World Health Organization (WHO) claiming that 'diseases of the heart and blood vessels cause nearly one half of all deaths'.[139] Books and pamphlets available to the public also strengthened this fear. In May 1967, Foyle's *Health Handbook on Heart Disease and High Blood Pressure* stated that 'heart disease is today's greatest killer.' If heart transplantation was seen as a remedy for, and part of the fight against, this number one killer disease, it would have a greater chance of being accepted by a potentially apprehensive public.

Figure 1.1 A British Heart Foundation advert from *The Times* (6 August 1963, p. 6). The Foundation first launched its high-profile public appeal for donations in June 1963 to help fight heart disease, the 'biggest killer of all'. The image depicts a doctor attending to an elderly man but the caption alerts readers that the 'crippling' and 'killing' disease is rapidly on the increase for people between the ages of 25 and 44, and affects both sexes. The advert uses the symbolic heart-shape, asking donors to give 'wholeheartedly'.

Source: Reproduced with the kind permission of the British Heart Foundation which owns the exclusive copyright in it.

The technical know-how was now in place, and by 1967, several teams around the world felt confident that they were ready to undertake a human-to-human heart transplant. On 20 November 1967, Shumway announced in the news section of the *Journal of the American Medical Association* (*JAMA*) that he was ready to do so whenever a suitable donor was available.[140] That day the *Daily Mirror* headlined 'US doctors plan heart transplants', referring to Shumway's team 'nearing a new breakthrough' – the transplantation of a complete heart from one person to another.[141] The *Daily Telegraph* and *The Times* reported the same story the next day. Meanwhile, around this time, Kantrowitz in Brooklyn sent 500 telegrams to heads of obstetric departments throughout the United States, looking for a heart donor for a newborn with

a congenital heart defect.[142] He considered an anencephalic infant (a baby born with no brain) most suitable.

In Britain, on 24 November 1967, Longmore wrote to Kenneth Robinson, Minister of Health: 'I felt that it would interest you to know that after three years of research at the National Heart Hospital we are now ready to undertake human heart–lung transplants, and it is my intention to start this work as soon as possible.'[143] A couple of days before, John Stevenson, the *Daily Sketch*'s medical correspondent, who had been welcomed by Longmore to interview him in the laboratory setting, wrote an article headlined, 'New hearts for old . . . that's the future now'. It mentioned the work of American teams, but also that 'one leading surgeon' in Britain 'believes that we could be well ahead in this field of spare-part surgery', referring to the potential replacement of both heart and lungs. However, no specific details were given of the surgeon or the hospital.

This information became public on 26 November 1967 when Christine Doyle, the *Observer*'s medical reporter, wrote: 'A team of doctors and nurses at the National Heart Hospital in London is fully prepared to perform the first human heart and lungs transplantation when a suitable occasion arises.' Longmore too was named. Within the National Heart Hospital and the Ministry of Health (MoH), this article created a furore. The hospital immediately issued a statement:

> with reference to recent reports in the Press regarding proposals to perform transplantation of human heart and lungs in the National Heart Hospital . . . while this is a possibility for the future, there are no plans to attempt such an operation at present. No such operation will be undertaken until further research has ensured that this is a practicable procedure.

The MoH noted that 'Longmore denies emphatically that he is responsible for the article.'[144] On 29 November, Longmore requested an extraordinary meeting of the surgical subcommittee at the National Heart Hospital to discuss the implications and consequences of the *Observer* article. The chairman of the meeting pointed out that given Longmore's liaisons with the press, it was not surprising that such an article was printed, in spite of assurances from the journalist to the contrary. He also stipulated that Longmore had no authority to carry out operations himself in the hospital, and before 'any attempt to perform an operation on humans . . . there would have to be the undivided backing from the whole of the surgical side'.[145] The surgeon Keith Ross, who had only joined the hospital in September, wrote to Holmes Sellors the day before the meeting, stipulating that he had decided not to associate with Longmore in his transplant work as he had not been party to the experimental work and did not know about the immunological problems involved.[146] However, the meeting concluded that in principle,

Longmore's work was supported and that heart–lung transplantation was 'of the greatest importance and that nothing should interfere with research that would eventually make this possible'. The press involvement and exposure was nonetheless contentious even at this stage.

From the start there was a split within the hospital. The main worry was over the risk to the hospital's reputation. Longmore recalls a meeting when he was 'faced with an ultimatum which was: that you have nothing to do with this disreputable heart transplant business, you'll bring the hospital into disrepute and if you don't promise not to carry on with your research and not go on in this area, we will materially damage your career'.[147] A handwritten MoH note also gives evidence of ambivalent personal judgements made about Longmore.[148] While he is acknowledged as being 'quite a brilliant man who has had many ideas on development in heart surgery', he is 'subject to sudden rushes of blood to the head and gets carried away in his enthusiasm for the work in which he is involved'. Regarding his transplantation goals, the note continued, 'In fact no one member of the team can make a unilateral decision to go ahead with this work.' The main burden of responsibility, it said, rested on the senior surgeon, Mr Donald Ross, who was abroad and not due to return until Christmas.

Keith Ross also doubted whether the co-ordination and organization of a team was in place: 'to say that we are prepared to undertake this sort of surgery on a team basis at the present time is a lie'.[149] Longmore was persevering with trying to enrol another surgeon into the team. Responding to this, Keith Ross wrote, 'The need to seduce or co-opt a surgeon at this stage not only shows the flimsy structure of the research team but a total lack of understanding of the basic organisation of such a venture.' Concerns were again raised about the ultimate damage to the reputation of the hospital, and that the long-term implications had not been adequately considered: 'I cannot help feeling that they have been shelved in the interests of "getting there first" '. The longest animal transplant survival time had been only nine hours, far worse than Shumway's results. No papers had been published or records kept of the experiments. All factors considered, Keith Ross asserted that carrying out the procedure at that time would degrade it 'to the status of a press stunt' and as such 'is nauseating'. Therefore, in 1967, even those most closely associated with heart transplantation work had reservations about whether to proceed or not, making the move from animal experimentation to human trials a particularly risky affair.

* * *

If the British heart–lung operation was not in fact imminent, then Shumway was sure to be the first to conduct a human-to-human heart transplantation. But on 3 December 1967 the world was taken by surprise and a relatively unknown surgeon from neither Britain nor the United States performed the

act. Yet the necessary conditions for anyone to conduct a cardiac transplantation in 1967 required far more than individual experience and expertise. As this chapter has demonstrated, institutional, disciplinary, financial and conceptual frameworks had to be in place to make the heart transplantable. With the heart conceptualized as a pump, the dominant mode of surgical intervention shifting from extirpation to replacement, and the body conceived of as a collection of spare parts, cardiac transplantation became a viable goal. As heart disease replaced tuberculosis as the West's number one killer, thoracic surgeons turned their attention to cardiac surgery. The confidence to experiment with such techniques required a certain attitude characteristic of the post-war period that witnessed the rise of the heroic surgeon, willing and able to push forward with new technologies. Heart surgeons were the most prestigious of all, perpetually dealing with life and death situations concerning this symbolic organ, their skill and ambition likened to those of space explorers.

Even after heart transplantation was proven feasible, the move from veterinary experiment to human therapy required turning a technically possible procedure into a socially acceptable and desirable one. For the cardiac surgeons, making the heart transplantable involved preparing both the wider medical community and the public at large for the view that human heart transplantation not only could, but should be done. As the next chapter demonstrates, how medical information was communicated to the public was vitally important for the acceptance of innovation at a time when post-war optimism was beginning to fade.

2
Communicating Medicine in Post-War Britain

The first human heart transplant was a phenomenally public event that received unprecedented media coverage for a medical undertaking. How and why the operation became such big news depended on not just the elements of the story itself, but also on the nature and structure of the media. The post-war period witnessed drastic changes in the types of media and organizations involved in delivering medical news, as well as in the style and content of reporting. Domestic television transformed communication in the 1950s – a period when the dominant form of medical news moved away from health reporting and medical politics to a primary focus on medico-scientific innovation. In the socially and politically volatile environment of the 1960s, journalists took on an investigative style of reporting, patients became more demanding and medicine started to become vulnerable to public critique.

Medical and media professions have numerous parallel goals and concerns. Each fight to create and hold on to their professional autonomy and reputation and both define themselves in terms of providing a public service. On the whole, up until the late 1940s, the two professions co-operated, and doctors largely retained control over their image and the information divulged to their patients. Medicine has historically been considered a special case for managing and controlling information, with strict ethical codes regarding doctor anonymity and patient confidentiality developed during the process of professionalization. Tensions mounted between the two professions when there was a challenge to professional autonomy and, most of all, when there was a perceived clash of interests regarding what, and how, information should reach media audiences who were also possible patients.

In the post-war era, an increasingly educated and affluent public, seen as active consumers rather than passive receivers, made 'public interest' a contested notion. Doctors and journalists disagreed over how public interest should be defined and who should be defining it. The differentiated publics themselves became more vocal, with a new set of expectations that

challenged the previously paternalistic attitude of both professions. New technologies raised the visibility and technical ability of both medical and media worlds, and doctors particularly objected to television cameras turning to the practice of hospital medicine – an esoteric domain they considered to be inappropriate for public entertainment.

By the late 1960s, medicine as a social enterprise had been firmly established in the news as an area worthy of discussion and debate, increasingly reported on by specialist journalists. Its innovations were still frequently celebrated, but at the same time it was no longer seen as an area to be sheltered from criticism and scrutiny. Whilst reliant on their sources to provide information, journalists also had their own agendas and ethos, which, in the wider context of 1960s critiques, developed an investigative edge. New journalistic attitudes and new outlets of communication meant that knowledge of divides between, and concerns amongst, the medical community became more open. In particular, accusations of human experimentation, made by whistle-blowers from within the medical sphere and subsequently taken up by journalists, threatened the image of, and the confidence in, a united medical profession. As information flowed between doctors, journalists, patients and audiences, the burgeoning field of PR was reluctantly introduced into medical institutions. Even so, individual British doctors and hospitals by and large managed to stay out of the media spotlight until human heart transplantation began.

Doctors and the control of medical communication

Medicine is inherently communicative, relying at its core on communication between doctors and patients, and increasingly, by the mid-twentieth century, between medical teams, the state, hospital managers, scientific researchers and industry. Changing expectations, judgements and power relations between and among doctors and their audiences have both influenced and been influenced by means of medical communication. In the eighteenth century, physicians composed only a small proportion of the healers in the medical marketplace and a unified profession did not exist before the mid-nineteenth century. Medical expertise, practice, autonomy and authority all had to be created, and relied heavily on image management, control of medical knowledge, and the public's trust in doctors and in the confidential doctor–patient relationship.

There is a long, complex history of information exchange between doctors and publics, including public demonstrations, lectures and autopsies, anatomy museums and hygiene exhibitions, but it was in the nineteenth century that medical information proliferated to far wider audiences. This followed a huge growth in the general press as well as the foundation of more permanent and distinct types of medical journals. Although medical

news was not an identifiable category, newspapers provided public access to medical matters through coverage of staple newspaper material such as crime stories involving medical evidence and witnesses.[1]

By 1860, following developments in telegraphy and photography, the formation of commercial news agencies, abolition of stamp duties and advertising taxes, reducing government control over newspapers, the concept of 'journalism' had been created. This has remained as a model ever since, alongside the notion of a professional 'journalist'.[2] *The Times* was the most 'establishment', British upper-class, conservative broadsheet, and held the daily newspaper monopoly until the *Daily Telegraph* was created as a newspaper for the middle class in 1855. The *Daily Mail* was launched for the lower middle classes in 1896, soon followed by the *Daily Express*, which firmly established the national popular newspaper.[3]

A minority of nineteenth-century medical journals were created specifically for the public but these lasted on average just a couple of years.[4] Medical journals written by and for doctors, notably the *Lancet*, founded in 1823, and the *British Medical Journal* (*BMJ*), started in 1857, were integral to medical reform, identity formation and professionalization.[5] The Medical Act of 1858 created the General Medical Council (GMC) and regulated qualifications and employment for physicians and surgeons in a bid to create a professional, unified body and distinguish medical men from their unqualified competitors. The medical profession that was created in this process of inclusion on and exclusion from the GMC's medical register was by no means monolithic. The traditional tripartite distinction between physicians, surgeons and apothecaries gave way to a new medical hierarchy of upper-class, elite hospital consultants versus the growing group of middle-class general practitioners (GPs).[6] Nonetheless, maintaining at least the image of a unified, single medical profession was, and has remained, crucial to the status of medicine.

In Victorian and Edwardian Britain, doctors created self-regulating professional standards of conduct, distinguished themselves from unqualified practitioners and appealed to their rich clientele by identifying themselves as gentlemen.[7] Although practitioners were competing for upper-class, private patients, they started defining themselves against the commercialist, self-interested, individualistic, profiteering 'quacks'.[8] Medical journals started to forge links with professional medical bodies and institutions with a growing emphasis on professional rather than economic gains.[9] Self-advertising was looked down upon as a hallmark of commercialism, associated with tradesmen and not gentlemen. By the 1860s, the Royal Colleges of Physicians and Surgeons had by-laws that prohibited members advertising or publishing anything that would dishonour the profession.[10] The GMC had a single charge of 'infamous conduct in a professional respect' whereby, if found guilty, the council could strike a practitioner off the register. All the professional medical bodies were concerned with maintaining

the dignity, honour and interests of the profession and regarded advertising as particularly objectionable.

In the late nineteenth and early twentieth century, doctors were increasingly discouraged from associating with the popular press. In 1873 the Royal College of Surgeons considered advertising medical works in the 'non-medical press' not to be 'conducive to the honour or dignity of the medical profession'. In 1905 the GMC issued a 'warning notice' against advertising and canvassing, and in 1923 the warning notice was revised to take account of advertising 'indirectly', which included dealings with the press. The term 'indirect advertising' was coined in 1925 by the BMA's Central Ethical Committee, devised to uphold the 'honour and interests of the medical profession'. From its creation in 1902, the Central Ethical Committee had discouraged doctors from giving named interviews or articles, addresses or photographs to the press, and it formalized this advice in 1923 with a special report printed in the *BMJ*.[11]

The BMA's special report also advised that 'discussions in the lay press on disputed points of pathology or treatment should be avoided; [these] find their appropriate opportunity in the professional societies and the medical journals'.[12] This echoed similar demands made by the Royal Colleges in the 1870s and 1880s that disputes between medical men should be kept within the profession and not aired in public. Ironically, in the late 1860s, the GMC started to allow reporters into its disciplinary proceedings, which had the effect of significantly increasing its power.[13] But keeping actual medical debate away from the public arena promoted a united professional front whilst simultaneously making a claim for medical authority and exclusive expertise. It marked a shift from reliance on lay judgements of doctors, based on their gentlemanly status, to peer judgements of medical knowledge based on 'scientific expertise'.[14]

Members of the profession were expected to maintain a commitment to doctor–patient confidentiality as well as a sense of professional solidarity and loyalty. Patient confidentiality had been promoted as central to the medical professional ethos even in the first medical journals of the eighteenth century, when tensions were found between the wish to publish and share knowledge and the need to respect patient privacy.[15] By the end of the nineteenth century, medical journals took on new formats and conventions to depict objective pathology rather than identifiable subjects, including blacking out areas around patients' eyes to make them anonymous.[16] However, doctors' commitment to patient privacy was increasingly challenged when public interests were deemed to conflict with maintaining an individual's privacy, for example concerning notification of venereal diseases or during criminal prosecutions.[17]

When the 'indirect advertising' rule was formalized the profession was particularly overcrowded with doctors returning to peacetime medical practice after the First World War. The banning of 'indirect advertising' was

first significantly challenged in the 1920s and 1930s by various physicians who started writing public-health articles, for example on diet and hygiene, arguing that they were providing a public service.[18] At this time the state was becoming increasingly involved in healthcare, and educating individuals about health was considered important for promoting the fitness of the nation.[19] Many voluntary societies, such as the New Health Society (started in 1926), were committed to providing such information to the population. Some doctors were actively involved in these organizations, asserting that information on health matters should be channelled through medical professionals to the public. Other doctors felt threatened, equating 'prevention rather than cure' to 'health without doctors', and were thereby less supportive of encouraging members of the public to take responsibility for their own health. The GMC thought that protecting the profession was itself in the public's interest, but the inconsistency with which the Council took action against 'indirect advertising' made blatant the internal hierarchies. Certain practitioners were struck off the register and others not; the elitist members comprising the GMC jury seemed to enforce one set of rules for their fellow elite physicians and another for the less eminent practitioners.[20]

Overall, constraints on doctors' involvement with the media were relaxed in the early 1930s for matters concerning public health, especially as the state started using new channels for disseminating health information, such as radio and documentary films. Between its inception in 1919 and the Second World War, the MoH produced around 350 public-health documentaries which were shown in cinemas, church halls, schools and other public spaces.[21] On radio, medical practitioners were allowed to broadcast on public-health issues provided that scripts were approved by the GMC-nominated Chief Medical Officer (CMO) at the MoH.[22] Regular radio broadcasting started in 1922, after which the BBC was founded in 1926 under the public-service ethos of the Director General, John Reith, to 'educate, inform and entertain'. The early BBC and the medical profession shared a paternalist attitude, with the BBC prescribing the types of programmes listeners should hear, and doctors entrusted with deciding what was best for their patients, giving and withholding information as they saw fit. The MoH was quick to recognize radio's potential for influence, which sometimes led to editorial power struggles as the BBC asserted its own professional autonomy, but for the most part the two bodies co-operated. During the Second World War, BBC radio ran government-backed talks on diphtheria and immunization, and by 1944, listeners were being encouraged to use state health services, the predecessors to the NHS. Charles Hill, the 'Radio Doctor', Secretary of the BMA and Chairman of the Central Council for Health Education,[23] became a radio star in the war years, advising the nation on health and lifestyle. Although officially anonymous, his voice was recognized by millions of listeners.

As well as 'health' reporting, 'science' and 'medico-politics' have also constituted medical news, yet they have different histories.[24] While science and politics were 'hard news', health reporting was seen as an area particularly suitable for female reporters and readers alike – 'soft news'. For example, in the 1930s and 1940s the Press Association news agency, a non-profit organization which served the whole of the daily press and broadcasters, sent two female reporters to a weekly meeting at the BMA headquarters to be briefed on the important health stories from the latest edition of the *BMJ*.[25] After the establishment of the NHS, local authorities carried the responsibility for health education, and health reporting in the 1950s was largely concentrated in the pages of women's magazines.[26]

Specialist science journalism really came into fruition after the Second World War, especially after the formation of the Association of British Science Writers (ABSW) in 1947. However, the first self-proclaimed British science correspondent was J.G. Crowther, who worked for the *Manchester Guardian* from 1929, although not as an official staff member.[27] Richie Calder also became an active science journalist working for the *Daily Herald* between 1930 and 1934. In the 1920s and 1930s, politically engaged socialist scientists such as J.B.S. Haldane and J.D. Bernal were key science popularizers,[28] believing that it was their responsibility as scientists to interpret the social implications of science for the public, but they were a tiny minority.[29] Many of the early science journalists were later involved in medical reporting, as medicine and science became increasingly aligned, but science journalism as a specialist area preceded medical journalism.

In the late 1940s, medical news developed primarily in response to the politics surrounding the implementation of the NHS. Arguments for and against the new system, and negotiations over pay between policymakers and doctors were fought out publicly in the media. John Prince, who worked for the Press Association and as political and lobby correspondent for *The Times* before joining the *Daily Telegraph* after the war, was one of the first journalists to start specializing in this area of health-service politics. The NHS was launched with great public fanfare, advertising the new services to the general public and informing people what they should expect from it.[30]

Despite the vast amounts of publicity surrounding the NHS, obtaining and supplying news of actual medical activities from within the new state hospitals proved to be problematic for both journalists and doctors. In the new set-up, the notion of doctor anonymity extended to hospital anonymity.[31] This had not been the case for the earlier voluntary and specialist hospitals where publicity was an important part of their foundation and maintenance. These institutions required a carefully constructed image to attract sponsorship from lay patrons, and regularly held fund-raising events and made newspaper appeals. Photographs were disseminated in hospital reports and commemorative albums, and made into postcards for the general public, staged to present particular images and understandings of the hospital, its

staff and patients.[32] Since the press played a major role in advertising hospitals' causes, information flow between hospitals and journalists tended to be mutually beneficial and co-operative.

At the start of the twentieth century, wards began to lose their domestic style and hospital imagery started to include more technology and activities such as surgery in the operating theatre. Such images of better equipped hospitals clearly demanded funds for maintaining the modern set-up. A new public image of surgery presented the technical skill, the sterilized, professional, well-equipped operation, but without a drop of blood in sight.[33] Even in the 1930s the Board of British Film Censors vowed to 'reduce to an absolute minimum all scenes taking place inside an operating theatre, and to object to the showing of surgical instruments in use or about to be used'.[34] Doctors had succeeded in lobbying film censors to act in accordance with the profession's interests and protect their image on screen, and in the 1930s the British film censors banned several films on the grounds that they would 'shake the confidence of the nation in the medical profession'.[35] In newspapers and magazines during the interwar years, medical photographs of hospitals, technology, nurses and patients increased substantially. Doctors themselves were largely in control of these images which created expectations of what medicine had to offer and also showed patients how best to behave in medical encounters.[36]

After the formation of the NHS the situation was quite different, with the state being the new owner of the hospitals and patients as tax-paying consumers, rather than recipients of charity. In the planning of the new system, no provisions were made concerning how and what information was to flow between hospitals and reporters. Events inside the nationalized hospitals were considered confidential, but keeping secrets in a modern hospital with numerous layers of staff and management was not easy. Secrecy also clashed with journalistic goals, and, in the case of newsworthy operations, ownership of stories was also an issue. Did the story belong to the hospital, the patient, the physician or the public who funded the operation?

These issues were first formally addressed in Britain following an operation in 1953, carried out at the Hammersmith Hospital by the surgeon Ian Aird, which again provoked debate over 'indirect advertising' and doctors' control over medical communication.[37] The operation concerned the separation of two Nigerian conjoined twins, one of whom survived. The press interest was completely out of the ordinary. Given that the hospital divulged no official press information, journalists and photographers resorted to tactics considered wholly unacceptable to the doctors involved in the operation. Prevented from entering the hospital, some journalists gained access by dressing up as doctors in white coats and persuading non-medical staff that they worked there. They obtained photographs of the children, which were subsequently printed in the press. Journalists also raided the homes of Aird and his parents, which forced police intervention and contributed to Aird

writing an official complaint about press intrusion to the Ethical Committee of the BMA.

This drama was soon followed by another attempt to separate conjoined twins at University College Hospital in 1955 which left both twins dead. The twins were known to Aird, and one of his acquaintances performed the operation. Media interest was again intense and following the failed operation, a hospital administrator issued a statement to the Press Association suggesting that the press had played a role in the twins' death. The chaos that ensued provoked Aird to give a named interview in a newspaper, which was frowned upon given doctors' ethical codes of professional conduct.

The publicity surrounding these operations angered both journalists and medical staff. Journalists felt that they were being denied information and were wrongly accused of contributing to the operation's failure, and surgeons and hospital staff argued that their privacy was being breached and that the press was unacceptably intrusive.[38] In response to the whole affair, the BMA organized 'The joint conference of the representatives of the medical profession and the press'. Key figures from the press and the medical profession met several times in 1955 and 1956 and produced a 'Routine procedure for the release of hospital information to the Press', which was ratified by the MoH.[39] For 'sickness cases', the guidelines stressed patient consent concerning any information divulged to the press. For 'accident cases', the press should be given on inquiry the name and address of the patient and a general indication of the patient's condition. An explanatory memorandum clarified that 'a patient's illness ought to be the patient's own personal secret where he wishes secrecy and where secrecy can be maintained. In no way is the secret the personal "property" (as it were) of his medical attendants, of the nurses or of the hospital authorities.'[40] One of the conclusions from the meeting was that 'all hospitals should ensure that a sufficiently senior and responsible officer of the hospital is at all times available, whether in person or by telephone, to answer press inquiries'.

Some hospitals did designate a staff member to deal with press inquiries, but even though the recommendations were sent to all hospitals in the country, in practice information flow and management between NHS hospitals and the media changed little. Meanwhile, medical bodies involved in policy rather than practice, such as the BMA and the MoH, were developing new strategies for media relations. Like other institutions in an 'information age' they were beginning to recognize the benefits of 'professional' information control and management, and introduced Public Relations Officers (PROs) as intermediaries between journalists and their sources.

'Public relations' was first developed as a profession in the United States at the start of the twentieth century, defined as the 'attempt, by information, persuasion, and adjustment, to engineer public support for an activity, cause, movement or institution'.[41] The British Foreign Office and the armed forces had started appointing press officers during the First World War, and

the MoH established an information section, run by a journalist, when it was formed in 1919.[42] This particular section closed after four years, but by 1935 the MoH, alongside all the major state departments, had press officers and distributed press notices.[43] During the Second World War, the government created the Ministry of Information with the aim of outwardly shaping methods for, and control over, public information distribution.[44] The successor to this propagandist Ministry of Information was the post-war Central Office of Information. In 1945 the Ministry of Information had 6550 staff in Britain and overseas, many of whom went on to start commercial PR firms.[45] In 1942 the MoH employed a Chief PRO, and in doing so transformed itself into an established media source, becoming not just a commentator on the news agenda but making its own activities part of the news itself. Around this time, the CMO started to hold press conferences to which the BBC and newspaper journalists were invited. The modern press conference had originated in the early 1930s presidential press conferences in the United States and developed into an increasingly common interface between journalists and their sources in the post-war period.[46]

In 1942 the lobby group Aims of Industry was founded in Britain, used for campaigns against the nationalization of the iron and steel industries.[47] Soon afterwards, in 1947, it assisted the medical profession in resisting the introduction of the NHS.[48] In 1948 the Institute of Public Relations was set up, testimony to PR's growth, institutionalization and professionalization.[49] By 1963 there were about 3000 PR 'professionals' in Britain, more than in any other European country; the government alone, between 1961 and 1962, spent £4.2 million at home and £20.2 million overseas on its information services. As well as government departments, many trade associations, charities and industries began to employ PROs, sometimes referred to as Press Relations Officers or Information Officers. The BMA was party to this growing trend since 1943 when it formed a Public Relations Committee (renamed from the Propaganda Committee) and by 1947 had appointed a full time PRO and introduced an information service for media inquiries. It also launched a publication, *PR News*, detailing the latest posters, charts and other print material designed to explain the NHS, and sent out circulars informing journalists of forthcoming conferences.[50]

Several other medical institutions and industries started to employ PROs by the late 1950s and 1960s: the Association of the British Pharmaceutical Industries, the Wellcome Trust, the Royal College of Nursing, the Royal Society of Health and the MRC all took on PR personnel.[51] The Royal Colleges of Surgeons and Physicians also realized that they could use the media to their own advantage by interacting with journalists rather than shutting them out. In 1958, the Royal College of Surgeons held a special lunch for broadcasters; an urgent need to raise money had persuaded them to 'lift the veil' on their work.[52] The Royal College of Physicians took their place in the public spotlight on 7 March 1962 when they published the results of a

four-year study into the effects of smoking on lung cancer.[53] Asserting that a relationship had been proven, their report stressed the need for intense and effective government publicity on the harmful effects of smoking, to counter the tobacco industry's £40 million spent on advertising and promotion. In contrast, local authorities and the Central Council for Health Education spent less than £5000 on educating people about the risks.[54] The Royal College launched their report at a press conference, aided by a PR firm, with the aim of using the media to influence policy and make their messages as public as possible. By 1964 cigarette advertising had been banned on television, and the speculation of the link between smoking and lung cancer, which had been going on for years, was changing into a scientific fact.

The 1960s has been described as a time of simultaneous 'lack of information' and 'information saturation';[55] in this climate, control over information became ever more important. For medicine, this control had been integral to professionalization, which relied on patient trust and confidence in expert practitioners. The profession aimed to retain a low profile but a high status. Both the medical establishment and the media shared an ideology of public service, but with a paternalistic undertone. The 'public' they served were, in the post-war period, 'consumers' of both healthcare and media; tensions between the two professions tended to arise when each judged differently what information should be supplied to the public-as-patients and to the public-as-media-consumers. The real challenge came with television and a new journalistic spotlight on the actual practice of medicine as 'medical news'.

Making medical news and the challenge of television

News had traditionally been the exclusive terrain of the press. When radio news started, newspaper proprietors used their clout to ensure that it could only be broadcast at a time of day that would do least damage to newspaper sales. The BBC was made to agree that no news would be broadcast before 7.00 P.M. and that they would not gather their own news but instead use summaries prepared by news agencies.[56] In 1934, BBC News separated from the 'Talks' department to become a department in its own right; even though newsgathering was restricted, BBC news presentations still managed to build up an excellent reputation for accuracy and professionalism.[57] Listeners trusted this news and the BBC was largely responsible for making British journalism as a whole internationally well respected. During the war, radio usurped the press as the main source of news for most of the population, but radio, newspapers and also cinema newsreel coexisted as the major news providers.[58]

The BBC's television service started in 1936, stopped in 1939 two days before the war, and restarted in 1946; it proliferated in the 1950s to become

one of the most striking social developments of twentieth-century Britain. At first news had been low on the BBC agenda, and when television started it was delivered in much the same way as on radio. It was read by an unseen announcer at the end of the evening's programmes, while a clock appeared on the screen, and was supplemented by biweekly newsreels provided by cinema companies. Newsreel companies did not renew their pre-war contracts, so in 1948 the BBC started to produce its own. The BBC Director General of the time, Sir William Haley, considered television news and newsreel to serve quite distinct purposes – the latter being primarily entertainment. He believed news to be a serious and crucial public service and was wary of subordinating 'the primary functions of the news to the needs of visual presentation'.[59]

News therefore remained primarily sound broadcasting, separated from the current-affairs programmes in the 'Talks' department which experimented much more freely with pictorial journalism and examined rather than just presented news items, established novel techniques such as probing interviews, and made room for human interest stories.[60] The BBC did not initially show the faces of their news broadcasters since personalities were assumed to detract from 'objective' news reportage. Across the media, journalists had traditionally remained anonymous, a code maintained by *The Times* until 1967, in order to uphold the notion of journalistic objectivity, separating editorial opinion from reporting on views and events.[61]

BBC television was founded on the notion of public service broadcasting, independent of the state and funded by the sale of user licences rather than advertising so that it could be free from commercial interests. The BBC lost its monopoly in 1955 with the creation of Britain's first commercial television channel, Independent Television (ITV); this meant competition for viewers and questioning the BBC's paternalist ideology of deciding, on behalf of the nation, what education, information and entertainment viewers could and should have.[62] In contrast, ITV had a more diverse output and situated itself as a channel 'of the people'.

One of ITV's biggest impacts on television was in its treatment of news broadcasting through its autonomous news service, Independent Television News (ITN), jointly financed by the programme companies. ITN made the most of the visual nature of television, bringing in newscasters, motion pictures, sound cameras and an altogether fresh approach to news broadcasting, and its success forced the BBC to follow suit. News became an increasingly important part of television output, furthered once more in 1967 by ITN's extremely successful half-hour *News at Ten*.[63] Despite criticisms of paternalism, BBC television adapted and retained a very positive international reputation for its programming and increased its output, budget and staff during the 1960s, especially after the arrival of BBC 2 in 1967, which also introduced publicly available colour television.[64]

Although television was a major competitor to newspapers, especially with the birth of ITV, the two media became intricately linked in terms of ownership, content and personnel. By the 1960s, most newspapers were owned by large conglomerates which developed into multi-media organizations,[65] blurring the divides between different media and their party-political attachments.[66] By 1962 the newspaper industry owned around a quarter of Britain's commercial television.[67] The exception was Lord Beaverbrook's group which had no stake in television companies; his *Daily Express* made a point of not reviewing television programmes. Most other newspapers started giving space to television review and criticism, and ITV reciprocated with its highly successful *What the Papers Say* from 1956, presented by editors of the *Spectator* and *New Statesman* magazines. Many television panellists were originally press reporters, and even within television, despite rivalry between the two channels, people moved from one programme and organization to the other. Notably, Charles Hill, the BBC's Radio Doctor during the war, moved from being Chairman of the Independent Television Authority (ITA) to Chairman of the Board of Governors of the BBC in 1967.[68] Technical personnel also moved between media, including newsreel cameramen becoming television camera operators. By 1961, 10 million people owned television receivers and by the mid-1960s there were TV stations in over 90 countries, with a global audience totalling 750 million. In Britain, by the late 1960s, television had become the dominant mass medium, watched for around four hours per day by around 20 million people.[69] Audiences for many programmes outnumbered individual newspaper circulations,[70] and although it did not supplant radio, television audiences overtook those of radio.

The incursion of television into popular culture was challenged by various groups and its global and national, intellectual, social and political implications were hotly debated. Especially in the 1950s, many people took a crude and nervous view of the power of television, seeing it as a threat to individual behaviour and morals, to class structures and to traditional ways of life. To the television critic of the *Evening Standard* in the 1960s, Milton Shulman, television was 'the ravenous eye', with British television 'the least worst television in the world'. For the American architect Frank Lloyd Wright, television was 'chewing gum for both eyes'.[71] The medical establishment kept its distance from the new medium, especially when it came to programmes concerning their field. However, television was put to many uses in medicine other than public broadcasting, such as for microscopy and endoscopy, and was generally welcomed as an aid to teaching.[72] For example, closed-circuit television was used (mostly in the London teaching hospitals) to transmit events in an operating theatre to doctors and medical students in adjoining rooms or another building. To keep in control of the technology, doctors stressed that television was an aid to the teacher, and not the teacher itself.

Science magazines of the 1950s and 1960s, such as *New Scientist*, regularly included enthusiastic articles about television as a new technology.[73] Closed-circuit television was recognized for its use in surveillance, for example in mental hospitals;[74] 'telediagnosis' was reported as the 'most recent use of TV in medicine', which would enable police at an accident scene to transmit an image of the victim to a casualty department, allowing a surgeon to give radio instructions for on-the-spot treatment.[75] Magnetic recording of television had also been devised in the late 1950s, and from around 1964, portable video recorders were used in hospitals.[76] In 1966, the BMA set up a Department for 'Fireside Education' to further the use of new teaching aids, including video tapes which doctors could play through their own television sets.[77]

During this time, open-circuit television broadcasts (i.e. open to the public) were starting for the purposes of doctors' own medical education. These began in the United States in 1953 and a decade later in Britain. Glasgow University postgraduate medical board and Scottish Television produced the *Postgraduate Medicine* series, transmitted late at night, starting in March 1963. Following this, the Association for the Study of Medical Education formed a working party to consider transmitting programmes for doctors by the BBC. The result was *Medicine Today*, a series developed primarily for GPs.[78] The broadcasts were criticized for being shown at inconvenient times, but these programmes produced by doctors for doctors were generally received positively and viewing figures were high. At a symposium on 'The impact of television on medicine' at the Royal Society of Medicine in April 1967, one speaker criticized the programmes for depriving the audience of its 'power to react' – an 'absolute essential to effective communication'. Unlike conventional medical teaching, which permitted the student to 'question his master and to register disapproval or approbation, for example by muttering, scraping feet and clapping', television, the speaker bemoaned, offered 'no emotional outlet except freedom to turn off the set'.[79]

Doctors' greatest objection to television was not concerned with open-circuit education for themselves, but rather with programmes broadcast specifically for the public, their patients. Public interest in medicine was high, as proven by the popularity of medical dramas and also the fact that even *Medicine Today* had 'an eavesdropping public' of half a million viewers.[80] Doctors generally had no grounds to object to television medical dramas which portrayed the profession favourably. A hospital or doctor's office provided a good programme setting and the public became familiar with the layouts, equipment and activities of such spaces. In 1957, ITV launched their twice-weekly medical drama series *Emergency Ward 10*, which proved extremely popular, attracting up to 24 million viewers at its peak and lasting ten years. Doctors approved of the programme on the grounds that it helped to remove people's dread of hospitals. Doctors were represented in the series as headstrong professionals who made life-saving decisions

and performed heroic actions for their patients, whilst also demonstrating sensitivity in their personal lives. Given the proven popularity of the medical drama, the BBC followed suit in 1962 with Sunday night's *Dr Finlay's Casebook*, set in a small 1920s Scottish town, pre-NHS and pre-high-tech medicine. This show also attracted millions of viewers and although some doctors thought it would be more beneficial if the series were brought up-to-date, the overall portrayal of the heroic, male doctor was still positive for medicine's image, and conjured up a nostalgic, if somewhat mythical, rural past of attentive doctor–patient relationships.

Whilst the fictional, selective and idealized portrayals of the inner workings of hospitals were approved by most doctors, the first public broadcast concerning real hospitals, doctors, patients and operations was highly contested and controversial. The BBC series, *Your Life in Their Hands*, was part of the new genre of television documentary, conveying social reality using actual, rather than reconstructed, footage. The ten half-hour programmes were launched in 1958 to satisfy public demand for medical programmes and to enable their viewers to 'see research and treatment in Provincial Hospitals and to demonstrate the fact that the most up-to-date Hospital treatment can be obtained outside London'.[81] The presenter was Charles Fletcher, a doctor from the Hammersmith Hospital, who introduced each week's topic before handing over to a particular hospital team. Three out of the first ten programmes included inserts of filmed surgical procedures: the diversion of the blood supply to the liver, the removal of a blood clot and a mitral valvotomy heart operation.[82]

NHS-based medicine had been shown on television before, but this was the first time that real surgical operations were broadcast.[83] The issue was debated in the House of Commons and in the Royal College of Surgeons, but the BMA was the harshest critic: an editorial in the *BMJ*, their publication, criticized 'Disease education by the BBC' (as opposed to the more acceptable 'health' education) and letters of condemnation poured in for weeks. The accuracy of the programmes was not questioned; the BBC had been meticulous with their research and consultation, seeking advice from the Scientific Film Association and the Society for the Study of Medical Education, and approval from the MoH. Neither were there any grounds for criticizing the entirely favourable portrayal of doctors and their hospital medicine. Instead the programme was faulted for intervening in the doctor–patient relationship, undermining medical authority, with patients learning about their or others' maladies, and inducing hypochondria and anxiety in viewers – all claims which the BBC's audience research department found completely unsubstantiated.[84] More generally, the distinction between education and entertainment was not clear; one person's education was another's entertainment. Most doctors perceived television as prioritizing entertainment over education and argued that medicine was not suitable for television entertainment. The human body undergoing surgery, in particular, was not

considered appropriate for public display. It was this same attitude that had shut down Victorian anatomy museums and put an end to a long tradition of surgeons and anatomists promoting public display of their skills and the insides of the body.

Loughlin (2000b) develops Karpf's (1998) argument that the BMA criticized the series so severely because it had not been consulted. This claim seems substantiated given the BMA's wholehearted approval of the second series in 1961, centred exclusively on the London teaching hospitals with an increase in surgical content, and over which they were consulted. Rather than the contents of the programmes undermining medical authority, the formal exclusion of the BMA from the approval process undermined its self-appointed status as the medical profession's public voice. Loughlin describes the BMA's changing public image in this period, away from an organization preoccupied with medical politics, towards becoming the voice of progressive, successful modern medicine. The BMA was displeased that the MoH, as the owners of the NHS hospitals, had given permission for the inside filming whereas they had not been consulted. It also took issue with Fletcher presenting the programme, given its support of the GMC rule against 'indirect advertising', which had been extended to television.[85]

With the advent of television, in the 1950s and 1960s some doctors again argued that they had a duty to inform the public about medical matters. However, the majority, especially of the older generation, believed that 'a little learning is a dangerous thing' and that medical programming on television could only have a negative impact on the audience, in particular by inducing hypochondria.[86] A doctor's two-page article in *New Scientist*, 'Why hypochondriasis is increasing', is testimony to these prevailing views. The public, he said, were being made unduly preoccupied with health. He placed much of the blame on television for its effect on 'victims of a timorous imagination', commenting on the dangerous and powerful influence of 'the living screen' which 'brings voice, personality, expression, gestures – all the most influential powers in human relationship'.[87]

At the symposium on medicine and television at the Royal Society of Medicine, some speakers lamented doctors' lack of enthusiasm and negative attitude towards what had become society's most powerful medium. At a time when over 20 million people in Britain watched television every night, it could not be ignored. In his introductory speech, Lord Hill, then Chairman of the ITA, acknowledged the generational differences. 'Children', he said, were 'growing up in a different world from us: to us TV may be a mystery and a marvel, but to them it is something to be taken for granted'. Charles Fletcher urged the medical establishment to move on from Victorian and Edwardian middle-class traditions which considered the interior of the body as taboo. Arguing against the idea that surgical programmes pander to a harmful sort of 'morbid curiosity', he said 'curiosity about disease is the mainspring of medical research and should be shared with the

public'.[88] Instead of creating anxiety amongst viewers, to the contrary, television could remove anxiety 'engendered by old wives' tales' and show 'what modern medicine is today – a humane branch of science and not a mysterious branch of necromancy'. Fletcher identified the fact that the medical profession left medical broadcasting entirely to the broadcasting authorities as a serious problem. 'Many doctors', he said, 'have always regretted and still do regret [television's] impact. Doctors have tended to fasten their gaze on the dangers and to neglect the opportunities.' His response was to encourage doctors to embrace this powerful medium and gain their own control over medical output on the screen.

Aubrey Singer, Head of Science and Features at the BBC, the department responsible for *Your Life in Their Hands*, defended the broadcaster's control. If one effect of medical television had been to make patients more demanding, then 'as a TV man', he did not mind this; furthermore, 'questioning decisions of doctors was not entirely a bad thing', and it was his duty to make the 'public alive to possibilities and opportunities'. There is a notable ideological symmetry between the media and the medical profession: both self-regulating professions defending editorial and clinical freedom respectively.[89] As the dialogue from the symposium demonstrates, each profession's preoccupation with their autonomy results in conflict when each claim control and power over the same area. As media and medical interests and social roles changed in the 1960s, medicine in the media was a point of immense tension between the two professions.

Medical accountability

In the 1950s, faith in science and medicine was strong and doctors were held in high esteem. Millions of people newly had access to medical care through the NHS and medical research was seen to produce therapeutic returns. During this time, medical news started to be reported as part of science news by specialist science journalists. Specialist journalists proliferated in the post-war period, constituting about 15 per cent of national newspaper personnel by the mid-1960s.[90] General newspaper correspondents began to specialize in science reporting, spurred on by atomic energy and weapons development and the goals and activities of space exploration, especially following the launch of Sputnik in 1957.[91] They gained authority as science moved into the political centre stage during the Cold War, becoming chief communicators of science, using scientists as their sources.[92] Unlike their pre-war counterparts, the new science journalists aimed to distance their reporting from their own (mainly left-leaning) personal politics.[93]

Associating medical news with scientific advance was encouraged by the BMA in an attempt to move away from medical news as medical politics after the introduction of the NHS.[94] In a climate of post-war optimism, presenting medicine as a science, a technologically advanced discipline able to

cure disease through research and application, made medical innovations into good news stories. Medical technology and the space programme both shared the dreams and goals of a high-tech future and links between the two arenas were often explicit. The rapidly expanding fields of cardiac and 'spare-part' surgery and artificial organs, for example, started to feature regularly as 'breakthrough' stories: artificial-valve replacements, use of pigs' valves, pace-makers, animal transplantation experiments, heart booster devices and so on. Medical and surgical events and promises were therefore reported side by side with major scientific advancements.

However, in the 1960s, scientific and technological innovation started to be viewed with ambivalence. Even though the Wilson government was elected in 1964 by advocating socialism and progress through the 'white heat of technology', the increasingly technologized society was becoming more critical, sceptical and disillusioned.[95] The 1960s was a time of growing activism, public awareness and demonstration, most visibly in England through the Campaign for Nuclear Disarmament (CND). In this environment, medicine began to be viewed as an activity, like any other, that should be open to public discussion and doctors as a group that could legitimately be held accountable for their actions. In 1961, after thousands of babies were born without properly formed limbs, the drug Thalidomide was banned, shaking public confidence in doctors and their treatments. Patients started to form pressure groups and associations, pushing for 'patient rights' collectively and also campaigning for resources and rights for people with particular diseases and conditions. In Britain, publications such as *Talk Back* for people with back pain, and *Beyond the Ointment* for eczema sufferers were on the increase;[96] women's organizations such as the Association for Improvements in the Maternity Service (AIMS) campaigned for reforms in highly technologized obstetrics,[97] and Mother Care for Children in Hospital (MCCH) pushed for greater hospital access for mothers of sick children and more generally for a more family-centred approach to medical care.[98] A Penguin Special, *What's Wrong with Hospitals*?, called in 1964 for spreading public knowledge and insisted on change to 'produce the revolution we [patients] are entitled to expect in the 1960s'. The biggest problem the author identified was not the actual medical treatment but lack of *communication* between patients and medical staff: 'patients are becoming impatient . . . of being kept in ignorance – not through wilful design, merely because it's no one's job in a hospital to tell the patient what is happening.'[99]

The media played an integral role in literally making issues more visible, for example via shocking television imagery of the Vietnam War, and with new styles of reporting and new journalistic attitudes. At a time when newspapers were increasingly being taken over by large conglomerates, papers were at pains to show that they were not mere tools of the rich owners, and accordingly invited challenging opinions in their columns, maintaining sceptical editorial stances towards the status quo and especially the interests

of the powerful.[100] High costs meant that most of Fleet Street was running at a loss in the 1960s, and most social-democratic newspapers and several Sunday papers were forced to shut down as they did not bring in enough revenue from sales, and their working-class audience did not bring in enough advertising interest.[101] Nonetheless, the number of national newspaper journalists increased by nearly 20 per cent between 1964 and 1969, to total about 20,000 in Britain.[102] Young journalists tended to be sympathetic to the groups they reported on: student movements, disgruntled junior doctors, civil rights and anti-war activists.[103] Youth were more affluent and more educated, less tied to specific particular parties and more ready to question. The style of journalism was self-reflective, with journalists often reporting about reporting, a style that was 'powered by feeling as well as intellect'.[104] Mirroring generational tensions within 1960s society as a whole, young and old journalists often clashed ideologically. Whilst the older ones vehemently defended traditional notions of objectivity, younger journalists were ready to be openly partisan, support causes or be explicitly critical.[105]

The early 1960s witnessed the rise of investigative journalism and the satire boom, both of which probed and exposed.[106] The ethos of investigative journalism was to scrutinize misdeeds in the name of the public interest, with journalists themselves defining that interest.[107] It appealed to society's own sense of right and wrong and called for corrective action.[108] By the late 1960s several national newspapers, magazines and television programmes such as the BBC's *Panorama* and ITV's *World in Action* had dedicated investigative personnel.[109] In this more sceptical environment, journalists started to report on the risks of science and medicine and not just the benefits, becoming commentators and critics rather than just advocates of their specialized areas.[110] Despite journalistic ideals, in the face of an authority such as medicine, journalists often tended to be critical only if there was already an existing divide within the establishment;[111] but even so, targeting medical conflict as newsworthy and in the public interest was itself new, and deciding on *which* of the divides to report still put the journalist in a powerful position.

By the late 1960s there were new forums for medical discussion with the launch of myriad 'paramedicals', as they were to be called, which encouraged many more doctors to express their views. The paramedicals started as weekly or fortnightly publications generally sent free to GPs or hospital doctors and reliant on advertising revenue from pharmaceutical companies. Articles were written by both doctors and journalists for the doctor readership – but the scope of the articles was far greater than the traditional medical journals and the style far less formal. Thus mainstream journalists had a new source for locating internal disputes and controversies within the medical community and such divides could legitimately provide a basis for somewhat critical newspaper articles. Many of the paramedicals proved extremely successful, popular with the readership and also good business.

Pharmaceutical companies' revenues were mushrooming and so were their advertising budgets, but they were banned from advertising prescription drugs in the lay press.[112]

As the number of publications increased, each had to identify itself as unique and promote itself accordingly, to the advertisers, the writers and the readers. *Pulse* was the first, launched in 1962 as an entertaining tabloid weekly requesting 'articles with a medical flavour or of direct interest to GPs. Purely clinical matter cannot be used'. Then came *Medical News*, launched by the proprietors of the *Financial Times*, which offered reporting and commentary on scientific and clinical news as well as political and social factors affecting doctors and their practice.[113] In 1965, *World Medicine* was launched in Britain, following on from its sister publication in the US, *Medical World News*. It was sent free to all GPs, specialists and consultants with a specification to report and interpret 'news about medical science, clinical practice, public health, the politics of the profession, the business and organizational aspects of doctoring, [and] the people who are influencing medical affairs'.[114] The publication distinguished itself as an attractive colour news magazine, filled with photographs, many of which, it proudly announced, were the work of its own photographers. Pages were filled with pictures of doctors and patients inside operating theatres and wards, close-ups of organs and operations, doctors at conferences and so on. *World Medicine* was edited by Donald Gould who went on to become editor of *New Scientist* in 1966. By the 1960s, a handful of doctors, including Gould, had turned full-time journalists, enabling them legitimately to use their professional title without breaching GMC rules as they were no longer practicing medics.

The *International Medical Tribune of Great Britain* was launched in 1966 as a sombre alternative to existing glossy magazines: 'In this age of publications designed primarily to dazzle and bemuse an affluent society, we are beginning to overlook the fact that the purpose of a newspaper is to give its readers news.'[115] The following year *On Call* started as the magazine of the Junior Hospital Doctors' Association. It refused to carry advertisements and served as a radical and collective voice of junior doctors, a group highly critical of the BMA.

In 1966 several of the individuals involved in the field of medical communication, especially the freelancers, considered that their interests would be better served if they collaborated and formed a professional association 'to cater for the needs of medical journalism and medical journalists'. They set up a committee on 30 June 1966 to 'inquire into the desirability and feasibility' of forming such an association.[116] The committee wished to consider the training of medical journalists; public relations with the world at large and between sections of medical journalism itself; communication between doctors and lay journalists; the influence of advertisers; and medical journalists' working conditions and pay. The result was the Medical Journalists' Association (MJA), which held its inaugural meeting on 1 February 1967.

On the agenda were 'off the record' meetings and talks and the organization of lunches to which one founding member suggested, 'anyone antagonistic to medical journalists could well be invited', in order to win them over.[117] By the opening of the meeting there had already been 48 applications for foundation membership. In order to distinguish the British association from comparable bodies in the United States which had been 'infiltrated by advertising copywriters and PR men', PROs were denied full membership in the Association.[118] The Association's links with the ABSW and the BMA, however, were strong and it helped promote medical journalism as an official specialist field and the medical journalist as a recognized professional.

Medicine was high on the news agenda in the 1960s, but journalists did not just create or impose concerns. There was considerable disquiet and questioning also generated from within scientific and medical establishments on various issues, but this had largely been contained so as not to reach the public arena. From the 1950s some doctors started examining their own practices, looking back, taking stock and looking forward to consider impacts of new medical technologies. In 1960 a conference on 'Great issues of conscience in modern medicine' was held at Dartmouth College, New Hampshire. Participants included both medical doctors and public intellectuals such as Aldous Huxley and C.P. Snow; the debates centred on the effects of medicine on humankind and what kind of medicine the future was to hold. A subsequent conference, 'Man and his future', sponsored by the CIBA Foundation in November 1962, considered the potential sociological, political and ethical implications of contemporary and possible future biological research. J.B.S. Haldane, Francis Crick, Julian Huxley and Peter Medawar were all present.[119]

In the 1960s, doctors regularly discussed pressing ethical matters ranging from the contraceptive pill to population control, the allocation of medical resources and, most disturbingly, human experimentation. Concerns over human experimentation date back to at least the late nineteenth century when the new laboratory-based sciences prompted widespread medical experimentation on animals and humans.[120] Anti-vivisectionists had championed the cause, claiming that animal vivisection lead to 'human vivisection', i.e. experiments designed to further scientific knowledge and not benefit the subject. In the United States, Britain and elsewhere in the early twentieth century, human experimentation and the notion of obtaining patient consent were repeatedly discussed.[121] These concerns were largely motivated by researchers' need to safeguard themselves against litigation and maintain public confidence in the medical profession.[122]

After the Second World War there was a climate of confidence and ambition amongst researchers as funding dramatically increased for scientific and medical research. Despite the horrific experimentation carried out by Nazi doctors, Western publics were reassured that these medical

war crimes bore no relevance at all to attitudes or activities of the mainstream medical establishment's legitimate clinical research. The Nuremberg Trials resulted in the internationally endorsed Nuremberg Code of 1947, to safeguard against future unethical medical experimentation and articulate rules for 'permissible medical experiments'. It stressed the need to obtain voluntary and informed consent from research subjects.[123] Although approved of by all the official medical bodies in both the United States and Britain, in practice the Nuremberg Code seems to have had little impact in either country. Seeking to maintain autonomy, researchers took the view that medicine should not be regulated by the state or by formal rules that could impede scientific progress, but instead that the public should rely on the value-judgements of scientists and doctors. Researchers and physicians should be trusted to assess the risks and protect the well-being of their subjects for both non-therapeutic and therapeutic experiments.[124] This attitude was little questioned in the 1950s: patients trusted their doctors and the profession fundamentally relied on this trust. Professional structures and hierarchies meant that junior researchers would not question their seniors for fear of impeding their careers, and colleagues would not consider it their place to expose misdemeanours out of professional loyalty.

In a mentality continuing from the war, valorizing bravery and service, and with a new set of Cold War concerns, many experimenters seemed to care more for scientific inquiry and progress than protecting individual subjects from undue risk. In the context of military research, much of which was secret, this had alarming consequences. The United States Government, for one, allocated large funds during wartime for experiments on orphans, prisoners, psychiatric patients and the mentally disabled. In Britain the Ministry of Defence's chemical and biological warfare establishment, Porton Down, conducted widespread experimentation on improperly informed subjects, which also involved the killing of an aircraftsman in the early 1950s through a sarin experiment.[125] Given the secrecy surrounding much of this military research, most bad news could be hushed up and public trust maintained. The MRC issued a memorandum on human experimentation first in 1953 then again in 1964, and from the mid-1950s incidents of unethical human experimentation in Britain were periodically questioned in Parliament. Ministers repeatedly responded that they were matters for clinicians to deal with.

The containment of such matters and faith in the medical profession to deal with these concerns started to be threatened in the 1960s. Physicians within the establishment publicly voiced ethical concerns regarding clinical human experimentation, notably the Harvard medical professor Henry Beecher in the United States, and a Harley Street physician Maurice Pappworth in Britain.[126] The public were alerted to the fact that much of the alarming experimentation was in fact going on not just with healthy

volunteers but also with sick patients.[127] In 1962 Pappworth published an article in the literary journal *Twentieth Century* as part of a special feature on 'Doctors in the sixties'. It was called 'Human guinea pigs: A warning' and described 14 experiments on humans.[128] No researchers were named but the article was widely reported and prompted the formation of the Patients Association in 1963 as a charity to represent patients in the UK healthcare system. Pappworth wanted to extend his article into a book but it took several years to secure a publisher and complete the text. During this time, he was urged by senior members of the profession not to publish 'for the good of the profession'.[129]

In 1964, the World Medical Association (WMA) formulated the Declaration of Helsinki, an ethical code for medical experimentation that made a distinction between non-therapeutic clinical research and clinical research combined with professional care.[130] Unlike the Nuremberg Code, informed consent was not central to the Declaration of Helsinki, but the onus was on doctors to know and decide how to treat their patients and subjects. In Britain especially, doctors wanted to sustain belief in their own internally regulated ethical standards and repute. This is well demonstrated by a debate within the *BMJ* in 1963, in which a well-known surgeon leapt to the defence of a practitioner involved in random controlled trials who had questioned the need for, and attainability of, informed consent. The surgeon maintained that there was nothing arbitrary about doctors' ethical standards which had been built up over centuries and were 'the envy of the world'.

In 1966, Beecher published 'Ethics and clinical research', in a leading American medical journal, which followed on from a speech given the previous year to a group of journalists at a medical conference.[131] Beecher exposed experiments which risked the health or life of human subjects in the United States, including a 40-year study of untreated syphilis on hundreds of African-Americans, a study of hepatitis involving mentally disabled children and the injection of live cancer cells into elderly patients. A typical British response to Beecher's revelations was that whether or not experiments such as those on cancer patients in the United States were true, they had 'no parallel in Britain'.[132] Beecher claimed that ethical breaches were systemic and universal but his aim was for the medical profession to regulate itself. He did not name particular researchers in order to protect them from litigation and felt that responsible, ethically conscious and compassionate researchers themselves should still protect both the profession and medical subjects from harm.

The following May, months before the first human heart transplant, Pappworth's book, *Human Guinea Pigs*: *Experimentation on Man*, was finally published, documenting extensive human experimentation in the United States and in Britain, where it was doubtful that subjects' consent had been asked or obtained. These included experiments on infants, pregnant women, and also on general hospital patients including patients with heart disease,

all of which had been recorded in medical journals. Pappworth acknowledged that the worst experiments must go unrecorded, and also that the majority of researchers acted with the 'highest moral integrity', but argued that doctors needed to stop the expanding minority of those involved in unethical practices in order to avert public opposition to all clinical research. Some of the greatest criticisms were directed at cardiac catheterization and liver biopsy experiments conducted at the Hammersmith Hospital. Unlike Beecher's 1966 article, Pappworth chose to name specific individuals and institutions and insisted that the medical profession should not maintain that it was a matter just to be solved by doctors themselves. He intended the book to stimulate both lay and professional action on what he declared to be one of the cardinal issues of the time. His scathing attacks and comparison with Nazi experiments both infuriated clinicians and attracted widespread media interest.

The *Guardian* quoted a doctor saying that it was 'useless to explain to a charwoman what was going to be done because she could not possibly understand'; the reporter pointed out that this seemed to sum up a prevalent medical attitude. The editorial of *Medical Tribune* lamented the 'poor public relations displayed by members of the profession on television and in the Press' and regretted that 'medicine with its present freedoms and responsibilities could be destroyed'.[133] The Patients Association demanded an inquiry into the question of experiments on patients in the UK, but the Minister of Health, Kenneth Robinson, refused. By now though, the public were even more sensitized to troubling factors accompanying medical advance. Although medicine was delivering exceptional therapeutic innovation, and unprecedented numbers of people had access to healthcare, public expectations and concerns had altered considerably and medicine was starting to be seen as an important area to be held publicly accountable like any other.

* * *

Even in 1966, many doctors in Britain still held the view that a 'little learning' was a 'dangerous thing' and that medical discussion belonged in medical journals and conferences. Real-life medicine was considered to be inappropriate for entertainment, and professional ethical codes safeguarding doctor and patient confidentiality and anonymity were still largely respected and upheld. Nevertheless, medicine had become an established part of the news agenda, treated by journalists and received by consumers with ambivalence. There had been great changes in the styles, arenas and methods of medical news-making, and stories could inspire hope and promise therapeutic advance, but they could also unsettle an already anxious public.

In April 1966, when Michael DeBakey implanted a mechanical device that took over the pumping action of a heart-patient's left ventricle, in Houston,

the British, and especially the American, press covered the operation as a landmark event: the first implantation of an artificial heart. In anticipation of the affair, DeBakey had permitted a photographer and reporter from *Life* magazine to remain on standby in Houston for almost a year, resulting in a 10-page colour spread in *Life* on 6 May 1966.[134] However, the patient died within five days and the British medical establishment criticized the vast publicity that had attended DeBakey's operation. The media coverage was seen as being sensationalist, inappropriate, and also misleading in referring to the device as an 'artificial heart' when it only temporarily took over some of the functions of the left ventricle. A *Medical Tribune* report on the 'mixed reaction' to the operation quoted the response of Denis Melrose from the Department of Surgery at Hammersmith Hospital:

> I do tend to think that it is all rather a storm in a teacup . . . in Britain our priorities are different. We have so many fit young children, for instance, who can be cured by surgery, that we feel they come before this sort of thing . . . . Anyway we don't have that sort of money to play with.[135]

Despite the reservations about all the publicity which attended DeBakey's operation, it was completely surpassed the following year with the news of the first human heart transplant. By December 1967, television and newspaper journalists, as well as their viewers and readers, were primed for this phenomenal medical breakthrough story.

3
Creating the Most Famous Operation in the World

On 3 December 1967, for the first time ever, a human heart was transplanted from one human being to another. News of the operation fired the imagination of journalists, doctors and patients alike. As the lawyer Ralph Porzio wrote soon after the event: 'Perhaps no single forward step in the history of medicine has ever equalled the heart transplant in awakening universal public interest.'[1] It was at once both a medical and media phenomenon, described by the *Daily Express* as 'the world's most talked-about operation'.[2] Likened to climbing Mount Everest, this symbolic medical 'first' was straightaway incorporated into the annals of human achievement, regardless of how long the recipient lived. The instant and cumulative effects of media reports and imagery produced doctor and patient celebrities and made medical science as a whole exceptionally visible.

Initial reports of the heart transplant described it as 'historic' and 'successful', a 'breakthrough' story and medical milestone that brought hope to a large population of heart-disease sufferers. As well as making heart transplants headline news, the media provided a forum for discussing ethical concerns and to question, more generally, the place of medical science and technology in 1967 and beyond. In the new media age of creating 'personalities', Louis Washkansky, the first heart recipient, was made into a patient celebrity during the 18 days of his post-operative life, alongside his surgeon, Christiaan Barnard, whom he lauded as 'the man with the golden hands'. In 1967, with South Africa internationally politically isolated in the midst of apartheid, the government seized the opportunity to promote their home achievement. Barnard's charm, charisma and willingness to deal with the press, together with his backing by the South African authorities, all contributed to turning him into an international celebrity.

A journalist for *Time* and *Life* magazines, who covered the heart-transplant news, described in his recollections how the 'story had everything that a reporter could wish for; it virtually wrote itself.'[3] But however inherently newsworthy heart transplantation seemed to be, a lot of work had to go into creating and sustaining the narrative – it did not write itself. How, where, and

by whom the story was produced and received, and the extent, duration, foci and repercussions of the coverage were neither predictable nor inevitable. As this chapter shows, the reasons for, and effects of, the media focus constitute an intriguing and influential point in the history of medicine and medical communication.

Breaking news

On the afternoon of Saturday 2 December 1967, a car collided with a mother and daughter who were crossing a Cape Town road. The mother died instantly and her daughter, Denise Darvall, was left critically injured and unconscious. A motorist passed by the scene, unaware that the accident was irrevocably going to change her own family's life. She was on her way to visit her husband, Louis Washkansky, who was in the nearby Groote Schuur Hospital suffering from end-stage cardiac disease. By 6.00 the next morning, on Sunday 3 December, Denise Darvall's heart was beating inside Louis Washkansky's chest. A dynamic, young surgeon, Christiaan Barnard, from the Groote Schuur Hospital, had led a team in conducting the first ever human-to-human heart transplant.

Within hours, the local and international media knew about the operation even though Barnard had not directly informed any journalists.[4] Articles by foreign correspondents made front-page news in the British press on Monday 4 December, and international television teams, including the BBC, started to arrive at the hospital from that day on.[5] Newspaper headlines were uniformly celebratory: 'Heart transplant makes history', 'Dead girl's heart transplanted: Sick man given new hope after unique operation', 'Girl's heart saves a dying man' (Figure 3.1).[6] Across the British newspapers on Monday 4 December the same pictures of Washkansky and Darvall were printed. The photographs showed them smartly dressed and bearing no relevance to their present state: Darvall now dead and Washkansky critically ill in hospital. However, with the donor and recipient pictured and named, the news story was instantly personalized and set up for updatable commentary in subsequent days.

In a seminal study of foreign news, Galtung and Ruge (1965) outlined the qualities likely to make a story. These 'news values' were: frequency (how well the time-span of the event fits into the news organization's schedule), threshold (the 'size' of the event, generally in terms of the number of people it affects), unambiguity (how clear its meaning), cultural proximity (how meaningful in terms of the news audience's own culture), consonance (how well the event matches journalists' expectations), unexpectedness, continuity (an event's tendency stay in the news once it has been defined as news), composition (weighting in relation to other news to achieve balance), actions concerning the elite (in the original study this referred to elite nations but is also applicable to people), personification (events which can


MONDAY

SUN

THE INDEPENDENT DAILY NEWSPAPER

Stick this on your car windscreen if you want to help

FREE LIFTS

AT YOUR OWN RISK

KEEP UP WITH THE NEWS IN THE SUN

GIRL'S HEART SAVES A DYING MAN

'DOING WELL' AFTER FIRST HUMAN HEART SWITCH

Miss Denise Darvall . . in a road crash

The girl . . and the man she saved

Mr. Washkansky and his wife . . now he lives

Families flee fire

Pat Moss signs

Drunk, aged 10

Petrol peg

Sir Francis No

RAILMEN READY FOR A BATTLE

By GEOFFREY GOODMAN, Industrial Editor

THE WEEK of bitter railway conflict which lies ahead may end with a full-scale strike by ASLEF, the locomen's union. That looked distinctly possible as their go-slow began at midnight last night.

Stay out of cities —police appeal

THE COST

'NO HOPE'

Memo to the Editor about colour TV

by Nancy Banks-Smith, SUN TV critic

131 ESCAPE JET STUCK IN MUD

Continued on Back Page

● WHO SITS WHERE? Pages Two and Three

Figure 3.1 Front page of the *Sun* (4 December 1967), headlining with the celebratory news of the world's first heart-transplant operation: 'Girl's heart saves a dying man'. These were the dominant images used in all heart-transplant news items that day, showing the donor, Denise Darvall, and the recipient, Louis Washkansky. The *Sun* also included Mrs Washkansky in one of the photographs, whereas other newspapers cropped the original image to display only her husband.

Source: Reproduced by permission of NI Syndication Ltd.

be portrayed as the actions of individuals) and negativity (bad news tending to be more exciting than good news). Although the medical 'first' of 3 December 1967 was good news (but with the potential to turn into bad news), it evidently matched a number of the news value criteria very well.

In the immediate coverage, the operation was widely reported as being 'historic' and a 'success'.[7] The fact that Washkansky survived the procedure and had a new heart pumping in his chest seemed enough to mark the operation as successful, regardless of his prognosis. Interestingly, the world's second cardiac transplant, performed two days later in the United States, was unequivocally reported as a failure by the press and by the surgeon, Adrian Kantrowitz. The two-week-old baby recipient died four hours after the operation, but the transplanted heart had restarted in the new body.[8] That Barnard's operation was the *world's first* transplantation of the *human heart* seemed sufficient to mark it as self-evidently 'historic', without journalists offering reasons for this claim, and the language and style of the reporting contributed to establishing it as such.[9] Reports suggested it was a historic event for surgery, for medicine and even for humanity. The *Daily Mirror* headlined: 'The spare-part heart: Spotlight on a historic step forward in surgery'.[10] The *Daily Sketch*'s medical correspondent celebrated Barnard's achievement as assuring him 'a place in medical history'.[11]

The celebratory aspect of the immediate coverage of Washkansky's operation followed a tradition of medical and scientific breakthrough stories. In the aftermath of the Second World War, new drugs and treatments such as penicillin and cortisone were big news.[12] Through the 1950s, as medical and scientific budgets increased, medicine had enjoyed professional and public optimism confirmed by the proud reports of therapeutic successes, including new antibiotics and vaccinations. News of these post-war innovations drew on an even longer trend of scientific and medical breakthrough stories such as X-rays in 1896 and the drug Salvarsan used for treatment of syphilis in 1910.

On 5 December, the *Daily Mirror* editorialized: 'Scientific miracles have become something of a commonplace in the Space Age, something only to be expected, even to be demanded.' Yet, it was no wonder that the 'dramatic and awesome' heart-transplant story made front-page news around the world. 'Nobody can be blasé about this pioneering drama of the operating table or the challenge it presents.... These problems have to be faced and solved as brilliant men push back the limits of medical daring and achievement. And what a breathtaking achievement it is!'[13] The 'great moral problems' to which this author later referred were concerned with allocation of resources. 'When spare parts... are in short supply, which patients should be given a new chance of life?' This was not a new dilemma; the problem had been addressed time and time again, from the rationing of civilian penicillin supplies in the late 1940s to the more recent shortage of life-saving kidney dialysis machines in the 1960s.[14]

Underlying this worry about the allocation of resources was the assumption that a transplanted heart was desirable, and that the problem was that not everyone who could potentially benefit would be given the opportunity to have one. The story was initially reported as one of hope: for Washkansky as an individual, for other heart disease sufferers, and for the population at large. 'There is *always* hope. That is the wonderful message of medicine today', read the *Daily Express*' opinion column.[15] The heart transplant was used to exemplify the progress and potential of scientific medicine more generally, independent of the operation's outcome. In this way, it was an immediate 'success' regardless of how long Washkansky lived.

However, as demonstrated in Chapter 2, this unquestioned success was by no means the only judgement of medical science and technology in 1967. In the 1960s, with ever-increasing technological complexity and ambition, science continued to astound and deliver but also to unsettle. For instance, the BBC Reith lectures, given between 12 November and 17 December 1967 by Edmund Leach, anthropologist and Provost of King's College, Cambridge, indicated this general ambivalence.[16] Leach's lecture series, 'A runaway world?', alluded to the public fear and uncertainty that accompanied a seemingly out-of-control, fast-paced, highly technologized society where 'Men have become like gods'. An advertisement for the lectures promised, 'If *you* are dismayed by the explosion of scientific knowledge, Dr Leach's BBC Reith Lecture Series . . . will provide an antidote.'[17] In the second lecture, 'Men and machines', delivered before the heart-transplant operation was performed, Leach asserted:

> The marvels of modern technology fill us with amazement but also with dread. It was all right when the surgeons just fitted us up with artificial arms and legs, but now that there are people going round with plastic guts, battery-controlled hearts, dead man's eyes and twin brother kidneys, there begins to be a serious problem of self-identification . . . . Am I just a machine and nothing more?[18]

Yet, Leach noted that apprehensions about machines were accompanied by love for machines, like 'a car, a telly, a fridge, a washing machine . . . '. In his fourth lecture, 'Men and morality', presented on the same day as the first heart transplant, Leach declared that 'Modern medicine has given the doctor almost unbelievable powers to preserve alive creatures that nature would previously have destroyed, power to change the life prospects of children still in the womb, to alter the personality of the living, and to extend the life span of the senile.'[19] 'Men', he said 'have become like gods', but 'although gods create they also destroy' – 'we too must accept our dual responsibility and come to terms with the fact that the total elimination of disease would be an entirely intolerable blessing'.[20]

Leach's lectures prompted a great deal of criticism and discussion, much of it incorporated into the extensive commentary relating to heart transplantation. A few early concerns about the operation were expressed in inner-page newspaper articles that ostensibly gave room for opinion rather than impartial news. *The Times*' medical correspondent, Dr W. Thomson, considered the transplant operation one further step towards Leach's 'entirely intolerable blessing'. Thomson pointed out that surgeons still faced the complex matter of tissue compatibility, compounded by the ethical dilemma of whether or not a donor was dead.[21] This was soon to become a major issue, but, initially at least, most of the front-page headlines did not doubt the 'dead' status of the donor patient, Darvall: 'Dead girl's heart transplanted', 'A dead girl helps to save Louis'.[22]

'Does this heart miracle make you uneasy too?' asked the *Daily Mail* journalist Pearson Phillips two days after the transplant. 'At a certain point in time the Capetown doctors decided that Miss Denise Ann Darvall was beyond help. At the same time it was decided that her heart would be suitable for transplanting into the body of Mr Louis Washkansky. Did the second decision influence the first?' Medicine, Phillips felt, was acquiring terrifying powers over mankind, with doctors 'leading us into the dark and we feel guilty about appearing to hang back'. He recommended that 'we should take a very careful stock of where we are heading.' The article prompted various reader responses. One man explained that Phillips' uneasiness was exactly the attitude Leach had questioned, but that acceptance of, rather than retreat from, the ever-growing powers of science was needed and that Washkansky 'lives to cheer us not to dishearten'. Another reader, of the same age as Miss Darvall, hoped that if her own life was ever in danger the doctors would do everything possible to save her, without letting anything influence them such as someone else requiring a new heart or kidneys.[23]

As the story of Washkansky's operation grew, commentary was not just the terrain of medical correspondents but spanned other specialist domains and was also taken up by general journalists. The first human heart transplant seemed to be everyone's business. The legal correspondent of the *Daily Telegraph* explained that 'experts in medical law were confident yesterday that there are no legal problems which could prevent a heart transplant operation in Britain similar to that performed in Cape Town at the weekend.'[24] Meanwhile, their 'churches correspondent' stated that the 'South African heart transplantation is not viewed in London by Church authorities as any denial of human dignity or any devaluation of the spiritual values of the human body.' On 7 December, following the death of the American heart-transplant infant, under the heading 'Right or wrong?', the *Sun* asked its readers to send letters to the paper expressing their views of this 'challenge to medical science'.[25] From the start, the heart transplant was seen as a public issue, with newspapers actively involving their readers. A selection of the *Sun*'s reader responses was printed in 'Your place in the Sun' a

few days later, under the title 'Go ahead and take my heart'. Despite the positive heading, views were mixed: one person described the operation as 'more shocking than gratifying' and argued that 'medical science has gone too far'; another worried how doctors were to choose 'who is to be saved and by whom? . . . A Prime Minister could need a new heart and the "hopeless" patient available might be a tramp'; on the contrary, another reader wrote defensively that 'It is immoral to suggest that advanced forms of surgery could be immoral.'[26]

In addition, over the days, readers learnt much about the technicalities and procedures of the operation itself. These details were explained within daily press articles, but explored more fully in the weekend papers which used a more reflective and explanatory style than the dailies and had significantly more space for longer articles. On 10 December, the *Sunday Times Weekly Review* dedicated two pages to 'The heart savers'.[27] Washkansky's 'actual electrocardiogram' with his new heart was reproduced here as *the* symbolic display of the beating heart, described in the article as the 'symbol of a medical miracle' (Figure 3.2). A smaller version of the same image was reprinted on the next page with an interpretation for the reader: 'The electrocardiogram of the transplanted heart, though regular enough, shows one striking peculiarity: the smaller 'peak' known as the P-wave is double-humped. This is due to the unusual shape of the atria after the operation.' The image and explanation not only taught the reader some technical detail but also provided visual evidence of the 'living' transplanted heart, beating regularly yet altered by its unique upheaval. The article,

Figure 3.2 A reproduction of Louis Washkansky's electrocardiogram recording, after his heart transplant, printed in the *Sunday Times Weekly Review* (10 December 1967, p. 45). The caption below the headline read: 'The salvaged heart of Denise Ann Darvall, a young South African girl mortally injured in a road accident, pulses steadily away inside the chest of a middle-aged wholesale grocer, Louis Washkansky. The actual electrocardiogram, healthily regular, is reproduced above—symbol of a medical miracle that has given hope to a man who had only days to live.' Here, the 'healthily regular' heart-beat is taken as self-evident from the image, and as a symbol of success. *Source*: Reproduced by permission of NI Syndication Ltd.

co-written by a correspondent in Cape Town and the *Sunday Times*' medical correspondent in London, also gave a more general insight into the history and challenges surrounding cardiac transplantation. This included information on blood transfusion, corneal transplants, immunology and a detailed section contrasting heart-and-lung transplants with heart-only transplantation.[28] That Sunday, the *Observer* also featured a long article by its medical reporter, displaying a diagram reconstructing the heart transplant in South Africa, outlining the timings of the operation and discussing other surgeons' reservations.[29]

The paramedicals and weekly magazines delivered news in ways specific to their target audiences and publication schedules. The *International Medical Tribune of Great Britain*, aimed at doctors, gave only doctors' points of view. On 7 December it headlined, 'Heart transplant – mixed reaction'. The article included various opinions of British transplant surgeons and physiologists, from Donald Longmore's reaction that the operation was 'a tremendous thing' to the pessimism felt by Denis Melrose from the Hammersmith Hospital. This was an early indication of what was soon to become a major divide within the medical world. Nobody was indifferent to the news of the transplant, and surgeons began firmly taking sides. *New Scientist* reported but did not celebrate the transplant, pointing out that the way to judge it as a success was not by the technical success of the operation itself, but by awaiting the immunological outcome, i.e. whether the recipient's body would accept or reject the new organ. 'The social and ethical problems which will follow are another matter', the article concluded.[30] The cautious tone of the *New Scientist* article was indicative of the personal opinion of the editor, Donald Gould.

Gould also wrote for the left-wing *New Statesman*, and commented in this weekly magazine, on 8 December, that Washkansky had been used as a guinea-pig. While Gould acknowledged that somebody had to be brave and to pioneer every advance, people had 'an absolute right to be allowed to die in peace, and comfort, and with dignity' and it could 'never be justified if a principal motive of the medical men concerned is a wish to be first with a dramatic achievement'.[31] Years later, Gould recalled his response to seeing the 72-point banner headline, 'FIRST HUMAN HEART TRANSPLANT', on the pile of *Evening Standard*s outside the tobacconist's door near his office: 'Oh the bloody fools!', he thought, 'without even knowing who had done it, and why or where it was done'. His reason was that he 'knew it was a silly act bound to generate many more problems than it solved, and having small relevance to the task of medicine, which is the relief of suffering'.[32] Blessed with hindsight, this account seems to be more pessimistic than his more ambivalent beliefs in 1967; however, Gould's original articles did display apprehension and caution that went against the prevailing spirit of the immediate, celebratory newspaper reportage of an already 'successful operation'. An article in the serious weekly political magazine, the *Economist*, gave

a detailed description of the immunological barriers and highlighted the fact that legal and ethical worries might be more intractable than the surgical challenges; 'When is a person dead? Speed is all-important in transplantations, and there is something a little horrifying in the thought of doctors waiting like crows for a compatible donor to die.'[33] The article also made the uncomfortable connection between the modern science and technology that generated the motor car – producing young people with 'hopelessly broken bodies' through road accidents – and transplantation. Cautiously commenting on what the previous few days' news had amounted to, the *Economist* summarized: 'The operation was successful, but the patient may die' – a medical cliché in circulation since the nineteenth century, but which *Time* magazine's 1963 lead article on surgery had proudly announced had been replaced by 'If they can operate, you're lucky'.[34]

In summary, the first human heart transplant was simultaneously a medical and a media phenomenon. By immediately hailing it as a historic event, a world 'first', the media firmly placed the 'successful' operation in the history of scientific medical achievement. Soon after the news broke, the transplant also became demonstrative of the place of science, medicine and technology in the 1960s 'runaway world'. It was considered to have wider implications for society at large; a story covered by a spectrum of specialist and general journalists. Readers and viewers became increasingly invested in the outcome and consequences of the operation as they gradually got to know the first man with a new heart.

Louis Washkansky: The world's most famous patient

Washkansky lived for only 18 days with his new heart but the period of his 'second life' was internationally reported as a leading news story. Headlines sometimes referred to 'heart man', sometimes just 'Louis'; both Louis Washkansky, and his surgeon, Christiaan Barnard, became household names within days. The operation competed with several other big news stories, but as the *Daily Mail* editorial summed up following Washkansky's death:

> The past 18 days have seen an unusual succession of big news stories. Among them the big freeze, the go-slows, foot and mouth, a toppled throne, a drowned Prime Minister and an acute government crisis. But one story above all has appealed to the deepest emotions of men and women everywhere. It is that of Louis Washkansky, the man with the transplanted heart.[35]

Most newspaper reports of Washkansky's post-transplant life were styled as human interest stories. On 5 December a post-operative photograph was printed in nearly all the British national newspapers (Figure 3.3). The picture had been taken by one of Barnard's assistant surgeons in Groote Schuur


I'M FEELING MUCH BETTER

—SAYS THE MAN WHO WOKE UP WITH A NEW HEART

MR. LOUIS WASHKANSKY, the 56-year-old grocer whose diseased heart was replaced by the heart of a girl killed in a road accident, spoke yesterday for the first time since the operation.

He said to doctors gathered round his bed: "I am feeling much better."

Doctors at the Groote Schuur hospital in Cape Town had removed the breathing tubes and respirator which had prevented Mr. Washkansky speaking since the five-hour operation.

They reported that their patient's temperature, blood-pressure and pulse-rate were normal; that he had had a good night's sleep and was not unduly excited.

By RONALD BEDFORD
SCIENCE EDITOR

FIRST-CLASS

NO MORE YET

The first picture of Louis Washkansky, the man with a new heart

Mr. Darvell and Mrs. Washkansky

Figure 3.3 The first post-operative picture of Louis Washkansky released to the international press, shown here in the *Sun* (5 December 1967, p. 3). Despite the positive headline, 'I'm feeling much better', the picture is visually alarming. The smaller photograph to the right depicts Denise Darvall's father, who agreed to the heart donation, meeting Mrs Washkansky.
Source: Reproduced by permission of NI Syndication Ltd.

Hospital with a camera set up by a photographer from *Cape Argus*. The image was used as a world exclusive in *Cape Argus* and its sister paper *The Star* on 4 December, and was then reproduced by the international press the following day.[36] Despite accompanying headlines, such as, 'I'm feeling much better says the man who woke up with a new heart',[37] and 'Man with new heart says, "I feel fine" ',[38] the picture was startling. Washkansky was lying in bed with his eyes closed, with most of his chest and arms bandaged up and tubes coming out of his arms and nostril, and a masked nurse leaning over him. This emotive image engaged the reader and provided dramatic visible evidence to complement the story. Some of the mass-circulation papers also included images of, and quotations from, the father of the donor and the wife of the recipient which created an even more poignant sense of emotion and reality. The *Sun* headlined, 'I'm glad I gave away my girl's heart', referring to Mr Darvall's first meeting with Mrs Washkansky. She wept as she told Mr Darvall, 'you are a man in a million.'[39] The *Daily Mail* too reported and pictured 'this emotional meeting' of 'the

man who gave away his daughter's heart and the wife of the man who received it'.[40]

The 'human interest' story was a style of reporting developed in the nineteenth century following the rise of the new, cheap mass-circulation newspapers. The so-called 'popular' and 'quality' dailies were funded in different ways: the quality press obtained most of its revenue from advertising, aimed at affluent readers, and the popular press derived over half its revenue from newspaper sales. One approach for the popular dailies to increase their circulations was by adopting a lighter and livelier presentation style which included regular 'human interest' stories.[41] For the Washkansky story, little distinction can be made, though, between the popular and broadsheet newspapers regarding the content of the human interest reportage. Whilst the *Daily Express* headlined on 6 December, 'Heart man to have visit from his wife', and the *Daily Mirror* announced 'Heart-swap man has a boiled egg for breakfast', the same day *The Times* headlined, 'Man with the new heart says "I'm hungry" '.[42] The similar styles may be explained by the fact that under the new ownership of Lord Thompson, *The Times* was actively trying to increase its circulation figures, and did so by 60 per cent between 1966 and 1969.[43]

The human interest reports created a connection between readers and Washkansky. Although his had been an extraordinary operation, he was portrayed as an ordinary man, an 'average' man, someone with whom readers could identify: a 54-year-old grocer, a family man, with soft likeable features and a big smile, being given a last chance of life. He was a unique person, yet also 'Everyman'. The lives of real 'ordinary' people were becoming commercially valuable, and programmes such as *Coronation Street* (started in 1960) made the activities of even such fictitious people an interesting and marketable commodity.[44] Television news was also incorporating street interviews where 'ordinary' people featured in 'vox pops'.[45] Brunsdon and Morley's (1978) analysis of the BBC's *Nationwide* current affairs magazine programme started in 1969 with an emphasis on 'everyday life' and 'ordinary' people, uncovers the amount of work put into convincingly constructing such notions as 'ordinariness'. As with the Washkansky tale, the human interest features in *Nationwide* managed to emphasize both the particularity of the stories and people as well as the normality; an extraordinary dimension to an 'otherwise ordinary' person's life.[46]

Almost immediately, Washkansky became public property: following his operation, the *Daily Sketch* headlined 'Wife who waits with the world'; it was not reported as the world waiting with his wife.[47] On 7 December, South Africans became familiar with his voice, during a news broadcast by the South African Broadcasting Corporation. In this interview, carried out by a surgeon in the hospital ward, Washkansky praised Barnard as 'the man with the golden hands',[48] and told the South African nation that he was feeling well. Humbly, in response to being asked how it felt to be famous,

he answered: 'I am not famous. The doctor is famous.' Washkansky's awe of Barnard and demonstrative gratitude to him were indicative of the ways in which the two men, although both made internationally famous, achieved quite different statuses: Barnard the active giver and Washkansky the passive recipient. This manifested the inherently hierarchical doctor–patient relationship, Washkansky the grateful beneficiary of a medical marvel by the 'great' surgeon. In this way, Barnard became the 'real' life-giver rather than Darvall; and his surgical feat turned Washkansky's ordinary actions, words and imagery into remarkable news items by virtue of the fact that they suddenly belonged to the man who was given a new heart. Reports of Washkansky's radio broadcast thereby became front-page material for British newspapers.[49] The hospital continued to release daily bulletins on his health but for a few days the coverage subsided until 15 December when *Life* magazine featured Washkansky on its front cover, and then on 16 December when a new photograph was made available to the international press to accompany the story, again making Washkansky's life into a leading story. This time, a photographer from South Africa's largest national daily newspaper, *Die Burger*, took the photo, rather than internal hospital staff. Under the picture, the *Daily Mail* captioned, 'Louis the heart man sits up'[50] – a story that without the image had seemed far less interesting two days before when *The Times* printed a Reuters article, 'Eager to get up'.[51]

Homogenous reporting like this is indicative of the process of news-making more generally, where competition between newspapers gives rise to self-referentiality within news production.[52] Although this competition also produces a degree of differentiation as papers try to distinguish their own content and stories from one another, on the whole, what is considered newsworthy to one news-producing organization often makes it newsworthy for others. It is a process that the medical journalist, Ronald Bedford, described as 'the big catch-up': When a story breaks on any media outlet, including a radio or television bulletin, the race is on for the journalists to investigate and report that news; time is of the essence since old news is no news at all. This trend is found most explicitly amongst the mass-circulation newspapers which need both to boost and maintain circulation figures. Because of the more immediate nature of television and radio, newspapers are not always the ones to set the news agenda, but rather at times are forced to follow the trends.[53]

On 18 December, the daily newspapers reported that Washkansky was suffering from pneumonia, but 'winning' his 'new fight' and that the pneumonia was 'not serious'.[54] After taking a major turn for the worse, the last few days of Washkansky's life were totally public, with the frequency and style of media reports matching the rapid and intense deterioration of his condition. On 20 December, the *Guardian* headlined, 'Man with new heart fights for life'; on the 21st the *Sun* reported 'Heart man's day of crisis'. He died that day, spawning extensive follow-up reports. Mrs Washkansky's grief

was photographed and published, Barnard was reportedly in tears, and journalists and readers alike wrote of their reaction to Mr Washkansky's death. The discussions addressed how he died, recapped the events of his post-transplant life, and debated whether he had been the right candidate for the operation and whether it should have been carried out at all. Despite the concerns, most of the commentary was still positive and restated the claims and opinions of 18 days before: 'He did not come through. Nevertheless, the case of Louis Washkansky is an outstanding triumph in the history of medicine and surgery.'[55] 'Yes it *could* have worked' headlined the *Daily Express*.[56] The overall message, promoted by Barnard, was that the heart itself was not rejected; it was in fact in good condition and Washkansky tragically died of pneumonia.[57] A reading at Washkansky's funeral, broadcast on television screens around the world, maintained a positive interpretation: 'The development of technology in the field of nuclear weapons has threatened man with destruction, but the medical wonder of heart transplantation has shown that the development of technology also points the way to peace and life.'[58]

Following Washkansky's death, *The Times* claimed that Louis Washkansky was 'the most publicized hospital patient in the world'.[59] He had indeed become a patient celebrity. Traditionally journalists had a keen interest in the health and maladies of already well-known public figures; the Duke of Windsor's cardiac operation, for example, in 1965, was highly publicized in Britain. Readers were informed beforehand why the Duke had chosen to travel to America to be operated on by the surgeon DeBakey and were regularly updated on his progress after the operation. Washkansky's case differed from such fairly frequently reported events by the extent of the reportage, but more importantly by the fact that Washkansky was made famous by virtue of being a patient – a man previously unheard of in the outside world. Other patients in the past, such as those involved in the March of Dimes for polio treatment in the 1940s, had received much public exposure for their campaigns, but none was singled out and made famous in the same individual way as Washkansky.

Washkansky was not, however, the first famous patient, but rather, he was made famous by different means and in a different way to prior cases. Hansen (1998) claims that America's first patient celebrities were six Newark boys treated by Pasteur's rabies vaccination in 1885 after being bitten by a dog.[60] The story of their dramatic trip to Paris and their treatment and recovery, was reported extensively in American newspapers and magazines, making the boys, Pasteur and his work famous among the American public.[61] Hansen argues that this story actually changed popular expectations about medicine in America and provided the foundation for subsequent reporting of medical 'breakthroughs'.[62] On their return from Paris, the boys had become such a phenomenon that three of them were put on live display in an exhibition at the Globe Museum in New York.[63] In this respect, public

interest in and awareness of the Newark boys was not a new phenomenon; human display and spectacle dates back to the sixteenth century in the form of the 'freak show'.

In Britain, 'human curiosities' possessing strange anatomies were displayed as part of the trading and market fairs from the sixteenth century until the fairs fell into disrepute by the mid-nineteenth century. Ostensibly exotic human beings, for example from Africa and South America were often exhibited and sometimes made to perform in ways similar to animal displays.[64] As the 'freak shows' fell into disrepute, museums and theatres became increasingly important sites of display. Physicians often had a keen interest in 'freaks', such as the so-called Elephant Man, Joseph Merrick, adopted by a physician in late Victorian London, who were thus also patients by virtue of being treated and studied as well as just looked at.[65] In the second half of the nineteenth century, as part of the scientization and professionalization of medicine, physicians increasingly considered it their right to access and study freak 'patients', in order to enhance medico-scientific knowledge.[66] New conventions were also introduced for photographing all kinds of medical subjects: patients were made anonymous, often photographed naked and with just the diseased parts displayed.[67] 'Typical' cases of groups such as 'degenerates, criminals and alcoholics' were recorded, but not as curiosities, rather as typological exemplars of scientific taxonomies.[68]

Although Louis Washkansky was by no means the first famous patient, clearly people such as the Elephant Man were famous for different reasons and by different methods from him. What significantly distinguished Washkansky from earlier cases was the fact that he acquired immediate international fame, facilitated by the new types of media available in that period, the increased interactivity and mobility of journalists, and the large cross-media, international audiences and readerships who had a new set of post-war expectations and concerns regarding medicine and technology. Louis Washkansky, as a patient celebrity, formed the start of a new genre of famous patients that is still with us today: for example, Louise Brown, the first 'test-tube baby', in 1978; Barney Clark, the first man to be fitted with a complete internal artificial heart in 1982; and the Iranian conjoined twins, Ladan and Laleh Bijani, who died through their separation operation in 2003.[69] In keeping with the subsequent famous patients, but extraordinary for the time, was the degree and duration of the media coverage of Washkansky's operation, its innovative but controversial public nature, and the new mechanisms for information exchange and management, such as the live interview and the press conference.

The mass media of the late 1960s made Washkansky visible worldwide overnight. Although the fully professionalized medical establishment placed great value on the notion of doctor–patient confidentiality, the publicity attending Washkansky's operation was seen as an exception to this rule;

this news required urgent public exposure and attention, and public interest was seen as more important than patient privacy. As with the other famous patient cases mentioned above, the heart transplant had numerous associated ethical issues that were of concern not only to medical professionals, individual patients and their relatives, but also to legislators, religious groups, lawyers and society at large. The media provided the main stage for both celebrating and questioning the immediate abilities, future direction and connotations of medical technology; it also created a seemingly intimate connection between the transplant patients and the public.

In interviews I conducted with medical journalists who covered the first heart-transplant stories, all stated that the unprecedented media attention was largely attributable to the culturally loaded values assigned to the human heart. This seems to help explain the comparative lack of media attention given to the world's first kidney and liver transplants that took place in 1955 and 1963 respectively, which were technically at least as difficult as the heart transplant, and conducted when similar media apparatuses were in place.[70] In December 1967, the beating heart was still considered the signifier of life and death and the symbolic value of the heart as the seat of the emotions and a special organ was still deeply embedded in public consciousness.[71] The different images, associations and meanings of the heart were played out in the mass media and many of the questions posed by journalists following the transplant operation were revealing. In Barnard's autobiography, *One Life*, published in South Africa in 1969 and Britain in 1970, he recalls a BBC interviewer in London asking Washkansky in his hospital ward: 'Mr Washkansky, as a man, how does it feel to have a female heart?' and 'As a Jew, what is your feeling about having the heart of a non-Jew, a Gentile?' The immunologist, Dr Bosman, allegedly responded by cutting the telephone line and asking the BBC sound team present: 'How do you, as men, feel about working for a company that asks a stupid question like that?'[72] But questions like those asked by the BBC interviewer were not one-offs. After the operation Mrs Washkansky declared: 'I was petrified at what I'd find. Like everyone else, I thought the heart controls all your emotions and your personality – you know?'[73] Reportedly, when finding out that the donor was female, Washkansky himself asked, albeit jokingly, if he would grow breasts and whether in future he should stand or sit when urinating.[74]

The *Daily Telegraph* editorial on 7 December questioned 'whether our views about the nature and sanctity of human personality must now be radically altered'.[75] Two days after the operation, the *Daily Mirror* columnist George Gale wrote:

> Suddenly the love songs of the world and much more besides are made manifestly meaningless .... All the poets, lyricists and novelists, who have found for donkeys years that in the heart is the true seat of emotion and the swelling place of love, have been made to look silly by a team of

> surgeons in South Africa. I have never quite understood why it is that poets imbue the heart, which after all is nothing more or less than a pump, with such romance.[76]

But even within medical circles, as suggested in Chapter 1, the heart had various other connotations and representations than of a mechanical pump. Transplant surgeons needed to hold on to the rhetoric of giving away a heart as being the ultimate 'gift of life', in order to promote their discipline and encourage donation.[77] This phrase had long been used as a metaphor to promote blood donation and other human organ transplants, before heart transplantation had begun.[78] A ten-page piece, 'Poetics of a transplanted heart', in the black African intellectual magazine *Transition*, written a few weeks after Barnard's operation, commented:

> For centuries it has been assumed that to give your heart to someone is to pledge your love. And yet here we are in the transition between 1967 and 1968 beholding a literal transplantation of hearts with a supreme impersonality. The donor and the beneficiary are total strangers, and might never have cast their eyes on each other. The ultimate symbol of human affection is reduced to a clinical convenience.[79]

However, for Barnard's operation, bonds between the recipient and his family and the family of the donor were made and demonstrated in the media; articles portrayed the generosity displayed by Mr Darvall in giving away his daughter's heart and Mr and Mrs Washkanskys' gratitude in receiving it.

As several psychological, sociological and anthropological studies have shown, part of the reason families agree to organ donation lies in the hope that a part of their loved one will quite literally 'live on', in the body of the recipient.[80] This is most pertinent for the heart that can beat on inside the new body. Even now, when anonymity between donor kin and recipient is usually ensured, families often part with organs not just as a charitable act, but as providing hope for transcendence and continuity of the life of the donor.[81] Recipients, too, often feel body parts are infused with the life and personality of the donor; Sharp's (1995) ethnographic study of transplant patients concludes that transplantation is a personally transformative experience in which the transfer of organs 'often radically alters an organ recipient's definition of self'.[82] Although the experiences and contexts of contemporary organ donation are completely different from the pioneering operations of their kind, this literature serves to highlight issues that emerged in the earlier period; notably making organs simultaneously personalized and objectified parts, what Sharp (2006) describes as a form of 'ideological disjunction'.[83] In 1967, as now, transplanting the heart was quite clearly not the same as replacing one pump with another. All hearts are not of course identical and the difference in make-up rather than function is

the root cause of immunological rejection. A report in the *Daily Mirror* suggested that it did also make a physical, if not emotional, difference to Louis Washkansky that he had a smaller female heart: 'an unexpected snag is worrying surgeons who gave Louis Washkansky the heart . . . because the new heart is smaller than the old one, it is wobbling from side to side in the heart cavity'.[84]

Objectifying the heart was notably problematic in several different contexts. There was a period when the heart was literally disembodied, after being removed from Darvall's body and before being sewn into Washkansky's cavity. At this point it was supported by a machine. Even after the operation, the newspapers at times referred to the heart as a separate object from Washkansky as a whole, as if he was a mere carrier: for example, the *Sun*'s caption to a photograph of Washkansky sitting up in his hospital bed read, 'Louis Washkansky swung himself out of bed yesterday and took his new heart for a walk'.[85] The language used by Barnard in his autobiography, *One Life*, also alludes to the surgeon's conceptualization of the organ, sometimes giving the heart its own agency. Describing Washkansky's autopsy, he wrote: 'I could no longer contain my overwhelming sadness and began to weep at the terrible tragedy of that little heart, so young and strong and ready to live – killed by two lungs filled with pus.' Washkansky's death also brought to the fore issues concerning the ownership of the heart. At that point, whose heart was it? Was it Darvall's, Washkansky's or just an object for medical study belonging to Barnard or the whole medical community?

Washkansky's second heart was removed before he was buried. As the *Sunday Telegraph* reported, the Chief Rabbi of Cape Town, who conducted Washkansky's funeral, criticized this on the grounds that Jewish beliefs required all parts of the body to be buried intact.[86] Nevertheless, Cape Town Jews apparently generally felt that it was indeed in the interests of medical science to remove the heart. A further tension over ownership arose when surgeons in the United States and Britain wanted samples of Washkansky's heart to be sent abroad for medical investigation, but the heart was also wanted for an investigation into Darvall's death in South Africa. Once again the heart could not merely be limited to an objectified spare part; instead, it was a part of a person with a history and an intimate connection to two individuals. Darvall's father, for one, still considered the heart to belong to his daughter, still infused with her life, in keeping with the hope of 'transcendence' that the 'gift of life' rhetoric offered. When Washkansky died, Mr Darvall lamented, 'There was at least part of my daughter still alive in Mr Washkansky. But now she is completely dead.'[87]

Barnard and his team were all too aware of the link between the identity of a patient and the patient's body parts, especially the racial aspect. In apartheid South Africa, it was for this reason that Barnard did not conduct his first heart transplant using a black donor. He recalled that a

London newspaper phoned straight after the operation to confirm that a heart had really been transplanted and asked, 'was it a white heart – that is, a white person?' Even though in *One Life* Barnard described this act as 'irritating', asking 'what difference did it really make?',[88] in later writings he admitted that he had purposely waited for a white donor so that he would not be accused of experimenting on blacks. The opportunity had arisen to use a black donor two weeks beforehand but Barnard decided not to proceed. He recalls that 'this turned out to be a wise decision' as one of the first questions he was asked by a British doctor was, 'Did you do this operation to improve the bad image of your country overseas?'[89] Barnard did use a non-white donor for his second heart-transplant operation performed two weeks after Washkansky died, a controversial act that was indeed picked up most ferociously in the British media and to which I shall return in Chapter 4. But even without the controversies of race, the news of Louis Washkansky, the 'heart man', had made an incredible human interest story. Although only alive for 18 days after his surgery, the world-wide media made him forever famous as the first man to have his heart replaced.

Christiaan Barnard: South Africa's 'most valued ambassador'

That the operation was conducted in South Africa was undoubtedly another reason why the heart transplant made such big news. In 1967, apartheid was deeply entrenched in the country despite widespread international condemnation. British opinion on the South African state of affairs was complex and divided by the late 1960s. During the 1940s and 1950s, both the Right and Left heavily and openly criticized the apartheid regime, and British newspapers reinforced the notion of apartheid as an ideology wholly contrary to British values and ideals.[90] The Sharpeville massacre in March 1960, when police opened fire on black demonstrators, had created a furore in Britain. At a rally organized in Trafalgar Square, the leader of the Labour Opposition, Hugh Gaitskill, called for a boycott of South Africa. The following year, South Africa was out of the Commonwealth, becoming a Republic on 31 May 1961. When Harold Wilson came to power in 1964 he promised an end to all arms sales to South Africa. By the late 1960s, however, political opinion had divided, with the Right becoming more apathetic and tolerant and the Left taking an even firmer stand against apartheid. The changing attitudes of the Right were tied to increasing racial tension within Britain itself, Britain's own retreat from her former empire and a comparison between newly formed, seemingly chaotic and poverty-stricken independent African states and the relatively prosperous and stable South Africa. Many British people had strong affinities with South Africa, and between 1961 and 1967, 57,000 Britons took up permanent residence there.[91] The Right increasingly considered apartheid a stabilizer of British economic interests in the Republic, preferable

to all-black rule;[92] and the white, English-speaking South Africans' support for the National Party also grew internally.[93] The Left meanwhile increased their opposition to apartheid, often using it as a way to take a stand for democracy, humanity and anti-racism more generally. Left journalists and media, such as *Private Eye*, were strongly critical of the South African regime.

In 1967, several South African stories had reached the pages of the British press, all with political underpinnings. One such incident was what came to be known as the 'D'Oliveira Affair', concerning a 'coloured' cricket player, Basil D'Oliveira, who had moved to England after not being allowed to play for the all-white South African cricket team, the Springboks. Early in 1967, the South African government announced that if D'Oliveira was part of the English cricket team, it would not be welcome to tour South Africa.[94] The controversy was widely reported in the British press and made sport a political terrain for years to come. As well as sport, South African medicine had reached the British press for political reasons, following the banning of a senior lecturer at the University of Cape Town (UCT) Medical School, Dr Raymond Hoffenberg, in July 1967, under the Suppression of Communism Act. Hoffenberg, who was Chairman of the National Union of South African Students (NUSAS) advisory board, also worked at Groote Schuur Hospital where the first heart transplant was conducted. The government gave no explanation for this ban, which led to immediate protests by university staff and students.

Groote Schuur Hospital, opened in 1938, had been previously denigrated by the South African authorities prior to the transplant, seen as a hotbed of liberal thought along with UCT.[95] Both black and white patients were treated there, and although wards were divided according to race, many individuals working in the hospital were against apartheid operating within medicine. Black people were not offered the training required to become surgeons and neither were they allowed to operate on, dissect or examine white bodies. Apartheid also affected ancillary services: ambulances were either for whites or non-whites, and blood for transfusion had to be labelled with the donor's race. The lack of secondary school education for black people significantly reduced their chances of qualifying for university places. Only one main medical school trained Africans – the Natal Medical School, opened in 1951, which in 1965 had only 34 final-year students.[96] Out of the nearly 9000 doctors in South Africa at this time, only about 100 were African, and qualified black nurses and doctors earned half as much as their white counterparts.[97] The highly publicized recent story of the deceased black man, Hamilton Naki, demonstrates that Africans without formal training could in fact get involved in highly technical laboratory work at Groote Schuur Hospital during the 1960s. Working on dogs and pigs, Naki conducted much of the experimental groundwork on cardiac transplantation prior to Barnard's operation and his extraordinary surgical skill was recognized and encouraged. However, contrary to 2003 newspaper reports,

and later obituaries in 2005, Naki was not allowed to operate on humans and so played no part in the first human heart transplant.[98] Apartheid restrictions still applied.

In December 1967 Barnard's celebrated operation gave the South African government an opportunity to create a better international image. As Barnard's biographer, Chris Logan, commented, 'For Vorster and the reviled regime that ran South Africa, it was manna from heaven. For once, however briefly, South Africa did not mean riot police and brutal racial oppression. It meant hope.'[99] The support of the South African government was one of the factors which propelled Barnard to international stardom. He became 'South Africa's most valued ambassador',[100] receiving in 1968 a gold medal from the Public Relations Institute of South Africa,[101] and invited personally by Vorster to a private dinner as a mark of appreciation for what he had done for the country. Immediately after the operation, Washkansky was more visibly represented than Barnard, but over the days and weeks Barnard became the icon.[102] Washkansky was dead after 18 days, but Barnard's celebrity status mushroomed.

Barnard rose from humble beginnings. As the son of a poor Dutch Reformed Church missionary in the town of Beaufort West, he graduated from UCT Medical School in 1946 and then became a general practitioner before gaining a scholarship to specialize in surgery at the University of Minnesota in the United States. Here, in the mid-1950s, working alongside one of the leading American cardiac surgeons, Walton Lillehei, he first became involved with open-heart surgery. During his time in America, Barnard came into contact with many of the 'inner-circle' pioneer surgeons described in Chapter 1.[103] He returned two years later to South Africa, becoming head of experimental surgery at Groote Schuur Hospital; here he developed the first intensive care unit in Africa, co-designed a prosthetic heart valve and built up a strong cardiac surgical team.[104] A grant from Washington paid for three years of funding and a heart–lung machine to be shipped to Cape Town. One of his colleagues later described him as 'egocentric, hardworking, clever, ambitious, brash and somewhat arrogant', functioning on the principle that 'anything others could do he could do at least as well'. He conducted a copycat experiment in 1960, grafting a second head on to a dog, a disturbing act which a Russian surgeon had just accomplished, seemingly just to demonstrate his 'technical virtuosity'.[105] Early in 1967, Barnard spent three months with a leading renal transplant surgeon, David Hume, in Virginia, United States, and also a fortnight with Thomas Starzl, who had conducted the first liver transplant in 1963, in Colorado. In these months he learnt about some of the immunosuppressive issues surrounding transplantation and whilst in Virginia also observed Richard Lower perform a heart transplant on a dog. Barnard returned to Groote Schuur Hospital and performed South Africa's first kidney transplant in June 1967. His experimental work on cardiac transplantation was minimal, however, and the operation

on Washkansky came as a surprise to the surgeons who knew him.[106] Outside of that circle of cardiac surgeons, on 2 December 1967 he was almost completely unknown.

After the operation on 3 December, Barnard became an international celebrity. He was labelled a 'hero', a 'heart-throb', 'super-man', a 'super-showman'; commentators have described the 'I touched him syndrome' that developed around Barnard,[107] and his 'messianic' image.[108] He drew huge crowds of people desperate for autographs and photographs. By the New Year, he had been voted third most popular man in the world after President de Gaulle and Pope Paul VI in a French poll and named Man of the Year by *France Soir*. Many factors contributed to making Barnard a celebrity. As an individual, he was charismatic, good-looking, articulate, photogenic, and a strong speaker with a sense of humour. This, combined with his readiness and willingness to deal with journalists, made him perfect media material. Although he claimed that the extent of the interest in his operation surprised him, he managed and welcomed the media attention. He held press conferences, gave personal interviews to international journalists, appeared readily on television programmes, and happily and frequently posed for photographs.

The film of his post-operative press conference reached the BBC television studios just in time for an episode of the science magazine programme, *Tomorrow's World*, on 6 December 1967. In this press conference Barnard had an opportunity to describe the background to and details of the operation using his own methods of interpretation, style and presentation. To a large extent, he was in control of the information he provided. The presenter of *Tomorrow's World*, Raymond Baxter, also conducted a telephone interview with Barnard which was broadcast on the programme as the 'latest news'.[109] Baxter started the interview by saying to Barnard, 'First of all it's a great pleasure to speak to you, sir, and on behalf of everyone in the studio, and I guess everyone in the country, congratulations on your magnificent achievement last weekend.' In the programme, Barnard stated that if they could perfect their technique then there would be 'no limit to the number of patients we can treat with this kind of operation – All the patients with coronary artery disease, with severe damage to the heart muscles and certain . . . valvular diseases and congenital heart diseases'.[110] Hence, Barnard was able to personally assert the great importance of his operation. Baxter thanked him and wished him and his team good luck. The other main item on the programme, preceding the piece on Barnard, was about controlling time and ageing during space travel.

The programme demonstrates well the mechanisms by which Barnard was propelled into stardom. By readily supplying the media with abundant material, he was often able to set the tone and frames of interpretation which the media were then willing to follow. It was a success story, an achievement, an operation with huge potential that offered hope to a large group of people

with heart disease. It was a story told alongside space travel, another fantastical human achievement, and placed on a par with it. A London heart surgeon, Hugh Bentall, was also present in the *Tomorrow's World* studio and gave a more sceptical take on the heart-transplant programme, explaining some of the drawbacks such as the death-status of the donor patient and why he personally had not performed and would not perform the operation.[111] Yet, even though this presented a journalistically balanced view, the overall message was clearly in Barnard's favour. Barnard was given his say first in the programme, the presenter was very supportive of him, and the news was placed amongst other positively presented scientific endeavours.

Although the transplant was carried out by a team of over 50 people, Barnard was made into an individual hero. His face became instantly recognizable as the media made him internationally visible. On 15 December he featured on the front cover of *Time* magazine (Figure 3.4), with a five-page article dedicated to 'The ultimate operation'.[112] A picture of Washkansky was captioned, 'In its way, equal to Mount Everest'. As with the space programme, associating the operation with the widely acknowledged human triumph of the climbing of Everest in 1953 amplified the magnitude and significance of this new achievement.[113] This comparison also made clear the importance attached to being the *first* to achieve a goal and how this contributed to making something 'historic'. Through the post-war period, both *Life* and *Time* took a celebratory approach to scientific and medical breakthroughs and the individuals associated with them, using their front-page pictures to create icons.[114] Freud, Salk and Fleming, amongst others, had been on their covers and to an extent Barnard fitted in with this tradition of individual medical heroes.

Hansen (2004) has drawn attention to another medium, comic books of the late 1940s,[115] which also regularly featured medical heroes, both past and present. A sub-genre of comics using 'true' stories was marketed from 1941 using the motto 'Truth is stranger and a thousand times more thrilling than Fiction'.[116] Alongside Batman and Superman, comic readers therefore could read about the 'real' adventures and deeds of the likes of Louis Pasteur, Robert Koch, Walter Reed, Florence Nightingale and Elizabeth Blackwell. The comics also glorified contemporary heroes like Alexander Fleming and Sister Elizabeth Kenny, affirming their place in medical history. These 'true-life' comics did not exist by the late 1960s,[117] but another method of historicization and hero creation can be seen in a completely different context through the methods and styles of reporting Barnard's operation.

The most striking example is the *South African Medical Journal* published on 30 December 1967 and entirely dedicated to Barnard's operation. British doctors would certainly have had access to this journal, although general public readership would have been minimal. The South African government alone ordered and purchased an extra 10,000 copies.[118] A look at this issue elucidates some of the mechanisms by which Barnard and his

Figure 3.4 Christiaan Barnard on the front cover of *Time* magazine (15 December 1967), the same day as Washkansky featured on the cover of *Life* magazine. Whereas *Life* used real photographs, *Time* typically used painted portraits of this style for its cover. The background cartoon of an anatomical heart and the strip – 'The transplanted heart' – make the association with the medical feat, but 'Dr.' Barnard is interestingly shown wearing a suit rather than surgical gear, unlike the surgeons who were on *Time*'s cover in 1957 and 1963.

Source: Reproduced by permission of Getty Images.

operation were made so iconic, how relationships between different media were changing, and the combined impact of such media representations. The content as well as style of this issue was utterly unprecedented for an academic medical journal. All the advertisements in the journal made an explicit reference to the transplant, each carrying congratulatory messages and associating their product with the operation: Parke-Davis laboratories used their full page of advertising space to say, 'Congratulations Professor Chris Barnard and your team on your magnificent achievement'; Dettol similarly offered congratulations on the 'outstanding achievement'; Sarns, the maker of the heart–lung machine used at the UCT, pictured their product and wrote: 'SARNS SALUTES, A world feat, A triumph in surgery, The skill and ingenuity of man, The UCT transplant team', and proudly added that 'The most reliable pump had to be used in the world's first human heart transplant.[119] A Sarns Heart Lung machine was part of the UCT team's equipment.' Similarly, 'Dependable Deknatel' were proud to acknowledge themselves as one of the great many factors that had contributed to the historic and successful completion of the first human heart transplant, given that 'Deknatel Silk Sutures were used throughout the extensive internal anastomotic procedure.'[120]

Stylistically, using words such as 'historic' and 'success' as self-evident made the journal's account similar to the celebratory reporting in the daily press. The traditional distinctions between styles of reportage in medical journals and in the popular press were blurred. The speed at which the detailed report of the operation was made available was also completely out of the ordinary for academic journals. The *Lancet*, in Britain, made no mention of the operation until June the following year; the *BMJ* made a brief editorial comment on 30 December 1967; and the write-up of the first British heart transplant that took place in May 1968 was not published in a medical journal until December that year.[121]

The *South African Medical Journal*'s opening article, written by the Head of the Department of Surgery at UCT and Groote Schuur, described the transplant as an epoch-making achievement. The editorial on the next page boasted that

> The young Republic of South Africa is rightly very proud of the magnificent feat achieved by a medical team at Groote Schuur Hospital in performing the first successful transplant of a human heart. The claim 'successful' can be used even at this early stage because to date it is a feat which makes medical history, no matter how short the further survival of the patient might be.[122]

By the time the journal was published, Washkansky was in fact dead, prompting two additions: firstly, a sentence framed in a black box, 'We regret to record the death of the patient, Mr Louis Washkansky, on 21 December

1967', and secondly, an extra article situated at the end of the journal, 'A provisional report on the autopsy of L.W.'[123] The tone and content of the rest of the journal was deemed not to need alteration since it had been immediately established that the operation was a success regardless of the patient's outcome.

Following the operation, Barnard was awarded an honorary degree at UCT and granted Freedom of the City. The year after, he received the Hendrick Verwoerd Award for 'outstanding service to the country' and then the South African Medical Association's most prestigious award, a gold medal 'for meritorious service to science and humanity'.[124] The speech from his UCT degree ceremony was printed in the exclusive journal edition, as well as a portrait in his graduation gown. This picture, taken by the *Cape Argus* (a Cape Town local daily newspaper), is another example of the overlapping styles of the medical journal and the newspapers. In the award speech Barnard was likened to John Hunter, 'the Father of British Scientific Surgery', and said to follow Hunter's wisdom: 'I think your solution is just; but why think? Why not try the experiment.' Barnard's comparison to Hunter relies on the unquestioned received view of Hunter, a unique hero and the founder of scientific surgery in the late eighteenth century. Jacyna (1983) has shown how images of John Hunter were built up by his contemporary and successive biographers and medico-scientific peers as a means to further their own statuses and disciplines. Later orators placed Hunter himself into a historic line of great men such as Hippocrates, elevating and grounding his importance in the history of medicine. Here, in the immediate coverage of the first heart transplant, Barnard was placed into this same historical perspective.

Barnard's own contribution to the *South African Medical Journal* was a three-and-a-half page report, 'A human cardiac transplant: An interim report of a successful operation performed at Groote Schuur Hospital, Cape Town'. Before giving detailed technical information on the operation itself, he started by saying that his achievement did not come as a surprise to medical scientists: 'steady progress towards this goal has been made by immunologists, biochemists, surgeons and specialists in other branches of medical science all over the world during the past decades to ensure that this, the ultimate in cardiac surgery, would be a success'.[125] He asserted that 'the dream of the ancients from time immemorial has been the junction of portions of different individuals' and talked about the progress made towards this goal by a number of 'brilliant men'. As discussed in Chapter 1, such progressive accounts and methods of historicizing events and individuals are found in many of the historical texts. What is interesting is the way the heart-transplant operation was so quickly assimilated into this history which now included Barnard and South Africa.

There were, however, also several marked differences between the articles in this journal and the newspapers, most obviously the amount of medical and technical detail about Washkansky and the procedure itself.

These included the tissue typing tests, the report from the anaesthetist, a report on the preliminary research, and several images such as Washkansky's angiographs and X-rays and charts of his oesophageal temperature and venous and arterial pressure.[126] No 'whole' pictures were shown of Washkansky and there was no reference to his personhood. As this would be expected of a medical journal, where articles are conventionally factual and detached, the similarities in style and content between the medical and popular press were more apparent than the differences.

Following Washkansky's death, Barnard did not retreat into his private world, and nor did media and medical interest in him wane. Quite the opposite; a couple of days after Washkansky died, Barnard flew to the United States to appear on the CBS programme *Face the Nation* alongside the prominent American cardiac surgeons Kantrowitz and DeBakey.[127] The programme was an hour long, double the usual length, and CBS expected an audience of over 20 million people.[128] Barnard's tour was paid for by CBS (who also donated $5000 to his heart fund) and included a visit to President Johnson and a conference at Chicago airport with leading American cardiac surgeons.[129] By this time, Barnard had already decided to do a second heart transplant imminently and knew who the next recipient would be. His trip to the States was entangled with bids and offers from media organizations to gain exclusive access to and material from his next operation.

Barnard's celebrity status should be seen in the context of making personalities more generally in this period, such as in music, sport and the media itself. The culture of investigative journalism in the 1960s and journalists' eagerness to report scandals had created a climate in which it was not unusual for the public to learn intimate details of individuals' lives and for previously unknown people to become household names overnight. Probably the most famous example is Christine Keeler, the woman at the heart of the Profumo Affair in 1963.[130] The new media technologies created new forms of publicity and visibility through having the power to connect vast media audiences with specific events and people.[131] As well as the media making 'stars' in the outside entertainment world, it also created stars from within.[132] This included not just actors on television programmes but also television presenters and commentators themselves. ITN's early newscasters, such as Christopher Chataway, became well-known television personalities and by the late 1960s many BBC news and currents affairs presenters also enjoyed national recognition. Some journalists, such as Malcolm Muggeridge, who started off as newspaper reporters, moved on to become television personalities.[133] Certain newspapers, too, had created their own 'celebrity journalists', such as John Maddox, science correspondent for the *Manchester Guardian* in the late 1950s and early 1960s. An advertisement in *New Scientist* for the *Daily Express*, promoting its specialist science and defence correspondent Chapman Pincher, exemplified this move away from anonymous journalism as a sign of professionalism to the promotion of the individual, personalized, expert correspondent (Figure 3.5).

Figure 3.5 An advert for the *Daily Express* in *New Scientist* magazine (20 February 1964, p. 478). The *Daily Express* appealed to *New Scientist* readers through advertising its 'expert' science and defence correspondent, Chapman Pincher. This represents the growth of specialist journalism and a break from traditional journalistic anonymity in a new era of celebrity media personalities.
Source: Reproduced by permission of the *Daily Express*.

In the 1950s and 1960s, as television producers increased their ability and readiness to make certain causes, events and people visible, many individuals became more aware of their own need to attract and affect media coverage. The creation of personalities was a two-way process between the media and the people involved. The civil rights leader Martin Luther King is a key example of someone who became increasingly media conscious, a lead followed in the 1960s by many other activists involved in different movements, such as anti-war campaigners and student activists.[134] British student protestors in 1968 were able to use the media to create leaders from amongst themselves such as Tariq Ali, as well as cleverly creating media events to draw attention, such as dying the fountain in London's Trafalgar Square red.[135]

As Kurlansky (2003) has recently commented, one of the best-known sports personalities of the time, Mohammed Ali, was 'perhaps even better than [Martin Luther] King at using the media'.[136] Politicians too, embraced the 'television age' that they sometimes unwittingly entered. In Britain, Harold Wilson used television to address the nation, make policy statements and appear regularly on current affairs programmes, acknowledging it as a powerful new means to address his own party, opponents, voters and the world at large.[137] Although television had not yet been introduced in South Africa, Barnard was a brilliant and willing contributor to the international television networks as well as the print media. This media consciousness was not unusual in the wider context, but it was certainly unusual for a medical man.

Daniel Boorstin's *The Image* (1961), describes the media's manufacture of fame whereby celebrities, defined as 'famous or well-publicized' people, have names that 'once made news' but 'now make news by themselves'. Celebrities had become such a common class that by 1959 there was already a celebrity register with the motto, 'to judge a man as a celebrity – weigh his press clippings'.[138] Boorstin makes a distinction between heroes and celebrities, where a hero is someone distinguished by his achievement and a celebrity distinguished by his image or trademark; the former creates himself, whereas the latter is created by the media. Boorstin laments that 'if someone does a heroic deed in our time all the machinery of public information . . . soon transform him into a celebrity.'[139] Although focused on the United States, a similar analysis could be used for other countries' media machinery and to some extent could be applied to the making of Barnard's celebrity. However, Boorstin's notion of a hero and heroic deed is problematic as it assumes that heroism is self-evident. As Barnard's case shows, hero status is as much created as celebrity status.

Barnard undoubtedly entered the world of celebrities, making news, attending events, meeting people who had no direct concern with heart transplantation. After his American tour, in late January and early February Barnard toured Europe, and his itinerary was by no means confined to

medical meetings. After London, it included an audience with the Pope, rendezvous with the actresses Gina Lollobrigida and Sophia Loren,[140] and visiting, as *Private Eye* put it, 'high society strip shows', in Paris.[141] Malan's (1969) biography commented that Barnard became a 'super-showman', kissing little girls handed to him from the crowds that surrounded him, and as Malan argues, 'reducing his status as great scientist to the level of a teenage pop idol'.[142] Barnard personally saw no problem with his status; to the contrary he seemed proud of it: 'I don't think it's bad being an idol. You know, this is about the first time in history that a scientist and not a pop star, an actor, an athlete, or a boxer has become an idol.'[143]

* * *

The world's first heart-transplant operation was thereby made into an extraordinary media, as well as medical, event. In addition to matching many of the 'news value' criteria, there were also several particularities which helped boost the story's profile. Firstly, the multiple angles from which the story could be told: the individuals involved, the medical milestone, the implications of transplanting a heart for human identity and scientific progress; and secondly, Washkansky's and especially Barnard's personal willingness and ability to deal with and accommodate the media interest, providing abundant information and imagery, with the full backing of the South African government.

The reporting of this medical 'first' in some ways followed the tradition of earlier medical 'breakthrough' stories, and it was likened to past 'historic' human accomplishments, such as climbing Everest, and told alongside contemporary wonders such as space travel. However, the manner in which Washkansky and Barnard were made into international celebrities was new to medicine. The extent and type of media coverage for this operation not only influenced the way in which future heart transplants were reported, but also established a new precedent more generally for how medical innovation could be transformed into major, multi-dimensional news stories and matters for public deliberation.

In early February 1968, the *Daily Mirror* printed a small article, 'Doctor's man', which reported Barnard's acquisition of his own PR man, Don MacKenzie: 'A doctor with a publicity man. Indeed what next!'[144] Barnard's transformation into an international celebrity crossed new lines for medicine, and his new-found media status was highly controversial and contested within medical circles. As the following chapter will demonstrate, this contestation was itself largely fought out in the media.

4

‘The Most Extraordinary Programme Ever Shown on Television’: A New Medium for Debating Medicine

On 31 January 1968, Christiaan Barnard arrived in Britain to participate in a BBC 1 *Tomorrow’s World* special, ‘Barnard Faces His Critics’ – an unprecedented medical–media event of numerous identifiable doctors appearing alongside patients in a television studio debate. Here I analyse the production, content and reception of this programme, explaining why it was described by a journalist the following day as ‘in many ways . . . the most extraordinary programme ever shown on television’.[1] I use the *Tomorrow’s World* special to explore the shaping of the heart-transplant controversy, but also argue that the programme was a key contributor to the changing mechanisms, forums and content of medical debate.

‘Barnard Faces His Critics’ was made in response to some of the early critiques of the heart-transplant operations voiced in Britain. One of the most forceful criticisms was a letter in the *BMJ* by consultants from the Hammersmith Hospital. Barnard responded by asking to appear on a BBC programme to defend himself against their allegations. Heated arguments ensued over where, and in what format, such a debate should take place and who should participate in it. The final result was a special edition of *Tomorrow’s World*, which substituted the usual 25-minute magazine format for an hour long studio debate with a distinct focus and an exceptional audience composition. I take a detailed look at how the studio discussion was managed, which questions were framed and which sidelined, who was taken to be representative of particular groups and views, and how the programme impacted on its viewers. The ‘Chris Barnard show’, as it was widely labelled, was discussed in the medical and general press for weeks after it was aired on television; the programme not only affected the ensuing heart-transplant debate, but challenged traditional professional codes of conduct regarding medicine and the media. Examining this programme thereby elucidates how medicine was negotiated on television, and the particularities of this powerful, visual medium that sought to provide a new platform for medical dialogue and controversy.[2]

Negotiating arenas and methods of medical debate

Following Washkansky's landmark operation, four more cardiac transplantations had quickly been conducted worldwide, but on Barnard's arrival in Britain, only one of the five patients was still alive – Philip Blaiberg, Barnard's second recipient. The American surgeon, Adrian Kantrowitz, attempted two transplants in New York, on 6 December 1967 and then again on 9 January 1968. His first infant patient died six hours after the operation, and the second recipient, a 57-year-old woman, after ten hours. In early January, Norman Shumway transplanted a heart into a 54-year-old man who survived only 15 days.[3] Following the overwhelmingly positive immediate press coverage of Barnard's first operation, with the successive deaths of Washkansky and then the American patients came the first wave of serious criticism simultaneously in the lay and medical press.

After Kantrowitz's second patient died, the *Sun* headlined: 'A question the world is asking – Should the heart doctors stop and think'?[4] A week later, the operations were harshly criticized by doctors writing in *New Scientist* and the *BMJ*. *New Scientist* dedicated six pages to articles by three medics discussing the immunological, ethical and social issues.[5] One of these articles, 'Why was it done?' by Peter Beaconsfield, a surgeon working at Charing Cross and Royal Free hospitals, attracted the most attention in the newspapers. He argued that although many medical teams had the technical skills and resources needed to carry out heart transplants, they nonetheless viewed them as 'ethically indefensible'. He claimed they were being attempted 'because of the twin allures of publicity and one-upmanship'. Also, he attacked the press for its 'growing appetite for sensationalism' and denounced the 'intrusion of commercialism into medical science'. The heart transplants, he said, provided South Africa with an opportunity to create a better international image and gave heart foundations a chance to attract extra funds.[6]

A letter printed in the *BMJ* on 20 January 1968 from three eminent cardiac specialists from Hammersmith Hospital, William Dempster, Denis Melrose and Hugh Bentall, added more fuel to the fire.[7] The Hammersmith doctors had been some of the earliest critics of the transplant operations. In the fortnight after Washkansky's operation, their names had appeared in newspaper reports, urging 'extreme caution' until the ethical, scientific and legal issues were debated. Their *BMJ* letter was reported in the national papers the day before it came out in the specialist journal, indicating that journalists had a preview of the *BMJ*. The *Observer* quoted one of the Hammersmith surgeons' concerns over the possible abuse of donor patients: 'we might be moving towards a sort of euthanasia'.[8] The *Sun* headlined, 'Why our heart men wait', promising that these 'top-rank British surgeons' would explain why 'this country has not followed South Africa and the United States in heart-swop surgery'.[9] This article seemingly demarcated the restrained and

considered British surgeons from their over-zealous American and South African counterparts. In their *BMJ* letter, the Hammersmith doctors elaborated on why, despite their extensive experience in both transplantation and cardiac surgery, they had not felt justified in conducting a heart transplant. They acknowledged heart transplantation as a milestone in the treatment of heart disease, but expressed grave doubts over the ability to tissue type accurately, and recognized the myriad legal, ethical and administrative problems that needed attention from the community at large. Despite the conservative tone, this long letter from three prominent medical figures was sure to have a large impact. A few days later, with the death of Shumway's patient, the *Daily Telegraph* headlined 'Fourth heart swap patient dies' and the editorial pointed out to readers that 'four out of five people subjected to this treatment are now dead'.[10]

In early January, Barnard had asked for an opportunity to appear on BBC television with Dempster from the Hammersmith team, to answer his criticisms. Michael Latham, a producer from Television Science and Features, and editor of *Tomorrow's World* dealt with the request. Latham was particularly keen to facilitate such a televised debate. In a letter to the Head of Television Science and Features, he wrote that although Melrose and Bentall would be 'worth considering as participants in a confrontation . . . Dempster would be the fiery one . . . Dempster says what he feels and this always makes good television'.[11] From early January, Latham set to work on a special edition of *Tomorrow's World*, to be filmed and broadcast at the beginning of February.

Barnard's second patient, a 58-year-old South African dentist, Philip Blaiberg, had survived his operation on 2 January 1968, and was in relatively good health when Barnard came to Britain, but controversy had broken out in the British press regarding the donor patient, Clive Haupt. Unlike Washkansky, Blaiberg's new heart came from a 'coloured' man, a highly politicized and sensitive issue in apartheid South Africa, and one of which Barnard was all too aware. A scathing article in the satirical magazine, *Private Eye*, claimed that the removal of Haupt's heart had not been sanctioned by his wife.[12] A letter to *The Times* from the journalist and outspoken social commentator Malcolm Muggeridge, told how he looked with 'sick foreboding' at what was going on in South Africa, where 'apartheid conditions people to regard large numbers of their fellows as domestic animals'.[13] The reaction in the British press to Barnard's second transplant is probably best summed up in a letter written by the British Consulate-General in Cape Town to the Foreign Office in London:

> The British press . . . perceived at once the irony of a Coloured heart beating in a White body in a country where Coloured people were not allowed to sit on the same bench as their White fellow-citizens. It was suggested that Mr Haupt had posthumously contravened the Group Areas Act by living in a White locality.[14]

The negative publicity was the basis for the BBC's failure to gain rights (along with the American company CBS) to make a film of Barnard's next transplant that he had scheduled for March 1968.[15] The superintendent of Groote Schuur Hospital, Dr Jacobus Burger, had apparently taken offence at criticism in England of the Blaiberg operation and declared that if the BBC took part in the filming then he would resign. Barnard also publicly shared his fury and interpreted the critique as prejudice and jealousy: 'Is this the way a dying nation is reacting?',[16] he asked in an interview in the *Daily Sketch*; 'There was a time when I stood up and pushed out my chest proud to sing "Britannia rules the waves". But I wouldn't be proud of singing "Rule Britannia" again – not any more'.[17] However, Barnard's public and private views may have been quite different. Apparently the South African Information Services in Cape Town thought that South Africans should be making the film and Groote Schuur Hospital should produce it, rather than an outside broadcasting organization. According to a BBC producer in mid-January, Barnard was still 'very much on our side but if the matter became purely political there is no doubt that he would side with the South African establishment'.[18] Despite the reaction to the BBC filming the next operation, Barnard was still keen to participate in the televised debate that he had requested.

Barnard spent a few days in Britain as part of his 12-day European tour. On 1 February 1968, a day after his arrival in London, he obliged photographers by posing in Trafalgar Square with pigeons on his head and then answered journalists' questions at a press conference at South Africa House. Outside, demonstrators gathered from the 'World campaign for the release of South African political prisoners', campaigning for the release of 33 deported South Africans.[19] Inside the embassy, Barnard made a concerted effort to disassociate himself from the political protest. At the press conference, he lamented that 'Britain had been the only country where political considerations had been brought to bear on what was, after all, a matter for medical science.'[20] Yet, a confidential letter from the British Embassy in South Africa, written in February 1968, described that 'it is now also believed in Cape Town that the Government issued instructions that everything possible in the publicity and other fields should be done to obtain the maximum advantage from the affair for South Africa'. The letter also revealed that they had been 'told in confidence that only Government intervention prevented [Barnard] being censured by the South African Medical Association for his antics abroad'. With the government's direct involvement, the South African heart transplants were clearly a political matter. Before Barnard left South Africa he had addressed a huge meeting of businessmen, which the British Consulate-General in Cape Town speculated was orchestrated 'to urge them to contribute more funds to heart research'.[21] Barnard was therefore well aware of the need to enrol people from outside the medical profession.

Publicly though, Barnard asserted that the implications and difficulties associated with heart transplantation were solely medical issues and should

be addressed only by medics. Speaking at the press conference at South Africa House, he said that 'Even the Pope . . . had not clouded any issues. He was not a man of science, and he had just said he would pray. That was his job.' The *Guardian* reported that 'Barnard thought the Vatican would be willing to leave the problems of transplants to the scientists.'[22] However, Barnard was keen to meet the Hammersmith surgeons even though their concerns went beyond the purely 'medical'. After all, they were highly regarded surgeons with international reputations and Barnard had to take them seriously.

Latham arranged a forum for Barnard to meet not only Dempster, but also about 100 other individuals, on a *Tomorrow's World* special. In the event, Dempster refused the invitation on the grounds that the programme was 'not a serious medical meeting'. 'This is not the way things are done in medicine', the *Daily Telegraph* quoted in an article previewing that evening's programme.[23] The *Guardian* reported Dempster saying: 'It is not my policy to debate medicine on television . . . . For the last 17 years I have been writing in medical journals of the world; it is high time Barnard started getting something down in writing. This is where serious medical debate should take place.'[24] A few days later, after the *Tomorrow's World* programme, the director of the Hammersmith Hospital's Department of Surgery, Richard Welbourn, reaffirmed similar views in a letter to *The Times*. For the problems posed by transplantation in science and medicine to be solved, he said, 'they must be . . . pursued by the methods which have been established for each of these disciplines'. Scientific meetings and journals were the correct spaces for such debate, where 'all the data are disclosed and can be assessed critically by those who are competent to do so'.[25] Barnard's response to Dempster, quoted in *The Times*, was: 'I do not believe in arguing in medical journals.'[26]

Barnard had previously featured on *Tomorrow's World* on 6 December 1967, following the Washkansky operation, and again straight after his second operation on Blaiberg.[27] Hugh Bentall from the Hammersmith Hospital had been in the studio with Baxter on the first programme where he expressed some of his immediate medical and, what he termed, 'human' concerns about transplanting the heart. But the criticisms he dared to voice on television so soon after Barnard's operation were much less forceful than those in the *BMJ* article alongside Dempster and Melrose a few weeks later. Nonetheless, Bentall clearly did not object in principle to speaking on television, yet he did not accept the invitation onto 'Barnard Faces His Critics' either.

It seems that Dempster's position, with respect to television as a suitable medium for medical debate, was more complicated than the newspapers reported. A couple of weeks before his letter was printed in the *BMJ*, Dempster agreed to have lunch with Latham, the *Tomorrow's World* editor. Latham described Dempster as being 'a little chary of a straight confrontation with Barnard', although Dempster 'agreed in principle to helping in a television programme to "set the record straight" '. Therefore, Dempster was not

categorically against the idea of appearing on television, yet this was the argument publicly presented.

Barnard and Dempster's dispute about where to argue – television or medical journals – took place in the pages of the press, illustrating the growing interconnectedness of different types of media. The content and audiences of the popular press, the specialist press, television and radio all overlapped. Indeed pieces in the press often assumed a degree of knowledge of prior television broadcasts and vice versa.[28]

As Chapter 2 discussed, in the late 1950s doctors initially resisted the televising of medical practice. In the late 1960s, the issue moved on to whether television was an appropriate medium for medical debate. Television, the lay press and medical journals often made references to similar stories and medical disputes were no longer aired and settled within the confines of specialist journals. Although many medics opposed these changes, some accepted the new status quo. In a letter to the *BMJ*, a former colleague of Barnard, George Sacks, accused Dempster and his colleagues of being 'naïve if they imagined that their cautionary pouring of cold water in their letter [to the *BMJ*] would not be picked up by every lay journal in the world'. He continued, 'the reporter's pencil and the television eye are poised over every issue of reputable medical journals . . . the days of cosy claustrophobic discussion confined to the medical press are over, and the medical innovator jostles the pop singer off the front pages of the daily press'.[29] The very public discourse surrounding the heart transplants significantly contributed to these changing patterns. These were new times for medicine and 'Barnard Faces His Critics' was working to speed them along.

Tomorrow's World in the making: Shaping medical debate

'Barnard Faces His Critics' formed a key part of the early transplant debate. The studio discussion also broke new ground for the *Tomorrow's World* television series and for medical communication more generally. *Tomorrow's World* was first broadcast on BBC 1 as a series of six, weekly, half-hour popular science programmes. Unlike *Horizon*, the BBC's other main science programme – a weekly documentary focusing on one issue,[30] *Tomorrow's World* had a magazine format, meaning that it dealt with several topics each week, averaging four to six film items per episode. The *Radio Times* advertisement for the first series in June 1965 read:

> Each [programme] shall be showing how new developments and discoveries throughout the world are having a decisive effect on the way we live and earn our livings . . . you will see the work of men and women who are shaping both the present and the future – for as the title suggests, Tomorrow's World is in the making today.[31]

The opening animation aptly used a bold, futuristic, computerized typeface for 'Tomorrow's World'. But not all at the BBC were happy with the title. Originally it was to be called *Modern Age* but the name changed to *Tomorrow's World* before the series was broadcast. Some wanted to call it *Challenge* as this was already an established name for a BBC science programme, which had been a successful annual review of science show. One employee complained in a memo to Singer that whereas *Challenge* sounded 'exciting and promising', *Tomorrow's World* was 'dewy-eyed and restrictive'. He asserted that it was a title 'grabbed in an emergency at the last minute' and that there was a 'unanimous view to change it'.[32] Singer disagreed entirely, maintaining that *Tomorrow's World* was a good title with a popular appeal and, far from being restrictive, gave scope to cover technology, science and medicine. Medicine in particular was to be included regularly in the programme, since the producers deemed it 'one of the surest ways of interesting people as well as one of the areas of enormous progress and achievement'. As Chapter 2 demonstrated, in the 1950s the dominant style of reporting medical news became associating medical innovation with scientific advance. When *Tomorrow's World* started in the mid 1960s, it upheld a positive and progressive ethos in relation to both science and medicine.

Tomorrow's World was intended to entertain. For the 1966 series, the production team was told to emphasize 'gee-whizzery' and, unlike *Challenge*, it did not focus on pure research but used film to demonstrate some 'sensational', some 'fascinating', some 'humorous', and some news-related stories which had a science angle, without resorting to expert discussion.[33] This was also a move away from the format of the earlier BBC science show, *Eye on Research* (1957–61) which relied on expert scientists from industry, government and universities, 'the backroom boys of science', to explain their research and its future implications.[34] Examples of *Tomorrow's World* stories in the first few years included electric shocks for compulsive gamblers, the leaning tower of Pisa, lie detectors, the sonic torch, the kidney machine, speech recognition, fire extinguishers, electronic art, computer movies and piezoelectricity.

The brief was to create a programme that showed the relevance of new developments, demonstrating the 'source material for political, social and industrial decisions', in a 'vigorously optimistic and thrustful' style. But whilst aiming to highlight how new developments did not exist in a vacuum, with a continuous emphasis on relevance to people's lives, this new programme did not want to be 'burdened with a social conscience'. The brief stated: 'These ingredients can only enter items if they are implicit in the scientific, technological or social development we are showing.' *Tomorrow's World* therefore aimed, most questionably, to look at developments separated from their social implications, i.e. to demonstrate how people could use new innovations, without investigating the possible broader effects on society. The cultural critic Raymond Williams, writing in the BBC's *Listener*,

reflected on the 'detached atmosphere of *Tomorrow's World* where devices and techniques can be looked at in themselves'.[35]

Required reading for all involved with this programme was the two-volume *The World in 1984*. This was a collection of articles planned by and first printed in *New Scientist*, written by 'experts' who were asked to forecast the conditions in 1984 'on the basis of known possibilities and trends rather than to speculate freely'. Staff were told that these books described the way scientists and engineers felt society was heading and so it would be the programme's route too. One article spoke of the 'sensational developments in grafting, with inescapable consequences'.[36] Focusing on kidney grafting, the author described a future where the problem would be the supply of normal organs, giving rise to a 'curious market (or racket) of fresh organs'. He contemplated the legality of being allowed to sell an organ and noted the potential conflict between scientific and legal advances: 'Is it legal for a surgeon to take organs from a young man or woman some ten minutes after accidental death? Legal difficulties will become numerous because the legal apparatus is conservative and adapts itself too slowly to scientific achievements.' Heart transplantation was not specifically mentioned – the book came out in 1965 – but it gives a useful insight into a period when the future was intensely debated and uncertain, and it was unclear in what direction it should or would be heading. Marking a change in their usual programming policy, in 1968 the *Tomorrow's World* production team decided heart transplantation warranted an exploration of the social, ethical and moral repercussions of medical advance.

By 1968, *Tomorrow's World*, a black-and-white 25-minute programme shown on Wednesday evenings at 6.40 P.M., was drawing a similar number of viewers to the old *Challenge*.[37] Of the 56 million people in Britain in 1968,[38] about 17.5 million owned TV licences;[39] *Tomorrow's World* attracted on average about 7 million predominantly male viewers. An internal BBC programme analysis conducted in 1969 reported that it was 'obvious' that *Tomorrow's World* would be mainly watched by men, and furthermore that it would be foolish to try and make it a woman's programme. Nevertheless, the analyst lamented that as it stood 'one suspects that there is actually a plot to stop women viewing it'.[40] He also made reference to the extreme lack of criticism of bad technology. 'A hostile critic', he said, 'could make a persuasive case for *Tomorrow's World* being a long commercial for the nightmare world of [Minister for Technology] Tony Wedgwood Benn'. One of *Tomorrow's World*'s most ambitious projects received similar criticism, even though it was designed and promoted as a forum to critique one of the most controversial medical feats of the day. It was called 'Barnard Faces His Critics', broadcast from 9.00 P.M. till 10.00 P.M., BBC 1, Friday 2 February 1968 – a slot likely to be watched by a predominantly adult, male audience after the news.

This televised debate was labelled as a 'special', given its longer and later broadcasting slot on a Friday night, and given its unusual format of focusing

on only one subject and including a participating live audience. Although radio programmes involving listener-participation had long existed, studio-audience participation was a new phenomenon altogether in television, pioneered in the United States by Phil Donahue on the *Phil Donahue Show* from November 1967 and in Britain by David Frost on the *Frost Programme* in the summer of 1966.[41] Celebrity interviewing, late-night entertainment shows, morning magazine-format shows, and news talk shows had all been started in the 1950s in the United States, and followed in Britain, but up until the late 1960s, studio audiences, when present, were not invited to participate directly, but were there as a backdrop to provide a general reaction.[42]

Tomorrow's World was usually recorded live, but this special was pre-recorded the night before; rehearsals started at 2.30 P.M. on 1 February and recording was from 8.45 until 10.00 P.M.[43] Although the programme was pre-recorded, viewers still got the impression of witnessing a live discussion.[44] It was chaired by the usual presenter of *Tomorrow's World*, Raymond Baxter, who was best known as a BBC motor-racing commentator, but who had also been the 'anchor man' of *Challenge* and commentator on *Eye on Research*.

The programme's opening narration explained: 'Tonight, in London, before a gathering of doctors, lawyers, churchmen and journalists, Professor Barnard meets some of his critics.'[45] These groups, however, were not represented in equal proportions. The vast majority of the hundred-strong audience were male medics. There was also a small contingent of medical journalists who had been chosen by the recently formed MJA.[46] As was pointed out in the show itself by Holmes Sellors from the National Heart Hospital, despite the programme title, the audience was by no means composed solely of critics. On the contrary, one genuinely strong critic, Malcolm Muggeridge, recalled that he had felt he was 'pretty well the lone representative of the critics Dr. Barnard had been billed as meeting'.[47]

The composition and seating arrangement of the audience was telling. As important as who was present was who was absent, who was deemed to represent a wider group and who was not, which issues were sidelined or omitted and which were framed. Dempster and other members of the Hammersmith team were notably absent critics from the medical establishment, and no one was taken as representative of the 'public'. Similarly, there were no representatives from patient groups or organizations such as the BHF. Such people were invited only to watch and not participate in the studio discussion.

For the BBC, the producer, and the anchorman, the discussion was first and foremost a television programme. As Aubrey Singer had stated in 1966, 'The televising of science is a process of television, subject to principles of programme structure and the demands of dramatic form. Therefore in taking programme decisions, priority must be given to the medium rather than to scientific pedantry.'[48] In contrast, most of the medics in

the studio treated it primarily as a medical meeting. There was no precedent for such a televised medical event, and most of the doctors present were not used to being on television. At several points in the programme the participants seemed to lack the 'dual consciousness' that Timberg and Erler (2002) describe as characteristic of television talk shows, given that these programmes 'address an immediate and public audience at the same time'.[49]

That the programme did not fit into an existing television genre and given the diverse and unknown expectations of the programme, Barnard's role was also ambiguous as both a celebrity and an expert. Accompanying him on the stage, alongside Baxter, was Martinus Botha, the immunologist from Groote Schuur Hospital's heart-transplant team. In terms of a medical meeting, given that Washkansky's post-operative survival had been largely dependent on immunological understanding, Botha's presence on the programme was important. Yet, with no mention of Botha, the program title: 'Barnard Faces His Critics', reflected Barnard's unique celebrity status and adhered to the needs of a television show.

The remaining guests sat on inclined rows opposite the stage. It mattered where in the audience the invited guests were positioned. For example, Donald Gould, editor of *New Scientist*, medical correspondent for the *New Statesman*, and Chairman of the MJA, complained that he was placed well towards the back. When he posed his first question, Barnard asked him if he was a doctor; the combination of Barnard's question and the seating arrangements made Gould 'feel like a heckler'. Gould, who was indeed a doctor, had asked Barnard and Botha why they had felt in a position to carry out the 'experiment' whereas other teams in the world, who were technically capable of performing the operation, had held back. After Botha's denial that it was an 'experiment' and Gould's reassertion that it was, Baxter interrupted Gould with: 'If I may interject, I didn't get a reflection of your reaction, Sir, from the distinguished surgeons along the front row. They don't seem to be as concerned on this specific point.' Having been differentiated from the front-row distinguished surgeons, the topic was changed and Gould did not speak again.

Of the 100 or so guests, fewer than 20 actually spoke on the programme. One doctor from the National Heart Hospital wrote to the *BMJ* that he had only accepted the invitation to attend 'under the naïve impression' that he was to speak. 'In the event', he continued, 'the whole crowded affair . . . allowed only time for the usual views to be expressed.'[50] Of course the debate was restricted to the time limit and scope of *Tomorrow's World* and since it was edited, not even all that was filmed was shown. One of the invited guests wrote to the *BMJ* after the programme expressing his concerns over the justification for heart transplants given medicine's limited resources. He had made no contribution on air because of the lack of opportunity to discuss what he felt were matters of most importance. The

odd remarks which did touch upon resources and priorities were, he said, not broadcast.[51]

Baxter had the task of keeping the domestic viewers in mind and making sure that the material was accessible to non-medical audiences and studio guests. After Barnard commented on how 'a small heart functions in a big pericardial sac' and a 'normal heart functions in an abnormal vascular bed', Baxter politely followed: 'So far, I believe the questioning has been somewhat technical. We have not only a medical audience here; perhaps you could broaden the scope in due course.'

Overall, in Baxter's role as chairman, he did not remain 'neutral', in terms of not openly supporting a particular position; instead he seemed consistently supportive of Barnard. In his memoirs, Baxter recalls: 'As chairman I did my best to preserve an appearance of neutrality, but I was sorely taxed!'[52] This may have been due to his personal opinion, or to the fact that the BBC had an interest in getting back on side with Barnard for future filming opportunities. Perhaps too, television did not want to damage the hero they had in part created and *Tomorrow's World* could not transgress too far from expectations of it being a programme essentially in support of scientific innovation. As Livingstone and Lunt (1994) have detailed, the generic ambiguity of an audience discussion programme is clearly apparent through the host, who can take on the role of 'the chair of a debate . . . a referee, a conciliator, a judge . . . a manager or a spokesperson'.[53] As this was the first event of its kind for *Tomorrow's World*, Baxter had to negotiate his role as the programme progressed. However, he was not the only one who steered the discussion; the audience dynamics, including the interplay between Barnard and the guests and amongst the guests, shaped the flow and content of the debate. These dynamics included non-verbal contributions such as laughing or applauding or even, at one point, hissing. This is well exemplified by arguments voiced by two of the guests, Malcolm Muggeridge and Peter Beaconsfield.

Muggeridge was by this time a very public figure. One of his biographers, Richard Ingrams, who in 1968 was the editor of *Private Eye*, described him as a journalist and television personality 'who had very publicly and courageously embraced the Christian faith'.[54] In the early 1950s, acclaimed by some as responsible for bringing back political satire, Muggeridge was editor of *Punch* and deputy editor of the *Daily Telegraph*. He was made famous by television in the 1950s, hosting interviews on *Panorama* and participating in discussion programmes on the BBC.[55] During the 1960s he became an outspoken critic on many controversial issues, including abortion, the contraceptive pill and euthanasia, but his criticism of heart transplantation was one of his most public involvements.[56] Despite his countless television appearances, he was later to describe the Barnard programme as 'one of the most curious encounters [he] ever had in a television studio'.[57]

Prior to the programme, Muggeridge had scathingly criticized Barnard's operation, in a letter to *The Times* and also on *Panorama*. He used extremely

politically and emotionally loaded language in *The Times*, linking the choice of Cape Town for trying out the first heart transplants to the choice of Hiroshima and Nagasaki for trying out the first atomic bomb. On *Panorama* he said that he found it deeply repugnant that the donor patient was regarded as a 'lately expired or just about to expire . . . collection of spare parts, available for other bodies'. In relation to viewing other people in this way, he added, 'Of course the Nazis went in for this sort of thing'.[58] He considered himself to speak as a Christian, but whether or not his views could justifiably be attached to the faith and whether his opinions were in fact representative of anyone's but his own was a matter of debate. In response to the letter in *The Times*, a university professor from the Department of History and Philosophy of Religion at London's King's College argued that in his view Muggeridge did not 'reflect a truly Christian attitude at all'.[59]

The BBC audience research report of the *Panorama* programme, based on a panel of 266 members, stated that viewers generally were 'well satisfied' with the way in which Muggeridge 'examined the problems posed by this new step in medical history'. In a 'quietly-conducted discussion', 'a lot of good sense was talked'. Viewers were also aware of 'disturbing ethical issues surrounding this kind of treatment, issues that many felt were ably put by Malcolm Muggeridge, speaking, as it were, for a layman's doubts'. On *Panorama*, Muggeridge was seemingly accepted as a representative of an ethically conscious 'layman', whereas the studio audience's response to him on the *Tomorrow's World* special reportedly left Muggeridge 'shaken by the experience'.[60]

On *Tomorrow's World* Muggeridge first denounced the heart-transplant operations for being part of the process that was transforming society into a 'sort of vast broiler house or factory farm such as satirists like Orwell and Aldous Huxley have envisaged'. The transplants, he said, disrespected the body of man that was made in the image of God. Just before making this point, one member of the audience, Reverend Kenneth Slack, had been called upon by Baxter to give 'the religious point of view'. Slack, Minister of the City Temple in London, did not entirely dismiss Muggeridge's claims, but tried to separate them completely from Christianity. He had argued this during a sermon at City Temple about ten days earlier, which was reported in *The Times*, and so his views on Muggeridge and heart transplants were already known.[61] Presumably this was one of the reasons he was invited onto the programme, and by knowing people's positions and likely antagonisms beforehand, Baxter would have been in a stronger position to manage and shape the studio debate. On the programme, speaking as a Christian, Reverend Slack praised Barnard for his genuine attempt to give a very sick person a chance for a fuller and richer life. Up until 1967 Slack had been a Presbyterian but then moved over to the Congregational Church. The two churches joined in 1972 to become the United Reformed Church, but for decades prior to that, Slack had been part of the ecumenical movement advocating

church unity. During the 1950s and 1960s he had published over ten books, mostly concerning ecumenical ideals.[62] He had served as secretary of the British Council of Churches and published *British Churches Today* in 1961.[63] Therefore, on the programme, Slack was taken as representing the united Christian voice and more generally as being representative of *the* religious take on heart transplantation. Muggeridge, on the other hand, became a lone critic. In contrast to Slack, it seems that Muggeridge was there as the self-proclaimed 'provocative or controversial figure'.[64]

Muggeridge received a more extreme audience response after he brought up sentiments similar to those expressed in his letter to *The Times*. He asked Barnard why the operation was first performed in South Africa: 'was it . . . because of the vile doctrine of apartheid in South Africa where life is held cheaper?' Barnard rather avoided the question, and Muggeridge pointed out that he had not answered. First of all Baxter himself made an attempt to answer the question, stating: 'Presumably because Professor Christiaan Barnard and Dr Botha and their team were working in Cape Town'. Muggeridge recalls doctors at this point manifesting their displeasure by hissing. The eminent physician, Lord Platt, past president of the Royal College of Physicians, stood up to announce that he and most of his colleagues disassociated themselves from the question. Baxter then put an end to Muggeridge's involvement, saying, 'Thank you very much. Medical opinion disassociates itself . . . May I move on'. So once again, Muggeridge was framed as an extreme case, representing only himself.

In his biography, Ingrams suggests that there were in fact numerous other critics, but they preferred not to voice their misgivings on television, and so 'it was left to Malcolm, almost alone, to question the morality of the new techniques'.[65] In private, Muggeridge received a supportive letter after the programme from a doctor who had once worked at Groote Schuur Hospital; he told Muggeridge that he had left because he found the attitude to surgery 'more veterinary than medical'.[66] However, given the hostile response of the other guests on the programme, Muggeridge came across as standing very much alone and certainly not as representing 'the religious point of view'.

Audience dynamics and power relations were also at play in the case of Professor Beaconsfield who had recently argued in *New Scientist* that the heart transplants had been conducted prematurely. On *Tomorrow's World* he asked Barnard and Botha about the rejection phenomenon, whether they had found any signs of rejection in Washkansky's second heart, and whether they felt they knew enough about these processes to warrant performing the operation again. The Cambridge transplant surgeon Roy Calne entered the discussion at this point to 'come to the aid of the Cape Town Group', asserting that 'it is a monstrous criticism of a surgeon not to perform an operation because he doesn't know what the result is going to be'. His defence was met with applause from the audience and a moment of disorder when several people spoke at once. Baxter tried to clarify the situation, pointing out to

Beaconsfield the distinct cleavage of opinion between his point of view and that of the other surgeons.

Then Beaconsfield posed the only question which, according to a report in *The Times*, caused Barnard 'slight irritation', asking him how many dogs he had experimented on before attempting the human transplants.[67] Barnard answered back: 'you do oesophagectomies for cancer? How many oesophagectomies for cancer have you done in dogs?' This was met with laughter and applause from the audience, or as *Private Eye* later put it: 'the entire audience of Queen's doctors, knighted surgeons, sycophantic journalists and pompous parsons exploded into applause'.[68] Beaconsfield tried to defend himself, saying it was not the same question at all since his work did not have to cope with the rejection phenomenon, but Baxter cut in, affirming that the audience found Barnard's answer satisfactory, and moved on to the next question. The point about the importance of prior animal experimentation was thereby dismissed. Beaconsfield and Muggeridge's contributions exemplify some of the ways in which responses of, and dynamics between, the audience, Baxter and Barnard framed certain issues as unimportant, unintelligent, non-representative or adequately concluded.

On the other hand, the interrelated issues of 'publicity' and 'anonymity' were framed as important and contentious matters, worthy of focus. With unintentional irony in the context of a televised debate watched by millions of viewers, Calne complained about the 'nauseating publicity' in parts of the press, television and radio. Whilst engaging in the discussion with respect to the immediate studio environment, here Calne did not seem to keep in mind the wider context of speaking on a televised debate with a large home-audience. He said that if there was one criticism to level at Barnard, it was the way he had handled the publicity. Calne empathized with the problem, stating, 'I know what newspaper men and television people are like, they're terrible once they get in', but insisted that the publicity had done harm not only to the individual surgeons involved, but to the medical profession as a whole.[69] His solution was to maintain the confidentiality of patient details and not to divulge any personal information to the press.

Calne reiterated the advice of Lord Brock, past president of the Royal College of Surgeons, contained in his letter to *The Times* the previous day: 'A plea for anonymity in heart transplants'.[70] Brock recalled the days of the first blood transfusions when the news reports highlighted the relationship between the donors and recipients, often depicting the hero donors 'sitting with or shaking hands with the grateful recipient'. This emotional connection was found to be problematic, and the ensuing anonymity between donor and recipient, he said, should be emulated in the case of the heart transplants. In order to achieve this, he proposed that research into the preservation of the heart, enabling conservation and transportation of the isolated organ, should be almost as important as research into the rejection

phenomenon. Brock accused the press of 'trying to squeeze out the last drops of emotion, of sensationalism and drama', and suggested filtering out such emotionalism by transplanting the heart both anonymously and without publicity.

In humble deference to Calne's assertion that it would have been possible to have stopped the publicity, Barnard responded: 'I tell you if you could do that, you're a better man than I am . . . because it was just impossible'. Contrary to reports of Barnard colluding with the South African government actively to seek publicity for the operation, Barnard described the publicity as an unstoppable force that could not be controlled. But it was not only the lay press that came under attack on the programme. Gould drew attention to the unusual style of the special edition of the *South African Medical Journal* on Barnard's operation, and the publicity it generated. He asserted that 'nothing like it had ever happened before . . . the whole issue of a scientific journal dedicated to this one thing and all the articles and a lot of advertisements, too, from drug houses, from firms who make instruments related to cardiac surgery and each carry congratulatory messages'.[71]

There were, however, also arguments for encouraging publicity. Lord Platt put forward the case for publicity as a chance to influence public opinion and encourage people to donate organs. He also suggested that it made medicine more accountable. Unlike 'the old days . . . in the charity hospitals [where] you could do almost what you liked to the sick poor', by publicizing the heart transplants and letting 'the world know about it', a more open forum for criticism could be encouraged.[72] Towards the end of the programme Donald Longmore from the National Heart Hospital took this point further, saying that 'we must tear down the barrier of mystique, mystery and ignorance which surrounds the medical profession. We must come into the open and tell people what we've got to offer'.[73]

The mystique and mystery surrounding the medical profession can be seen as analogous to that surrounding the heart. On the programme, Melville Arnott, a professor of medicine from Birmingham University, had rushed to Barnard's defence, saying that the publicity was beyond his control because he was, after all, dealing with the heart, which occupied 'a very ancient place in the art and psychology of mankind'. Several speakers took the opportunity to objectify the heart. Barnard spoke about the heart transplants as corrections of the pump, and Holmes Sellors reminded the audience that the 'very emotional organ' with a lot of mystique around it was 'only an efficient pump'.

The identifiability of eminent doctors on a television programme was uncommon, since the rule against 'indirect advertising' was still largely respected, although previously disputed. The medical journalist Tony Thistlethwaite recalls that at the time of the Barnard programme, doctors still had an 'underlying fear, always present at the time, of receiving a warning letter' from the GMC regarding 'indirect advertising'. He believed that

many of the doctors were in fact unaware that as they were speaking on the programme the BBC was superimposing their names on the screen.[74] Views on doctors being named in the media were clearly divided at the time. The newspaper television critic Milton Shulman rejoiced in the *Evening Standard* that television audiences were allowed to see the distinguished doctors and that there was 'no nonsense about anonymity' on the Barnard programme.[75] He compared the situation to the early 1960s when he had produced two TV profiles on a particular drug and invited several doctors to appear on the programme. All had refused, either of their own accord or following the advice of the BMA. The rules of the advisory bodies, however, appeared to be open to interpretation, as was pointed out in a letter to the *BMJ*. The author, John Potter, a leading British brain surgeon, called upon the GMC to state unequivocally its views on doctors advertising themselves: 'does [the GMC] approve of a situation where some doctors allow themselves to be named while others still feel constrained, presumably by their interpretation of the Council's rules, to observe anonymity?'[76] Another journalist, Ludovic Kennedy, questioned in a letter to the BBC's magazine the *Listener*, after the programme, 'May I ask the BMA . . . whether anonymity . . . is now to be regarded as having finally gone down the plug-hole? And if not, whether there is to be one rule for the medical establishment and another for ordinary GPs?'[77]

While Shulman focused on the identifiability of doctors, meaning that viewers would be able to 'look up their credentials' and thereby decide 'what importance' could be attached to their views, Potter associated doctors' being identified by the general public with the traditional fear of advertising as a mechanism to attract funds. He considered advertising and competition for money in medicine to lead to 'harmful' consequences such as 'incomplete objectivity, premature conclusions, over-publication, petty one-upmanship . . . and ultimately frank ballyhoo'. Whether the medical profession should remain masked from the public gaze was contentious and, as Chapter 2 demonstrated, the 'indirect advertising' rules had been challenged before. However, the sheer number of doctors appearing on the *Tomorrow's World* programme practically overturned the prior convention of medical professional anonymity in the media. As one journalist questioned, following the programme, 'despite the profession's own holier-than-thou attitude of not mentioning doctors' names, the names of the learned people in the programme *were* given . . . WHY this change in the rules?'[78]

'Barnard Faces His Critics' took the other unusual step of featuring patients, as well as doctors, in the television studio. Two individuals were taken as representative: the first an Australian woman who had undergone a kidney transplant and, the second, a British patient waiting for a heart transplant. Following Muggeridge's arguments about the inviolability of the sacred human body, the first patient remarked: 'All I can say is that I am very grateful for my spare parts'. However, the appearance of the second

patient was the most controversial feature of the programme. Longmore had a wheelchair-bound patient, Bill Bradley, brought onto the studio stage, in the last few minutes of the programme, in an attempt to focus on issues he thought really mattered and sideline those that did not. Baxter asked Longmore for permission to speak to his patient, asserting that of course he would 'respect the patient's identity' which was not disclosed to the viewers.[79] Longmore introduced him, saying that he was sure his patient was not 'the least impressed with the phoney ethical arguments' and that whilst those in the studio had been having their interesting academic discussions, to this patient it was his future at stake. The patient told the audience how, given the opportunity, he would have a heart transplant tomorrow, and that he had been looking forward to being fitted with a new heart for a long time. After the patient was wheeled off the stage, Longmore was questioned a little further. He said that he did not want to talk too much about the patient because he didn't want him identified and harassed by the press, but nonetheless explained how this patient had been waiting since 1962 to have the transplant and had so far undergone 25 other operations. Longmore explained that it was the research progress in heart and lung transplants that had given his patient hope and drive to carry on, omitting the fact that, given the survival rates of heart-transplant recipients, the patient would almost certainly have been dead if he had had a transplant in 1962. And there the programme ended on screen, but a further heated debate followed in the press for weeks later.

'Barnard Faces His Critics' was a new undertaking for *Tomorrow's World* in style and approach, and analysing the micro-dynamics of the programme demonstrates how the studio debate was shaped. The anchor man, the composition and seating arrangement of the audience, the ordering of questions, the verbal and non-verbal responses and the editorial process all formed the debate, making some points salient and others seem irrelevant or concluded. But how was this programme received and what were its implications with respect to medicine and the media?

Response to the 'medical circus'

Television programmes have multiple meanings, understood in diverse ways by differentiated audiences, and viewers' interpretations may not match producers' intentions. Nonetheless, the meanings are constrained and largely determined by a set of conventions, frameworks and expectations.[80] In particular, the rules, styles and conventions of television genres define programme outputs, and viewer expectations and readings. As Livingstone and Lunt (1994) have outlined, 'The evolution of a new genre, such as that of the audience discussion programme, results in unstable and diverse expectations from viewers.'[81] This was particularly true for 'Barnard Faces His Critics', given that it was a new experiment for *Tomorrow's World* and in fact for

television as a whole – the first time that there had been a medical audience of that scale taking part in a televised studio debate.

It is difficult to uncover details of how the programme was received by the majority of the viewers. The only statistical information available is from an 'Audience research viewing barometer' compiled and archived by the BBC, and the same information given in the proceedings of a second conference on the 'Impact of television on medicine' held at the Royal Society of Medicine later that year.[82] At this conference, Singer (who was then Head of Features Group, BBC Television) spoke on the 'Effects of different types of programmes'. He made particular reference to 'Barnard Faces His Critics' and said that the viewing figures had been around 10 million or 17.7 per cent of the population.[83] The 'reaction index' was 84 out of a possible 100, reaction indices being the BBC's way of measuring how much the audience 'like' a programme, where 0 indicated 'total and utter rejection' and 100 represented 'total and utter enjoyment', with an average of around 65.[84] The term 'like' is not very revealing and there is no information regarding the population sample, the questions asked or the responses given. Individual reviews and responses in national newspapers and medical journals seem to provide the most elucidating material for judging the programme's reception.

'Barnard Faces His Critics' was extensively reviewed. The *Evening Standard* and *The Times* reported fairly positively, in particular on how Barnard and Botha conducted themselves. But there was also a lot of negative press, with the strongest attack from Cyril Kersh, in a *Sunday Mirror* article, 'And now folks – it's the Chris Barnard Show'. The article included a picture of a beaming Barnard in front of his audience, captioned 'Dr Chris Barnard. Ready for cameras at Friday's medical "circus" ' (Figure 4.1). As a newspaper journalist, Kersh responded defensively to the attacks on the press made by the medics on television. Firstly, he found the accusations from the doctors unjustified since he claimed that they had actively sought the publicity, 'tripping over their sterilized gowns in their urgency to make statements and appear before the TV cameras'. And secondly, he accused television of gross hypocrisy: 'The Barnard Show raises above all the question: JUST WHAT IS TELEVISION UP TO? Is it not time before screening snide attacks on the newspapers that they put their own house in order?' He suggested the need for a broadcasting equivalent of the Press Council, whereby television could be made responsible for the contents of its broadcasts in the same way as the newspapers were held accountable.[85]

Internal memos from the BBC show that the Board of Management were concerned over bad publicity. They reasoned that the adverse reaction was because some of these critical journalists should have been asked onto the programme but had not been invited. The consequences of this mistake could be found in the following morning's press, even though the programme had been good in itself. The producer, Latham, was also reproached for having given a press preview of his programme without the proper

Sunday Mirror

By CYRIL KERSH

And now folks–it's the Chris Barnard Show

IN many ways it was the most extraordinary programme ever shown on television. . . .

The programme when Dr. Christiaan Barnard, the South African surgeon, discussed his heart transplant operations with a distinguished panel of doctors — and Malcolm Muggeridge.

I have read the word-for-word transcript of Friday's proceedings on BBC. In cold print it gives an even more sickening impression than the live performance.

And it must raise many serious misgivings in the public mind about this sort of television three-ringed circus

Urgency

There were the facile sneers and attacks on the Press—little pricks with blunt and clumsily handled needles that were made all the more meaningless by what followed on the Chris Barnard Show.

Accusing the Press of being "nauseating" and "terrible" is easy—in this case too easy. **For when did the Press once offend in their coverage of the transplant operations in South**

which it was so quick to attack the newspapers.

For example, despite the profession's own holier-than-thou attitude of not mentioning doctors' names, the names of the learned people in the programme were given.

A minor point, perhaps—but the question still needs to be answered, **WHY** this change in the rules?

ling climax introduced by Mr. Donald Bernard Longmore, of the National Heart Hospital, London. He had wheeled into the studio "Mr. X."

Looking pathetically ill and a man who has already endured twenty-five operations for his condition, he was produced like an ailing rabbit from a shabby hat. He is, in fact, a man desperate for a new heart.

It may be recalled that the original idea was not to show his face. It was shown. **WHY?**

ist who refused to take part in the programme on the grounds that TV is not the place to discuss controversial major medical matters is Mr. William Dempster.

He says: "I saw the programme, and if doctors are going to parade their patients in public, responsible public opinion sooner or later is going to say that surgery is too important to be left to surgeons."

The Barnard Show raises among all the question: **JUST WHAT IS TELEVISION UP TO?**

Is it not time before screen-

ing snide attacks on the newspapers that they put their own house in order? In other words, to set up their own equivalent of a Press Council.

Where, otherwise, will it end? With names and faces followed through to the final knife cut—in glorious colour?

Dr CHRIS BARNARD Ready for cameras at Friday's medical "circus"

Figure 4.1 An article by journalist Cyril Kersh in the *Sunday Mirror* (4 February 1968, p. 3) critical of the 'Chris Barnard Show'. Kersh, who did not participate in the studio debate, described it as, 'In many ways . . . the most extraordinary programme ever shown on television'. The image of Barnard, smiling and opening a briefcase, was captioned 'Dr Chris Barnard Ready for cameras at Friday's medical "circus" '.
Source: Reproduced by permission of Mirrorpix.

permission, and having disregarded certain rules about programme publicity. Furthermore, without permission, he had made himself partly responsible for Longmore's patient, even though it was clear that only Longmore could assume that responsibility.[86]

The appearance and role of the patient was the most widely discussed element of the programme and several journalists inflated this individual's significance by labelling him as a potential candidate for Britain's first heart transplant. Concerns were voiced about the impact of the patient's television appearance on his health, on raising potentially false hopes for other patients, and of the 'use' of an identifiable patient as being an unacceptable 'appeal to the emotions'[87]. Kersh described the wheeling into the studio of 'Mr X' as the 'show's sickening climax', the patient produced 'like an ailing rabbit from a shabby hat'. Kersh reported Dempster's views on the matter; having refused the invite but watched the programme, Dempster retorted: 'if doctors are going to parade their patients in public like this, responsible public opinion sooner or later is going to say that surgery is too important to be left to surgeons'.[88]

Whether or not to show the face of the patient was highly debated inside and outside the BBC the night before the programme was aired; the decision to show his face, yet keep his name secret, made headlines. A couple

of days after the programme, Longmore issued a press statement to say that his patient had suffered 'no ill effects' after his television appearance.[89] However, Longmore clearly had concerns over his patient participating in the programme, and was quoted in the *Daily Telegraph* saying that 'the resulting publicity might kill him'.[90] After the programme, he nonetheless defended his decision to 'allow' his patient to participate, maintaining that the 'patient's view was so important, when perhaps there were a lot of irrelevant arguments being brought in'.[91] Kersh strongly objected to Longmore's statement on the programme that he did not want the patient identified and harried by the press. Given the concerns over the patient's anonymity, he inquired whether it was 'beyond the technical brilliance of the BBC' to hide his face. The newspapers, after all, had refrained from printing his picture.

Yet the patient's appearance made such an impact precisely because of the combined visual and audio effect. This was something that television could offer that the printed press and radio could not. The emotive consequence of seeing a 'dying' patient would have been far less effective had his face not been shown. This emotional effect was a central point of criticism. The medical correspondent of the *Observer* argued that it was 'futile and cruel to indulge in the emotionalism provoked by the spectacle of fragile patients like the man in his late fifties who had had 25 operations and told the eager millions . . . on *Tomorrow's World* that he wanted a new heart'.[92] Potter's letter to the *BMJ* the following week also attacked the incident as being an undesirable, 'undiluted appeal to the emotions'. In his opinion 'the straight talks on the radio without visual distraction' had always seemed better.[93]

Potter also remarked on the 'unusually naïve journalist', in the studio audience, who 'believed that Professor Barnard had been able to predict how long one of his patients would have lived without the operation'. Although not named in Potter's letter, the journalist in question was John Stevenson, medical correspondent for the *Daily Sketch*. In the following week's *BMJ*, Stevenson wrote in his defence: 'as the journalist referred to by Mr Potter . . . I would ask your permission to correct . . . any misinterpretation he may have made of my question during the recent BBC television programme'. Just as medical men were not sticking to the confines of their medical journals, popular journalists were not remaining within their newspapers. The sites and participants of medical communication were changing, overlapping and being negotiated. With television as the new powerful medium of the time, arguments were frequently raised to promote and re-establish other media as the preferred choice and most suitable medium for medical discussion: radio, without the visual distraction of television; medical journals, where considered articles could be written at length unlike the more superficial arguments that television could accommodate; and newspapers, which, thanks to the Press Council, were allegedly more regulated than television.

The *Tomorrow's World* programme sparked off correspondence in the *BMJ* for several weeks, relating to the programme itself and more generally

concerning medicine and the media. A leading article on 10 February opened by criticizing emotional accounts of medical advances that emphasized personalities and resulted in journalists employing 'the technique of confrontation'.[94] It continued, 'their approach is out of place in the coverage of events in medicine'. The author argued that legitimate disagreements amongst the medical profession required a space where doctors should be free to argue their views 'without fears of arousing suspicions of professional jealousy or creating anxiety in patients'. These spaces were medical societies and the medical press and not the mass media. One of the central misgivings of the heart-transplant controversy was not that there was disagreement within the medical profession (as this was the case for a number of new medical advances) but that this disagreement was conducted in public.

The *BMJ* article concluded that one main reason for the mass media's unsuitability for medical discussion was because it was set in the context of public entertainment. Concerns over television's requirement to be entertaining were repeatedly voiced. Potter found the Barnard programme entertaining, but that was all this 'spectacle' was. He was concerned that in such a situation, with a mixed studio audience, 'the views of the prejudiced, the oddball, and the plain ignorant . . . are likely to have the greatest impact on the public . . . because these men will always be better entertainment than those . . . [who] spoke sober common sense, though too often alas with articulate monotony'. Although the audience consisted mainly of medical men, and was highly selective, the BBC would have indeed been keen to include people from outside the profession, to give a more 'balanced' spectrum of arguments. Journalistic objectivity, after all, entails representing various viewpoints in a quest for neutrality and unbiased reporting. This was at odds with the attitude of many of the medical men who held a very different notion of objectivity and neutrality, relating to 'factually correct' assertions, rather than a balance of views.[95] As Donald Longmore recalled, 'the BBC pursued their usual policy of giving equal weight to the scientists and doctors who knew what they were talking about and to every "fringe nutter" '.[96] Such a remark is also testimony to the ongoing contestation regarding who should legitimately participate in medical debate.

An article in the *International Medical Tribune of Great Britain* raised similar issues, stipulating that the format of this kind of discussion programme was likely to turn 'any serious matter into a joke'. The author criticized the type of television producer 'whose purpose it is, apparently, to egg on participants in programmes to be aggressive, to "pull no punches" in order to create "tension" and "interest" '. He also attacked the television chairman whose 'suavely unctuous sycophancy towards Professor Barnard was the most amusing thing in the programme'. In the author's opinion, the 'Chris Barnard Show' *was* good television if judged on entertainment value,

where 'argument, interruptions, ranting and the scoring of cheap debating points make for exciting viewing', but it was not educational and should not be the way 'to help the public to understand serious medical problems'. He took issue with doctors appearing in such a programme, not because of anonymity but because it reflected badly on the medical profession if 'doctors, even those who are among the most distinguished, take part in such productions and show themselves to be as ill-mannered and unreasonable in debate as trade unionists and politicians'. This article is representative of the more refined criticism of this *type* of television programme thought unsuitable for medical debate rather than television per se. The author reflected that it would in fact 'be a pity to go back to the days when the medical profession was afraid of the prying eye of the television camera', but the concern was that 'if this programme were to become the pattern for TV medical discussions, it might be better to recommend to doctors a discreet withdrawal when confronted with the flattery of television invitations'.[97]

It seems that Dempster's objections to participating were also more concerned with the style and format of that particular programme. Latham wrote to Humphrey Fisher, Head of Science and Features, a week or so after the programme:

> I am going to see Dempster tomorrow to examine the Washkansky heart specimens that he has in his lab … [He] says without any doubt the heart was rejected – and he can prove it. I have suggested to him that since he now has the evidence he is in an unassailable position and should be prepared to go on television. He thinks he may well be able to do this in 3 or 4 weeks, providing it is on a scripted, pre-arranged basis.[98]

Fisher responded that he did not want to rush into it: 'I feel allergic to the idea of our being used by Dempster and of our appearing to have been pushed or shamed into appeasing Hammersmith'.[99] No such programme went ahead, but the internal correspondence gives an insight into the connections that remained between the BBC and the doctors who publicly rejected their invite onto the *Tomorrow's World* special. A fortnight after the airing, the BBC's *Listener* magazine printed an excerpt from the by then infamous programme, under the title, 'The heart is a very emotional organ – Dr Barnard faces his critics'. It gave the reader a chance to go over some of the main arguments, and displayed one of the only photographs of the event (Figure 4.2). For better or for worse, by this time television could not be fully rejected by the medics concerned with this high-profile case and similarly, the television producers did not want completely to sour relationships with key medical protagonists. Given the number of participants in the programme and the enormous response to it, 'Barnard Faces His Critics' irreversibly established the heart-transplant controversy in the public arena

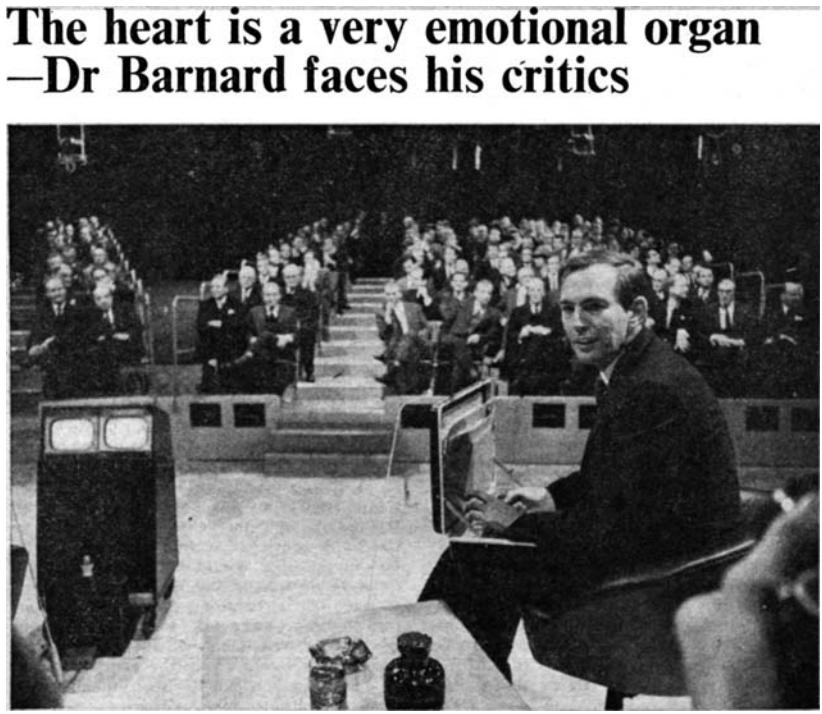

The heart is a very emotional organ —Dr Barnard faces his critics

Figure 4.2 One of the only photographs of 'Barnard Faces His Critics' was printed in the BBC's *Listener* magazine (15 February 1968, p. 202), together with an excerpt from the programme. It was taken from a similar angle to the photograph in the *Sunday Mirror* article but this wider shot captures the layout of the studio. Although not shown in this photograph, the anchorman, Raymond Baxter, was seated on the other side of the table to Barnard, and just behind Barnard was the immunologist from the Groote Schuur Hospital, Martinus Botha. The seating plan for the studio audience was pre-arranged with the most eminent professors placed in the front row.
Source: Reproduced by permission of the BBC.

and was a highly significant event for both the future of medical programming and the future transplant debates.

* * *

After this time, the BBC made an overall change in the focus of its medical programming from actual medical procedures to the social aspects of medicine. At the second conference on 'The impact of television on medicine' in September 1968, Aubrey Singer stated:

> The new era of transplants has raised problems of ethics and identity which strike at the philosophical foundations of our culture . . . there is no

> doubt at all that the ethical debate is at the centre of audience interest at this moment. It explains the evolution of our medical programmes away from the field of the direct practice of medicine and into the problems surrounding it.[100]

Singer specifically referred to the success and popularity of 'Barnard Faces His Critics'. The BBC producers wanted to make their programmes entertaining and educational, but, from this time on, there was a new priority to explore the social and ethical dimensions of medical innovations. This was a marked change to the original intention that *Tomorrow's World* should not be 'burdened with a social conscience'.[101]

The programme also marked a turning point in the attempt to maintain the traditional professional codes of conduct regarding doctor anonymity. Even if some of the doctors were not aware that their names would appear on screen as they spoke, the sheer number of distinguished medics appearing on television was unprecedented. The presentation of the patient, 'Mr X', in the studio was also unparalleled, and made the debate over transplant patients' anonymity and doctor–patient confidentiality significantly more ambiguous and complex. Although there were those within the medical establishment who considered television a wholly unsuitable medium for medical debate, the *Tomorrow's World* programme was indicative of medicine's new public visibility. The programme was also involved in the very making of the heart-transplant controversy into such a public issue. The type and style of programming was still open for debate but television and medical worlds were now intertwined.

The debate which was shaped in the television studio went on to influence the agenda for future heart-transplant discussions. Media studies scholarship has long drawn attention to the 'agenda-setting' aspect of news production, whereby issues are defined and framed through how news is selected and presented.[102] Here, I suggest, and the following chapters will demonstrate, that this programme helped set the agenda for the news itself. As heart transplantation continued, publicity and patient anonymity remained central issues of debate.

The CMO, George Godber, had been nervous about the potential repercussions of the programme for the MoH. On 2 February he wrote:

> There is to be a television programme including Professor Barnard today . . . I suspect that this may accentuate the revulsion of feeling which I believe is already detectable. The public is realising that this surgical success is not one offering anything so dramatic in further life as the original reports implied. It may well lead to the kind of question which the Minister may have to answer.[103]

The criticism of Barnard was not nearly as severe as predicted, but the Ministry acted on one of the main condemnations aired on the programme

regarding the extreme publicity that had attended Barnard's operation. A week later, it sent a letter to numerous hospitals setting out guidelines on how to limit and deal with publicity if a heart transplant was performed at their hospital. The central advice was to try and preserve the anonymity of both donor and recipient and to reduce publicity to an absolute minimum. Yet, in the event of Britain's first heart transplant, these objectives proved to be unattainable.

5
Hospital–Media Relations in the First British Heart Transplant

Medical and media interest in heart transplants had continued unabated ever since Barnard's operation, but reached a new peak in Britain on 3 May 1968 with news from London's National Heart Hospital of Britain's first, and the world's tenth, cardiac transplant. This was internationally symbolic as well, given prior expectations that British doctors would maintain their customary restraint and reserve. Yet, in the extraordinary enthusiasm for performing heart transplants in 1968, 'even Britain succumbed to the atmosphere'.[1]

This chapter provides a new examination of Britain's first heart-transplant operation by exploring how the relations between British medical and media bodies were negotiated, managed and mismanaged. How did journalists turn what the hospital described as a 'completely uneventful' operation into a major medical 'drama'? And how did the story continue to be front-page news for weeks? Transplant surgeons tried and failed to control the publicity by holding a post-operative press conference – the first of its kind in Britain. However, their mismanagement of this event made publicity an evermore prominent component of the transplant news, particularly given pre-existing assumptions about how British surgeons should conduct themselves. As well as looking at the journalistic methods of creating updateable human interest stories, I consider the surgeons' own contribution to the extensive media involvement, and challenge the claim that the media interest in their operation was entirely unwelcome and imposed. The surgeons had their own motives for making their affairs public, such as attracting funds for heart research and increasing personal, professional and national prestige. The media facilitated the creation of networks between patients, surgeons, readers and viewers, but the divides within and between medical and media worlds highlight the heterogeneity and differentiation of these two groups. Some of the tensions and divides remained private and others were propelled into the public domain, but the public/private dichotomy became highly ambiguous as all involved parties

struggled to control and exploit Britain's most significant medical–media event.

Staging a press conference to manage a media event

> An ambulance and a white police Jaguar pull to a halt. It is a moment of drama that brings a busy London street to a standstill. A woman attendant helps to lift a stretcher out of the ambulance. Across the road a sweeper leans on his broom. A taxi meter ticks on unheeded. Passers-by stop to watch.
>
> (*Daily Mail*, 4 May 1968, p. 1).

Journalists and photographers were ready and waiting when the police-escorted ambulance arrived outside the National Heart Hospital, Westmoreland Street on the afternoon of 3 May 1968. Photographers clicked as the body of a man who was to become Britain's first heart donor was pulled out on a stretcher and carried up the stairs into the hospital. The *Daily Mail* used this image the following day to tell the story of Britain's 'New heart drama' (Figure 5.1). The *Daily Express* captured the moment with a close-up of the ambulance, escort and stretcher; the *Sun*, using the same photograph, told its readers about the 'dramatic four-mile ambulance dash to get Britain's first heart donor to the hospital'.[2]

Under pressure to say something, at 6.00 P.M. the hospital secretary, Ronald Denney, confirmed that 'A heart transplant operation is in progress.... The donor's relatives have been given a solemn undertaking that the name will not be divulged. The co-operation of the Press is asked for in safeguarding this confidence.'[3] A BBC van parked outside the hospital (Figure 5.2), and news reports throughout the afternoon and evening speculated on the activities inside the closed hospital doors. The BBC news bulletin at 8.50 P.M. started: 'In the London National Heart Hospital the first British heart transplant operation began about five hours ago. The names of the heart donor and the patient are being kept secret.'[4] The reporter, Ian Ross, announced that two police escorts broke the news of the transplant, one accompanying the ambulance and the other the heart surgeon, Donald Longmore, from King's College Hospital to the National Heart. Who exactly leaked the news was open for debate (a MoH memorandum suggested that journalists found out by monitoring ambulance and police radio messages),[5] but what remained important was that the hospital did not announce the operation in advance. This followed the 7 February guidelines from the MoH that 'there should be no publicity before any operation'.[6]

At 10.00 P.M., with the operation complete, the entire 18-strong medical team came out onto the steps of the hospital to crowds of journalists and passers-by (Figure 5.3). This operation was the tenth heart transplant in the

Daily Mail

News Chronicle

FOR QUEEN AND COMMONWEALTH

SATURDAY, MAY 4, 1968

Britain's first transplant man 'satisfactory'

New heart drama

By WILLIAM BRECKON and HARRY LONGMUIR

BRITAIN'S first heart transplant was successfully completed last night.

The patient's condition is satisfactory, an official at London's National Heart Hospital announced.

The heart donor was a young Irishman, who died after being seriously injured in an accident at work. His name was not disclosed.

The operation, the tenth of its kind in the world, began shortly after 2 p.m. on the third floor of the hospital in Westmoreland Street, Marylebone, a stone's-throw from Harley Street.

Escort

A total security clampdown was ordered. Doctors and staff were told to talk to no one and the name of the recipient was not revealed.

One of the three surgeons at the operation, was 40-year-old Mr Donald Longmore, who brought into a TV studio last February a man who hoped to be Britain's first heart transplant recipient.

With Mr Longmore at the operation were surgeons Mr Donald Ross, 45, and Mr Keith Ross, 42, who are not related.

More than four hours after the operation started, a hospital official came out and announced:

'A heart transplant operation is in progress. A more detailed statement will be issued at the completion of the operation.

'The donor's relatives have been given a solemn undertaking that the name will not be divulged.

'The co-operation of the Press is asked for in safeguarding this confidence.'

The day's drama had begun when Mr Longmore, driving his Lagonda near Park Lane, called Scotland Yard over his radio-telephone in the car asking for an escort. A police car led the way to Southwark and a second car then escorted him to King's College Hospital in Denmark Hill, S.E.

Checks

Later one of the patrol cars and a police motor-cyclist escorted Mr Longmore to the National Heart Hospital, and the other led the ambulance taking the donor across London.

When the ambulance arrived at the heart hospital, police removed boxes packed with solid carbon dioxide and carried them into the hospital.

Then the ambulance attendants carried in a covered stretcher from which only a head swathed in bandages was partly visible.

In the 81-bed hospital surgeons and nurses had been standing by in the operating theatres. A sterile recovery unit was prepared. Here the recipient will be cared for in totally germ-free conditions in the few weeks following the operation.

As soon as the donor was taken into the hospital all telephone communications with the operating theatres was cut off and Mr Keith Ross and Mr Donald Ross began work.

They and their teams had practised on dogs similar operations second by second and stitch by stitch.

In two adjoining operating theatres two teams began to operate simultaneously on both the donor and the recipient

Turn to Page 2, Col. 7

2.17pm: The real battle begins

AN ambulance and a white police Jaguar pull to a halt.

It is a moment of drama that brings a busy London street to a standstill.

A woman attendant helps to lift a stretcher out of the ambulance.

Across the road, a sweeper leans on his broom. A taxi meter ticks on unheeded. Passers-by stop to watch.

The time: 2.17 p.m. The moment yesterday when the body of the donor was carried in to the waiting surgeons at the National Heart Hospital in Westmoreland Street, Marylebone.

Hustle for Paris peace talks

Briton freed

The rear window

Murder after caning

Now—tooth swop

Rothwell in America

Robin in top form

Comment

The new, new story

LATE NEWS

HEART MAN SATISFACTORY

Figure 5.1 The front page of the *Daily Mail* (4 May 1968) headlined with Britain's 'New heart drama', and reported the official statement that the patient's condition was 'satisfactory'. The headline played on the recipient having received a 'new heart' and being at the centre of a 'new drama'. On the right, the photograph shows the white ambulance outside the National Heart Hospital with a stretcher being pulled out carrying the donor. The white car in the centre was a police Jaguar that escorted the ambulance to the hospital.

Figure 5.2 A BBC van setting up filming equipment opposite the National Heart Hospital, Westmoreland Street, London, on the day of Britain's first heart transplant operation (3 May 1968).
Source: Courtesy of Dr Simon Joseph.

world and despite the precedent set by the enormous media coverage of the first operations, especially those in South Africa and the United States, the extent of the media interest still seems to have surprised the British doctors. One member of the transplant team recollected:

> We went out there and there were arc lights, so you couldn't quite see how many people were there, and the whole thing looked like a royal wedding being watched, it was unbelievable when you saw the masses there, and we found ourselves on live television.[7]

To the crowds of reporters, Denney made the following official statement: 'A heart transplant was carried out on a man aged 45. The operation was completely uneventful, and the patient's condition is entirely satisfactory.' There is a striking difference between the language used in the official press releases and that used by journalists to make their stories. Bland medical descriptions such as 'uneventful' and 'satisfactory' were clearly not enough to make this medical undertaking into a significant media event.

Figure 5.3 Members of the medical team who conducted Britain's first heart transplant greeting journalists and photographers on the steps of the National Heart Hospital after completing the operation on 3 May 1968. On the far right is the hospital secretary, Ronald Denney, and next to him is Donald Ross, who led the surgical team.
Source: Courtesy of Dr Simon Joseph.

To make the 'uneventful' eventful, the popular papers sought to recreate the 'drama', detailing exact timings, and noting each and every participant and action:

> The day's drama had begun when Mr Longmore, driving his Lagonda near Park Lane, called Scotland Yard over his radiotelephone in the car asking for an escort . . . . When the ambulance arrived at the heart hospital, police removed boxes cooled with solid carbon dioxide and carried them into the hospital. Then the ambulance attendants carried in a covered stretcher from which only a head swathed in bandages was partly visible.[8]

The quality newspapers were more toned down and less explicit, although they too created their own sense of excitement: 'Crowds cheer first heart swap in Britain', headlined the *Daily Telegraph*.[9] *The Times* used photographs to give a sense of drama: one bird's-eye view picture displaying 'the scene outside the National Heart Hospital', and another showing nurses crowding behind an open window trying to catch a glimpse of the goings-on,

captioned: 'Nurses look from a hostel window at the activity outside the National Heart Hospital where the London operation took place'.[10] The papers also highlighted the secrecy and reported that the wives of the surgeons had no idea what their husbands were up to until after the operation was complete: 'I had a phone call from my husband late this afternoon saying he would not be home for supper', one of the wives declared.[11] The science and medical journalist Ronald Bedford recorded in his diary that at 8.00 P.M. he had called Donald Longmore's wife, and by a stroke of luck her husband had just telephoned to say that the transplant had been performed. Bedford was therefore able to get the story going before the formal announcement by the hospital, and to be ready in time for the surgeons to appear in public.[12] This illuminates some of the informal mechanisms by which journalists acquired their information and shows that co-operative relationships existed between certain specialist journalists and their sources.

The beaming faces of the hospital team were printed on the front pages of the national papers on 4 May. In the turbulent days of May 1968, Britain's first heart transplant competed with several other big stories, both domestic and international: a student riot at Leeds in which a Tory MP's wife was allegedly 'trampled', a race attack on a West Indian man by '18 youths chanting "Powell" ', the Union of Post Office Workers threatening total post office shutdown in response to a revised pay offer, an agreement by the United States for Vietnam peace talks to be held in Paris, and an aircraft crash in Texas killing 84 people. Nonetheless, the heart transplant still ran as the lead story, securing the only front-page image in most newspapers. The *Daily Mirror* headlined: 'The team that made history'. As with the Barnard operation, the media in part created the proclaimed historicity of the British operation by giving it so much attention and using such language in reports. This time, Britain was celebrating its own national event.

The *Daily Express* named all 18 participants in the operation (Figure 5.4), including the nurses, whereas the broadsheets tended to focus on the star surgeons involved. Included in the front-page photographs was, as the *Guardian* pointed out, 'a coloured man', Mr S. Khoja – the surgical registrar; absent from the photograph was Dr Simon Joseph, resident surgical officer at the hospital, who remained with the heart recipient while the rest of the team met the press. The photographing of the medical team was still in keeping with the Ministry's advice on publicity in their letter of 7 February. What the MoH did not consider 'suitable for release to the lay press' was any photograph of the operation itself, but 'it would be for consideration whether a photograph of a non-technical character – e.g. showing the medical team – might be released at a suitable time'. Days before the operation, the Information Services Division (ISD) had spoken at length to Denney at the National Heart Hospital regarding how publicity would be handled if there was to be a heart transplant. The idea of the medical team holding a press conference was considered, and the ISD recommended that 'if photographs of

DAILY EXPRESS

No. 21,123 SATURDAY MAY 4 1968 Weather: Thundery showers Price 5d.

HEART TRANSPLANT

—the British team

Paris for the peace talks

From ROSS MARK

WASHINGTON, Friday

IT'S Paris in the spring! After four weeks' haggling, the United States and North Vietnam have agreed to open preliminary peace talks in the French capital next Friday.

President Johnson made the announcement to a White House news conference today—but warned:—

On the steps of the National Heart Hospital last night, the team who took part in the operation. Key below:

(01)353-1585 ACTION LINE helps 12 small boys SEE PAGE 5

IN THE KNOW with the Express

Patient of 45 'satisfactory' after two-hour operation

Express Staff Reporters

BRITAIN'S first heart transplant operation was carried out last night "uneventfully and successfully," it was announced at the National Heart Hospital in London. The patient was a 45-year-old man, believed to be named Frederick West, and the donor was a 26-year-old Irishman, Patrick (Peter) Ryan, who died after a fall on a building site.

At 10.10 p.m. the medical team of 18, led by Mr. Donald Longmore and including several women, came on to the front steps of the hospital in Marylebone, all obviously delighted.

MY HUMAN DILEMMA —by the man behind it all: Page 10

The days when he helped dopes like me

By MICHAEL BROWN

BRILLIANT

Post Office clerks demand strike

By JOHN GRANT

IN FAVOUR

DECISION

MICHAEL RYAN

PAGE TWO, COL. ONE

LATEST

TV-Radio programmes Page 15

RAZOR ATTACK ON POLICEMAN

PHONE (STD CODE 01) 353 8000

'Impartial'

Envoys

G.I. deserters on Moscow TV

Airliner blast kills 84

Ness Edwards dies

31 stop Cortinas

FANCY THAT

POCKET CARTOON by OSBERT LANCASTER

Patrick Ryan is carried from an ambulance into the National Heart Hospital yesterday

Figure 5.4 The front page of the *Daily Express* (4 May 1968) the day after Britain's first heart transplant, picturing the medical team on the stairs of the National Heart Hospital straight after the operation was completed. There is a key below the picture, naming all the individuals involved.

Source: Reproduced by permission of the *Daily Express*.

the team were permitted . . . these could be taken in a 15-minute session for photographers and before the conference began'.[13]

In the event, the decision for the whole team to come outside straight after the operation was apparently 'spontaneous' since 'no-one was willing to face the press alone'.[14] The Ministry had also stated in its original letter in February that on completion of the operation 'it would be reasonable (if only to prevent unauthorized disclosure) for the Board to issue a Press statement', which might include, if consent had been obtained, the names of the patient, donor and participating medical staff.[15] This advice to hospitals, sent shortly after 'Barnard Faces His Critics', shows that the MoH, at least, were not going to resist the growing trend for doctors to be named in the media. However, there was still disquiet among other members of the medical establishment regarding the preservation of doctor anonymity; one of the National Heart Hospital surgeons, Donald Longmore, particularly seemed to overstep the mark.

Longmore had actively promoted heart transplantation in public and private and had written *Spare-Part Surgery* for both the public and medical students. This book was due to be published on 20 May 1968 but had been distributed to journalists for review prior to this time. The day after the transplant, the inside pages of several newspapers dedicated space to Longmore. The *Daily Sketch*'s medical correspondent, who had previously interviewed Longmore in November 1967, celebrated the news with: 'John Stevenson recalls a prophecy by heart surgeon Donald Longmore that came true yesterday: "Give us time . . . and we'll do it too" '. Several newspapers printed extracts from the forthcoming book which promoted transplantation over artificial body-part substitutes and also heart–lung transplants as a preferred treatment to heart transplants. Given this prior promotion, some newspaper reports speculated that in fact a heart–lung transplant had been carried out at the National Heart Hospital, but this was not the case. An article in the *Sunday Telegraph* on 5 May criticized Longmore's 'personal involvement', in campaigning for heart transplants, referring back to the 'controversial programme' where he 'produced a patient . . . to state his views on the operation's desirability'. It also commented on Longmore's *Spare-Part Surgery*, which 'strongly argues the case for heart transplants despite current ethical misgivings', being on the 'Fleet Street reviewers' desks when the operation began', enabling extracts from it to appear side by side with operation reports.[16]

The relatives of the donor and recipient had not unanimously consented to disclosing the patients' names and so the hospital was adamant about keeping this information confidential. In fact, the pregnant wife of the donor was unaware that her husband's heart had been transplanted, as she was in hospital suffering from shock at the news of his death. Given Denney's request for the press to co-operate in safeguarding the donor's identity, *The Times* dutifully stated that the donor's 'name is known to *The Times* but is being withheld to comply with the hospital's request'.[17] Apparently

Scotland Yard had unwittingly revealed the name to reporters asking about the victim of a building-site accident. However, several other newspapers printed the name – Mr Patrick Ryan – and some also published a picture of his brother, Michael, who allegedly disclosed the following morning that he had given permission for his brother's heart to be removed.[18] From that moment on, despite the hospital's initial request, the name of the donor was public and all news reports used it. Although newspapers competed for 'scoops' or 'firsts', it was also of paramount importance not to be the last to deliver news. In an attempt to control and contain the publicity and to co-operate with journalists' interests, the surgeons announced that they would hold a press conference the following morning, at which they would discuss details of the recipient.

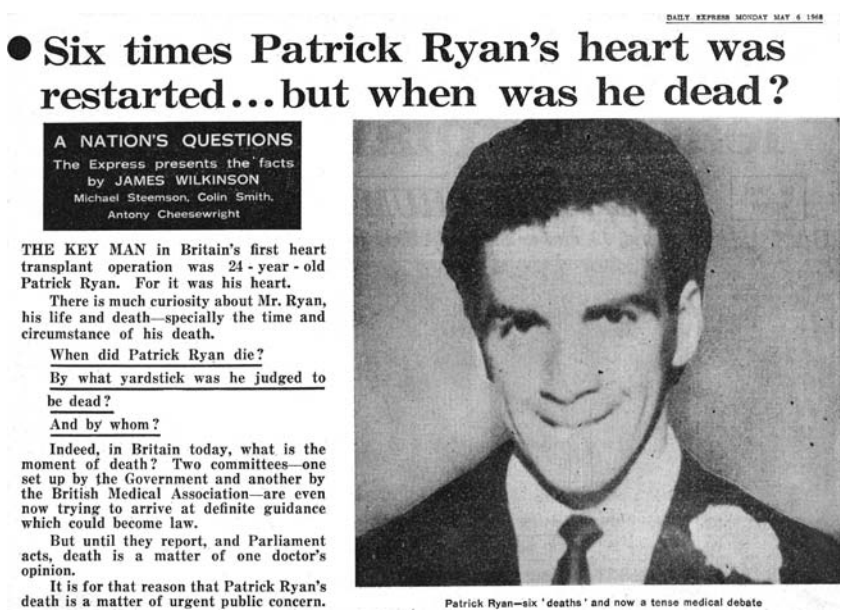
The press conference was held in a small lecture theatre at the National Heart Hospital on the morning of Saturday 4 May, and was the first post-operative press conference of this kind given by a surgical team in British medical history.[19] During the NHS set-up, doctor anonymity had been extended to hospital anonymity, and individual hospitals were not expected to be in the limelight. In May 1968, the British heart-transplant surgeons and hospital did not aim to remain anonymous, but they did expect to be in control of how and what information was divulged. Both the Ministry and the hospital had considered a press conference to be an appropriate means for managing the media interest. All members of the transplant team were present at the conference and the surgeons spoke freely about both the donor and the recipient. They named the recipient as 45-year-old Frederick West, a contracts manager who had an irreparably diseased heart. In response to journalists' concerns, the team were at pains to assert that they were satisfied that the decision to conduct the transplant was not premature, and that the operation was morally correct and acceptable; the patient wanted it and had no alternative treatment. The surgeons spoke of the lengthy preparations and rehearsals, the animal experiments, and the precautions taken at the hospital to safeguard sterility and cleanliness.

But Longmore unintentionally created a sense of uncertainty and unease when asked about the condition of the donor. He said that the man had been resuscitated twice already before he saw him, resuscitated again in the ambulance, again in the lift at the National Heart Hospital and then his heart arrested on three occasions after that, before 'it was finally decided to accept the fact that the patient was dead'. Longmore concluded that 'the donor was very dead indeed'. Then, to try to clarify the situation, he gave an exclusive interview to the *People* after the press conference. He warned the reporter:

> I want you to be extremely careful about this because your newspaper has a very large circulation and you have a great responsibility in these matters.... The public need have no fears about the condition of the donor (Mr Ryan). He was undoubtedly dead when his heart was removed.[20]

Dr Edward Raftery, Senior Registrar at King's College Hospital, confirmed in an additional exclusive interview with the *People*: 'There is no doubt in my mind he was dead'. But these reassurances did not stop the press from continuing to probe the troubling issue of if and when the donor was 'dead'. The *Daily Express* headlined on 6 May: 'Six times Patrick Ryan's heart was restarted . . . but when was he dead?' (Figure 5.5). The science correspondent, James Wilkinson, asked: 'When did Patrick Ryan die? By what yardstick was he judged to be dead? And by whom?' These were matters of urgent public concern, 'A nation's questions'.[21] On 8 May *The Times* reported that a coroner's inquest had been launched into the death. A verdict of accidental death was given by the jury, but Longmore described the inquest as a 'very nasty', incident, 'stirred up by the press', that could have put the surgeons in 'very serious difficulties' had he not taken Ryan's actual skull and photographs as evidence.[22]

On BBC television news at 5.40 P.M. on 4 May, reporter David Wilson described the press conference as undoubtedly the most crowded and hectic he had ever attended, but remarked positively that there was 'an enormous



DAILY EXPRESS MONDAY MAY 6 1968

● Six times Patrick Ryan's heart was restarted... but when was he dead?

A NATION'S QUESTIONS
The Express presents the facts
by JAMES WILKINSON
Michael Steemson, Colin Smith,
Antony Cheesewright

THE KEY MAN in Britain's first heart transplant operation was 24 - year - old Patrick Ryan. For it was his heart.

There is much curiosity about Mr. Ryan, his life and death—specially the time and circumstance of his death.

When did Patrick Ryan die?

By what yardstick was he judged to be dead?

And by whom?

Indeed, in Britain today, what is the moment of death? Two committees—one set up by the Government and another by the British Medical Association—are even now trying to arrive at definite guidance which could become law.

But until they report, and Parliament acts, death is a matter of one doctor's opinion.

It is for that reason that Patrick Ryan's death is a matter of urgent public concern.

Patrick Ryan—six 'deaths' and now a tense medical debate

Figure 5.5 An article in the *Daily Express* (6 May 1968, p. 8), asking when the donor patient Patrick Ryan died, and by whom he was judged to be dead. These were deemed 'A nation's questions', and Ryan's death 'a matter of urgent public concern'.
Source: Reproduced by permission of the *Daily Express*.

sense of occasion and confidence about it'.[23] Looking back, Donald Gould, Chairman of the MJA and editor of *New Scientist*, described the press conference as totally lacking 'serious objective comment'. Logistically, the space was too small and the conference was out of control, as 'journalists shoved, shouted and swore in the desperate competition to get quotes and pictures'.[24] Another journalist recorded in his diary that there were 'about 150 pressmen crammed into a tiny room, everybody pushing and shoving and fighting'.[25]

The most heavily criticized aspect of the press conference was symbolized by a moment when the surgeons, all dressed in matching ties with embroidered heart valves,[26] held up and waved miniature Union Jack cards that read 'I'm Backing Britain'. The 'I'm Backing Britain' campaign had started in January of that year when a group of factory workers offered to work for an extra half-hour each day for no extra pay to help the country's economy.[27] The doctors seemed to be proud of their nationalism, demonstrated in Figure 5.6 which shows the Union Jack card from the press conference pinned up on the hospital notice-board, reading: 'I'm Backing Britain', followed by 'And we're not ashamed' marked alongside the signatures of the key surgeons. The highly contingent happening of the doctors holding up the cards became an enduring image as it was immediately captured on camera, printed in the next day's press (Figure 5.7) and reprinted on several occasions. In an

Figure 5.6 One of the 'I'm Backing Britain' cards, held up at the post-operative press conference, was later pinned up on hospital notice-board with 'And we're not ashamed' written below, initialed by Donald Ross, Donald Longmore and Keith Ross.
Source: Courtesy of Dr Simon Joseph.

AVIA 17 JEWEL SWISS LEVER WATCHES

SUNDAY TELEGRAPH

No. 377 May 5, 1968 Price 6d.

IMMIGRANTS How cut-price fares work Pp. 6, 7

WORSTHORNE on PATRIOTISM AND PARTIES P. 18

Thumbs Up By Heart Man

Two Women Get Donor's Kidneys

BRITAIN'S first heart transplant patient was fully conscious and his condition was "entirely satisfactory" yesterday, it was stated at the National Heart Hospital, Marylebone. The patient, Mr. Frederick West, 45, a contracts manager of Leigh-on-Sea, gave a "thumbs up" sign in hospital last night.

SURGEONS SPORT THEIR TEAM TIE

MEMBERS OF THE BRITISH heart transplant team sitting with "I'm Backing Britain" cards and wearing their specially designed team ties before yesterday's Press conference at the National Heart Hospital in London. Left to right are: Mr. Donald Longmore (consultant in clinical physiology), Mr. Donald Ross (senior surgeon and leader of the team), and Mr. Keith Ross (a consultant heart surgeon).

RIGHT: The heart team's tie, with gold heart valves on a dark background.

MANY JOBS THREATENED AT BRITISH LEYLAND

By PETER PATERSON

MRS. WEST SEES HER HUSBAND

'Pop' Music In Operation

By JOHN DELIN

KIDNEY PATIENTS DO WELL

Plane Crashes On Line: 10 Hurt

FRANCO CLAMP ON GIBRALTAR

ATTACK BY HANOI ON TALKS EVE

B.A.C. design cut-price jet

Envoys meet in Paris

How to Ruin Britain

LIVER PATIENT SATISFACTORY

Shell-BP HQ. burned

OTHER PAGES

LADY ALANBROOKE

LATE NEWS

PILOT CUTTER FIRE

New hope for patient, loving, stay-at-home wives

BOAC 'Stowaway' fares to North America.

BOAC takes good care of you

Figure 5.7 The day after the post-operative press conference, the *Sunday Telegraph* (5 May 1968) dedicated over half of its front page to the heart transplant story. Under the title 'Surgeons sport their team tie', it pictured the heart surgeons, from left to right, Donald Longmore, Donald Ross and Keith Ross. The caption explained that the photograph showed 'Members of the British heart transplant team sitting with "I'm Backing Britain" cards and wearing their specially designed team ties before yesterday's press conference at the National Heart Hospital in London.' The lower photograph is a close-up of 'the heart team's tie, with gold heart valves on a dark background.'

Source: Reproduced by permission of the *Sunday Telegraph*.

interview in the *Daily Mail* in 1970, the leader of the surgical team, Donald Ross, recalled his interpretation of what had happened:

> As a joke, someone – I am not certain who – produced those 'I'm Backing Britain' cards and for fun we all held them up. Then the cameras clicked. How were we to know that the picture would be used all round the world?[28]

The MoH also lamented that the 'flags were put on the table by a member of the Press and that the unfortunate members [of the transplant team] who were silly enough to pick them up were photographed holding them'.[29] This incident indicates the different approaches to, and expectations of, the press conference held by the surgeons and journalists. For journalists trying to make the medical event into a media event, the striking picture of the flag-waving surgeons was perfect news imagery. The surgeons, on the other hand, did not have the media consciousness to monitor their each and every action and utterance.

Hilgartner (2000) gives a sophisticated interpretation of the processes of scientific information management and control. He uses the sociologist Erving Goffman's 'dramaturgic' approach of understanding communication between individuals and groups through the metaphor of the stage, distinguishing between the managed 'front-stage' performance and the 'back-stage' discourse. Hilgartner appropriates Goffman's model for understanding how scientific authority, expertise and credibility are created and maintained by careful 'stage-management'. Part of his work looks at the effects on individual and institutional credibility and integrity when this stage management breaks down. However, whilst certain useful parallels can be drawn between Hilgartner's material and the heart-transplant case, his study is situated at a time when machinery for information control and management was already fully in place. In 1968 no such mechanisms or guidelines had been established. This event at the National Heart Hospital demonstrates the uncertain and chaotic beginnings which led to the carefully managed, image-conscious post-operative press conferences of today.

The National Heart team's 'front-stage' performance and their flag-waving image was strongly criticized both within and outside the medical establishment. In a parliamentary question, one MP pointed out that 'it might be a good idea to remind those concerned that medicine is international and not best served by flag-wagging'. A letter to the editor in the *Lancet* condemned the 'fatuous spectacle . . . of eminent members of a cardiac team displaying flags and buttons [with] "I back Britain" ' which suggested that the 'TV camera was photographing the last night at the Proms, or a football ground, rather than recording a moment in the lives of two families, of whom one member has died tragically and another may die any moment'.[30] Here again, such a spectacle was not deemed appropriate for medicine.

The *Sunday Telegraph*, which had the picture on its front page (Figure 5.7), editorialized:

> If we have any pride left in the Union Jack the one place where we do not wish to see it is in the operating theatre. Today's pictures of Mr Donald Ross' surgical team holding 'I'm Backing Britain' symbols and sporting neck ties adorned with an anatomical heart, throw a dubious light on what otherwise would have been hailed as a great British achievement. Are we now engaged in a gruesome kind of medical Olympic Games?[31]

Interestingly, the editorial considered advances in science that were spurred on by national rivalry to be more acceptable than in medicine. In the spirit of the Cold War being fought out largely in terms of technology, the editor acknowledged: 'Admittedly it is part of the human condition that man's divinely inspired urge to extend the frontiers of knowledge and power should be conditioned by his own competitiveness. Thus the exploration of the infinity of space becomes a function of terrestrial rivalry between America and Russia.' However, he argued that such sentiments must not be put to work 'in the presence of the grave questions of life and death that spare-part surgery presents to mankind as a whole'.[32] Although the newspapers were quick to criticize the nationalistic element of this medical feat, one of the main reasons for the media interest was because it was a national story – the first British heart transplant performed on a British patient in a British hospital.

Professional expectations of British surgeons, partly self-created, and partly imposed from outside, seemed to be irreconcilable with the nationalistic images of the heart surgeons, making the British spectacle seem particularly problematic. A leading American transplant surgeon, Francis Moore, recollected his experience in London at the time:

> Considering the usual British soft-spoken undersell, we discovered that boasting and crass showmanship could be prominent even in Great Britain. The surgeons, in full operating regalia, appeared on the steps of one of the London teaching hospitals to the shouts of cheering crowds, bands playing 'Britannia Rules the Waves' and 'God Save the Queen' with the waving of flags, and guardsmen in bearskin busbies hovering around on horseback. British reserve was cast into those waves that Britannia rules.[33]

The day after the press conference, a doctor's letter to *The Times* noted an unwelcome change in medicine:

> The heart transplant which took place in London . . . has presented a new and disturbing aspect to the whole subject: that is the apparent complete

> breakdown of the professional secrecy which should exist between a doctor and his patient .... The idea of a team of doctors giving a press conference and being identified by name and waving flags (actually and metaphorically) and discussing the closest details of a patient would never have been considered a short while ago.[34]

The author made reference to publicity surrounding transplant surgeons in other countries, lamenting that 'we may well move into an era of the doctor personality cult', but again Britain was seen as exceptional. The letter continued: 'This does obtain in other countries ... but it would not be acceptable here, by our patients, and would in fact be in direct conflict with our cherished ethical standards'. Although medicine was supposedly 'international', Britain had its own particular medical ethical codes of conduct which had been held in high esteem and were now under threat. In June 1968 the BMA issued a revised report on 'Advertising and the medical profession', which elaborated upon the original rules; certain concessions were made over 'unavoidable publicity', but it reiterated that photographs of doctors were 'a most undesirable form of publicity' and that anonymity should in principle still be observed.[35]

Britain was considered to have higher ethical standards than other countries, such as the United States, where this activity could pass as acceptable. Following the first transplant operations, the Chairman of the Board of Governors of the Hammersmith Hospital had made a similar judgement. He wrote to the Minister of Health:

> Everyone here regards the glare of publicity that has attended the heart transplantations in South Africa and the United States as not merely distasteful but disadvantageous to the best development of such techniques. And certainly no reputable team of surgeons in this country would lend themselves to such publicity.[36]

In their attempt to prepare for the seemingly inevitable publicity that would attend the first British heart transplant, the MoH had offered the National Heart Hospital the services of Mr R.C. Moody from the government's ISD to assist them in dealing with the press. Although there was some miscommunication and misunderstanding (such as the hospital secretary apparently not having taken down Moody's home telephone number), the hospital chose not to take up the ISD's offer on the day, and the first Moody heard about the operation was when it was already in the newspapers.[37] At this stage, the ISD felt that Moody should not be expected to 'pick up the pieces'.[38] A smug ISD note records how despite Moody's warning, the National Heart team 'did not expect to be besieged by such large numbers of reporters and photographers, whereas we knew that they would be'. And, whilst acknowledging Denney's impromptu handling of the situation, the

ISD felt that the 'National Heart were initially quite confident about their ability to handle the Press and rather shattered when the thing exploded in their faces.'[39]

Yet, as I have demonstrated, it was not the publicity surrounding Britain's first heart transplant that was problematic per se, but rather the mismanagement of that publicity. Despite preparations for how to handle the media interest, the British surgeons were treading on new ground. Journalists needed to make the 'uneventful' operation eventful, and their experience and expectations of press conferences mismatched those of the surgeons. Longmore's ambiguous statements regarding the death-status of the patient, and the surgeons' momentary holding of 'I'm Backing Britain' cards, had ramifications that the medical team could not control. Keeping in command of media coverage and relations became even less attainable once these debates and images were circulated nationwide, but relations between transplant surgeons and journalists were dynamic and their respective interests could just as well align as diverge.

Continuing the story: Using the press or being used?

The first British heart transplant remained front-page news for weeks after the operation. Journalists used various methods for continuing the story, but the surgeons too had their own interests in keeping their activities public. Unlike the South African transplant which created a single surgeon and patient celebrity, the British heart-transplant story had a whole cast. 'Personalities behind the drama of Britain's first heart transplant operation', headlined the *Sunday Telegraph* on 5 May 1968, introducing in separate photographs the recipient, Frederick West, his wife and 25-year-old son Michael, two nurses who assisted with the transplant operation, and the donor, Patrick Ryan.[40] Because the operation was performed on a Friday this meant that it could receive full weekend newspaper coverage.

A very positive *Sunday Times* Insight team devoted a page to explaining the 'four months of secret rehearsals behind the transplant', telling the story of the 'countdown to the best-prepared operation of its kind yet to have been performed'. The article went into detail, presenting a diagram of the Shumway heart-transplant technique used by the National Heart team, and a sketch of the operating theatre at the hospital as the operation was taking place. The diagram labelled the staff involved, as well as equipment such as the heart–lung machine and the blood drip, and the article explained the attitudes and skills of the surgeons, the immunological details of cardiac transplantation generally, and the technicalities of this operation.[41] Figure 5.8 shows an unpublished photograph of the actual operating theatre at the National Heart Hospital, around the time of the first heart transplant. The *Observer* printed a schematic reconstruction of the operation, and documented similar points to the *Sunday Times* article.[42] However, reports

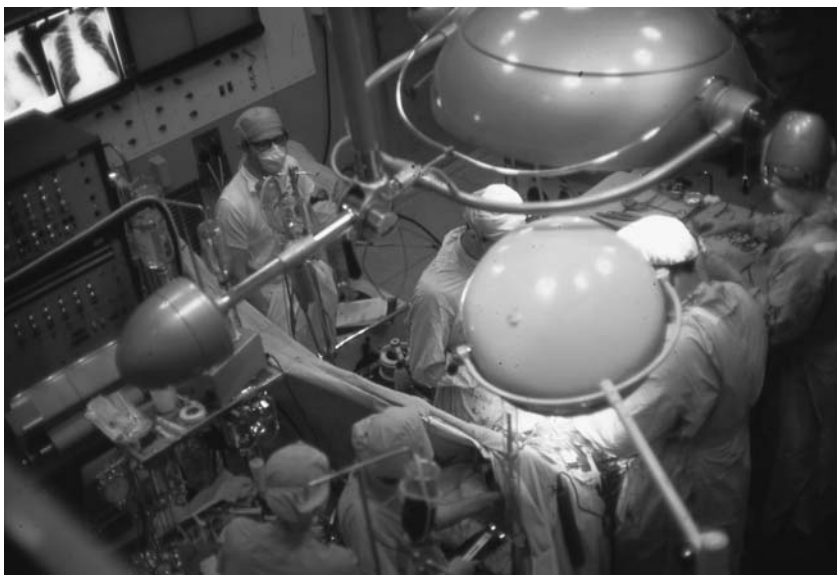


Figure 5.8 One of the operating theatres at the National Heart Hospital in the late 1960s, showing two operating surgeons; a theatre nurse by the instruments table; two anaesthetists who would have been wearing pink uniforms; and to the left, a technician operating the heart–lung machines. The equipment on the far left was for recording data such as the ECG and blood pressure, X-ray display boxes are above, and in front is the anaesthetic equipment. Overhead lamps are obscuring the patient from view.
Source: Courtesy of Dr Simon Joseph.

focusing on medical and technical details were self-contained, inner-page, feature articles which, once printed, exhausted the material and had no follow-up. Journalists therefore had to devise alternative methods to sustain the story.

As had been the case for Barnard's operation, one way to keep the British transplant in the news was by introducing the characters in detail so that readers could follow their individual stories and perspectives during the following weeks. Readers were familiarized with not only the main protagonists, i.e. the patients and the medical professionals, but also their families. In this way the stories gave a sense of getting to know the personalities: being able to sympathize and empathize with them and increasingly wishing to keep up with the story on a daily basis. This is well evidenced in a congratulatory letter to the National Heart Hospital written by a nurse following the transplant: '[Mr West's] family can feel very proud of their place in medical history, and I know will have impressed many, many folk like ourselves who met them on television'.[43] As with Barnard's original operation,

the first British heart transplant had notably high 'news value'. It was the first operation of its kind in the country, a 'human interest' story concerned with the heart, a surgical achievement and an emotional tale of the hope surrounding the survival of one man due to the tragic death of another.

The *Sunday Express* headlined, 'As one life ends there is new hope for three',[44] detailing how Patrick Ryan's kidneys were distributed to two other patients at Hammersmith Hospital, as well as his heart to West. Monday's *Daily Express* followed the news by dedicating a whole page to 'Yesterday's visitors to the hospital of hope' where two of the 'heart transplanters', Donald Ross and Jane Somerville, were pictured outside the hospital alongside their respective children. Underneath were photographs of Mrs Josephine West, her son Michael, and 'The man who refused to give up', Frederick West.[45]

Following the initial press conference, the hospital released bulletins through the Press Association to try to control the official information output and minimize direct contact between the hospital staff and journalists. Fitting the newspapers' cycle, the hospital released daily updates on the patient's state which usually consisted of small statements such as '[h]e is alert and co-operative and his circulation is stable'.[46] To distinguish their stories, reporters supplemented such official information with interviews and comments from the recipient's family and others looking after him. As had been the case with Washkansky's operation, the media exposed remarkably minute details of West's post-transplant life. On Sunday he gave a 'thumbs up'; on Monday he winked and waved at his wife, twiddled his toes and ate carrots and prunes; on Tuesday he walked from his bed to a chair, his wife sat by his bedside and he drank a small glass of sherry; by Thursday he was 'tired and resting', although this was 'no cause for alarm'. Readers heard that he joked with the nurses, performed exercises, read car books, watched television and played chess with a surgeon. Hundreds of letters from the public poured into the hospital wishing him well, and Mrs West used the newspapers to relay the family's thanks. The surgeons also received an abundance of letters, a number of them congratulatory but others more critical and aggressive, including death threats.[47]

Alongside Mr West, the lived experiences of Mrs West and her son Michael were made emotive public tales. In a press assemblage on their back lawn, the day after the operation, West's family claimed to have found out about the operation whilst driving through London and spotting a newspaper billboard poster that described a man of 45 and a first heart-transplant operation.[48] In an exclusive interview, printed simultaneously in the *Daily Mail* and *Daily Sketch*, Mrs West gave the nation an insight into her emotions: 'I don't think he will love me any differently. He already has that old twinkle in his eye'.[49] She expressed what she most loved about her husband, his qualities and hobbies, how they had lived for the past 12 months with his heart problems, and how the heart transplant was an answer to her prayers.[50]

The other key characters were the donor, Patrick Ryan, and his family. Speaking in 1997, Longmore asserted that journalists used untoward practices in their desperate attempts to obtain immediate pictures and information regarding the donor. For example, he claimed that journalists broke into Ryan's in-laws' house and stole a picture of him on his wedding day.[51] Most of the immediate coverage concerning the donor focused on two aspects: questions regarding the moment and status of his 'death', and praise for him and his family for the 'life' he had given to the three other people using his kidneys and heart. Ryan had fallen 20 feet onto his head at a building site in South London. Prior to the transplant at the National Heart Hospital, he was first taken in an ambulance, brain-damaged, to King's College Hospital. The newspapers often printed photographs of Ryan (when alive) side by side West, forming a visual and emotional connection between the two men. Lord Platt had spoken out against this sort of association when he had pleaded earlier in the year that transplant donors and recipients should remain anonymous, not only to the public but to each other and their families as well.

In fact, the publicity surrounding the transplant created networks between transplant donors, recipients, their families and surgeons. The newspapers reported incidents such as the Wests sending flowers to Ryan's funeral, and Mr West receiving a letter of hope from Barnard's second transplant patient, Philip Blaiberg; daily updates were also given on the state of the remaining heart-transplant patients around the world. Thus, the first British transplant was not just a national event but was also part of the wider international transplant movement. Ties between the surgeons were also made and reinforced: Barnard paid a brief visit to the National Heart Hospital on 7 May to meet and assess Mr West, an event which attracted enormous media attention.[52] Donald Ross and Barnard had been college contemporaries in South Africa and Barnard had unsuccessfully applied for a vacancy at the National Heart prior to performing his transplant operation. Barnard's support and advice was invaluable for Ross and his team during West's post-operative period, and they were in regular telephone contact.

On the same day as the first British heart transplant, Denton Cooley also conducted a transplant in Texas. He too was part of the inner circle of heart-transplant surgeons. Extending Fox and Swazey's (1974) analysis of 'kinship' formation between transplant surgeons who shared similar training, values and attitudes (as described in Chapter 1), here I suggest that the media provided another means for developing such 'social circles'.[53] This was further exemplified through another *Tomorrow's World* special, on 4 May, featuring a discussion between editors and medical journalists and some of the British transplant team. On the phone to Baxter, Cooley was able publicly to send his congratulations to Donald Ross and Donald Longmore – his 'close personal friends'. Therefore, although journalists reported on the doctors' divided opinions, the media also created a forum that connected patients,

surgeons and media audiences. This *Tomorrow's World* special also evidences the changes that had taken place in light of the precedent set by 'Barnard Faces His Critics', whereby the British surgeons no longer refrained from appearing, identifiably, in the television studio.

Incredibly, the first British liver transplant was also conducted on the very same day as the National Heart operation, by Roy Calne at Addenbrooke's Hospital in Cambridge. It was an equally great, if not greater, technical achievement, but this operation received drastically less media coverage than the heart transplant; the contrast was striking. The liver transplant was generally mentioned only within or beside articles on the heart transplant and in that way served the purpose of adding to the heart story and keeping it going. The story of Britain's first lung transplant, conducted at Edinburgh's Royal Infirmary, also in May 1968, was used in a similar way.[54] On 'Barnard Faces His Critics', Calne had voiced his concerns over the 'gross publicity' surrounding Barnard's operation, and following the liver transplant he largely managed to keep himself out of the media spotlight. The names of neither the donor nor the recipient were published. Calne steered clear of the press, but journalists were nothing like as eager to uncover the details of this operation as they were of the heart transplant, testifying to the different degrees of cultural symbolism assigned to the heart and the liver.

Both at the time and in hindsight, the National Heart surgeons often expressed regret at the considerable media involvement in the heart-transplant affair. The physician to the first transplant, Jane Somerville, recalls the 'rotten time' they had with the press for the six or seven weeks after the operation and how 'everything had to be kept secret as a means to deal with the press'.[55] This especially seems to have been the case after the press conference, when much of the publicity was itself about publicity – part of a general trend in news reporting in the late 1960s when, as Schudson's (1978) analysis of news-making describes, 'as never before, news writing was itself a topic for news coverage'.[56]

Yet I would question some of the surgeons' own accounts in which they describe the media involvement as completely unwelcome and imposed. A cartoon in *The Times*, following the press conference, is indicative of the feeling that the surgeons were actively seeking the limelight rather than, as they would claim, being besieged by the press (Figure 5.9).[57] In response to much of the unfavourable publicity after the transplant, Donald Longmore arranged for a meeting between himself and other transplant surgeons, representatives from the MJA and the ABSW. One of the journalists present described in his diary how this 'buffet supper . . . turned into a virtual free fight, with Longmore making a bitter attack on the Press and blaming them entirely for the adverse publicity the heart team got'.[58] Yet it worked to the surgeons' advantage for certain information to be made public. This is exemplified most convincingly by the newspapers' exposure of the National Heart Hospital's financial predicament.

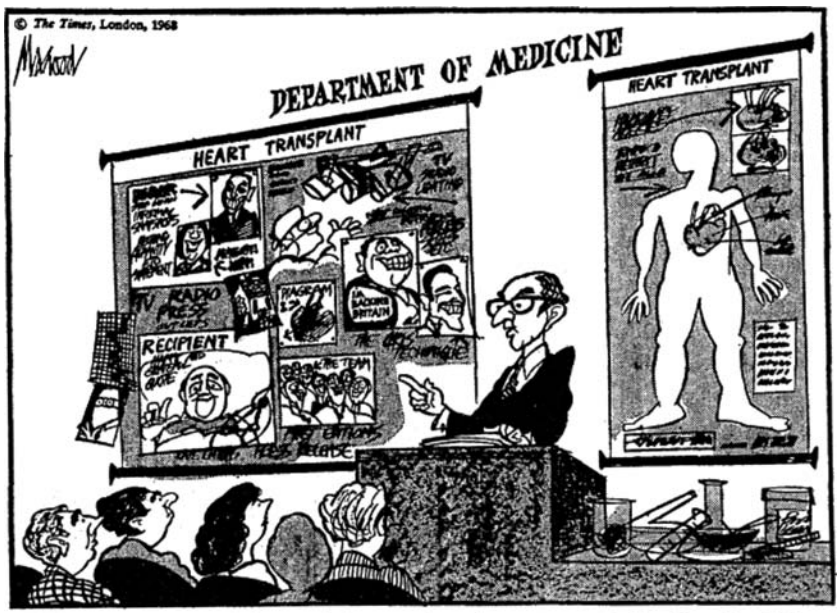


Figure 5.9 A cartoon by Kenneth Mahood in *The Times* (7 May 1968, p. 2), satirizing the publicity surrounding the first British heart transplant. Donald Ross is caricatured with his characteristic dark-rimmed glasses. Pictures on the wall behind him include a surgeon keenly placed under spotlights, 'informal snapshots' of beaming surgeons, and 'I'm Backing Britain' marked on clothing.
Source: Reproduced by permission of NI Syndication Ltd.

The hospital was in financial crisis; a MoH memorandum for a meeting due at the end of March 1968 explained that 'In 1967/1968 the Board's financial affairs have gone completely out of control and the overspending is of the order of £60,000'.[59] Although the Board attributed the overspending to the increased expenditure on medical and surgical appliances and equipment, the Ministry considered it 'not unfair to say that the Board have made no efforts to exercise financial control'. The hospital had greatly increased the number of patients using pacemakers,[60] the cost of which had risen from £100 to over £300 for each device, and Keith Ross' recent appointment had significantly increased the amount of open-heart surgery together with its associated costs. Privately, civil servants wondered why the Board had failed to anticipate these increases and make realistic estimates in advance. On 26 April 1968, the hospital held a 'Forward look' meeting to discuss the following year's finances. They asked the surgeons what the financial implications

of a heart-transplant operation would be. Longmore pointed out that private research funds had met the entire cost of their investigations. The first one or two transplants he said would be 'exploratory', and if they proved successful then he imagined this operation taking place every two or three months and becoming routine. Once routine, a transplant would be no more costly than a multi-valve operation which, he said, it would replace. For the first one, the surgeons envisaged the patient staying in the theatre for the first week since that was the most sterile area of the hospital. Although this would preclude other surgery, they hoped that it would not affect the waiting list for other cardiac surgery too much.[61] The surgeons estimated that the first year of cardiac transplantation might cost in the region of £3000, but future costs were difficult to assess. The gravity of the hospital's financial situation was stressed to all present at the meeting, alongside the potential restrictions that might have to be made to curtail costs. No solutions to the financial predicament were reached and so the meeting was adjourned.

The heart transplant was carried out at the National Heart Hospital a week after the 'Forward look' meeting, creating suspicion that the close proximity of the two events was 'more than a coincidence'.[62] Some government officials and Board members alike questioned why, if the hospital had been ready to perform a transplant for months, as Longmore had told the press, they had only started looking for a suitable donor and recipient a week before. Given that there were no separate sterile facilities, the heart recipient had to remain in the operating theatre after the operation. The surgeons had predicted that this would be for around a week, when the patient's immune system was most vulnerable, but in the event West remained there for over three weeks. The transplant therefore had a positive financial effect on the hospital because it meant that other operations temporarily had to come to a halt, which reduced overall expenditure. Nevertheless, the government was worried that the heart operation made 'an administratively difficult situation into a politically explosive one'. A panicked internal letter read: 'If the news leaks that there is even a possibility that activity will have to be reduced because of shortage of finance there will almost certainly be a much louder outcry now than there would have been a week ago.'[63] The Ministry noted how 'other surgeons have claimed that they too could have performed heart transplants now if they had been prepared to be equally irresponsible'. The Ministry was worried that it would come under more pressure to provide extra funds and that 'the possibility of repercussions makes the problem a very ticklish one'. Another note the next day stated, 'I think you will agree that our explosives have now moved into the megaton class'.[64] The hospital denied any 'political opportunism' but the Ministry remained worried that if they allocated more funds and met the hospital's demands, other teaching hospitals might follow suit. This seemed understandable given the tough restrictions and competition for funds.

Plans were also looming to merge the National Heart with the larger Brompton Hospital. Construction would start in 1970/71 and be completed in 1973/74. The heart surgeons were wholly against this merger, and instead wanted to build a separate transplant centre as an extension to the existing National Heart Hospital. The construction of a north block had been planned to start in 1966, and was to have included clinical laboratories, a sterile unit and an intensive care unit as well as 28 extra beds, totalling £650,000. This plan, however, had been abandoned for financial reasons and also because of the longer-term aim of merging with the Brompton. Ministry officials speculated:

> [The surgeons] feel strongly that what is being planned is not a cardiac-thoracic centre in which they will be equal partners with the Brompton, but a bigger and better Brompton Hospital in which they will be lost without trace.... [T]he surgical team seem determined to move heaven and earth to get their transplant centre.[65]

They also thought that the surgeons were not prepared to wait for so many years to gain their facilities: 'The active professional life left to the more senior of them is limited to about 10 years and the last thing they want to see happen is to let time run away from them while they cannot reach the targets at which they are aiming'.[66]

The hospital's plight did reach the newspaper pages, and most favourably for the surgeons. Longmore, at least, was clearly aware of how media exposure might influence government decision-making and help to raise private funds. This is exemplified by a personal letter written by the editor of *Tomorrow's World* to the Head of Science and Features at the BBC:

> Longmore is still actively pressing for our co-operation when he launches his 'let's save the National Heart' fund. I am playing along at the moment for obvious reasons. It is probably a good story on its own but I don't want to commit us to doing it definitely.[67]

Meanwhile, the MoH warned:

> Flushed with their success and the publicity it has attracted [the surgeons] want to go ahead with the scheme... to build an extension to the existing National Heart Hospital.... We understand that an appeal for funds to build the centre and perhaps even provide Endowment Funds to run it, is to be made tonight on behalf of the British Heart Foundation in the BBC television programme 'Tomorrow's World'.[68]

Prior to this, several newspapers had already commented upon the outrageous lack of funds that the hospital and the surgeons had had to endure

whilst persevering with their pioneering work. The *Sunday Observer* had revealed how 'resources for researching and performing "heroic" surgery of this kind are completely inadequate'. In this article, Donald Ross stressed that if the plans for building a new centre had been adopted when they had been submitted four years ago, they would already have been nearing completion. Instead, the site, consisting of derelict houses to the north of the hospital, had been 'standing useless and rotting since the end of the war'.[69] The same day the *Sunday Times* headlined, 'Heart surgery crisis behind the West transplant', and continued: 'Behind the achievement of Britain's first heart-transplant operation lies the disturbing story of the total failure of the established medical world in Britain to secure the resources to match this revolution in medicine.'[70] Putting direct pressure on the government, the article ended: 'the Ministry is now considering what additional financial support can be given to the National Heart Hospital from the funds available in the current financial year. Their decision will determine whether some patients will live or die'.[71]

That weekend, on 11 May, the *BMJ* editorial congratulated the members of the transplant team on behalf of their colleagues and urged that the Heart Hospital be 'given every help and opportunity to pursue their advances'.[72] Although warning that 'national pride and the stimulus of competition between cardiac centres must not encourage the diversion of disproportionate resources into transplantation', the editor promoted the work of the pioneers in select specialist centres such as the National Heart Hospital. The Ministry did in fact give the hospital an extra £30,000 for the following financial year. A causal link between the media exposure and this end result seems likely. Of interest is not just *that* the media reported on the financial state of the hospital but also the manner in which the reports were written. For example, there was no mention of the Board's allegedly irresponsible handling of finances prior to that time; the predicament was framed only as a financial problem and the surgeons were seen as victims of a tight-fisted MoH whose inaction was detrimental to the hospital's work. The details of the Board's handling of the hospital money may have been unknown to journalists, but representatives from the Ministry were not quoted nor their views presented.

Therefore, despite some of the negative effects of the publicity surrounding the first British heart transplant, in some respects the media coverage worked to the transplant surgeons' advantage. Contrary to claims that the media involvement was unwanted and imposed, the surgeons had their own personal, professional and institutional interests in obtaining publicity for their cause. Thus the transplant story was kept alive through journalistic methods such as developing a human interest angle and creating a narrative (as with the Washkansky reports), but also due to the British surgeons' own contributions and agendas.

Divided communities

Neither the 'media' nor 'medics' were monolithic wholes, but dynamic, fragmented groups with diverse interests. There were divides between and amongst cardiac surgeons and cardiologists, and also among members of the hospital board and between some of the London hospitals. Government and media involvements in these clashes were complex, and these bodies were themselves heterogeneous.

Following the transplant, the weekend papers also carried news of another bold act carried out by the National Heart surgeons – that they had all resigned from the Institute of Cardiology. The Institute's Committee of Management were told that eight members of the surgical subcommittee had resigned on the grounds that they were 'not receiving an allocation of space and money in proportion to that which the physicians received', and that the integration of surgical and medical departments had not been as effective in the Institute as it had been in the hospital.[73] The MoH only found out about this through the newspaper reports, which explained how in the early days when the Institute was first formed, and heart surgery was minimal, it made sense for it to be largely composed of physicians rather than surgeons. Now, despite the great developments in cardiac surgery, the National Heart surgeons claimed that the Institute was still the preserve of physicians. Apparently there were 'bitter arguments' between the surgeons and physicians over the unequal distribution of research funds.[74] The surgeons felt that their disapproval was best expressed by resigning from the Institute and perhaps even trying to establish a separate Institute of Cardiac Surgery. Their favourable media coverage gave the surgeons more momentum.

In order to combine research interests in transplantation and not to duplicate efforts, straight after the heart operation St Mary's, Guy's, and the National Heart Hospital set up a Joint Cardiac Transplant Committee and working party, under the chairmanship of Longmore.[75] However, the medical profession as a whole was divided over whether or not the transplant should have been carried out in the first place: the Hammersmith Hospital, although also a renowned centre for both cardiac surgery and transplantation, was publicly and privately against the National Heart Hospital's transplant activities. Even within the Heart Hospital there were major misgivings. A well-respected cardiovascular pathologist, Reginald Hudson, was notably strongly opposed to the heart transplants taking place at his hospital; as a colleague stated, with regard to the donor, Hudson was 'upset that it was not a whole person in his *post mortem* room'.[76] The anaesthetist for the operation, Alan Gilston, recalled that his registrar was also troubled by the operation and the death-status of the donor as 'here she had, as it were, a live human being and then they snatched his heart away'.[77] There were

also major power struggles between the heart surgeons and Mr J. Serrell Watts, the Chairman of the hospital's Board of Governors. Serrell Watts complained about the unwelcome attention, and said that he had 'intended to take charge but found himself supplanted by Mr Ross' at the press conference following the operation.[78]

The publicity surrounding Britain's first heart transplant was a constant sticking point. The Minister of Health's first statement in Parliament following the operation congratulated the 'entire hospital team on this outstanding achievement', but regretted aspects of the publicity associated with the event. However, he defended the Heart Hospital, saying that they had acted in accordance with his advice, but that the names of the patients had been revealed to the press from sources other than the hospitals concerned. His speech, which was widely reported in the newspapers, prompted a defensive letter in the *Daily Express* from a journalist asking why Mr Robinson sought to 'smear the Press', and insisting that journalists had done nothing untoward or dubious: 'Here was a surgical event of immense importance .... Naturally the Press was interested. And naturally the public, which incidentally was paying for the operation, was fascinated'. Robinson was accused of using the occasion for 'ill-informed criticism of the newspapers'.[79]

Yet despite the media defending their common goals and interests in the operation, behind the scenes they were engaged in aggressive bidding wars with each other. There was extreme competition for photographs, interviews and exclusive stories with West and his wife, and for the right of entry into the hospital spaces. Some of the transplant leaders were actively involved in these deals, motivated by the financial rewards for the hospital and the opportunity to promote their own work and discipline. Straight after the West transplant, the BBC Science and Features division asked the National Heart Hospital for permission to have exclusive filming rights in the event of a second transplant there. Speculating that the next recipient might be Bill Bradley, Longmore's patient who had appeared on stage on *Tomorrow's World*, the BBC had made a concerted effort to keep in contact with this man who was at that point in the Heart Hospital. As the editor of *Tomorrow's World* noted, 'Our relationship with "old Bill" and his family is still as good as ever – we talk to his wife regularly'. He also suggested that it would be a good idea to renew the acquaintance with Donald Ross in order to get their project for filming the next transplant onto a firmer footing.[80] Alongside the negotiations for filming the next transplant, in which they were to offer the hospital around £3000, the BBC was also proposing to make a major television documentary based on interviews with Fred West and his immediate family. As well as the hospital and media staff, solicitors were involved. The BBC set out their proposal to West's solicitor, suggesting that they would pay Mr West £600 for his and his immediate family's 'exclusive services' for six months, from the time he left hospital until six months after the interviews were transmitted. Other television appearances would be forbidden apart

from those of less than two minutes conducted by television news organizations, and the arrangement would not interfere with newspaper interviews.[81] The BBC was competing with ITA to make this programme, which would be around 50 minutes long.

In the meantime, about two weeks after the operation, the BBC and ITA were granted two minutes of mute material featuring West for inclusion in their news bulletins. During their filming, the BBC News crew asked West if he would agree to a sound interview even though ITA were planning a programme with him. West reportedly agreed and while they were filming, the BBC crew allegedly assured Denney that the sound would be untransmittable. The BBC ended up having an exclusive sound interview with the patient, as Aubrey Singer, Head of Features Group, described it, 'on the face of it, a commendable initiative and a "scoop" '.[82] This caused utter furore within the hospital and amongst other television agencies. Longmore wrote a seething letter to Singer, asking whether he was aware that the BBC 'put up a most frightful black with the Heart Hospital by doing some dirty deeds associated with Fred West'. Longmore threatened that 'unless suitable heads are delivered to Mr Denney quite soon, cleanly decapitated, it is highly unlikely that he will agree to any material from [the hospital] being used ever again'.[83] Indeed, the Heart Hospital did cut off relations with the Science and Features department for a time and Michael Latham in turn withdrew his filming units and also his support for the hospital appeal until the matter was sorted out. Longmore's letter also indicates his interest in keeping the media involved, tempting them with lucrative stories:

> I would like to point out that we have far more up our sleeves than just the odd heart transplant. Personally I am committed to heart–lung transplants and the whole question of heart replacements is in the melting pot here. All this is quite apart from the considerable interest which I am sure will be shown by the general public when the Ministry try to close this place down.[84]

Meanwhile, newspapers were also competing for exclusive material: The *People* apparently offered Mr West £500 for each of three or four articles telling his life story. *The Times* gained rights for exclusive photographs of Mr West which they used on 29 May: a front-page picture with five of his nurses, showing the healed scar on his chest (Figure 5.10), and one further inside the paper – a close-up of him smiling and winking. Underneath both photographs, the newspaper proudly declared that they had been taken by their own photographer, Harry Kerr.[85] The *Daily Mail* and the *Daily Sketch* also reportedly paid £5000 each for still photographs of Mr West in the hospital.

As West was recovering, photographers and film crews were allowed right inside the hospital space, turning the patient ward into a television studio and bringing the hospital world into public view.[86] Practically, this involved

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THE TIMES

STUDENTS IN REVOLT: THE NEW RADICALS—Page 10

LEGAL CURB ON WAGES MUST END NEXT YEAR CALLAGHAN SAYS

Trade unions driven far enough

As the Prices and Incomes Bill began its committee stage upstairs at the Commons yesterday, Mr. Callaghan, Home Secretary, was in Blackpool giving the Fire Brigades' Union the strongest ministerial assurance so far that the Government knows they have driven the trade unions as far as they could be expected to go in tolerating legislative control of wages.

By the autumn of 1969, Mr. Callaghan said, compulsory powers would have gone on long enough and must give way to a voluntary policy. If that fell short, then the Government could not make wages bear the weight any longer. Fiscal and monetary policies and general economic policies would need to take the strain.

In the Palace of Westminster yesterday M.P.s were angry and frustrated by frequent divisions on the Transport Bill. Proceedings in 15 committees had to be interrupted for members to rush to the lobbies.

ECONOMY WILL HAVE TO TAKE STRAIN

By DAVID WOOD

No arming of prison officers

Long enough

Industrial regime at new centre

15 committees halt for divisions in House

By HUGH NOYES—Westminster

These weeks and four days after his operation, Mr. Frederick West, Britain's first heart transplant patient, smiles as he shows the healed scar—dubbed by his wife " the zip fastener ". With him in this picture, taken yesterday by Harry Kerr of *The Times*, are five of the nurses looking after him in the cardiac unit at the National Heart Hospital, St. Marylebone, W.

Hopes fade for U S missing nuclear submarine

From IAN McDONALD—Washington, May 28

Transplant lung boy dies

Boy falls 200ft to death

New Zealand criticism of the Duke

Mitterrand urges de Gaulle to go

From CHARLES HARGROVE—Paris, May 28

Johnson accuses Hanoi

New force emerges

Students drive Berlin rector to resign

FROM OUR CORRESPONDENT—Berlin, May 28

MP's request on privilege case

Student theatre for Cardiff

Time to make claim

ON OTHER PAGES

PRELIMINARY ANNOUNCEMENT

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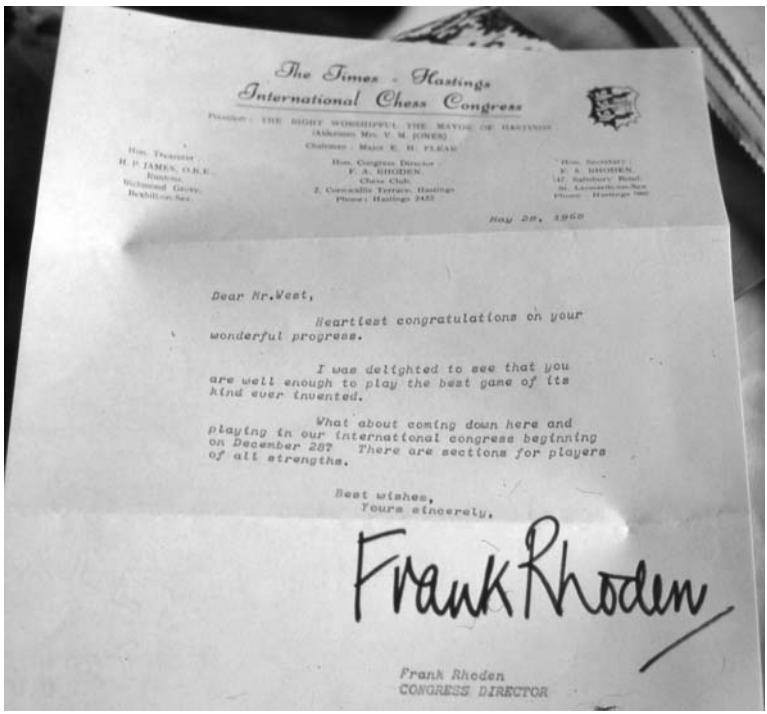
Figure 5.10 The front page of *The Times* (29 May 1968), showing an exclusive photograph of Frederick West surrounded by nurses, revealing his chest scar, taken by *The Times* photographer Harry Kerr. Also on the front page was an article reporting on the death of Britain's first lung-transplant patient, but the heart-transplant patient still provided the day's dominant transplant news and imagery.

Source: Reproduced by permission of NI Syndication Ltd.

procedures such as placing a sterilized microphone around West's neck and filming from 10 feet away through an open doorway.[87] At this stage, the hospital was more cautious about endangering West's immune system in this crucial recovery period. In comparison, one of the National Heart consultants recalled how 'the first day was like a circus, people we didn't know existed arrived at the theatre to see the performance . . . and the bacterial fallout was incredible'.[88] After that, there were much stricter checks on who was allowed to enter the theatre and the possibility of contamination was greatly reduced, although there 'were always plenty of people with Mr West'. The BBC news interview, however, opened by stating that West was being filmed for the first time since his operation 25 days earlier, in a 'germ-free room'. He had been moved from the operating theatre into a sterilized cubicle, but was hoping to go home shortly. By this stage he was allowed to drink and eat normal meals; he was also allowed to smoke. Like the doctors and nurses, the camera crew and interviewer wore masks and gowns, and, like the surgical equipment, the camera equipment was sterilized.

Among the other big news of the day – including the North Vietnamese pouring troops into the South, the French education minister resigning after the student uprising that threatened to overthrow the entire government, a missing American nuclear submarine, an oil slick in the Atlantic, and the Stock Exchange voting against admitting women – the exclusive interview with Britain's first heart-transplant patient was still the highlight of the *Newsroom* programme. The two-minute report showed West drinking Coke, talking with his nurses and speaking about his experience. He was also filmed playing chess, which prompted an immediate letter from the Director of the Hastings International Chess Congress to West, optimistically inviting him to play in the Congress at the end of that year (Figure 5.11). On television, West said that he didn't feel any signs of rejection and that he could 'go out today if it wasn't for them putting the chains on and the nurses keeping me tied in bed all the time'. Grateful for the care they had given him, he complimented the nurses, surgeons and doctors, and said that he hoped to live a 'normal life' following his landmark operation; he acknowledged the importance of his surgery for the surgeons too: 'They want to follow me as much as I want to get well, you know, they will learn quite a bit from me I dare say'.[89]

By seeing West interact with other people, hearing his voice and observing his mannerisms, viewers would have achieved a unique sense of the space and activities inside the hospital. But there were still significant differences between public and private arenas. It is important here then to understand the public exposure of the heart-transplant operation in terms of the type of information that was made public and how it was portrayed. This point is exemplified by contrasting representations of the patient used by the press, of him smiling for the cameras (for example, Figure 5.10), and the kind of representation charted in the hospital (Figure 5.12). The chart displays the patient's weight, temperature, drug doses and so on; even though some


The Times - Hastings
International Chess Congress

May 28, 1968

Dear Mr.West,

Heartiest congratulations on your wonderful progress.

I was delighted to see that you are well enough to play the best game of its kind ever invented.

What about coming down here and playing in our international congress beginning on December 28? There are sections for players of all strengths.

Best wishes,
Yours sincerely,

Frank Rhoden

Frank Rhoden
CONGRESS DIRECTOR

Figure 5.11 A letter from the Director of the Hastings International Chess Congress (28 May 1968) inviting West to take part in the tournament.
Source: Courtesy of Dr Simon Joseph.

details of the patient's physiological state were reported, this was not the type of imagery used in the media or indeed information to which journalists had access. These two representations of West within the hospital setting exemplify the extreme ends of the public versus private spectrum, but, as Hilgartner (2000) asserts, the binary distinction between 'open' and 'closed' processes, and the 'transparent' and the 'opaque' is too simplistic a framework. The boundaries are not rigid, and there are a range of in-between states, depending on how information is managed, framed, restricted and accessed.[90] For example, private photographs of West taken by a member of the transplant team (Figure 5.13 a,b), show him posing in his ward alongside blown-up versions of similar media shots. These images, as well as technical representations of the operation printed in newspapers, are indicative of the public/private crossover.[91]

The British doctors spent the days and weeks following West's transplant anxiously discussing their patient's medical condition, in particular trying

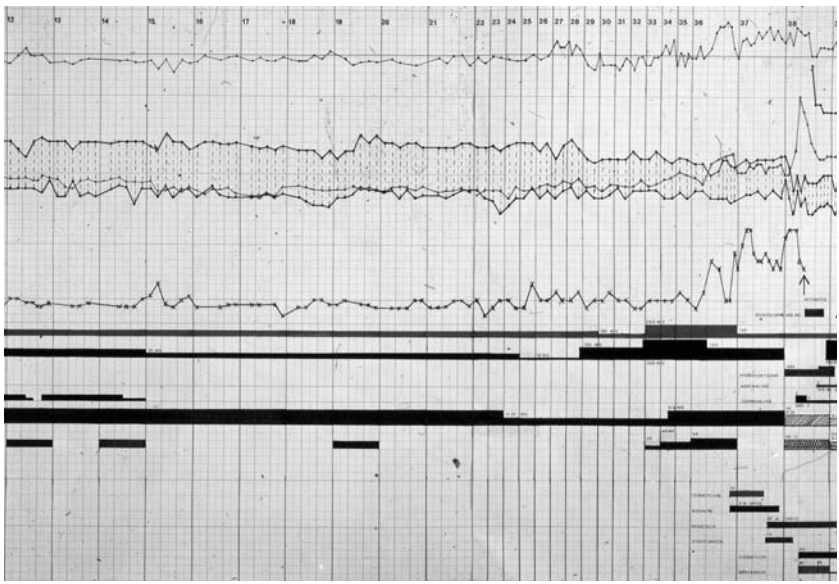


Figure 5.12 A medical chart covering West's 12–39th post-transplant days. The graphs from top to bottom are his weight, blood pressure and heart rate, temperature and the doses of various drugs including azathioprine to combat rejection; the steroids prednisolone and hydrocortisone; adrenaline and other cardiac stimulants; penicillin, streptomycin and other antibiotics.
Source: Courtesy of Dr Simon Joseph.

to identify and treat any signs of rejection. It was the post-operative period and not the operation itself which was the greater challenge: controlling the immune responses to the newly grafted organ. Most of the medical dialogue remained in the medical domain and was not a matter for public discussion. Other types of images remained private such as West's X-rays (Figure 5.14) and photographs of the actual operation taken for purely medical use. In fact, following the operation, Denney contacted Moody from the Government's ISD and sought his aid in getting negatives and prints made under secure conditions. Moody put him in touch with the Ministry of Defence, who agreed to print the slides and photographs of the operation taken by the hospital's medical photographer.[92]

Unfortunately, West never made it back home and died on 17 June 1968, 46 days after receiving his new heart. By this time, 21 heart transplants had been performed worldwide and West was the sixteenth to die. The surgeons reported that he died of an 'overwhelming infection', and not because the heart was rejected. Infection and rejection, though, were two sides of the same coin: lowering immune responses to counter rejection was what left

(a)

(b)

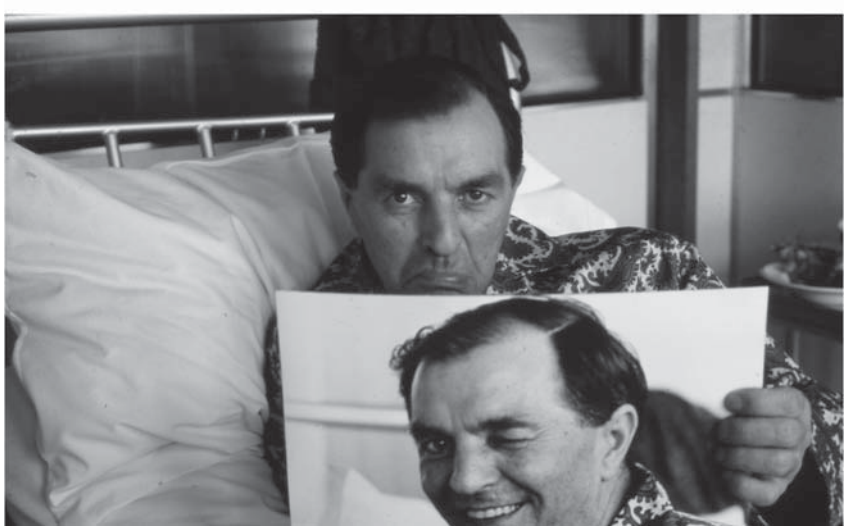


Figure 5.13a,b Photographs taken by Dr Simon Joseph of West in the National Heart Hospital after his operation in May 1968. The picture that West is holding up in Figure 5.13b is a copy of one of the photographs taken by *The Times* photographer Harry Kerr which was printed in *The Times* (29 May 1968, p. 16) the same day as the front-page picture of West with his nurses (Figure 5.10).
Source: Courtesy of Dr Simon Joseph.

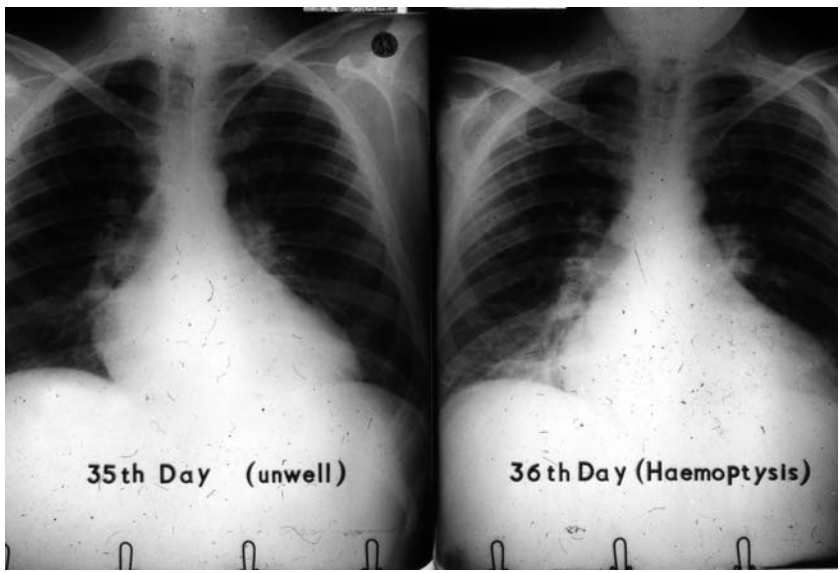


Figure 5.14 West's chest X-rays on the 35th and 36th day after his operation. The first X-ray is marked as 'unwell' and the second 'haemoptysis' (coughing up of blood from the lungs). They show a patchy shadowing at the right lung base, compatible with collapse, infection or infarction. West died ten days later.
Source: Courtesy of Simon Joseph.

transplant patients susceptible to infections. West's death was greeted with sadness among all those close to him and also by members of the public who had no connection to him yet had watched, listened and read about his fight for life through the extensive media coverage. The newspapers reported how Mrs Blaiberg, the wife of the longest living heart-transplant patient, sent a telegram of sympathy to the widow of Britain's 'heart man'. Mrs West publicly announced where the funeral would take place and where flowers could be sent. Instantly though, following West's death, the polarized debate about whether a heart transplant should have been carried out in the first place, and whether such transplants should now be discontinued, again made headlines. The day after West died, *The Times* printed a half-page article on 'differing views after a fight for life fails'. *The Times*' medical correspondent strongly argued that the time had come to call a halt. 'Today the flags are put away, the special ties discarded and the nation mourns the death of the recipient of the transplanted heart'.[93] A few days later *The Times* reported on a medical conference in Munich at which Donald Ross acknowledged that he could have made a technical error during the transplant by not cutting out enough of the atria. The front-page headline simply read: 'Error made in London transplant'.[94] At the beginning of July, *Private Eye* launched

a front-cover attack on the surgeons showing the infamous image from the press conference with the surgeons holding the 'I'm Backing Britain' cards, captioned ' "O.K., SO WE GOOFED" say Heart Men' (Figure 5.15).[95] Medical opinion and media representations of human heart transplantation became even more fragmented.

* * *

The British heart-transplant surgeons nonetheless announced that they would continue with the transplants until they had three or four long-term survivors. The immunologist from the West transplant, James Mowbray, told *The Times* news team that 'when we have a few groups of Blaibergs, we can stop for a while and have discussions with other teams about the best treatment that has emerged.... No matter what, it is perfectly right to go ahead now and do another heart transplant'. With plans immediately in place to conduct a second operation, the media stood on guard for their next big story. The day after Fred West's death, the BBC pushed forward with their plans to film the next operation, setting out their terms and conditions for this exclusive programme. The hospital passed on the proposal to the MoH, which refused permission. Referring back to their original letter of advice on publicity from 7 February, the Ministry reminded the National Heart that such a programme would be in direct conflict with this advice, which 'clearly excludes photography for exhibition to the lay public'. However, they noted that since 'both the spirit and the letter of departmental doctrine has been so repeatedly breached in the course of recent events at the National Heart Hospital it may be due for review and possible modification'.[96] The BBC filming was nevertheless not approved and did not go ahead.

The Chairman of the Board of Governors, Serrell Watts, was adamantly against the BBC film and wished that he and the hospital could step out of the public glare. In early July, he approached the Ministry to express concern over his waning control. He was uneasy about the prospect of a second transplant, given the continued ethical dilemmas and also the associated publicity, but the medical staff were exercising their right to clinical freedom. One civil servant suggested declining to select the National Heart Hospital as a viable centre for heart transplants because 'they cannot achieve the degree of control of publicity that we think desirable in the case of these transplant operations'.[97] Others responded that it would not be possible just to bar the National Heart Hospital unless transplants were banned nationwide; certainly it would not be feasible to 'exclude a hospital from participating in a specialised field on the grounds that it cannot handle its publicity properly'. Furthermore, 'Dr Ross and others would make mincemeat of any reasons which were not adequately based medically'.[98]

Figure 5.15 The front cover of *Private Eye* (5 July 1968), which used the notorious picture of the surgeons from their post-operative press conference, showing, from left to right, Donald Longmore, Donald Ross and Keith Ross.
Source: Reproduced by kind permission of *Private Eye*.

The National Heart transplant surgeons were determined to continue with their operations, but they too were unhappy with how the publicity had been handled, and were keen to formulate guidelines and channels for dealing with journalists and information flow. Journalists also recognized that

the status quo was unsatisfactory but judged that the heart transplants were a matter of great public interest and concern, and so believed they had every reason to continue to provide transplant news. The staging of the press conference, the competition for news material, the use of the media in the formation of networks, the exposure of divides and the revelations of personal details of doctors and patients, all had made hospital medicine in Britain into an extraordinary public affair, that in turn made medical–media relations particularly important. As this chapter has demonstrated, and as Chapter 6 develops further, all those involved in the conduct, coverage and financing of the heart-transplant enterprise acknowledged that managing media relations and controlling information would be crucial for its future.

6
Managing Medicine's Image in the 'Time of the Heart Transplants'

In 1968, over 100 heart transplants were conducted worldwide in 18 different countries. The public, the press and the medical community had mixed responses: from real hope and awe to despair and even disgust. Two-thirds of the patients operated on in 1968 died within three months of their revolutionary surgery. Some died after hours or days, while Barnard's second patient, Philip Blaiberg, went on to celebrate his first year with a new heart, symbolizing and embodying hope for the new procedure.

Widely acknowledged as one of the most politically unsettled years of the post-war era, 1968 was 'the year that rocked the world'.[1] With the Tet Offensive, the assassination of Martin Luther King, *les événements* in Paris, the Soviet invasion of Czechoslovakia, amongst many other extraordinary happenings, 1968 was hardly short of news. Yet each and every heart transplant received media coverage and follow-up commentary. But as the transplants continued, and evermore recipients died, the medical divide grew deeper and trust in the entire profession was at stake. Medicine was rendered vulnerable, without sufficient rules or regulations to govern the controversial procedure and its media exposure.

This chapter investigates doctors' attempts to save medicine's public image and maintain their professional autonomy. It focuses on the committees, meetings, conferences and guidelines instituted in order to regulate and control the heart-transplant enterprise and, crucially, to try and combat the growing public distrust of the medical profession. Tensions grew when demands for doctor–patient confidentiality clashed with notions of public accountability and journalistic freedom at the time of Britain's second heart transplant in July 1968. After the first operation, doctors, ministers and journalists all agreed that hospital–media relations needed better management; it was not clear, however, how this should be achieved, and the decision to hire a professional PR advisor at the National Heart Hospital was highly contested. Meanwhile, the life-or-death status of the donor patient became one of the most controversial issues in heart-transplant surgery, not just in Britain but worldwide. Building on recent academic literature,

I explain how and why 'brain death' was defined, by whom and in whose interests. Much of the debate on redefining death was in fact part of a much wider concern – not to let 'outsiders' influence medical decision-making or impinge upon doctors' cherished clinical freedom.

Individual doctors began to hold the media directly responsible both for jeopardizing the public's willingness to donate organs and for risking the public's faith in their doctors. Despite the growing criticism directed towards transplantation in 1968, deriving from the media as well as from figures within the medical profession, at the end of the year the leaders in the field still remained optimistic. Given that there could be no recipients without donors, how, then, did transplant surgeons try to encourage the public to donate their organs? And why, after a third operation in Britain in May 1969, was human heart transplantation all but stopped for a decade?

Public accountability

Following West's death, the National Heart doctors were immediately keen to conduct a second transplant. There were again significant objections. An official from the MoH speculated: 'The National Heart is preparing to go ahead with another transplant when Ross gets back . . . i.e. any day now. Longmore is obviously pushing them. He is also pushing others into attempting transplants and I pointed out that this was still very much in the research stage.'[2] Given their experience with the media during the first operation, the National Heart surgeons were at pains to reduce and manage any further media involvement. The surgeons made a plea for doctor and patient privacy in a letter to the Press Council and the Press Association; they promised that in exchange for this privacy they would keep the press regularly informed of the progress of future patients, acknowledging the 'need to satisfy public curiosity'. They regretted the extra strain that the media coverage had put on the first patient, his relatives and the medical team. They stressed that their primary concern was their patients' privacy:

> Looking ahead we feel that so much information has already been published on the technical aspects of heart transplantation and on the ethical problems involved, that in the future it is inevitable that more and more attention will be directed to the individual recipient and donor in search for good copy. It is this, above all, that we wish to see prevented.[3]

Donald Gould, as Chairman of the MJA, responded by writing to the Ministry that the National Heart surgeons' proposal to provide bulletins through the Press Association would not meet the needs of journalists whose job it was to supply individual reports to their editors.[4] Following the formal and inconclusive meeting between Longmore and members of the ABSW and the MJA, Donald Gould and Tony Osman (Chairman of the ABSW) arranged to meet Longmore in a series of private meetings, 'so that under less tense

circumstances' they could attempt to work out an approach. Together they concluded that there was no point in trying to draw up 'an elaborate set of unenforceable rules'. Transplants, they thought, might be a unique case requiring rules not applicable to other medical endeavours; they also considered that transplants might 'quite rapidly lose their peculiar news values, making any such code obsolete'. They all agreed that the immediate solution was to ensure that the hospital had an experienced press officer. Gould wrote to the MoH to suggest that they should make one of their own press officers available to the National Heart Hospital, asserting that 'a good deal of the trouble and dissatisfaction arising out of the previous occasion can be put down to the fact that the handling of publicity was left to the doctors themselves and to hospital officers who had no experience of this sort of situation.' On 24 July, the Ministry repeated its original offer to provide the hospital with a member of the ISD to assist with the press.[5]

Two days later, the National Heart surgeons performed a second transplant. Again they did not take up the Ministry's offer, but used the services of a PR firm, John Gorst and Associates, who had agreed to help without charge. Gorst was a contact of the lead surgeon, Donald Ross, and the arrangement was apparently made without consulting the chairman of the hospital board. The Ministry's initial response was that they had no objection as long as 'Gorst was properly briefed and did not abuse his position.'[6] Gorst extended his services to Guy's Hospital, from where the donor and recipient had come. Surgeons' own memories of Gorst's role are mixed. A thoracic surgeon from Guy's later stated that he had one word for this PR man 'which actually begins with PR and ends in CK.... He was actually a pain in the neck.'[7] But, 25 years on, Donald Ross concluded that 'he welcomed him then, and would welcome him again'.[8] Yet the Ministry soon developed concerns, not with Gorst as an individual but with his role as a commercial PR man, especially when payment was suggested. By September, the House Governor of the National Heart Hospital, Ronald Denney, had written to the hospital board to ask if Gorst's assistance could be formalized and whether he could be paid a retainer or an honorarium in line with services from other professional advisors. Denney stressed that 'experience has shown that dealing with the press and public on such matters is not only something which the medical and administrative staffs cannot cope with in addition to their normal duties but is a matter which ought to be handled professionally'.[9]

Several civil servants at the MoH, including the press secretary and his deputy, negatively viewed Gorst's role as publicizing transplant operations. Although they ultimately approved the unprecedented hiring, the debate continued for months.[10] One ministerial advisor wrote in an internally circulated letter:

> I find it incongruous that hospitals which obviously dislike giving information about transplant operations should employ professional publicists

> to handle the Press on such occasions. They appear to unload the burden on to a commercial agency which has no opportunity to understand the relationship between doctors, patients, administrators and, in the ultimate, the Department .... The question remains whether a public relations agency should handle the matter, or a press officer in the Public Service. The Board would lose the value of a permanent employee's knowledge of its work and that of the Department with which it is connected. All they would get would be publicity expertise.[11]

After Britain's second transplant operation, the Clerk of Governors at Guy's wrote to the Ministry requesting that a code of procedure be urgently drawn up. He lamented that Guy's, from where the donor patient had been transported, was 'besieged by the press' and there was an 'increasing feeling of irritation with press tactics'.[12] The head of the ISD, Mr A. Richardson, considered the possibility of a code but did not accept that news editors and 'straightforward reporters are the chief offenders'. In fact, the responsibility was shared with everyone from proprietors downwards. Inducing the press to abide by a code of conduct would be a 'mammoth undertaking – covering national and provincial papers, periodical publications, radio and television, freelance journalists, besides the foreign and commonwealth Press stationed in this country – and it would be doomed to failure'. Those who attended Longmore's meeting with even just a 'handful of journalists' had not been able to agree. If the matter was taken to the Press Council, then a code of conduct could only be advisory; it would be unenforceable and 'journalists would drive a coach and horses through it'. Richardson also considered that the Council was 'well known to put the maintenance of press freedom in the front rank of its objectives'.[13] The Council's first objective, written into its constitution, was indeed 'to preserve the established freedom of the British press'.[14]

One of the inappropriate media tactics referred to in the letter from Guy's was that apparently 'very considerable cash inducements' had been offered to members of hospital staffs to persuade them to admit photographers and reporters to the hospital. Many journalists also strongly disagreed with such practices; nonetheless, as Richardson argued, 'cheque-book journalism' was a wider issue that would never be stamped out. Ministry officials and senior doctors themselves appear to have had a condescending and distrustful attitude towards some of the non-medical hospital workers as potential media informants: 'Hospital porters, orderlies, switchboard operators – what's to stop them giving information even if doctors and nurses recognise their professional obligation?'[15] The General Whitley Council conditions of service, governing NHS staff, were considered not 'comparable with the requirements of the Official Secrets Act which bind civil servants'. The Ministry discussed the possibility of centrally designed training manuals or courses to teach and aid hospital staff.

Meanwhile, following the first British heart transplant, Longmore was working on a proposal to the MRC to create a National Tissue Service. One of its functions would be to alert surgical teams when donor tissues became available. An 'obvious' advantage of this service was that calls would not be made through the hospital switchboard, 'where the operator might contact a newspaper'. Longmore also proposed that the service would make the names of solicitors available to donor families to protect their interests and 'make certain that they are not "doorstepped" by pressmen or signed on by newspapers at any unrealistic low figures for exclusive stories. It is only by protecting people in this manner that it is possible to give proper reassurances when asking permission from donors' relatives that their lives will not be made a misery by publicity'.[16]

Longmore's mention of 'unrealistic low figures' demonstrates that for the patient's story, cheque-book journalism seemed acceptable; publicity could be welcomed and not imposed, if at the right price and controlled by the patient. For this purpose, Longmore approached Macfarlanes solicitors who drafted a letter to potential relatives of a donor, advising them to 'keep the press at bay' and telling them that the best people to assist in dealing with the 'problem' of requests from newspapers, radio and television were solicitors. Macfarlanes' covering letter to Longmore stated:

> We should of course be very grateful if you would make it very clear to anyone receiving a copy of the notice that it should not be shown to the press .... I know you appreciate the problems that this would cause were the press, for example, to get hold of our number![17]

The freedom and role of the press came into sharp focus as a result of Britain's second transplant. The operation, on 26 July, was carried out on a 48-year-old recipient, Gordon Forde, who died two days later. On the afternoon of the operation, Gorst prepared a statement, which was circulated to all newspaper offices by the Press Association, requesting that the identity of the donor and recipient patients be kept private. By this time the first edition of London's *Evening News* had already printed the recipient's name.[18] The following day, the *Daily Express* and the *Daily Telegraph* also printed the name of the recipient, even though the hospital had made a formal request for anonymity. All the other national newspapers respected the request. Several complaints to the Press Council followed. One accused the *Daily Express* of sending three reporters on a 'snooping scoop' to obtain all the information, no matter from what source they could gather it, in spite of the hospital's public appeal. Another complained that the *Daily Telegraph* had printed the name and address of the recipient whilst omitting any reference to the hospital's statement and the wishes of the recipient and his wife that their names not be published. Both newspaper editors responded to the charges by pointing out that the identities were already in the public domain because of the

Evening News, that various family members were willing to talk, including the recipient's brother and father, and that the patients' identities were a clear matter of public and parliamentary interest. The editors argued that the public must have reasonable knowledge of the costs and consequences of such operations and that it was important for moral, social and legal reasons that identities should be known.[19]

The editors' assertion that they were acting in the public interest was endorsed by the Press Council ruling:

> When a request is made to refrain from publication on the grounds that distress would be caused, the Press Council . . . is unable to say that a request of this sort, made by the family of a donor or donee of a heart or other organ, is something that must invariably be complied with. This type of operation raised many important questions such as the nature of death, the propriety of taking an organ from a dead or dying man, the need for consent and the use and value of the resources involved in the operation. These are not purely scientific or medical questions; they are questions on which the public interest should be aroused. It is not practicable to arouse interest over anonymous cases . . . . The time may come when public opinion on these points becomes settled and when demands for privacy can be given greater weight . . . . The charges against the editors are unfounded and accordingly the complaints are rejected.[20]

Here, doctor–patient confidentiality was set against journalistic freedom and the ethos of journalists as public informants. To the doctors' disappointment, the Press Council considered the public's right to information paramount in this case. Great importance seems to have been placed here on the Council's fourth constitutional objective: 'to keep under review developments likely to restrict the supply of information of public interest and importance'.[21]

Throughout 1968, doctors held conferences and meetings to discuss the implications of the heart transplants. The role of the media and medical–media relations was raised repeatedly by doctors who felt out of control of the situation. Many tried to keep medical discussion confined to traditional sites, and did not agree that the public should have free access to all information. The presidential address at a meeting on heart transplantation arranged by the Council for International Organizations of Medical Sciences (CIOMS), in Geneva in June 1968, stipulated that it was a 'private meeting' and 'not the intention that it should become a subject for the popular press or that its proceedings should be communicated directly to journalists'. The meeting intended to 'provide an opportunity for the free exchange of opinions between doctors and specialists'; only a short statement would be made public. One professor complained that 'the present

status of heart transplantation is known to us through the pages of the press, and not through articles in medical journals, as we should like'.[22]

In 1968, 47 cardiac teams around the world attempted transplantation, some with very little prior experience of animal experimentation or immunology. Critics condemned them for joining the 'me-too-brigade': some blamed pressure from within the profession that to be a serious cardiac surgeon one must have performed a transplant; some blamed the media for the initially flamboyant reports which encouraged more surgeons to follow suit; others blamed pressure from patients wanting the new treatment. Despite the continued division of opinion and the high patient mortality rates, more and more transplants were conducted. November 1968 alone witnessed 26 operations. Out of the initial 100 recipients, 43 were alive by the end of 1968; but only two lived for over six months after their operation and only one, Blaiberg, lived for more than 11 months.[23] As more patients died, medical opinion polarized further and journalists were quick to report on this medical divide.

In October 1968, *Private Eye* printed a special edition, *A Private Eyeview*. *Hearts and Grafts*: *An Examination of the Heart Transplant Craze*, composed of *Private Eye* reprints of all transplant-related articles and cartoons from that year. Although confined to a limited readership mainly of Londoners, this edition helped to establish *Private Eye*'s own reputation as well as impacting on the public transplant debate. Paul Foot, who joined *Private Eye* as a journalist in 1966 has been credited with starting the investigative side of the magazine. He recalled that 'in 1968 the material we were getting suddenly changed. The stories about Dr Christiaan Barnard's heart transplants were the watershed. They were taken seriously and started an argument . . . . We put out a pamphlet of reprints which sold 15,000, when magazine sales were less than 50,000'.[24] One article reprinted from 27 September sarcastically noted:

> [Barnard], the man who had travelled across the globe on three separate occasions, seeking publicity in the luxury hotels and night clubs of every major city; the man who had . . . asked Carlo Ponti to make a film of his life . . . the man who had told a photographer that he was lasting longer in the headlines than Bobby Kennedy; the man who had spoken the introduction to two long-playing records about heart transplants; the man who is urgently at work on his autobiography for sale across the world . . . put his finger on the root of the matter: 'The real trouble', he told the *Sunday Times* of September 15th,'is sensationalism – the press seeking publicity for transplants . . . . This is not in the public interest. So why pursue the matter?'

The article ended by mentioning that on 18 September the Chris Barnard Heart Fund topped 250,000 rand.[25] *Private Eye* also used this opportunity to

establish and promote itself as taking the lead in investigative journalism, claiming that it had provided a public watchdog service where other newspapers had failed. The first reprinted article, from January 1968, lamented: 'For the slaughter that is to come in the operating theatres of cardiac hospitals, no one is more responsible than the Press.'[26] The opening statement to the reprint edition strongly criticized the British media for not only failing to provide a critical edge soon enough, but for creating much of the mess in the first place: 'After Barnard, the press all over the world went wild with delight. Every one of the British papers enthused about the operation, some in the most extravagant terminology .... The Press of the world launched itself into ill-informed panegyrics for the operating surgeons.' Commenting on the reports of the first British transplant, the paper accused the *Sunday Times* Insight team, 'celebrated for some reason for "exposing" and "digging" journalism', of confining itself to 'recording the key times and dates of the Great Transplant Drama'. 'Gradually, however, as the "recipients" began to die, the press began to change its tune ... one by one the journalists began to pour cold water on the "miracles" which they had created.' Proudly, *Private Eye* asserted that throughout all of this it had maintained a different view. In this way, the magazine used the heart-transplant stories to develop and secure its own journalistic style, role and status.

In this period of journalistic change, the accessibility, accountability and representation of the media itself came under scrutiny. In the same month as the *Private Eye* reprint, the Minister of Technology, Tony Benn, delivered a controversial speech on the role of TV broadcasting. He first acknowledged that 'the mass media, and especially broadcasting, now play a large part in shaping our attitudes, our outlook, our values and indeed the whole nature of society'. But he criticized the growing tendency to personalize news presentation, which greatly narrowed the gap between 'objective' news and comment. He believed that access to broadcasting 'is still too restricted in that it is almost limited to a few hundred broadcasters, chosen by the BBC'. His main message was that media accessibility was highly restrictive and denied minority views. 'Broadcasting', he said, 'is really too important to be left to the broadcasters.' The goal was somehow to 'find some new way of using radio and television to allow us to talk to each other' and be representative, not be ruled by the 'benevolent paternalism' of the 'constitutional monarchs who reside in the palatial Broadcasting House'.[27] Whilst Benn asserted that broadcasting was too important to be left to the broadcasters, the *Guardian* editorial, after the first British transplant, had stipulated that one of the key lessons of the operation was that 'spare part surgery is too important to be left to the surgeons alone'. This echoed a statement made by the presenter of *Panorama* current affairs programme that the moral questions raised by 'what is coming to be known as spare-part surgery' are 'too important to leave entirely to doctors'.[28] These critiques resonated with the

increasingly sceptical mood of the late 1960s when trust in expertise and authority was faltering.[29]

The intense public interest in heart transplantation significantly contributed to pulling medical discussion out of its traditional esoteric and exclusive confines, making medicine into a more transparent and accountable enterprise. Under the new spotlight, doctors saw it as imperative to manage the information flow and, crucially, to maintain their clinical freedom.

'Brain death' and access to medical decision-making

Doctors fought hardest to maintain their professional autonomy over one of the most contentious issues surrounding organ transplantation – the definition of death – a topic that provoked major media interest and great public concern. When exactly should a donor patient be classified as 'dead'? In 1967, when Barnard conducted his first transplant, the beating heart was still the traditional signifier of life and death. 'Brain death' was not defined, but the exact point and nature of death had been addressed in medical and religious contexts.[30] During the nineteenth century, death shifted from being a primarily religious event to an essentially biological event that increasingly took place in hospital.[31] With the development of artificial respirators, people could be kept 'alive', perhaps indefinitely, but without any meaningful brain function.[32] This gave rise to the concept of a 'dead' body with 'living' parts, and transplantation made living bodies with parts from the dead.[33] As the anthropologist Margaret Lock notes, the artificial ventilator created a new space seemingly betwixt and between life and death that was populated by the 'living dead'.[34] Without transplantation, she argues, this condition, originally termed 'irreversible coma', would not have received much attention.

The meaning and timing of death had been controversial long before the intensive-care technologies of the 1960s.[35] Early physiological research, which eventually contributed to the clinical practice of organ transplantation, had kept individual organs 'alive' outside of the body. This, together with research on resuscitation, had led many scientists to question the meaning and boundaries of life and death.[36] Death came to be understood as a process rather than an event, a temporal 'trajectory of dying'.[37] In Western medical thought, death was viewed and defined as both final and irreversible and hence failure to respond to resuscitation became the central criterion for diagnosing death. What remained in question was when clinicians should abort attempts to resuscitate. The definition of death was contentious in the early-twentieth-century debates over euthanasia. As early as 1915, an eminent Chicago surgeon, and advocate of eugenic euthanasia, invoked a brain-based concept of life, but the predicament over when to cease using life-supporting treatment was not widespread until the 1950s and 1960s as

new equipment became common in hospitals. Albury (1993) argues that the criterion of death changed from being biological to technological as the irreversibility of death was dependent upon existing resuscitation techniques.[38] In 1959, a French report coined the term *coma dépassé* (beyond coma) – a loss of all reflexes and brain activity and irreversible loss of consciousness in patients whose heart and lung functions could be artificially maintained.[39] Giacomini (1997) argues that kidney transplantation from cadavers was the main medical reason for redefining death rather than heart transplants. The discussions at the CIBA Foundation symposium in 1966 on 'Ethics in medical progress' seem to support this view. However, the heart transplants made the issue public and in turn prompted an urgent medical response. Without medical consensus, there would be no way of pacifying the public.

Public fears about bodies being mutated and organs being removed prematurely resonated with much older fears of premature burial.[40] In the mid to late eighteenth century, 'humane societies' had proliferated with the goal of saving people who appeared dead, because of drowning or asphyxiation for example, but were in fact still alive.[41] And in the late nineteenth century, anti-vivisectionists became particularly concerned about premature dissection or autopsy of still living bodies.[42] The medical historian Ruth Richardson has drawn a comparison between the demand for corpses for anatomical teaching in the nineteenth century and the demand for body parts for transplantation from the mid-twentieth century.[43] When demand was high and supply short, when bodies could be worth more dead than alive, the history of anatomy is testimony to the potential for a disturbingly sinister side to the pursuit of medical knowledge.[44]

As the heart transplants continued through 1968, several formal attempts were made to address the moment of death and produce guidelines to safeguard doctors and patients alike. Surgeons wanted protection from the charge that they were prematurely snatching organs from dying patients and the public wanted assurance that everything would be done to save the life of a dying patient regardless of transplant surgeons' interests.[45] The moment of death was not just an academic question: transplant surgeons in Britain, the United States and Japan were all taken to court in the first year of heart transplantation.[46] After an operation in Virginia, United States, in May 1968, transplant surgeon Richard Lower was sued for $100,000, accused of killing the heart donor, Bruce Tucker, by removing his heart. Tucker had a fatal head injury but his family had not given permission to remove the heart. The litigation was not resolved until 1972 when Lower was found not guilty and 'brain death' was legally accepted.[47] The most serious case was when the first Japanese heart-transplant surgeon, Wada Jiro, was charged with intentional homicide and professional negligence resulting in the death of Japan's first heart-transplant donor and recipient in August 1968.[48] Wada was accused of unnecessarily transplanting the recipient's heart and hence murdering him and also for failing to provide any evidence that the donor patient was

dead when his heart was removed. He was responsible for both declaring the donor dead and leading the transplantation procedure. Although the charges against him were eventually dropped in 1972, Wada was found to have lied to the media and to have changed the valves in the recipient's original heart to exaggerate how defective they appeared. This media and medical scandal had long-lasting effects; Japan's second heart transplant was not attempted until 1999.[49]

The continuation of heart transplants hurried along the redefinition of death. The most authoritative early statement on the matter was by the Harvard Medical School after the anaesthesiologist, Henry Beecher, approached the dean to discuss 'hopelessly unconscious' patients. As discussed in Chapter 2, Beecher was well known for his previous exposé and criticism of unethical exploitation of human subjects in medical research. He was appointed chair of the ad hoc committee of the Harvard Medical School, initially formed to 'examine the definition of irreversible coma'. By the time the final report was published, this had changed to 'examine the definition of brain death'. The committee, formed in January 1968, finished its research by June and quickly published the results in the August issue of *JAMA*.[50] Although brain-death laws were not enacted until several years later, and different definitions were ultimately used in different countries, the Harvard report possessed considerable authority in 1968, especially in defining and establishing the term 'brain death'.[51] That same month, August 1968, the WMA met in Sydney, Australia. A committee had been formed to study the ethical implications of resuscitation and the use of cadaver organs for grafting in 1966, but the heart transplants necessitated a public statement. As the *BMJ* reported, 'spurred on by the public apprehension about having their vital organs removed while still living', the WMA felt obliged to issue an interim statement about death, the Declaration of Sydney.[52] The results were almost identical to those of the Harvard ad hoc committee.

The stated purpose of the Harvard report was to define irreversible coma as a new criterion for death for two reasons: firstly, to know when to stop treating desperately ill individuals who had undergone resuscitative and supportive measures but had irreversible brain damage even though their heart was still beating. The new definition would alleviate the burden on patients, families, hospitals and those in need of hospital beds. Secondly, the committee stated that 'obsolete criteria for the definition of death can lead to controversy in obtaining organs for transplantation'.[53] From studies of the original committee archives, Giacomini (1997) has argued that contrary to the indications of the published report, transplantation was in fact the primary purpose for redefining death, and not concern over needlessly perpetuating the condition of comatose patients.[54] The draft conclusion stipulated: 'The question before this committee cannot be simply to define brain death. This would not advance the cause of organ transplantation since

it would not cope with the essential issue of when the surgical team is authorized – legally, morally, and medically – in removing a vital organ.'[55] The committee coined the term 'brain death'; that 'death' was used at all rather than just 'irreversible coma' was primarily for the purposes of the transplant surgeons. After all, only the 'dead' could be treated as donor bodies with no further need for their organs. The time period for diagnosing death was decided to be 24 hours to facilitate organ transplantation, and electroencephalograph (EEG) data, which measure the brain's electrical activity, were not permitted an essential role since the technology was not available in enough clinical settings. Giacomini convincingly demonstrates the social and clinical construction of brain death during this period when brain-dead bodies were 'created, recognized, described and defined in the development of brain death criteria'; in contrast to the brain, the heart as the signifier of life was made to seem 'primitive, sentimental and obsolete'.[56] The *JAMA* paper referred back to ancient times, 'those times' when the heart was considered the central organ of the body. These were compared to modern times when resuscitative and supportive measures 'restore "life" as judged by the ancient standards of persistent respiration and continuing heart beat'.[57] Previous definitions and assumptions were thereby rendered obsolete.

Rothman (1991) claims that the interdisciplinary composition of the Harvard committee was a significant marker of medicine losing its authority and autonomy to law, ethics and public opinion in this period. I would argue that public and media reaction to heart transplantation and its associated ethical issues contributed to this shift, but not so significantly in the case of the Harvard committee. The interests and authority of the transplant surgeons were firmly upheld during this particular process. Beecher himself was adamant about excluding lawyers from the committee, and most transplant surgeons were at pains to keep medical decision-making in doctors' hands. They disagreed over whether defining death should be left to individual physicians to judge on an ad hoc basis at the bedside, as they had frequently done in private, years before heart transplants, or whether more authoritative and regulatory steps should be taken. However, it was unanimously agreed to be a matter for doctors. The report repeated in several places that the definition of death is a 'fact to be determined by physicians', and was 'solely a medical issue'. The paper ended with an address by Pope Pius XII stating that 'verification of the moment of death can be determined, if at all, only by a physician', and acknowledged that it is not 'within the competence of the Church' to determine this.[58] The only suggested limitation was that the decision to declare the patient dead should not be made by physicians involved in later transplantation. This was 'advisable in order to avoid any appearance of self-interest by the physicians involved'.[59] The WMA's Declaration of Sydney similarly stated that two or more physicians should decide that death has occurred and they should in no way be immediately concerned with the performance of the transplant. Nonetheless,

'the determination of the time of death is in most countries the legal responsibility of the physician and should remain so'.[60]

The transplant surgeons' resistance to outsiders impinging upon their medical autonomy was also forcefully demonstrated during March and April 1968 at the Mondale Hearings in the United States. Senator Walter Mondale called for the establishment of a President's Commission on Health, Science and Society to promote a national debate on the directions that medical science should take. Several transplant surgeons were called to speak before the senators to give their opinions on the proposed commission. Barnard scathingly commented that if by a committee they meant anything but a group of qualified doctors then it would be an 'insult'. With regard to transplantation, he said that if he were in competition with doctors from the States, then he would 'welcome such a commission, because it would put doctors who embark on this type of treatment so far behind me, and hamper the doctors so much that I will go so far ahead that they will never catch up with me'. When a senator pointed out that the public were paying for the costs of the treatments, and therefore should be part of decision-making, Barnard responded: 'Who pays the cost of war? The public! Who decides where the general should attack? The public? The public is not qualified to make the decision.'[61] Owen Wangensteen, Professor Emeritus of Surgery at the University of Minnesota, also said that he could not see how theologians, lawyers, philosophers and others could help in medical matters: '[T]he fellow who holds the apple can peel it best', he added. The eminent surgeon Walton Lillehei also commented that 'decisions regarding transplantation are better left to those who are doing the work rather than to self-appointed critics who are better versed in the art of criticism than in the field under study . . . they are people who are frustrated by their own inability to create'.[62] At the world's first international heart-transplant symposium in Cape Town in July 1968, where all surgeons who had performed a heart transplant were invited, Lillehei again argued against the formation of endless committees and teams to make transplant decisions. Committee formation was detrimental to achievement and action: 'it has been said that "if Moses had had a Committee, the Jews would still be on the other side of the Red Sea" '.[63] As a result of the Mondale Hearings, the bill was not passed and no Presidential Commission was formed.[64]

Similar sentiments were raised throughout the year at the major international meetings of the transplant surgeons. At the CIOMS meeting in June, one professor argued that the 'conscience of medicine' should solve the problems, because if 'lawyers, laymen, the clergy and the agencies of Government, with however good intention, codified the medical problems of heart transplantation in the law, the great progress in many areas of medicine will come to a halt'. The President of the CIOMS also affirmed: 'we believe that it is for doctors themselves to discuss these problems and then to pass on to those whose responsibilities are of a different kind – those of drawing up

legislation'.[65] The Director of Research Coordination at the WHO agreed: 'we believe that the medical profession, which has traditionally stood up for the ethical and moral aspect of its work, will face this new situation and will solve it in the best interests of humanity'.[66] To address the ethical dilemmas, some clinicians were happy for a limited amount of input from experts in other fields. For example, in Houston in March 1968, DeBakey encouraged a theologian from the Institute of Religion, Kenneth Vaux, to arrange 'a platform for the vital issues raised by transplantation . . . and other unprecedented medical events that give rise to reconsideration of medical ethical codes'. The attendees included the anthropologist Margaret Mead and the theologian Paul Ramsey.

In Britain, the MoH arranged a conference on the transplantation of organs which had first been considered by the MoH's Advisory Committee on Renal Transplantation in November 1967 to discuss kidney transplantation and a possible amendment to the Human Tissue Act to increase donations. Chaired by Sir Hector MacLennan, President of the Royal Society of Medicine, the meeting eventually took place on 6 March 1968, after cardiac transplantation had become a clinical reality. The participants reconvened on 4 June 1968, after Britain's first heart transplant. The hope was that 'doctors in many and ranging fields, lawyers, churchmen and enlightened laymen' would participate in this 'private meeting', with the view of '"judicious reporting" of the proceedings'.[67] In the event, alongside the majority of medical figures, the meeting also included nurses, the editor of the *Lancet*, the Secretary of the Coroner's Society, leaders from the Church of England and the Roman Catholic Church, and the Chief Rabbi. Members were told to 'refrain from communicating with the press', resulting in the closed nature of the conference becoming more widely publicized than the actual conclusions from the meeting. The *Evening Standard* headlined the day after the conference, 'Transplants: Secret talks on new law'. The Patients Association, the Medical Journalists Association, the British Humanist Association, the Institute of Medical Social Workers, the Christian Science Committee, amongst others, had all written to the Ministry before the event, pleading to be represented, but their requests were rejected.[68] Donald Gould argued in a private letter to Kenneth Robinson: 'While there may be good reasons for the proceedings remaining "off the record", it is also important that we who put things on the record should have the best possible understanding of the attitudes now existing among people directly concerned with this sort of problem.' Disallowed from attending the meeting, he consequently wrote in a *New Statesman* article, on 1 March 1968, that the entire exercise was 'doomed in advance to accomplish absolutely nothing', given that it was to be held behind closed doors. What was needed, he insisted, was '*continuing* and *public* debate'.

At the international conferences, doctors rarely mentioned the need for laypeople to be involved in medical decision-making. An exception was at

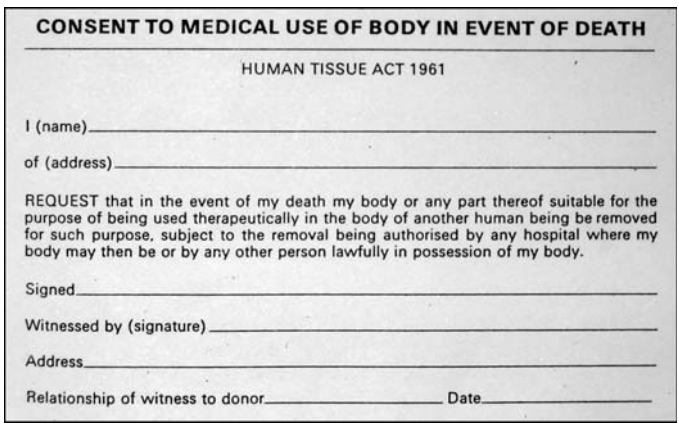
a symposium on human heart transplantation in New York in September 1968, when the surgeon James Hardy suggested that the 'informed layman may at times see larger vistas of potential success, by virtue of the fact that he is not imprisoned by knowing all the reasons for possible failure'.[69] From that he concluded that 'this of course constitutes one of the advantages of appointing informed laymen to the various scientific assessment committees'.[70] Essentially, Hardy was suggesting that the involvement of a wide-eyed, optimistic layperson, less familiar with the likely prognosis for a heart-transplant recipient, would benefit the transplant surgeons' cause. Any other involvement of the public in medical decision-making seemed to be opposed by most of the doctors, especially anything viewed as a threat to clinical freedom.

Donor supply and trust in the medical profession

Although resistant to laypeople becoming involved in clinical matters, the transplant surgeons had their own interests in communicating with the public and controlling medicine's image. Firstly, the public were potential donors, and without donors there could be no transplantation. Secondly, transplantation was representative of medicine as a whole, in many ways symbolizing high-tech medicine's goals and practice, and so maintaining the public's trust in this endeavour was vitally important.

Several transplant surgeons engaged directly with the public through their own popular publications to promote organ donation and the potential of this new era in surgery. Professor Michael Woodruff, a leading kidney-transplant surgeon in Edinburgh, wrote an article, 'Will you save a stranger's life?', in the AA's motorist's magazine, *Drive*, for their 1968 New Year issue. This article made explicit the grave fact that the majority of good-quality organs were sourced from young, healthy people who were killed suddenly in road accidents. Just as road traffic accidents caused on average 20 deaths each day in Britain, Woodruff asserted that about the same average number of people died each day from irreversible kidney disease. They too were 'struck down in the prime of life'.[71] Woodruff appealed to AA members to sign a consent form to 'make an enormous difference' and 'help their fellows'. The form was embedded within the article and readers were told that it would fit conveniently into the AA member's wallet (Figure 6.1). Woodruff stressed that many potentially useful grafts were 'lost' because people had not given prior consent and next-of-kin could not be contacted in the small window of time needed to take the fresh organs.

In May 1968, when Donald Longmore proposed a National Tissue Service, he hoped it would provide so many donors that 'the element of competition and secrecy' which had grown up around transplant units would be discarded 'in favour of a more rational system based on tissue typing'. Increasing the supply of donors was fundamental to the transplant



CONSENT TO MEDICAL USE OF BODY IN EVENT OF DEATH

HUMAN TISSUE ACT 1961

I (name)_____

of (address)_____

REQUEST that in the event of my death my body or any part thereof suitable for the purpose of being used therapeutically in the body of another human being be removed for such purpose, subject to the removal being authorised by any hospital where my body may then be or by any other person lawfully in possession of my body.

Signed_____

Witnessed by (signature)_____

Address_____

Relationship of witness to donor_____ Date_____

Figure 6.1 A 'wallet-size' body-donation consent form in the AA's *Drive* magazine (New Year 1968, p. 35). It was embedded in a two-page article on organ donation written by a leading British transplant surgeon, Michael Woodruff.
Source: Reproduced by permission of AA Publishing.

programme. Longmore's book, *Spare-Part Surgery*, available to the public in June 1968, also shows a surgeon trying to bring the image and duty of donor patients in line with the interests of transplant surgery. Writing in 1966, and envisaging a near future in which heart–lung and heart transplants would be routine, Longmore predicted:

> To be a donor will carry a certain social importance . . . . The small letter D that each donor has tattooed under his left arm (in invisible UV ink if he prefers) will be increasingly seen on beaches, in clubhouse shower rooms or Turkish baths, at swimming pools – whenever people congregate in swimsuits. To some, no doubt, it will be mainly a status symbol. To many though, it will be something more profound: the mark of the person who cares.[72]

The early transplant patients also played a role in promoting organ transplants. After the initial bad press regarding racial issues, Philip Blaiberg, Barnard's second recipient, became the most important patient for creating a positive image. Whilst the majority of the early heart recipients died within days or weeks of their surgery, Blaiberg lived for 18 months. Throughout 1968, Blaiberg symbolized hope and success for cardiac transplantation. Although he was the exception, proponents claimed that he represented the goals and achievements of transplant surgery – leaving hospital and returning to a meaningful and fulfilling 'normal' life. Image management was crucial. Blaiberg's discharge from hospital was another celebratory media and medical event. In the months following his surgery, he wrote a book

about his experiences, *Looking at My Heart*, where he acknowledged and reinforced his perceived role as a 'symbol of hope for heart sufferers now and in the future'.[73] More than this, in a divided medical community, he also provided this hope for the transplant surgeons themselves. In May 1968, *Newsweek* reported that Blaiberg was now walking half a mile a day to work. This man with a second heart and second life was walking, talking testimony to the potential of heart-transplant surgery during 1968. In November of the same year, newspapers around the world pictured him swimming in the sea (Figure 6.2). It was a remarkable and uplifting sight, yet highly staged. The South African physician Raymond Hoffenberg, who had declared dead the donor patient for Blaiberg's operation, wrote that Blaiberg was never in fact able to walk by himself with his new heart. For the photographs in the sea, 'he was carried into the water, the entourage stepped back, cameras flashed, and he was hauled out before he disappeared helplessly under the waves'.[74] This is a striking example of the importance placed by these medical entrepreneurs upon image creation and management. Blaiberg's first

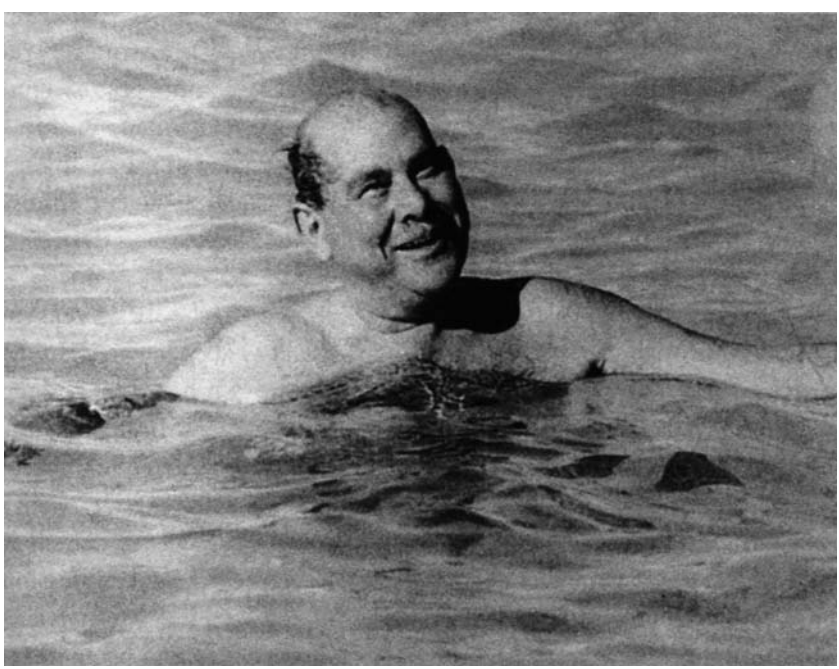


Figure 6.2 A photograph of Philip Blaiberg 'swimming' in the sea (November 1968). Variations of this image were reproduced in media outlets throughout the world.
Source: Reproduced by permission of Novartis.

anniversary with a new heart in January 1969 was also the subject of highly charged media attention.

Transplant surgeons were unified in promoting the view that organs not donated were wasted and that donating was reasonable, charitable and noble. Barnard speculated in his popular autobiography that just as Mr Darvall had given away his daughter's heart, Denise would also probably have done it herself since 'all men wanted to give . . . these were not heroic acts . . . they were part of the natural instinct of man – of all men, for human beings were essentially good'.[75] At the first international heart-transplant symposium in Cape Town in July 1968, Barnard declared that the public 'should be educated to accept that it is surely wrong to bury a heart so that the worms can devour it instead of grafting that heart into a suitable recipient whose life can then be usefully prolonged'.[76] Roy Calne, Professor of Surgery at the University of Cambridge, who had performed Britain's first liver transplant, later made a similar comment in his book *A Gift of Life*. He believed that 'most civilized people would prefer that their organs after death should help other human beings rather than be destroyed by cremation or devoured by worms'.[77]

Calne had been the harshest and most vocal critic of the media's coverage of the heart-transplant stories. He wrote a scathing article in *Medical Tribune* in July 1968 directly blaming the media for negatively affecting the entire transplant programme. He lamented that 'the emotive content of heart transplantation, given publicity cover by mass media comparable to that of a major war or an international crisis' had, for the most part, 'tragically misinformed' the public, 'resulting in a very serious impediment to progress in transplantation surgery'. He continued, 'Some of the recent shameful publicity of heart transplant cases, including honeymoon photographs of the deceased and interviews with the bereaved, have had a disastrous impact.'[78] From his extensive experience in kidney transplantation, relatives had 'nearly always', and often gladly, given consent to organ donation, but after the heart-transplant publicity there had been a 'succession of refusals' which had halted the kidney transplant programmes and resulted in deaths on the waiting list for transplantation. Calne even objected to the style of positive press coverage.[79]

A fortnight later, *Medical Tribune* printed a response to Calne's article by James Wilkinson, medical correspondent for the *Daily Express* and member of the MJA. Wilkinson put Calne's accusations down to medical arrogance, remarking:

> doctors have to realize that when they carry out experimental procedures on patients, the public has a right to know what is happening, to have a say in whether it should happen at all, and to help solve any ethical or social problems which may arise as a result of new advances. Similarly, doctors undertaking these procedures should be prepared to justify their actions in public and not only behind closed professional doors.[80]

As a result of the conflicting interests of journalistic accessibility and medical privacy, the MJA proposed to organize a symposium on publicity and medicine, with special reference to major surgery. The MJA executive decided in September 1968 that the symposium would be called 'Medicine today and tomorrow – how much should the public know?' Although this meeting did not go ahead as initially planned, it provides a clear indication of journalists' concerns and intentions at this time.[81]

Doctors and media personnel did gather in September 1968 at the second symposium organized at the Royal Society of Medicine on 'The impact of television on medicine'. This was where Aubrey Singer explained that with the 'new era of transplants' and its associated ethical issues, the focus of medical programming had moved 'away from the direct practice of medicine and into the problems surrounding it'. A colleague from the BBC audience research department declared that for news and current affairs programmes, television was a 'formative agent in creating opinion on new issues, such as those raised by organ transplants'.[82] Whether television was a creator of opinion, or an enforcer of existing attitudes and beliefs, was open to debate. One GP reminded the audience that medical broadcasters must always be mindful of the doctor–patient relationship and spoke in favour of fictional programmes such as *Emergency Ward 10* and *Dr Finlay's Casebook* which helped to allay 'patients' fears of hospitals' while portraying 'doctors as likeable people of high character'.[83]

Conversely, Singer asserted that the job of factual medical programmes was partly to act as a counter-image to fictional programmes which showed idealized situations and produced a bland image of medicine. Factual programmes should give viewers 'some sense of the standards of service and type of care they can expect from the health service and their doctors'. They should be designed to explore the doctor–patient relationship rather than tiptoe around it, and he hoped that when that had been explored 'we might have a healthier country based on real truth and understanding'.[84] Meanwhile, a doctor from the MoH highlighted the Ministry's shared interest with both the medical profession and the media: to serve the public. While he did not want to suggest that 'television could, or should, ever become the mouthpiece of officialdom', he stressed that factual accuracy and health education should be prioritized. Several of the symposium talks contributed to the familiar debate on how best to combine public education with enjoyment. Charles Fletcher from the Hammersmith Hospital pleaded with television authorities to consider the public's 'real interest' and 'not just its curiosity'. He regretted the BBC producers' change of attitude and fascination with 'the social aspects of medicine, the ethics of transplantation and all this sort of stuff' which now seemed to take precedence over 'more simple informative programmes'. His solution was for doctors and television producers to collaborate to create a more effective health education and enable television to be used to 'further doctors' healing powers'.[85] Although focused on television, this symposium highlighted many of the existing

tensions, diverse opinions and goals of doctors and journalists concerning medical image creation and management.

Transplant surgeons were especially anxious about the effect of publicity on organ donation, but the entire medical profession had reason for concern over the public's wavering trust in their doctors. An influential leading article in the *Lancet* raised this concern: '[The] story of the past months . . . is not one that the profession round the world can look upon with ease.'[86] The article blamed the media for raising public expectations too high but also the surgeons whose 'surgical skill and ambition clearly ran some way ahead of the advice about the control of rejection and infection' that was available from immunologists and pathologists, based on studies of patients with other transplanted organs. The article's authors could not share the view of Sir Hedley Atkins, the Guy's Hospital Professor of Surgery, who wrote in a letter to *The Times* that public confidence in doctors and surgeons had escaped harm.[87] Atkins had defended heart transplantation after *The Times*' medical correspondent called for a halt to these operations after West died, on the grounds that the public was, 'not unnaturally, losing confidence in its doctors, and above all its surgeons'.[88]

At the Cape Town meeting in July, Dr Francis Ames, a psychiatrist and neurologist at UCT, warned surgeons that the public was clearly uneasy about heart transplants, this being demonstrated by the sheer number of related jokes in circulation. 'Joking is a well-known defensive mechanism', she said.[89] Stickers reading 'Drive carefully, Barnard needs you' were reported to have become popular car accessories in England. At the symposium on heart transplantation in New York on 8 September 1968, Dr Milton Halpern, the chief medical examiner for New York City, commented humorously that 'the public needs assurance' because 'a man who falls asleep on a park bench is afraid he'll be whisked off and operated on as a heart donor'.[90] Two days later, Geoffrey Spencer, head of the intensive care unit at St Thomas' Hospital launched one of the most serious public attacks on the transplant surgeons from within the medical establishment. Spencer said at a press conference at the World Congress of Anaesthesiologists that 'as soon as one has a patient with useful organs one has a gang of vultures trying to snatch out these organs, ranging from the cornea to the heart'.[91] Apparently Spencer's remarks were made specifically in response to Ross' team at the National Heart Hospital, who had allegedly written to other hospitals requesting hearts. Front-page headlines, such as 'Doctor criticizes heart transplant "vultures" ', in *The Times*, and 'Doctor attacks heart transplant surgeons: "Like vultures round dying patients" ', in the *Daily Telegraph*, followed the next day. A *Daily Express* cartoon (Figure 6.3) compounded these fears by caricaturing medical staff as vultures ready to 'body-snatch' a healthy hospital outpatient with a sprained finger. Even three months later, the recently formed Department of Health and Social Security (DHSS) regretted that the

Figure 6.3 A cartoon by Michael Cummings (*Daily Express*, 12 September 1968, p. 8) drawn in response to Geoffrey Spencer, head of the intensive care unit at St Thomas' Hospital, commenting: 'as soon as one has a patient with useful organs one has a gang of vultures trying to snatch out these organs'. The cartoon implicated all kinds of transplant surgery, and represented both doctors and nurses as vultures. However, the dark-rimmed glasses on the vulture-doctors made a specific reference to Donald Ross and heart transplantation.

Source: Reproduced by permission of the *Daily Express*.

use of the word 'vultures' had been 'detrimental not only to the public at large but to doctors and nurses also'.[92]

Unable to contain the heart-transplant news and surrounding controversies, medics tried to unite to uphold their clinical freedom and most of all to try and maintain public trust. Nonetheless, the transplant surgeons remained confident in their novel technique. They hoped and assumed that the initial high mortality rate of the largely experimental first transplants would give way to successful routine clinical application and that the news value and ethical concerns would die down. In his popular book of February 1968, *Biological Time Bomb*, Gordon Rattray Taylor predicted that one day in the near future we would expect to see 'organ factories from whose catalogue a surgeon will be able to order a heart . . . of any desired size and capacity, with the assurance that it will be youthful and in prime condition'. He also predicted 'prophylactic transplantation', to prevent rather than cure disease, 'just as we replace tyres before they actually give way'. By 2000, he saw no reason for sticking to the conventional body make-up, suggesting that a supplementary heart might well be useful for an athlete.[93] At the international congress of the Transplantation Society in September 1968, Medawar predicted that 'The transplantation of human organs will be assimilated into ordinary clinical practice . . . and there is no need to be philosophical about it. This will come about for the single and sufficient reason that people are so constituted that they would rather be alive than dead.'[94] Despite such pockets of optimism, the dire clinical results of the 'year of the heart transplant' and the associated media exposure took their toll.

A moratorium on heart transplants

Far from becoming assimilated into ordinary clinical practice, at the end of 1969 heart transplantation was abandoned in Britain for a decade.[95] The controversy surrounding a third transplant in Britain in May 1969, again led by Donald Ross, no doubt contributed to bringing the procedure into further disrepute. However, a lack of heart donors and, importantly, a sharp drop in donated kidneys seem to have been the key reasons why heart transplants were brought to a halt. The plummeting kidney donation rate was also seen as indicative of the public's growing distrust of the profession as a whole with the unedifying spectacle of successive, controversial heart transplants being held chiefly responsible. Implicit in why cardiac transplantation ground to a halt in Britain was the fact that the controversy took place in public and not in private, with the media thereby directly contributing to bringing about the heart-transplant moratorium.

After the quick succession of recipient deaths in 1968, by the start of the following year it was clear that this procedure was not even a potential solution for 'the nation's heart disease sufferers'; instead it was an experimental procedure that could benefit, at great cost, a select few gravely ill

patients. Rather than media consumers identifying themselves as potential heart recipients, it seemed that in fact there was a far greater chance of becoming a potential organ donor or donor kin. Several doctors blamed the media for raising false hopes through the initial euphoric reports; however, transplant surgeons themselves had initially been happy to kindle this hope. A report by the BMA's Planning Unit, charged with examining the financial implications and priorities of 'new and complex methods of treatment such as organ transplantation', concluded in January 1969, 'It seems unlikely that heart transplantation can make a serious contribution to the general problem of degenerative cardiac disease.' The unit fully supported transplantation as a useful therapeutic field; however, it emphasized that

> occasional dramatized successes should not oblige the Health Service to try to meet the disproportionate demands of surgical enthusiasts for scarce medical, technical, and nursing resources that are implicit in a premature attempt to establish cardiac transplantation as a practicable form of treatment before the basic scientific problems concerned have been brought nearer to solution.[96]

The front-page article of the *BMJ* in January 1969 reflected on the first year of cardiac transplantation:

> In the past year man has transplanted the human heart and orbited the moon. The public imagination was fired no less by the surgical than by the lunar feat. While kidney grafting and the first liver transplant passed almost without comment, transfer of the human heart was accompanied by embarrassing publicity.[97]

The article advised that 'until the rejection problem has been more successfully overcome it would seem correct for cardiac transplantation to be restricted largely to the experimental animal, while immunological studies are concentrated on the grafted kidney'.[98]

During 1969, the donation rate for all organs dropped; safeguarding transplantation programmes other than for the heart thus became an increasingly important focus. Much had been invested into establishing kidney transplantation and these operations were achieving relatively good results.[99] Liver transplantation was also in its infancy in Britain, but, as with the heart transplants, recipients had a very low survival rate. The pioneering liver transplant surgeon Thomas Starzl decided to stop performing the procedure on humans for three years after his first few unsatisfactory attempts in the early 1960s;[100] however, liver transplantation resumed later that decade, again with extremely high mortality rates, but was virtually unquestioned

and unreported in the media. This point was made in *Transplantation Proceedings* in June 1969:

> The surgical mortality in liver transplantations is 82 per cent and only five patients have been known to survive beyond six months. Despite all this, there has been virtually no lay or scientific discussion of the ethical, moral, economic or scientific implications of this type of human transplantation. Surely then . . . public concern [over heart transplantations] must equate with public, mythological heritage.

The authors, both members of the National Heart Institute (USA), believed that the symbolism attached to the human heart accounted for the difference.[101]

In Britain, liver transplants tended to be mentioned in the press only in relation to criticism of heart-transplant publicity.[102] In April 1969, addressing the Guild of British Newspaper Editors at a widely reported meeting in Cambridge, Calne accused the British press of 'directly causing the deaths of patients awaiting transplant operations'.[103] He claimed that deaths had been caused by irresponsible reporting, which had negatively affected the willingness of relatives of would-be donors of transplant organs to give their consent. Calne was therefore shifting the focus from the deaths of transplant recipients onto the potential deaths of patients with failing organs who were denied transplants due to a lack of donors.[104] The debate continued in the press: 'I am not sure that the attitude of certain transplant surgeons in virtually ignoring the fears voiced by the public is not damaging transplant surgery', said an MP in the *Evening News*. He continued, 'I do not believe it is the Press which is causing the lack of donors, but the fact that surgeons do not appear to be concerned with what the public thinks.'[105] Donald Ross, the surgical leader of the first two British heart transplants, held similar opinions to Calne. At a conference on heart transplants in London he said that he alone had 'five patients die consecutively while awaiting the prospect of a donor heart'. But as well as organ supply being short, so too was demand at that time, he said, due to 'present adverse publicity relating to heart transplants, the ghoulish counting of deaths and the scoreboard kept by the daily papers'.[106]

In May 1969, the *Lancet* carried a leading article restating its argument from the previous year that too many heart transplants were attempted too soon. It questioned the high costs and asked if it was not time to call to a halt the 'spread of this operation'. This was one of many descriptions that made the heart-transplant craze seem analogous not to a potential cure but to a disease. At the time and thereafter, critics often referred to the heart-transplant 'epidemic'. The *Lancet*'s leading article highlighted the fact that only a small number of heart-disease patients could potentially benefit from a transplant and that medical research on preventing cardiac disease should

'take precedence over the surgical salvage of a small fraction of the total number afflicted'. It advised the enthusiasts wishing to push ahead with cardiac transplants to 'pause to examine it'.[107]

However, days later on 16 May 1969, Donald Ross went ahead with a third transplant, this time at Guy's Hospital, London, where he was also a consultant. The patient was a 59-year-old man, Charles Hendrick, and the operation was one of forty-eight cardiac transplants conducted worldwide in 1969, about half the number performed in 1968. As with the previous operations, the Guy's transplant was accompanied by a blaze of publicity. Inside the hospital, as remembered by the Senior Registrar in Thoracic Surgery of the time, Barry Ross, the staff's first trepidation was dealing with the father of the donor who wanted to 'see the embodiment of his daughter in this chap': 'He made a tremendous scene, and was, eventually, after a big fight, ushered into the room, to view this poor patient in whose body his daughter's heart lay.' This was not, in fact, a surprising reaction given the meaning assigned to gift-giving and the hopes of transcendence used to promote organ donation. The longer-term, primary concern of the hospital staff was the recipient's aftercare, made difficult by the fact that two different teams were involved – one from Guy's, the other from the National Heart Hospital. Barry Ross recollects the problems of managing the patient by committee. After the Guy's immunologist and cardiologist had made their pronouncements, the 'National Heart team would swan in . . . and produce diametrically opposite views'.[108] At this stage, strategies for keeping the recipient patient alive were still unclear and debated.

The press focused on quite different problems: transporting the dying donor from one hospital to another was a central issue, and again the definition of death, in addition to the disclosure of donor and recipient identities. The donor, a nurse injured in a motorcycle accident, had been transported in an ambulance from Putney Hospital to Guy's the night before the transplant. The anaesthetist at Guy's, David Carnegie, recalled that a message came through to Donald Ross on a Thursday afternoon alerting him to a potential heart donor; Carnegie went to Putney in an ambulance, 'found her on a ventilator, took her off, ventilated her by hand, and brought her back on Thursday evening to Guy's. The following morning she had an EEG, was considered brain-dead and therefore suitable as a donor.'[109] This reinforces precisely the public concern of the time, over whether the donor patient had been rushed from one hospital to another, not because her life might have been better saved at Guy's Hospital but because she had been reduced to a collection of 'spare-parts' for a waiting transplant recipient. The *Lancet* summarized the press debate: 'The injured woman was taken from Putney to Guy's. Why? Because resources for her treatment would then be better or because her heart might become available for transplantation?' It seems that both may have been true, but, nonetheless, the case generated adverse media reports.[110] Since Britain's second heart transplant, there was

already a ban on transporting donor patients to recipient hospitals solely for the purpose of organ transplantation.

Unlike the first British transplant, when a similar scene was considered to be an exciting part of the drama, by May 1969 it was a distasteful and 'macabre manoeuvre'.[111] The *Lancet* article commented that 'each of these operations is attended by a fresh outburst of criticism from those who believe that the interests of a dying patient may not have been fully protected'. The media debate followed the inquest into the donor's death, which several journalists had attended. The *Daily Express*' renowned science correspondent Chapman Pincher wrote a long opinion piece on the transplant, headlined 'Patient still alive? Doctors must stop the doubts'. Pincher claimed to have found the inquest 'profoundly disturbing', since the nurse's still beating heart was removed and yet no evidence was provided to satisfy the court that the removal had not contributed to the patient's death. In his view, the open provision of such evidence was essential for allaying public doubts:

> If the medical profession believes that such doubts do not exist, it is deluding itself. They exist because the public is naturally suspicious of the secrecy under which transplant operations are being performed.... They exist because the individuals who comprise the public realise that they or their relatives may be the next to turn up at some hospital as highly desirable donors.[112]

On 30 May, the *Daily Mirror* had a dramatic front page (Figure 6.4), divided into two sections: the spectacular news and imagery of 'earthrise' as seen from Apollo 10 on one side, and the scandalous news of plans to make 'every heart a swap heart' on the other.[113] This referred to an article in the *BMJ* by Calne in which he advocated changing British law to a system of 'contracting-out', whereby unless there were definite indications that the deceased had objected, doctors could assume consent for organ donation.[114] Meanwhile, despite its own associated accidents and fatalities, space travel was becoming the dominant scientific 'success' story, in contrast to the distinctly problematic transplant endeavour.[115]

Continuing as front-page news, the next day – Saturday 31 May – the *Daily Express*' lead article further inflamed the debate over when a patient could legitimately be described as being 'dead'. The newspaper printed a letter from a mother whose daughter apparently recovered from what doctors had described as a hopeless state (Figure 6.5). The mother explained that it was only due to her insistence on keeping the ventilator on that her daughter, who was by then recovered and at home, remained alive.

The *Lancet* reflected on how the disquiet following each heart transplant 'has been held responsible for a decline in the number of organs donated for

Daily Mirror

5d. Friday, May 30, 1969 + + + No. 20,349

Shock plan from a transplant surgeon

'EVERY HEART A SWAP HEART'

ONE of Britain's top surgeons has called for a radical change in the law governing transplant operations.

His revolutionary plan: Everyone's heart should be considered as a transplant heart.

Surgeons, he says, should be able to remove anyone's heart without asking permission—unless prior objections have been made.

And people should be able to "contract out" of this vast nationwide transplant "bank" simply by carrying a card—or by previously registering their objection.

The surgeon is Professor Roy Calne, professor of surgery at Cambridge University. He is a transplant pioneer.

By PAUL CONREW and NICK DAVIES

Stopped

His astonishing views, intensify the controversy that is raging after the news that the heart of the donor in Britain's third transplant operation was still beating when doctors decided to use it.

The heart of student nurse Margaret Sinsbury, 25, had been kept going only with the aid of a ventilator machine, it was revealed.

Two minutes after the machine was switched off, the heart stopped.

Professor Calne's plan—it does not specifically refer to hearts, but to organ transplants as a whole—is in this week's British Medical Journal.

He writes: "It would be a great help in the development of transplantation if permission was automatically assumed to have been given, unless active objection had been made."

He goes on: "The law is unsatisfactory since seeking permission from the relatives who have suddenly been bereaved—particularly in the case of accidents—can cause a great deal of distress unnecessarily."

A legal definition of death, he says, will never be satisfactory since it is a medical matter, not a legal one.

Next, he outlines his plan . . .

ONE. He stresses the need for safeguards.

"Safeguards would be needed," he says, "so that those who do not wish their organs to be used for transplantation after death could register an objection on their own behalf and also on behalf of their children."

A "contracting out" procedure on these lines would be preferable to the present "contracting in" system."

Continued on Back Page

EARTHRISE

ONLY a handful of men have ever seen this sight at first hand. For this is the Earth glowing above the horizon, seen from the far side of the Moon.

A shining ball of blue and mottled white, it presents to the astronaut soaring through Space an awesome spectacle of astonishing beauty.

To gaze upon it from out there in that alien void is a deeply moving experience. A humbling affair that has already inspired one man to read aloud to the world the opening words of the Bible.

This picture, taken from Apollo 10 on the latest Moon run, was released yesterday by Space Centre officials in Houston, Texas. And even as a still black-and-white snapshot, it gives an indication of the sense of wonder that every astronaut must feel.

It is the same kind of wonder that once moved poets and people to write lyrically of the mystic beauty of the Moon.

But times have changed. And now that man can actually get to the Moon, he sees at last the poetic possibilities of the Earth.

Earth it, perhaps, a troubled planet. But to the traveller in Space, it is and always will be an utterly beautiful place to come back to.

The dawn spectacular for astronauts on the far side of the Moon

Figure 6.4 The front page of the *Daily Mirror* (30 May 1969) juxtaposing the now iconic earthrise image and a heart-transplant story. Connections between these two endeavours had continually been made in the 1960s. By 1969, despite accidents and fatalities, space science was undoubtedly the leading scientific success story, in contrast to the controversial heart transplants.

Source: Reproduced by permission of Mirrorpix.

DAILY EXPRESS

No. 21,456 SATURDAY MAY 31 1969 Weather: Showers; sunny spells Price 5d.

Transplants row: An extraordinary case

THE LIFE THEY COULD HAVE SWITCHED OFF

continued resuscitation against the will of the doctors who have been proved wrong at every stage

By ARLISS RHIND and PHILIP FINN

AS the controversy over heart transplants continued yesterday a mother wrote to the Daily Express telling how her daughter, suffering severe head injuries, appeared to be near the point of having her life "switched off"—but recovered when treatment continued at family insistence.

The moving letter from Mrs. Pamela Cox—*reproduced below right*—came from her Cornish farm at Redmoor, near Bodmin, while the daughter, 17-year-old Jenny, was milking the goats and feeding the chickens, a smiling happy girl full of the zest of life.

MACHINE

INSTINCT

ORDEAL

THE LETTER:

ASHRAM,
REDMOOR,
BODMIN,
CORNWALL.
29th May, 1969.

Dear Sir,

On November 18th, 1967, my daughter was admitted to Treliske Hospital, Truro, suffering from terrible brain injuries due to a high speed car crash.

The doctor in charge of casualty stated that she only had a few hours to live, but had carried out a tracheotomy to allow mechanical resuscitation.

A few days later another doctor a specialist, took us aside and stated that our daughter had irreversible brain damage, was deeply unconscious and only alive as far as mechanical respiration and heart action allowed. He stated that if by a remote chance she lived, it would be a vegetable existence at best.

We insisted on her being kept on the machine, and he agreed to do this for a short while.

My daughter is now a help to us on our smallholding and in the house, and leads almost a normal existence even to taking business calls when we are out, callers never suspecting there is anything wrong with her.

We are told that no one with similar injuries have survived, that she is a medical miracle, but this miracle was only achieved by our insistence on continued resuscitation against the will of the doctors who have been proved wrong at every stage of her recovery.

If we had listened to medical opinion she would not be here at all, luckily transplants are not yet carried out in Cornwall or the fight might have been even harder to save her life.

I realise that doctors have difficulty in determining death in such cases, but surely my daughter has proved that such grave doubts exist on this subject, that the decision to give up the life of a patient should never be made.

Pamela Cox.

Jenny Wood pictured at home last night...'I feel fine now'

New safeguard plea

By JAMES WILKINSON

Rail strike called off

POCKET CARTOON By OSBERT LANCASTER

More dinner money for student nurses

COURT CURFEW ON SEASIDE YOUTHS

By MICHAEL BROWN

No blackout

IN THE KNOW with the Express

Oil battle (cont.)

D.J. accused

LATEST

TV-Radio programmes Page 12

TWO DROWNED

PHONE (STD CODE 01) 353 8000 TELEX 21841

A DELIGHTFUL SUMMER DRESS

THE SMART OUTSIZE DRESS

Figure 6.5 The front page of the *Daily Express* (31 May 1969) soon after Britain's third heart-transplant operation, which further inflamed the controversy over defining death.

Source: Reproduced by permission of the *Daily Express*.

the established and increasingly successful operation of kidney transplantation', and that the 'graver consequence' was the 'weakening of the public's trust in medicine and its research efforts'. It urged the profession to examine 'whether or not the gains of heart transplantation are yet great enough to offset these losses'. It also encouraged the ethical issues to be scrutinized by 'the Law, the Church, the Press, and the public' and that doctors must certainly not 'retreat behind a barrier of seeming, scientifically, to know what is best. At the moment, no one truly knows.'[116] An editorial in the paramedical *Medical Tribune*, which had generally been sceptical of the heart transplants, this time called for a complete halt: 'it seems inescapable that the time has come to stop these experiments', mainly because of the 'apparently increasing distrust of certain sections of the populace not only for transplant surgeons but for doctors and their research efforts in general'.[117]

Following the third transplant, the *BMJ*'s leading article focused on the other controversial aspect of the operation – that the *Daily Telegraph* printed the name of the donor a week after the transplant, and the following day printed the name of the recipient and some biographical details, despite requests from the hospital and the family not to do so. The plea was made on the grounds that the recipient's wife, who was herself in hospital (and had been for many years), did not know about her husband's operation and news of it would be a shock. A formal complaint was made to the Press Council, but was rejected on similar grounds to the year before, declaring that the newspaper editor had considered all factors and it was in the public interest to print the name. The *Daily Telegraph* editor told the Council that 'the circumstances of this transplant, subsequently revealed, became a matter of intense public discussion – in private, in the Press, on Television and Radio, and in Parliament'. Since the Press Council had previously stipulated that 'the time may come when public opinion on these points becomes settled and when demands for privacy can be given greater weight', the editor argued that in May 1969 'that time had certainly not come, and, indeed, public opinion has been more unsettled than ever'.[118] The *BMJ* article 'Invasion of privacy' was highly critical of the press action and outraged by the 'newspaper's assumption that it knew better than the doctors in charge'. The journal argued that 'the pleas of public interest cannot be sustained' for what amounted to breaching confidentiality and undermining the doctor–patient relationship, as well as potentially affecting the 'willingness of relatives to permit the donation of organs for those who would die without them'.[119] The *Telegraph* editor responded to the charge in the paper's editorial column without remorse. An apology, he felt, was in no way due, since the paper had acted in the public interest. Once again, the media and the medical profession clashed over media exposure of medical concerns and the arguments themselves were fought out in public.

A few days later, in a long letter to *The Times*, 'Public and heart transplants: Allaying concern', a professor at St Mary's Hospital, W. S. Peart, stressed the

importance of the public believing in the good intentions of doctors. Rather than wanting the media to stay out of medical affairs, Peart called for the media and the medical profession to take on a dual responsibility for safeguarding the public. He believed that 'the major protection that the public has against abuse of all kinds is the press', and the 'ability to expose malpractice and transgression of human rights' was an 'essential power as important as our precious freedom of speech'. Therefore he encouraged a situation whereby 'doctors must always feel and be exposed to the public gaze'. He hoped that this panoptical effect of the media spotlight would breed public confidence that would in turn 'resist the assaults of unfair criticism'.[120] Peart worried about the present public distrust of organ transplantation, again fearing for the more established and clinically successful kidney transplant programme. Doctors were united over the fundamental importance of keeping public faith in the profession and in the field of transplantation as a whole, an area at the cutting edge of medical research, but they were divided over the role of the media. It was widely acknowledged, however, that the media coverage of medical innovation had to be confronted and would influence medicine's future direction.

At the second world symposium on heart transplantation in Montreal, three weeks after the Guy's transplant, Donald Ross took the opportunity to discuss medicine and the media: 'Although the subject of press relations in transplant surgery is not strictly part of my brief, it has an important bearing on the further development of the field of cardiac transplantation, certainly in England, and I feel it should be aired.' Much of his paper was dedicated to this topic:

> The development of heart transplantation in England has been characterised by a small number of clinical cases punctuated by frenzied emotional outbursts from the daily newspapers. The net effect has been to spread suspicion and distrust widely throughout the country and this has reflected badly on the supply of donors both to myself and to my colleagues working in related fields of liver and kidney transplantation. These outbursts have been largely of a destructively critical nature with a demand for full details of the surgery . . . and of donor and recipient.

Ross stressed the patient's right to private and confidential relationships and highlighted the surgeon's current plight of 'having to carry out our everyday surgery which commonly involves decisions of life and death in the full glare of publicity'. He argued that the 'newspapers would have a much stronger case to justify their sensational headlines if they showed the same public-spirited watchdog qualities in relation to the almost daily cadaveric kidney transplants and also to the liver transplants – all of which involve the death of a donor'. Ross' solution to allaying legitimate public fears was that the doctors should take the matter of public education into their own hands,

possibly by 'compiling a report of our views for lay readers' and weaning the public from the idea that heart donors fall into a special category. At this point, the third transplant patient was still alive, and Ross made clear that 'it is our intention to continue with a programme of experimental and clinical transplantation with the experimental emphasis on donor organ transport and shortage'.[121]

In fact, this was Ross' last heart-transplant operation. The recipient, Charles Hendrick, died just over three months after his surgery, and by the end of 1969, in Britain and elsewhere, human heart transplantation was halted. On 20 July 1969, Apollo 11 landed on the moon, an event broadcast live to 600 million people. The moon landing eclipsed the heart transplants as the year's greatest media event and most historic scientific undertaking. In 1970, 17 heart transplants were conducted worldwide (eight of them by Norman Shumway at Stanford) and in 1971 only nine.[122] Barnard performed a few more, but Shumway, who had undertaken most of the experimental groundwork on cardiac transplantation, was the only one to continue a small but regular number of operations.

For some, the death of Barnard's celebrated patient, Philip Blaiberg, on 17 August 1969, marked the end of an era for heart transplants. British media reaction to his death was mixed. While the *Daily Mirror* headlined 'The 563-day miracle',[123] the editorial in the *Daily Telegraph* insisted that 'one thing is already clear: [Blaiberg's] death must lead to a pause and reassessment of the whole concept of this kind of operation'.[124] Elsewhere in the paper, together with the headline, 'Barnard says, "I'll do more transplants" ', was a picture of the sad-looking surgeon, alongside the mayor of Cape Town, at Blaiberg's funeral. And on another page the results of a Gallup Poll suggested that 53 per cent of people would be willing to donate their heart. But whatever the expressed intention, the actual donation rate for all organ donations had by now reached an all-time low, and was one of the primary reasons for the British heart-transplant programme drawing to a close. The media's role here was critical.

Fox and Swazey (1974) defined a clinical moratorium as 'the suspension of the use of a still experimental procedure on patients', typically when 'the uncertainties and risks of a new treatment become starkly apparent and the patient mortality rate seems unbearable or unjustifiable'.[125] Fox later added that the pressure for moratoria can be 'internal or external, formal or informal, explicit or implicit' or a combination of these.[126] The first explicit moratorium on heart transplants was in January 1969, when the Montreal Heart Institute publicly announced that it was suspending the operations after five of its nine recipients died in quick succession in November 1968. The Director announced, 'to continue to operate under the same conditions and problems that face us now would be immoral'.[127] Also explicit was a report in the *Lancet* on 2 August 1969 that the 'State government of New South Wales, Australia has suspended indefinitely heart transplant operations.'[128] The

moratorium in Britain, on the other hand, seems to have been implicit in the first few years, until made explicit in a letter sent to hospitals by George Godber early in 1973 and at the same time reported in the *BMJ*.[129] The report followed a meeting on cardiac transplantation held at the DHSS in late October the previous year, where Donald Ross was present alongside six other clinicians, civil servants from the DHSS, and an MRC and Scottish Home and Health Department representative. Looking back, those involved in early heart-transplant operations have quite different interpretations of what happened. Both Godber and Donald Ross have been keen to stress that the moratorium in Britain was not imposed by the government. Godber wrote in a letter in 1997 that 'it is very important that [the moratorium] should be seen as the development of consensus and not central dictation'.[130] Ross claims that the moratorium was self-imposed: 'After our early euphoria we realized that we were abysmally ignorant and didn't know how to assess rejection or how to treat it.' He said that the third transplant which 'didn't work very long' triggered his 'self-imposed moratorium' and emphasized that this 'implies that the surgeons did have a sense of responsibility and then, of course, the Government moratoria came into play'.[131]

Donald Longmore remembers it differently, and has stated that the 'Department of Health was a major obstacle' and that 'it is terribly important for us not to be God-like and think we have had a moratorium because doctors thought it wasn't right and so on, it was forced on everybody'.[132] Jane Somerville, a physician to the first British heart transplant, reflected: 'I respect what Donald [Ross] says, but I think if they'd had donors they would have soon found recipients.' Her belief was that the moratorium 'very strongly related to the difficulty in acquiring donors'. Sources from the time seem to corroborate this view, along with the highly debated and intimately connected factor, the role of the media. Critical that the press behaved in a 'disgraceful fashion', Somerville believed that the public's unwillingness to donate organs was due to families being 'genuinely fearful of having all these people [journalists] . . . running through their homes, making their moment of bereavement just terrible'.[133]

In 1970, Calne wrote *A Gift of Life* for a general audience to 'clarify organ transplantation'. The preface opened:

> The first heart grafts were covered by press, radio and television on a scale equivalent to the news of the outbreak of a major war. Unwarranted and extravagant optimism has been followed by bitter criticism. This has undermined public confidence in the medical profession and seriously impeded progress in an important endeavour aimed at reducing human suffering.[134]

Early that year, Philip Blaiberg was again making headlines, posthumously, as his wife publicly denounced her husband's misleading public image.

A front-page article in *The Times*, headlined 'Blaiberg's hidden agony', reported claims Mrs Blaiberg had made in an interview with an Italian women's magazine that her husband had led a double life after his operation: 'Officially, he was in good health, had a good appetite, swam, played rugby and tennis. But during his 595 days of renewed life he spent 248 days in the Groote Schuur Hospital in Cape Town fighting against death.' Of his days at home, '95 were spent completely in bed' and he took '32 to 100 pills a day'.[135] Soon afterwards, Barnard's autobiography came out in England and was serialized in London's *Evening News*. In response to much of the personal information in the book, Barnard's former wife also gave her public response and said she would publish her own life story to set the record straight. The *Evening Standard* headlined, 'Barnard's memoirs "fairy tale" '.[136] The favourable images of heart-transplant surgery, surgeons and patients were at this time constantly subject to public challenge and modification.

In March 1970, only a few months after Donald Ross had declared that he would be continuing with heart transplants, he gave a full-page interview to the *Daily Mail* entitled 'The Price of Fame . . . . Why I want to be forgotten'. Ross said, 'Myself, I want to be forgotten by the public. I would far rather have the respect of my colleagues than the acclaim of the multitude.'[137] At this point, though, both of these had been undermined. A piece in *New Statesman* later that year summarized another perspective on the media exposure of the heart-transplant endeavour:

> I see to my delight that Mr Donald Ross, the first and only surgeon in Britain to undertake heart transplants, has now said, quite quietly: 'I do not think there is any justification for going on at present' . . . . And yet no more than a few months ago, Mr Ross, and many of his surgical colleagues, were stoutly defending both the virtues and the future of heart-transplant surgery. This unusually rapid reversal of a fiercely held but, I am convinced, mistaken enthusiasm, seems to me to provide an unanswerable argument in favour of telling the public, in plain terms, just what the doctors are up to. I am sure that without the sort of publicity which so many doctors resented, the heart-transplant experiments would have gone on for far longer and with all the fruitless pain and distress which has characterised this particular surgical adventure.[138]

In July 1971, an article in *The Times* headlined 'British opinion "rules out heart transplants" ' reported on Longmore's second popular book, *The Heart*. The article gave Longmore's reasons for having written the book, to 'clear up some of the misconceptions he feels have made this type of surgery unpopular', and directly quoted him stating: 'I blame the mass media for what has happened'; heart transplants, he said, were 'impossible at the

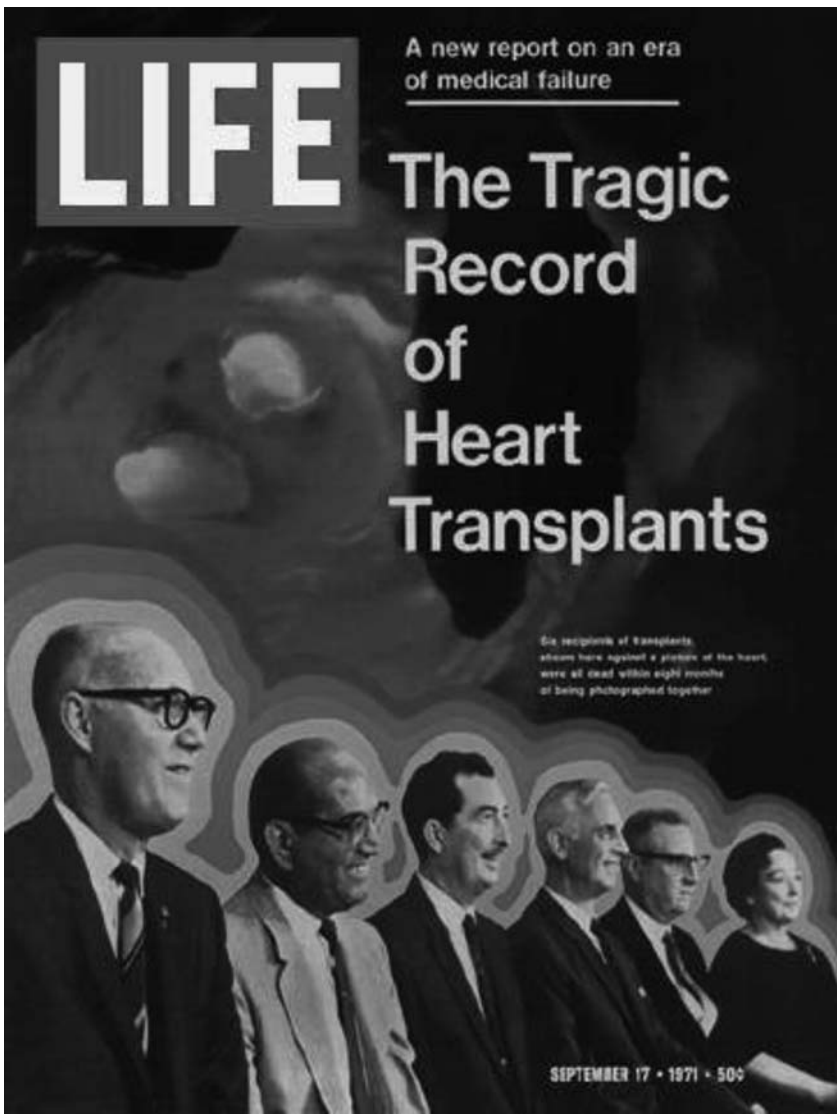


Figure 6.6 The cover of *Life* magazine (17 September 1971) described the heart transplants as symbolizing 'an era of medical failure'. The six heart-transplant recipients shown on the cover against a picture of the heart 'were all dead within eight months of being photographed together'.
Source: LIFE logo and cover treatment © Time Inc. Used with permission.

moment because of adverse publicity'.[139] Soon after, *Life* magazine's front cover damningly revealed: 'A new report on an era of medical failure: The tragic record of heart transplants' (Figure 6.6). The image showed six heart-transplant recipients, all of whom were dead within eight months of being photographed together.[140] Human heart transplantation, at first a resounding and historic 'success', was now deemed a 'failure', and the transplantable heart of 1967 could, for the moment, be transplanted no more.

Conclusion

In 1972, British cardiac surgeons considered attempting another heart transplant, but the DHSS was adamant that resources should no longer be used for this still experimental procedure.[1] Even though a handful of patients worldwide had survived with a new heart for over a year, the risk of further adverse press response and of affecting renal transplantation rates seemed too great. In January 1973, the CMO, George Godber, wrote formally to various doctors and hospital boards discouraging any further attempts. The next month, the *Guardian* reported: 'Sir George Godber . . . is understood to have advised Mr Donald Ross against attempting to perform Britain's first heart transplant in three years on the grounds that a failure would have a disastrous effect on other forms of tissue donation'. He feared that 'kidney transplant surgery, now running at the rate of 500 operations per year would be badly hit by the emotive publicity that inevitably follows a heart transplant'.[2] The Secretary of the National Kidney Research Fund reaffirmed:

> When we had the spate of heart operations four years ago kidney donations dropped to negligible proportions, and I fear this would have happened again if Mr Ross had gone ahead . . . illogical as it may seem to skilled surgeons, the very word heart has a strong pull on the emotions. Many people are quite happy to will their own kidneys to be used if they die prematurely . . . but immediately you have heart transplants then the barriers go up. This even happens at the medical level. At the time of the last heart transplants many casualty doctors refused to cooperate too.[3]

The article concluded: 'it is plain that any resumption will be a political as well as a medical decision'.

As this book has demonstrated, technical developments cannot be separated from their cultural context, and politics was inherent in the medicine from the start. The impetus to perform the pioneering operations of the 1960s came from far more than technical expertise. To be transplantable, the heart first had to be conceptualized in terms of its function as a pump,

becoming repairable, and then replaceable. To become socially acceptable and to encourage organ donation, transplant surgery had to incorporate the dual discourses of the 'gift of life' and 'spare-part surgery': the heart was the 'ultimate' gift of life, yet just a replaceable pump. The heart–lung machine, successful animal experimentation, human kidney transplants and other open-heart surgery all contributed to making heart transplantation technically feasible. But creating the opportunity and desire actually to conduct a human cardiac transplant was as much a product of the particular post-war mood that was conducive to heroic, ambitious and radical surgery. Developing a fix for an ailing heart seemed all the more important, given the prominence of cardiac disease as the new number one killer of the affluent West, as threats from tuberculosis, polio and other previously major diseases were significantly reduced.

The reasons why heart transplantation proliferated, despite the great uncertainties and risks, and then came to a halt, are multi-layered and multifaceted. I have made connections between the different explanations by bringing to the fore the crucial role of the media and the public nature of the events. That the first heart transplants received the degree of media coverage they did was a product of both the media organization and strategies of the time and a specific chain of events. In Britain, television had permeated most households, medical journalists had formed a distinct professional group, and medico-scientific innovation had become a common but sought-after news item in a high-technology space age. Furthermore, the fact that Barnard's operation was a 'world first', concerned with the human heart, that it took place in South Africa with the full backing of the authorities, together with Barnard's panache and readiness to deal with the media, turned this surgical feat into a phenomenal media, as well as medical, event. This set the precedent for the coverage of subsequent operations. Despite being 'an age when news dies almost as quickly as the ink dries on the page',[4] the news-value of heart transplantation was sustained and unabated.

In a letter simultaneously sent to various national and international regulatory medical bodies in October 1969, an Iranian physician requested that Barnard be called to an international medical professional court for questioning. He labelled Barnard's operation 'mere propaganda', which forced heart specialists throughout the world to perform this operation 'in order to keep their own and their countries' prestige high'.[5] This accusation was one-dimensional; but individual, institutional, disciplinary and national prestige did play a part in motivating the early heart-transplant surgeons. The heart, unlike the kidney or liver, evidently still held a unique symbolism, well demonstrated by journalists' inquiries about Washkansky's new 'female' heart and the disquiet over Barnard's second operation using a 'coloured' heart for a white man in apartheid South Africa. Up until the heart transplants, the beating heart was the signifier of life and death; and transplanting

the heart was a matter of life and death, whereas kidney transplants had dialysis as a back-up. The novelty and audacity of replacing a human heart contributed to the vast media interest and also attracted many surgeons to the field in the first place. But the pace at which the operations were taken up worldwide, and the style, duration and effect of the media coverage could not have been foreseen.

A multitude of reasons account for the operation's discontinuation after 1969: patients died in quick succession; immunological knowledge did not keep pace with surgical know-how; the financial costs were high and only a few stood to benefit; the death-status of donor patients remained controversial; the donor supply dried up; and the medical community was divided over whether or not to continue. On reflection, the kidney-transplant pioneer Joseph Murray described the period from 1968 to 1970 as 'transplantation's darkest hour because of the careless application of technical procedures with insufficient laboratory background'; a time when many cardiac surgeons 'with little or no immunological background rapidly accumulated large numbers of heart-transplanted patients only to witness them all die of rejection within a few months'.[6] But high initial mortality was not peculiar to heart transplants and discontinuation was due to more than these statistics. Without established ethical committees and with less stringent patient-rights codes than now, other high-risk medical procedures, such as liver transplantation, continued to be performed in the late 1960s with minimal therapeutic success, yet heart transplantation was stopped. Barnard denounced the suspension of heart transplants in Britain as a 'great tragedy' that slowed medical advance. He claimed that heart transplantation had better results than treatments for cancer of the gullet and about the same as treatment for stomach cancer, yet nobody had suggested that those treatments stop.[7]

This book has argued that the key pressure to desist derived from the unprecedented media exposure of this medical controversy. The extensive and unmanageable media coverage had major negative implications for heart transplantation, other transplant programmes, and for the wider medical community. In the 1960s, transplantation was representative of the goals and abilities of modern medicine, and heart transplantation epitomized this pioneering surgery. Therefore, the highly visible fate of heart recipients and the surrounding medical controversy, which was fought out in public, affected the entire profession. Comments from traditionally unnewsworthy and private medical meetings built up momentum and had a completely different effect once made into national headlines: for example, the 'heroic' surgeon could be transformed into a 'vampire' or 'vulture' overnight. However, it was not the media coverage per se that was problematic: favourable media attention and public recognition could serve many of the surgeons' own interests and the media was actively courted at times. Doctors' inability to manage and control the publicity, retain a positive, united image

and maintain the trust and confidence of the public is what ultimately undermined the heart-transplant programme.

These conclusions have wider historiographic implications, most generally by exemplifying why medical history should take media processes seriously. If mentioned at all in medical histories, the media is most often seen as an appendage to a medical story, and if analysed at all, then usually only in terms of medicine *in* the media, i.e. media coverage is treated as an optional extra to an unchanged account of a particular event. I have shown, by contrast, that we cannot effectively understand medical change and controversy unless we identify the specific processes, interactions and interests involved in medical–media relations. The medical and media histories are inseparable.

* * *

This book has aimed not only to situate the first heart transplants in their wider context, but also to recognize them as a watershed in post-war medical and media history. It contributes to the hitherto thin body of literature on the history of modern surgery, and to media and medical histories of the 1960s, and highlights heart transplants as particularly significant events in these histories. Demands for accountability, and increased public scepticism and disillusionment with medicine were building up before the heart-transplant controversy and were related to wider cultural contexts and moods; nonetheless the heart transplants brought to a head many of these concerns within medicine in an unprecedentedly public manner, and with far greater significance than historians have so far recognized. This analysis has demonstrated both the effects of the media involvement on the heart transplants, and the effects of the operations on medical communication. The heart-transplant coverage was indicative but also constitutive of several important changes in the content, sites and methods of medical news-making. Largely as a result of these operations, medicine was brought into the new media age of 'personality creation', as doctors and patients were made into celebrities overnight; Louis Washkansky, I suggest, was the first of a new genre of media-created patient celebrities that remains with us today.

The heart transplants also radically undermined traditional British medical ethical codes of conduct regarding doctor anonymity. The appearance of around 100 eminent doctors in the *Tomorrow's World* televised studio debate; the unprecedented publicity given to surgeons, donors, recipients and their families in newspaper reports; and the staging of the first post-operative press conference, seriously challenged professional ethical rules and the traditional reticence of the medical establishment. By October 1968, the BMA's Central Ethics Committee passed two resolutions, 'that the recent increase in the use of doctors' names in mass media of communications is deplored' and 'that the use of doctors' names on press and broadcasting media is increasing and the practice is deplored'.[8] The Committee was 'greatly concerned about

any lowering of professional standards', but in light of the *Tomorrow's World* programme and the first two British heart transplants, it was fighting a losing battle. In Britain, media coverage of transplants 'strained the embargo against "indirect advertising" to breaking point'.[9]

The operations also fundamentally affected medical communication in other ways. For one, 'public interest' was deemed to take precedence over patient confidentiality with respect to the naming of donors and recipients – a view that the Press Council upheld, much to the outrage of transplant surgeons, hospitals and patients' families. Negotiating the role of the public was central. The notion of 'the public' was mobilized and utilized in myriad ways by different parties. Concurrently, 'the public' constituted patients – heart disease sufferers, organ recipients, potential organ donors, and those giving consent to organ donation, taxpayers and users of the NHS – and also media consumers. Of course, doctors and journalists were themselves members of the public, but the two professions had different ideals and interests regarding how they identified themselves with and in relation to the public, whom they both claimed to serve. As the history of early heart transplantation demonstrates, maintaining doctor–patient confidentiality at times directly conflicted with journalistic goals. Such tensions are particular to medical–media relationships, given the dual status of the 'public' as both patients and media audiences.

'Doctors' and 'journalists' were also fragmented groups, with competing and conflicting interests within and between them. Nonetheless, at times when medical professional autonomy was under threat, such as over redefining death in terms of brain activity, maintaining the interests of the profession as a whole required unity. Similarly, although different popular media agencies often defined themselves against each other in competition for stories, interviews and images, journalists had common professional roles and defended their autonomy as a group. Journalistic culture and goals were changing in this politically turbulent period as specialist and investigative journalism proliferated. The heart transplants did not just reflect but also helped formulate these new styles.

The transplants also ushered in a new dominant form of medical news, as the head of BBC Science and Features had said, away from the actual practice of medicine and onto the ethical and social issues surrounding it. As the medical world was divided over the merits of and justification for heart transplantation, the media became a forum for fighting out and framing the arguments. Where medicine should be debated and who should be part of medical debate became a crucial component of the argument itself. Medical journals, the new 'paramedicals', national newspapers and television became ever more interconnected, referencing one another, steering each other's debates and setting agendas, with overlapping arguments not just within but across different media.[10] Distinctions between specialist and popular media often became unclear; and doctors and patients uncustomarily

appeared in television studios while journalists entered hospital wards. The *Tomorrow's World* special, 'Barnard Faces His Critics', was not only a central component of the heart-transplant story, but also represented a new style of television programming that included a participatory live audience in a studio debate. And, as the media became increasingly filled with medical news, medicine was made more media-conscious, for example in the use of Blaiberg's first anniversary with a new heart and in photographing him swimming in the sea. In Britain, the hiring of a commercial PR company to manage hospital–media relations was also completely new.

Britain in the late 1960s can be seen as both representative and particular. British medical and journalistic organization, professional ethics, competence and reputation were unique but at the same time they were world renowned and representative of a number of wider Western values, achievements and goals and connected to activities in the international arena. The British case therefore sheds light on similar situations in different places. This study also draws conclusions and provides tools which help understand more recent medical debates.

* * *

In Britain, cardiac transplantation resumed in 1979, led by the surgeon Terence English at Papworth Hospital, Cambridge and a year later by Magdi Yacoub at Harefield Hospital in London. Following extensive negotiations, heart-transplant programmes at Papworth and Harefield were granted NHS supra-regional funding in 1986.[11] Analysing how and why they restarted would constitute a lengthy project in its own right; but, as with the first heart transplants, the story is complex and cannot simply be put down to improved anti-rejection regimes. The immunosuppressor, cyclosporin, hailed as another 'miracle drug', did significantly improve the life expectancy of transplant patients, but was not introduced to British heart recipients until the early 1980s, after the operations had recommenced.[12]

When heart transplants restarted in Britain, the Department of Health was still unwilling to fund them, but English gained the support of the Chairwoman of the local health authority to use Papworth facilities for the first two operations. Acquiring donors remained a principal obstacle; English recalls writing to all the neurosurgeons that he knew, as well as to several anaesthetists and some renal transplanters, asking for help with securing a donor. 'But, alas, none was forthcoming', he lamented.[13] A local donor was found eventually and the first transplant at Papworth went ahead in January 1979. The recipient survived only 17 days and was never fully off the ventilator, having suffered brain damage before the new heart was implanted. Fortunately, the second attempt at Papworth in July 1979 resulted in the recipient, Keith Castle, surviving five and a half years. In several contexts, including on Papworth's website, this case is now cited as the 'first successful

UK heart transplant'.[14] The earlier attempts at the National Heart Hospital are completely omitted from this history, or at least the history of 'success'.

Bolstering its high international reputation, Papworth Hospital boasts a number of other 'firsts', including performing the UK's first 'beating heart transplant' in 2006, using a new system designed to preserve a beating heart by pumping warm, oxygenated, nutrient-rich blood through the organ between extirpation and implantation.[15] As one of five centres in England that currently undertakes cardiac transplantation, Papworth is well recognized for its exceptional expertise. Between 2004 and 2006, 7 per cent of the hospital's heart recipients died within 30 days of their surgery (compared to a national average of 10 per cent) but in 2007 this increased five-fold. Following a routine audit, seven out of 20 patients between January and October were confirmed to have died within 30 days of their operations. Papworth informed the Department of Health and heart transplants were suspended whilst under review by the Healthcare Commission. In November 2007 the Commission concluded that the quality of care was sound, with no single factor linking the deaths. The hospital was given the all-clear to resume activities subject to 12 recommendations, including informing future transplant patients of the recent rise in mortality rates.[16] No sooner had heart transplants restarted at Papworth, in December 2007, they were then halted at the National Heart Transplant Unit at Glasgow Royal Infirmary, the only heart-transplant centre in Scotland. Four out of eleven patients in 2007 had died within 30 days of their transplant.[17] After a review by a team of 'independent experts', transplantation was resumed in Glasgow by mid-January 2008.

As Ralph Porzio wrote in *The Transplant Age* (1969): 'In the scramble for headlines, the organ transplant now competes with violence, war, crime and sex'.[18] The same holds true today, with transplant-related stories repeatedly foregrounded by editors and journalists. Both the Papworth and Glasgow suspensions made headlines, and a number of media articles referred back to the situation in 2000 at St George's Hospital in London when the 30-day mortality rate, post-transplantation, was found to be 80 per cent. Following an investigation by the Commission for Health Improvement (now the Healthcare Commission), the heart and lung transplant unit was closed at St George's. The media coverage of the Papworth and Glasgow cases was delicately handled, with every effort made to maintain public trust. The Head of Investigations at the Healthcare Commission, publicly stated: 'I would like to praise the [Papworth] trust for triggering this process. That in itself suggests an organisation that is putting patients first and should give the public confidence.' Meanwhile, Liam Donaldson, the CMO, reaffirmed: 'The transparency and openness demonstrated by the trust in this instance is commendable'.[19] Nonetheless, these incidents demonstrate how the practice of heart transplantation is fundamentally unstable, despite its current status as a routine operation.

One of the recommendations that came out of the Papworth investigation was that the Department of Health should 'seek advice from UK Transplant [the body responsible for matching and allocating organs] and the Royal College of Surgeons to agree a threshold for mortality rates which, if breached, would trigger an urgent review'[20]. But as this book has demonstrated, the acceptability or unacceptability of mortality rates in fact rests on a number of fragile concepts that are under constant negotiation and cannot simply be stipulated by medical authorities. Brain death, for example, is still a highly contentious phenomenon even in Britain. An international conference on the 'social context of death, dying and disposal' held at the University of Bath in September 2007, brought fresh media attention to the issue. BBC online news headlined, 'Call to revamp death definition', reproducing the views of one of the conference participants, a professor of sociology, who argued that the medical diagnosis of brain death did not map on to society's view of when death actually occurred: 'corpses are not warm, they are not pink, they do not move, they are not pregnant – but a person who is brain dead can be all of these things'.[21]

More recently, the debate about whether Britain should have an 'opt-in' or 'opt-out' policy for organ donation is raging, reminiscent of 1960s arguments surrounding 'contracting-out' donation policies. The 'contracting-out' policy was precluded in 1970 after an advisory committee determined that it would be 'premature' and had the potential to 'jeopardise the future of transplant surgery' given the 'climate of public opinion'.[22] The current CMO, together with the Prime Minister, backed calls for a campaign to radically increase organ donation, and to introduce an 'opt-out' policy involving 'presumed consent'. The critical shortage of organs is not seen as a result of the ever-increasing demand for body parts, but due to people's regrettable failure to sign donor cards in their lifetime. A number of media organizations have actively supported these proposals: The *Observer* launched its own 'reform campaign' in January 2008, signalling 'a vital change that could save thousands of lives';[23] and the *Guardian* published online a long comment piece by journalist Polly Toynbee, entitled 'Living people matter. When you're dead, you're dead'. Outlining the argument in terms of 'the forces of superstition and reaction' against the 'spirit of the enlightenment', Toynbee contended that 'hundreds of thousands of lives have been blighted or lost over the past decades for no better reason than a few vociferous people's misguided and primitive instincts about the sanctity and integrity of corpses'.[24] As this book has demonstrated, this is of course a gross simplification that fails to recognize the very uncertainty unpinning 'when you're dead', alongside the widely and deeply held cultural concerns over the process of dying, and the treatment and ownership of corpses, all of which make dead people 'matter' – a view by no means confined to the 'misguided instincts of the few'. Furthermore, there are potentially serious implications of 'presumed consent' undermining the notion of donated

organs being 'gifts', which has been carefully and painstakingly built up over decades. Indeed, an authoritative report, 'The potential impact of an opt out system for organ donation in the UK', by the UK Organ Donation Taskforce in November 2008, concluded that 'such a system has the potential to undermine the concept of donation as a gift, to erode trust in NHS professionals and the government, and negatively impact on organ donation numbers.' Nonetheless, the Prime Minister has not ruled out a change in law; the debate is far from closed and future policy remains unclear and controversial. To evaluate today's 'climate of public opinion', full consideration also needs to be given to the lasting effects of recent medical scandals, which resonate loudly with the 1960s heart-transplant controversy.

In Britain between 1999 and 2001, it came to light that dead babies' hearts and other organs were routinely retained without proper parental consent at Liverpool's Alder Hey Hospital. In fact, the practice seemed to be widespread across the country, but the media scandal focussed on Alder Hey. Although the lack of consent was seemingly the central issue, more fundamentally the episode highlighted a continued public resistance to the apparent violation of the human body.[25] These sentiments echo those of the late 1960s, which were themselves reminiscent of earlier attitudes. Amongst the calls for a halt to heart transplants, surveys showed that public opinion was mixed and a significant proportion of the population still stated a willingness to donate organs. In practice though, organ donation rates were far lower than anticipated, connected to the unease surrounding 'brain death' and also a reluctance to accept fully the premise of 'spare-part' surgery. Many parents involved in the Alder Hey incident felt devastated that they had not in fact buried their dead child 'whole', and second and even third funerals were held as hearts and other organs were found and returned to the families.

At the height of the press coverage of the scandal in 2001, following the official inquiry report, organ donation rates plummeted.[26] The public outrage at Alder Hey developed at the tail end of another British medical scandal centred on the Bristol Royal Infirmary. In 1998, the GMC ruled that 29 deaths of babies who had undergone heart surgery at this hospital between 1988 and 1995 amounted to an unacceptably high mortality rate; the ruling resulted in three practitioners being struck off the register for professional misconduct. The GMC trial was the longest hearing in its history and was followed by a public inquiry in 1999, headed by a professor of health law, ethics and policy. Its findings called into question the self-regulation of the medical profession and found that in addition to surgical failure, pre- and post-operative care, lack of resources and lack of communication between professionals were also to blame. Although three individuals were singled out, the case highlighted grave institutional problems across the NHS. An interim report in 2000 documented that organs were also being retained at

Bristol without proper consent and this paved the way for the Alder Hey report in 2001. The two scandals caused a dramatic blow to public confidence in the medical profession and led directly to policy changes such as the Human Tissue Act (2004), revised in an attempt to improve public and professional confidence, and to safeguard and clarify consent rules.[27] The government also insisted that hospitals should publish details of clinical performance to make individuals and their institutions accountable and allow the public to compare figures.

The media was absolutely central in exposing and sustaining both of these controversies. Years before the official GMC inquiry, *Private Eye* broke the Bristol story in a series of articles in 1992, written by the anonymous 'MD', who was actually a well-known media personality and doctor, Phil Hammond. In 1996, *Dispatches* (Channel 4), *Panorama* (BBC 1) and *Newsnight* (BBC 2), all carried investigative reports. The *Dispatches* team was later involved in making a 'factual drama', *Innocents*, about the Bristol heart babies. Affected parents who had complained to the GMC were made into key media faces and voices, used to sustain the story and frame it in a particular way; the media also provided a platform for an internal 'whistleblower' who approached a journalist to raise the alarm.

The history of early heart transplantation offers analytical tools for understanding and unravelling these contemporary debates by elucidating the type of medical and media interests that are negotiated in public medical controversies. What makes good medical news? How are stories appropriated to further journalistic goals? How can medical professional standards and expectations change in the glare of the media spotlight and how does the profession remain united? What are the changing roles and demands of the public as both medical and media consumers? How is 'acceptability' of patient mortality judged and by whom? And how is a crisis resolved through a 'trial by media'?

A final case that is pertinent to this discussion is human face transplantation.[28] On 30 November 2005 French surgeons grafted part of the face of a brain-dead donor onto a 38-year-old woman who had been mauled by her dog. The surgeons held a well-organized post-operative press conference, gave interviews, and released hospital video footage of the patient (without showing her face). The operation made headlines internationally. The surgical know-how had been in place for several years, and teams in Britain, France and the United States were all aiming for the same goal. In 2002, Peter Butler, a London plastic surgeon who had been at the forefront of facial transplantation development, called for a public debate on the matter and presented his research at a meeting of the British Association of Plastic Surgeons. The media began to speculate on an imminent face transplant, prompting journalists to try and identify the first potential recipient. The Royal College of Surgeons subsequently established a working party to look into the operation's feasibility. The charity, Changing Faces, for people with

facial disfigurement, issued a press release calling on the Royal College of Surgeons to 'attempt to create a moratorium on further media coverage of the issue'.[29] The College's November 2003 report answered:

> This is something the College has never had the power to do. Both the College and the British Association of Plastic Surgeons, however, shared the concerns expressed by Changing Faces and others. Sensationalist coverage and a media hunt for the first patient could impinge on the privacy and well-being of any potential patients and their families. Any discussion of facial transplantation must also involve issues which are technical, psychological, medical and ethical. If such a procedure were to take place, it must be preceded by careful and open debate.[30]

The report concluded that it would be 'unwise to proceed with human facial transplantation' at that time. The media interest was one of the considerations, presumed to be vast and onerous: 'recipients, their families, the donor family and the transplant surgeons will be the subject of invasive press interest and publicity. All parties will need to deal with the considerable challenge of media intrusion'.[31]

A month before the French operation, the British media reported, 'US plans first face transplant'.[32] The medical world was divided, and the more cautious pace of British doctors was compared to their American counterparts. Several articles questioned whether the operation was being done for the benefit of the surgeons or the patients. The surgeons themselves denied a 'face race' and accused the media of creating the notion. Soon after the news from France, British surgeons were reportedly given the green light to look for their first face-transplant recipient.[33] Media attention focussed on this new potential 'first', the first full face transplant, rather than the partial transplant conducted in France. Meanwhile, the French recipient called for media privacy for herself and her family; her identity was protected under French privacy law. Nonetheless, it was reported that she and her doctor had signed a deal with a British documentary filmmaker, months before the operation, and that exclusive rights for photographs and film of the operation had been given to a photo agency. Media articles and online forums questioned the potential and implications of the operation, discussing identity, consent, privacy, hope and risk. Six weeks after the operation, the French surgeon declared that his patient had 'been out in public without drawing stares', and that there were plans for five more operations.[34] On 6 February, the patient relented to the still acute international media interest and gave her own press conference. She was named and photographed; a double-page spread in the *Independent* included a full-page colour photograph and announced, 'Isabelle Dinoire showed a new face to the world . . . To a storm of flash bulbs and camera shutters, she appeared before a two-hour

press conference'.[35] In mid-April 2006, news came from China of its first partial face transplant, conducted on a man who had been disfigured by a bear,[36] and a second one was performed in France in early 2007. Despite the controversy, the operations are set to continue. The Royal College of Surgeons' working party on facial transplantation reconvened in mid-2006 and published a second edition of their report in November that year. Re-assessing their position on the procedure, this time they gave their support, provided that institutions wishing to undertake the operation met the 15 minimum requirements outlined in the report. The report's introduction, however, stressed the importance of avoiding 'a repetition of the media and medical frenzy that accompanied the first heart transplants in the late 1960s.'

Face transplants have taken place in a completely different social context from the late 1960s heart transplants, but clearly there are many parallels. In a post-heart-transplant world, post-operative press conferences and careful image-management are routinely employed to announce new surgical developments. But pressure and competition remain between media organizations to achieve exclusive material, often giving rise to financial incentives or 'cheque-book journalism', which impacts directly on patients, doctors and doctor–patient relationships. Today's well-managed press conferences, when doctors are prepared and forthcoming with information, provide accessible channels for medical communication; however, news cannot be generic so reporters will always try to find individual angles and 'scoops', thus making it impossible fully to contain, direct, control or predict the type, duration and effect of media coverage.

Information is now packaged and regulated to a far greater extent than in the 1960s: PR, 'spin' and the role and effects of the media are continuously under question. However, radical changes in media structure and technology such as the internet have completely revolutionized the volume of and access to information. In this way, public access to medical discussion has been further opened up, and the sites of and participants in medical debate are being re-negotiated. Groups such as expert ethics committees and more vocal and coherent patient organizations are now integral to medical decision-making. Just as television, being a new medium for medical communication, was resisted and then accommodated in the post-war period, a similar analysis and similar questions are relevant to the new media of today. What are the potential consequences of conflicting professional journalistic and medical interests? The medical profession is continuously vulnerable to charges of paternalism and secrecy, along with calls for accountability and openness, yet it must maintain patient confidentiality and trust. The face transplant shows that, even when the patient's identity was protected under French 'privacy' law, maintaining patient anonymity was not sustainable with concurrent immense media interest in the operation. Doctors and hospitals, on the other hand, are simply no longer expected to remain anonymous – largely, I would argue, as a result of the 1960s heart transplants.

My analysis of Barnard's operation elucidates what it means to be a medical 'first', and the likely media and medical competition which surrounds such an undertaking. When vast media attention is given to a first, then publicity predictably attends subsequent attempts. The history I have presented highlights the kind of information that journalists use to break news and keep news stories going, such as taking a 'human interest' angle, seeking images to complement the story, and identifying protagonists by name. It also elucidates how operations are deemed to be successes or failures and how the definitions of these terms are not fixed. The partial face-transplant recipient's test of not being stared at in public is one way in which her surgeon has labelled the operation a success. If her body rejects the tissue, then the criterion of success is likely to change.

Medical innovations cannot be viewed in isolation from the rest of medicine. When one event is under the media spotlight, the whole profession can be affected. If people are resistant to the idea of having their faces removed upon death, and so are unwilling to donate, this may well affect the entire transplant enterprise. Here again, rhetorics matter and compete. Face transplantation, on the one hand, is a well-researched, revolutionary way to help people with facial disfigurement, and the main argument is that skin, like any other body-part, is of no use to the dead, and is indeed 'wasted' upon death. However, as with the heart transplants, there are many counter-claims: that the face is each person's unique identity; that there are great immunological and psychological challenges even if the surgery is successful; that there are too many unknown risks; and that resources could be put to better use. Only time will tell whether or not face transplantation will become an acceptable routine therapy. Meanwhile, this cultural history of early heart transplantation offers an insight into the kinds of arguments that are likely to be fought out in the context of highly publicized, cutting-edge medical events, and into the ways in which these can precipitate more general change.

Notes

Introduction

1. 'Barnard Faces His Critics' (hereafter, BFHC) *Tomorrow's World*, transcript of the programme-as-broadcast, p. 1. This introduction was spoken by an unseen narrator, Derek Cooper.
2. For example, Bishop (1989, p. 251); Wenborn (1999, p. 392). Popular histories of medicine also reinforce the significance of Barnard's transplant (Adler, 2004; Gordon, 1993; Le Fanu, 1999).
3. Rothman (1991, p. 157).
4. See, for example, UK Transplant's press release in December 2007: '40 years of heart transplant progress, but donor shortage still the biggest obstacle' (http://www.uktransplant.org.uk/ukt/newsroom/news_releases/article.jsp?releaseId=196). UK Transplant (recently renamed the Organ Donation and Transplantation Directorate of NHS Blood and Transplant) is responsible for matching and allocating organs for transplantation in the UK. Originally established in 1991, in 2000 it was given an extended remit to increase donation rates.
5. UK Transplant launched a nationwide campaign in 2007–08, distributing organ donation registration forms and leaflets with the slogan 'My life, My gift' to 11.6 million UK households (http://www.uktransplant.org.uk/ukt/campaigns/key_campaigns/my_life_my_gift/index.jsp?campaign=1515). National Transplant Week followed, in its 18th year in 2008, run by the charity Transplants in Mind (now called The Transplant Trust), to promote the 'positive benefits of organ and tissue donation for transplantation'.
6. Calne (1970, preface).
7. A mention of the vast media interest is included in recollections of practicing surgeons such as in Kantrowitz (1998), Terasaki (1991), Tansey and Reynolds (1999); in other historical accounts written by medics, for example, Treasure (2000), Kirklin, Young and McGiffin (2002), Tilney (2003); and also in general social histories of medicine such as Porter (1997), Risse (1999), and Rivett (1998).
8. Moore (1995, p. 198); Westaby and Bosher (1997, p. 265); Bing (1999, p. 110) and Kantrowitz (1998, p. 251). Kantrowitz also claims that the popular press 'exaggerated expectations' and hence misled the public that 'transplantation was perfected and should soon be generally available'.
9. For example, Fleming (1997) explains that the initial results were 'appalling' and then 'a reaction set in', with only a couple of teams carrying on into the 1970s. No further explanation is given of what brought about this reaction. Lansman, Ergin and Griepp (1989) state that 'early results were discouraging . . . and by 1970 all but several institutions had abandoned the procedure', but no explanation for the abandonment is explored. Even Webster's more contextualized political history of the NHS merely states that heart transplants were attempted and then discontinued in 1969 'owing to the adverse results' (Webster, 1998, p. 115); and *The Cambridge Illustrated History of Medicine* similarly states that many hospitals soon abandoned the operation 'because few recipients survived for long owing to

the immunological problems of graft rejection' (Porter, 1996, p. 239). The medical historian Anne Hardy notes that heart transplants were abandoned for a time, 'yet', she says, 'surgeons are persistent, and by the 1980s they had achieved a survival rate in the region of 80 per cent' (Hardy, 2000, p. 160). My aim is to elucidate the specific determinants of surgical persistence or lack of persistence regarding early heart-transplant surgery.

10. For example, by 1963 in the United States and Europe, two-thirds of over 200 kidney-transplant recipients (who were non-identical twins) were dead within months of their operation (Tilney, 2003, p. 2). Le Fanu (2000, p. 92) writes that the 'pattern of initial disaster' of the first closed-heart operations set a precedent that was important in the next phase of open-heart cardiac surgery, 'encouraging surgeons to persist even though at times their operating theatres resembled killing fields'.
11. Renée Fox commented during a witness seminar that she would add to her early work (Fox and Swazey, 1974) concerning reasons for the heart transplant moratorium that 'the pressure to cease and desist can also come from the media', a point that seemed evident from the seminar discussions (Tansey and Reynolds, 1999, p. 46). Rivett also mentions 'adverse publicity' as one of the concerns contributing to the British moratorium (1998, p. 223). Neither author, however, has explored this point in detail.
12. Current histories of medicine do not identify the heart transplants as sociopolitically salient events. For example, Hardy (2000) identifies the 1960s as a time when a 'more critical public attitude towards medicine and medical practitioners' developed, but heart transplantation is not seen as relevant to this. Although she describes the first heart transplants as having a 'disastrous early history', this is a comment on high mortality rates only and not identified as a moment of changing public trust in and expectations of their doctors. Saks' (2000) discussion of medicine in relation to the 'counter culture' mentions that overt criticism has been commonest in 'areas of experimentation such as organ transplantation that give rise to fundamental social concerns', but uses examples such as the antipsychiatry movement, thalidomide and breast-cancer surgery to exemplify the concerns of the time, leaving out heart transplantation altogether. Likewise, Lock (1997) states that the public was involved in ethical debates surrounding transplants, but does not discuss this in relation to growing public disillusionment with medical science.
13. Critical attitudes towards health and medicine are often considered to have developed in the 1970s, notably marked by intellectual critiques from Illich, Foucault and McKeown. While Hardy (2000) claims that 1945–80 was a period of 'innovation, excitement and the expectation of progress', Berridge (1999) periodizes 1948 to 1974 (when the NHS was re-organized) as a time when faith in 'high-tech' medicine was at its peak, for reasons including the fresh possibilities of transplantation. How to periodize and where to see continuities and turning points is a much wider historiographical issue, with little consensus amongst twentieth-century historians. For example, Morgan (1990) labels 1961–79 as the 'years of retreat' (with smaller periods defined such as 1964–67, 'Labour blown off course'); Clarke (2004) groups together 1963–70, the last year ending with the replacement of Wilson's Labour government with the Conservatives; Hobsbawn's sweeping international history of the twentieth century, on the other hand, broadly defines the period 1947–73 as 'the Golden Age', ending with the OPEC oil crisis of 1973. Post-war advance and then decline after 1973 is re-visited

and debated in Black and Pemberton (2004) and the interpretation of a declinist welfare state is challenged in Edgerton (2006).

14. For example, Marwick (1982, 1999); Kurlansky (2003).
15. The only scholar thus far to have directly and rigorously tackled changes in medical–media relations in post-war, NHS-served Britain is Kelly Loughlin. In a number of recent articles (Loughlin, 2000b, 2002, 2005a, 2005b, 2005c), Loughlin addresses points that are of central importance to this book: how and by whom information is managed, the formation of 'information elites', the changing roles of press and public relations in medicine, and the questioning of medical professional ethics and journalistic roles and conduct. Some of the chapters in Berridge and Loughlin (2005) look at the impact and history of the media in post-war public health, and Virginia Berridge's (1998, 2007) own work on anti-smoking research and campaigns in Britain also provides a valuable historical insight into the mobilizing of the media by the medical establishment in post-war Britain. For the earlier interwar period, Timothy Boon's (1999) work on public health films and documentaries gives an excellent analysis of the way in which these highly contested information sources were constructed and received. General histories of medicine such as Porter (1997) and Bynum and Porter (1993) do not directly address the media in relation to medicine. Cooter and Pickstone (2000) and Rivett (1998) are the exceptions. The former contains a short chapter by Lederer and Rogers on the media and medicine which itself draws attention to the lack of scholarly attention given to 'the intersections of medicine and twentieth century media' (Lederer and Rogers, 2000, p. 501). Rivett (1998) contains useful sections on 'medicine and the media', although they are separated off from, for example, sections on 'cardiology and cardiac surgery'. My aim is to synthesize such histories.
16. For example, Bert Hansen's exploration of nineteenth-century medical 'breakthrough' stories and 1940s comic-book medical 'heroes' and their effects on American public perception and expectations (Hansen, 1998, 1999, 2004). Also on the United States, Burnham (1987) addresses the history of science and medical journalism; Turow (1989) looks at the representation of doctors in American fictional medical television shows from the 1960s to the 1980s; and Pernick (1996) explores twentieth-century American medical motion pictures and eugenics. Nancy Tomes has recently completed the online Medicine and Madison Avenue Project (http://scriptorium.lib.duke.edu/mma/), investigating the relationships between medicine and advertising in the first half of the twentieth century. A number of these authors have contributed to Reagan, Tomes and Treichler (2007) – a more recent compilation of essays relating to medicine and the media in the United States.
17. Accounts of transplants written by journalists include Hawthorne (1968), which documents the medical background to heart transplantation, and the competitive media coverage of Barnard's operation; Thompson (1972), also written soon after the first heart transplants, focuses on the competing professional lives of American cardiac surgeons Michael DeBakey and Denton Cooley; Stark (1996), which overviews the development of different types of transplant surgery and their societal implications [also made into a documentary series, *Knife to the Heart* (BBC, 1996)]; Logan (2004), a biography of Barnard as celebrity surgeon; and most recently McRae (2006) on the 'race to transplant the first human heart'. The journalist and sociologist Anne Karpf has one chapter, 'Take heart', dedicated to transplants and the media in Karpf (1988). However, her account is historically

misleading, implying continuity from the first heart transplants to those 20 years later and omitting the fact that there was a ten-year moratorium during the 1970s.

18. For example, Lansman, Ergin and Griepp (1989); Shumacker (1992); Westaby and Bosher (1997); DiBardino (1999); Kirklin, Young and McGiffin (2002).
19. The anthropologist Nancy Scheper-Hughes' politically engaged work on the illegal trade in organs and the commodification of body parts has been particularly illuminating. Scheper-Hughes has conducted a ten-year ethnographic study of the global traffic in human organs in various locations including South Africa, Brazil, Israel and India. See, for example, Scheper-Hughes (2000), and essays in Scheper-Hughes and Wacquant (2002). Scheper-Hughes (2004) details her ethnographic method and dilemmas arising from research into areas often associated with criminality. Also see Sharp (2000, 2006) for further related anthropological work on body commodification and transformed notions of personhood brought about by organ transplantation. The social scientist Renée Fox, and medical historian Judith Swazey, also relied heavily on ethnography to inform their innovative and now classic texts on organ transplantation in American society. Fox and Swazey drew on interviews at major transplant and dialysis centres in the United States, with the main aim being to understand these 'biomedical innovations primarily from the viewpoint of the research physicians engaged in them' (Fox and Swazey, 1974, p. viii). In the 1980s and early 1990s they continued and concluded their studies on developments in organ transplantation and the Jarvik-7 artificial heart. Their departure from this field, after 25 years of involvement, was a value statement, rejecting the 'overly zealous medical and societal commitment to the endless perpetuation of life and to repairing and rebuilding people through organ replacement' and believing that 'such unexamined excess' can and already has brought 'human suffering and . . . social, cultural and spiritual harm' (Fox and Swazey, 1992, p. 210).
20. A five-part documentary series, co-produced by the BBC (1987), on pioneers of modern surgery took up the title *The Courage to Fail*. The series contains relevant audio-visual material for my project and can be found in the Wellcome Library's Moving Image and Sounds collection, London.
21. *Time*, 3/5/1963, p. 32.
22. See Durant, Evans and Thomas (1992) and Bauer (1998). A study conducted by The Science Museum Media Monitor (Bauer et al., 1995), involving a content analysis of 6000 articles from British newspapers between 1946 and 1990, demonstrates a sharp increase in medical press articles since the 1980s, with biomedical articles coming to dominate physical science articles. This period coincided with the rise of HIV/AIDS awareness in medical, public and policy arenas alike, a topic that has received particularly great attention from both modern medical historians and media researchers. See, for example, Berridge (1996); Epstein (1996); Miller et al. (1998).
23. This work has been largely concerned with science and/or medicine *in* the media: how science and scientists are represented in the media, the sources of authority and the language used in science reports, how 'risk' is discussed, and how science in the media 'influences' public and policy opinions (e.g., Klaidman, 1991; Tulloch and Lupton, 1997). Silverstone (1985) is one of the earliest and best works specifically analysing science on television, and Nelkin (1987) on press coverage of science. Gregory and Miller (1998) is a key text that brings together much of the science communication scholarship from the late 1980s and 1990s. Academic interest in (and the formation of the subdiscipline of) science communication

developed after the Royal Society's 'Bodmer report' set up the Committee on the Public Understanding of Science (CoPUS) in 1985. The Committee included representatives from the Royal Society, the British Association for the Advancement of Science and the Royal Institution, and set in place various schemes with the intention of promoting public understanding and appreciation of science. Bauer (1998) suggests that the PUS movement commenced in the United States in the late 1970s, prior to the British movement of the mid-1980s. Following the House of Lords report, 'Science and society', in 2000, over the last few years there has been a shift from discussing 'public understanding' to 'public engagement', in order to promote an active and involved public, encouraging dialogue and debate, rather than assuming a passive audience to whom scientific knowledge is imparted (Miller, 2001).

24. Such literature tends to focus on analysing discourse: how notions of health and illness are constructed and mediated, their effects on audiences' experiences, perceptions and identities, and the interplay between advertisers, PR departments, pharmaceutical companies and health-care providers. These works usefully elucidate how medical information, advice, stories and images permeate our lives, but they are largely ahistorical. See, for example, Friedman (2004); Gwyn (2002); King and Watson (2005); Seale (2004). The essays in Marchessault and Sawchuk (2000) are similarly focused on media representations of illness, health and medicine, but approached from the perspective of 'feminist science studies'.
25. For example Lamb (1990); Veatch (2000); Caplan and Coelho (1998). The discipline of 'bioethics' was formed and institutionalized in the United States, shortly after the early heart-transplant controversy. It is also gaining disciplinary recognition in Britain although medical ethics is still largely studied within and across academic faculties such as philosophy, theology, law and sociology.
26. Rothman (1991) was one of the first studies aiming to historicize twentieth-century bioethics. Lederer (1995) has studied concerns over human experimentation in America between 1900 and 1940, pre-'bioethics'; and Jonsen (1998) has become a standard account of the rise of bioethics in America, challenged more recently by Stevens (2000). See also Weindling (2004) on Nuremberg trials and Nazi medicine; Schmidt (2004) on Nuremberg trials and Cold War medical ethics; and Hazelgrove (2002) on post-war British medical ethics.
27. Philosophical approaches often try to fit the complex ethical issues surrounding transplantation into established ethical frameworks such as utilitarianism or deontology and to use hypothetical situations to test moral frameworks. For example, Veatch (2000, pp. 28–37) and Harris (1999).
28. As discussed further in Chapter 6, Margaret Lock's comparative ethnographic study on organ transplants and the definition and acceptance of 'brain death' in Japan and North America has provided a fascinating insight into how and why 'brain death' has been contested and accepted in these different cultural contexts (Lock, 2002).

1 Making the Heart Transplantable

1. Lawrence (1985, p. 16). Interestingly, this concept of the 'living heart' significantly changed its meaning in the context of heart transplantation, where the 'living heart' could be taken out of an essentially 'dead donor'. There are connections between these two interpretations, however, as the 'living heart' required

for a heart transplant is 'living' by virtue of functioning in the way described by Lawrence.

2. See Frank Jr (1988) for more on electrocardiography.
3. Risse (1999). This trend continued into the 1960s with the emergence of coronary care units, binding cardiology to hospital-based technology. Doctors and nurses were trained to perform closed-chest cardiac massage, defibrillation and resuscitation and relied heavily on monitoring by electrocardiography.
4. Howell (1985).
5. In the late 1930s, growing from the Cardiac Club, the Cardiac Society of Great Britain and Ireland was formed (renamed in 1946 as the British Cardiac Society), with the goal of advancing 'knowledge of diseases of the heart and circulation for the benefit of the public', (Matthews, 1990, p. 2). From 1939 it published the *British Heart Journal*, renamed in 1966 as *Heart*.
6. In 1919 the hospital started formal out-patient and special teaching courses, building much of its reputation on the teaching of ECGs and X-rays (Silverman et al., 2000, p. 85). See also Campbell (1958) for the early history of this hospital.
7. Lawrence (1985). See Marshall (1964) for a description of working at the Westmoreland Street hospital.
8. Lawrence (1992a, pp. 53–54).
9. Richardson (1969, p. 9).
10. Often quoted are the words of the British surgeon Stephen Paget, from his book *The Surgery of the Heart*: 'Surgery of the heart has probably reached the limits set by Nature to all surgery: no new method, and no new discovery, can overcome the natural difficulties that attend a wound of the heart' (Paget, 1896, p. 121).
11. Lawrence and Treasure (2000).
12. Souttar (1925).
13. Le Fanu (1999, p. 91).
14. Treasure (2000, p. 194); Comas, Widmann and Hardy (2006).
15. Treasure (2000, p. 196).
16. See Pelis (2007) for a description of pre-NHS blood transfusion in inter-war Britain, in particular the London Red Cross Blood Transfusion Service started in 1926 and its precursor, the Camberwell Red Cross.
17. Silverman and Leatham (2000, p. 93).
18. Julian and Pentecost (2000, p. 74).
19. 'A new drive against heart disease', *New Scientist*, 13/6/1963, p. 592. Between 1963 and 1966 the BHF spent on average £175,000 on heart research throughout the country for over 130 different research projects with therapeutic as well as diagnostic aims. Crudely calculated, this would be equivalent to just over £2 million today.
20. Rivett (1998, p. 63).
21. Tröhler (1993, p. 1024).
22. Holmes Sellors (1967, p. 393).
23. See Hughes (2002) for an account of the making of the atomic bomb and 'big science'; Neushul (1993) for the mass production of penicillin. For a critical historiographic overview of the relations between war and medicine see Cooter (2003), who questions the dominant 'progress through bloodshed' thesis.
24. Cardiac surgery commenced earlier in larger hospitals such as Harefield, Guys, The Brompton and The Middlesex due to their pre-existing surgical infrastructures that could facilitate a range of surgical specialities.

25. In the mid-1960s, Ross developed a successful procedure to treat aortic stenosis by using the patient's own pulmonary valve as a graft to replace the aortic valve. A pulmonary autograft could also be used in place of a patient's mitral valve (Ross, 1967). In addition, Ross developed a procedure for treating pulmonary atresia (the failure of the pulmonary valve to develop) by grafting a cadaveric aortic root containing its valve (Ross and Somerville, 1966). Aside from his work on valve replacement, Ross also pioneered work on a new hypothermia technique using veno-venous cooling. When combined with perfusion techniques, this development enabled therapeutic open-heart surgery allowing ten crucial minutes inside the heart to operate (Treasure, 2000, pp. 203, 206).
26. At around the same time, John Gibbon in Philadelphia developed a different version of the heart–lung machine. In the year preceding the first clinical use of these machines, Walton Lillehei and Richard Varco at Minneapolis performed open-heart surgery using a method of cross-circulation, whereby the patient's blood was connected to that of an adjacent live 'donor' (Fleming, 1997, p. 223). This was highly innovative but had associated risks not only for the patient, but also for the donor (usually a parent), so gave way to the heart–lung machine.
27. Cleland et al. (1968).
28. In the inter-war years, a more 'holistic' approach was taken to the body and disease (Lawrence and Weisz, 1998), but a mechanistic, reductionist approach fully returned after the Second World War.
29. In fact, in Melrose's original paper, he described two pumps: one to act as the right side of the heart to supply blood to the substitute 'lung' and another as the left side, returning the newly oxygenated blood to the recipient (Melrose, 1953, p. 59).
30. Friedberg (1966, p. 1768); Rivett (2000, p. 36).
31. Foreword by Aird in Melrose (1953, p. 57).
32. Harvey (1628). *An Anatomical Study of the Motion of the Heart and of the Blood in Animals*.
33. Quoted in Pelis (1997, p. 203). Fuchs (2001) gives a detailed study of Harvey's belief in 'vitalistic' aspects of the heart, stemming from Aristotelian foundations, and contrasting to a Cartesian 'mechanistic' heart.
34. The term 'spare-part', in relation to the body, started to be used in the early 1960s.
35. Longmore (1968, p. 93).
36. Longmore (1971, p. 20).
37. Ibid., p. 23.
38. Ibid., p. 172.
39. McKellar (2004, pp. 14–16).
40. Haldane (1939, p. 180–81).
41. The whole field of artificial organ replacement was developing in the 1950s, mainly after the success of the artificial kidney machine (dialysis machine). The first convention of the American Society for Artificial Organs took place in 1955. Willem Kolff, pioneer of the artificial kidney, in particular worked extensively on creating various artificial heart prototypes in the 1950s, and implanted the first artificial heart into a dog in 1957 (McKellar, 2004, p. 16). Michael DeBakey was also one of the first artificial heart investigators in the early 1950s and was instrumental in securing the NIH funding (DeBakey, 2000).
42. Researchers were also encouraged by recent developments in heart bypass and cardiac pacemakers (McKellar, 2004, pp. 17–18).

43. Shapiro (1969, pp. 243, 257).
44. Richardson (1969, p. 9).
45. Recent examples include Hakim and Papalois (2003), Weisse (2002), Kirklin, Young and McGiffin (2002).
46. For example, Hakim and Papalois (2003, p. xvii).
47. Schlich (1995, pp. 311–13).
48. Westaby and Bosher (1997, p. 253).
49. Calne (1970, p. 1).
50. Holmes Sellors (1968, p. 530).
51. Barnard (1967, p. 1271).
52. Hopwood (2000, p. 387).
53. Schlich (2004, pp. 71–72). The gland had been removed to treat goitre (an enlarged thyroid) which inadvertently uncovered its physiological function.
54. In the 1880s and 1890s, gland transplantation and therapeutics using extracts from secreting glands shared common principles based on the science of experimental physiology. In the early twentieth century, endocrinology and transplantation practices diverged as endocrinologists increasingly focused on 'hormone' therapies, but 'organotherapy' using animal tissues continued apace into the 1920s and 1930s, especially after the work of Alexis Carrel. The most famous documented case of 'organotherapy' is that of the Russian-born, Parisian surgeon Serge Voronoff who claimed that transplanting monkey testicles into humans would rejuvenate ageing men. He performed hundreds of these operations in the 1920s; although this process did not achieve its desired goal and was then ridiculed, Voronoff was supported by many medics and vets as well as the French government. See Hamilton (1986).
55. Carrel and Guthrie (1905); Carrel (1907).
56. Schlich (1995, p. 319).
57. Carrel (1907, pp. 27–28).
58. Stark (1996, pp. 20–21).
59. Medawar conducted this research at the Glasgow Royal Infirmary, where he worked alongside the Scottish surgeon Tom Gibson. Their results were published in their seminal paper, 'The fate of skin homografts in man', *Journal of Anatomy*, 1943, pp. 299–310. For more on the life and work of Medawar, see his autobiography (Medawar, 1988); Tilney (2003, pp. 109–24); and 'Sir Peter B Medawar obituary', *The Times*, 5/10/1987, reprinted in Terasaki (1991, p. 3).
60. Lawrence (1992b, p. 1).
61. Lawrence suggests that American surgeons were likened more to frontiersmen, whilst the European surgeon was akin to the imperial explorer (Lawrence, 1992b, p. 29). As Brieger (1992) demonstrates, surgeons have been described as heroes since at least the mid-nineteenth century.
62. Porter (2002, p. 129). See Pressman (1998) for an account of the rise and fall of psychosurgery in American psychiatry.
63. Tröhler (1993, p. 1024).
64. In the United States in 1952, Paul Zoll introduced the first external cardiac pacemaker to regulate the heartbeat. Within the next decade small implantable cardiac pacemakers were developed using new electronic technologies. See Jeffrey (2001) for an in-depth study.
65. Rostron (2003, p. 282).
66. Stark (1996, pp. 30–31).
67. Calne (1998, p. 57).

68. Woodruff (1996, p. 139).
69. Stark (1996, p. 48).
70. It is beyond the scope of this book to analyse the history of kidney transplantation in any depth – how and why it started and continued – but my study of heart transplantation should demonstrate the approach that such an analysis would need to take, considering socio-political settings alongside technical developments and operation outcomes. Patient statistics are not exclusively determining.
71. The surgeon Vladimir Demikhov at Moscow State University is often acknowledged as an early pioneer of cardiac transplantation. He started work in the 1940s and developed a technique of inserting the donor heart into the thorax whilst leaving the original heart to act as an auxiliary pump. However, during the Cold War, exchange of information with Russia was limited and the first English translation of his work was not until 1962, when he also visited Britain.
72. Lansman et al. (1989, p. 6). For the original paper, see Marcus, Wong and Luisada (1951).
73. Richardson (1969, p. 315).
74. This was conducted by Wilford Neptune and his colleagues in Philadelphia.
75. *Time* was an American publication, but an Atlantic edition was widely distributed in several different countries, including Britain.
76. *Time*, 25/3/1957, p. 45.
77. *Time*, 3/5/1963, p. 42.
78. 'Heart–lung machine for underwater life?', *New Scientist*, 25/10/1962, p. 190.
79. *Time*, 3/5/1963, p. 32.
80. After the Second World War, building on techniques and technologies developed in wartime, vast sums of money were pumped into space science. The goals of the 1950s were to create an Intercontinental Ballistic Missile and to launch artificial satellites for commercial, scientific and military purposes. The United States and Soviet Union were rivals in the race to develop space science, and in response to the Russian launch of Sputnik in 1957, the United States set up the National Aeronautics and Space Administration (NASA) in 1958 which further boosted resources into space science during the Cold War. See McDougall (1985) for a political history of the space age covering the Soviet Union, North America and Europe.
81. *New Scientist*, 14/11/1963, p. 366.
82. Rosenberg and Snyderman (1969, p. 110).
83. Wolstenholme and O'Connor (1966, p. 65).
84. For example, the Brompton Hospital had an international reputation for thoracic surgery, visited in the 1940s by American pioneers of cardiac surgery, Dwight Harken and Denton Cooley. In the late 1940s, Guy's Hospital formalized an exchange programme with consultants at John Hopkins in Baltimore (Lawrence and Treasure, 2000, pp. 665–66).
85. Atkins (1965, pp. 175–76).
86. Fox and Swazey (1974).
87. Ibid., pp. 110–11.
88. Le Fanu (1999, p. 84).
89. Cooper (1992, pp. 42–43).
90. Lawrence and Treasure (2000, p. 665). For example, in 1948 surgeons Harken and Bailey in the United States and Russell Brock in London simultaneously performed successful operations for mitral stenosis. Although this has subsequently

been presented as an extremely significant start to therapeutically successful cardiac surgery, medical textbooks of the time described the procedure as reckless and without scientific grounding and it was not at first widely adopted (Treasure, 1997, p. 104).

91. Kantrowitz (1998).
92. In 1959, Cass and Brock documented five autotransplants, in which the heart was taken out and put back into the same animal, establishing that the organ could be removed and restarted. Autotransplants were significant not only because of their implications for orthotopic transplants, but also because if successful, they would create the potential to remove, repair and replant a heart in a more flexible way than in situ surgery (Cooper, 1968, p. 178).
93. Cass and Brock (1959, p. 285).
94. Kirklin, Young and McGiffin (2002, p. 7).
95. Lower and Shumway (1960).
96. Dong, Shumway and Lower (1991, p. 442).
97. Homotransplantation (now called 'allotransplantation') referred to the transplantation of organs from one animal to another of the same species (as opposed to xenotransplantation).
98. Bing et al. (1962, p. 275).
99. Hudson (1965). Hudson was a consultant pathologist to the National Heart Hospital and Institute of Cardiology.
100. Friedberg (1966, p. 1775).
101. Kirklin, Young and McGiffin (2002, p. 4). Kantrowitz started his experimental work in 1961. For his own recollections see Kantrowitz (1998).
102. Hardy (1999).
103. Hardy and Chavez (1968, p. 774).
104. Hardy et al. (1964, p. 114).
105. For example, Hardy and Chavez (1968) and Hardy (1999).
106. Lansman (1989, p. 15).
107. Richardson (1969, p. 322).
108. Lansman (1989, p. 15); Hakim and Papalois (2003, p. 197).
109. DeBono (1966) described lung, heart and liver transplantation.
110. The BHF also awarded £3330 to researchers at St Mary's Hospital in London for work on the mechanism of rejection of cardiac and kidney grafts (British Heart Foundation, 1967, p. 2).
111. British Heart Foundation (1967, p. 2).
112. In 1965, with support from Donald Ross, Longmore was granted £700 for 'assistance for the purchase and maintenance of dogs at the Royal Veterinary College'. A further £860 was requested and granted by the National Heart Hospital endowment fund 'for the purchase of pumps and general equipment for the further study of transplantation of heart and lungs' (NHLI: 00010, Institute of Cardiology, Research and Education Sub Committee minutes, no. 39. 19/1/1966, National Heart and Lung Institute (NHLI) archives, Imperial College, London).
113. Tansey and Reynolds (1999, p. 6).
114. Longmore (1968, p. 34).
115. Richardson (1969, p. 51).
116. Risse (1999, p. 588).
117. Porter (1967, p. 551).
118. Hairston (1965, p. 1).

119. Ibid., p. 7.
120. See Dausset, Hamburger and Mathé (1968) for proceedings.
121. Tansey and Reynolds (1999, p. 6).
122. Longmore recollected that after taking legal advice from McFarlanes solicitors, the Vet College were told 'they were so out of date that they could only benefit from having active, progressive surgeons in the place' (Tansey and Reynolds, 1999, p. 6).
123. *Time*, 25/3/1957, p. 45.
124. Richardson (1958, p. 228).
125. *The Times*, 5/12/1962, p. 14. News from the Soviet Union was rare in this Cold War period with excessive restrictions on journalists. However, scientific exchange was slightly increasing at this time.
126. *Time*, 2/5/1963, p. 44.
127. *The Times*, 15/7/1964, p. 12.
128. This lecture was delivered at a conference of the European Dialysis and Transplant Association. Kolff emigrated to the United States in 1950 to join the Cleveland Clinic Foundation and later in 1967 became Professor of Surgery at the University of Utah.
129. *The Times*, 26/9/1964, p. 8.
130. Ibid., 31/12/1964, p. 13.
131. Ibid., 2/7/1965, p. 15.
132. Richardson (1969, p. 321). For the original paper, see Lower and Shumway (1964).
133. Tansey and Reynolds (1999, p. 7).
134. Longmore (1968, pp. 162, 163, 179).
135. The CIBA Foundation was established for the 'promotion of international co-operation in medical and chemical research'. The doors were first opened to the public in 1949. The emphasis was greatly on the international dimension, in contrast to the predominantly British medical research supported by bodies such as the MRC, the Royal Society of Medicine and the Wellcome Trust (Lee and Spufford, 1993, p. 42). The idea of the symposia was to provide a private homely atmosphere in which to bring together small groups of scientists from around the world to promote discussion in the conference and also in private discussions in the course of the, usually three-day, meeting. From the early 1960s, symposia begin to include broadly social aspects of science, the first being *Man and his Future* in 1962. *Man and Africa* followed in 1965, a year before the 1966 symposium on ethics and transplantation.
136. Wolstenholme and O'Connor (1966, p. 176).
137. Ibid., p. 190.
138. Lee and Spufford (1993, p. 49).
139. *The Times*, 11/6/1964, p. 10.
140. 'Way is clear for heart transplant', *JAMA*, 202, pp. 31–32.
141. *Daily Mail*, 20/11/1967. Where page numbers are not given for newspaper references, clippings can be found in National Archives, Public Records Office (from hereon NA PRO:), file MH150/412.
142. Rosenberg (1969, p. 55). Also see Kantrowitz (1998, p. 246), where the telegram is reproduced.
143. NA PRO: MH150/411, 24/11/1967. (From hereon, dates are given for NA PRO archives when in the original documents. Folio numbers are also given where possible.)

144. NA PRO: MH150/411, 27/11/1967.
145. Archives of Sir (James) Keith Ross (hereafter, KR:) GC/238/8/1/2, Archives and Manuscripts, Wellcome Library for the History and Understanding of Medicine, London.
146. KR: GC/238/8/1/1.
147. Tansey and Reynolds (1999, p. 8).
148. The note was written a couple of weeks after Longmore's letter to the Ministry and the *Observer* article (NA PRO: MH150/411, 6/12/1967).
149. KR: GC/238/8/1/1.

2 Communicating Medicine in Post-War Britain

1. Harris (1992).
2. Thompson (2000, pp. 51–52). A recent challenge to the definition of a professional journalist is the notion of 'citizen journalism', largely spawned by the proliferation of 'blogs' and online news (see Allan, 2006).
3. Although there was a stylistic distinction between 'popular' and 'quality' newspapers, this did not necessarily map on to 'tabloid' and 'broadsheet' sizes. For example, the *Daily Mail* was not tabloid size in the 1960s and neither was the *Daily Express* until 1977. In recent years, a number of broadsheet-size newspapers, such as *The Times* and *Independent*, have adopted a tabloid format, but label themselves 'compact' to avoid 'down-market' connotations. The *Guardian* and *Observer* have adopted a new size, between the tabloid and broadsheet, called the 'Berliner' or 'midi'.
4. For example, *The Medical Advisor and Guide to Health and Long Life* (1823–25) and *The People's Medical Journal and Family Physician* (1850–51). See Loudon and Loudon (1992, p. 59).
5. The *BMJ* was formed as the journal of the BMA. The Provincial Medical and Surgical Association, founded in 1832, became the BMA in 1855, a professional body for general practitioners.
6. Peterson (1978, p. 36).
7. One way of creating this image was by circulating highly crafted portraits using the new photographic technology, whereby doctors could represent themselves as respectable, dignified gentleman and members of a single profession (Fox and Lawrence, 1988, pp. 22–23).
8. Peterson (1978, p. 196).
9. Bynum and Wilson (1992, p. 43).
10. Peterson (1978, p. 252). Disallowance of advertising was used in many different ways. For example, it was through medical professionals classifying mid-nineteenth-century anatomy museums as a form of 'indecent' advertising, and outlets for 'quack' activity, that such museums were shut down in London. See Burmeister (2000).
11. 'Indirect methods of advertising', *BMJ* ii, supplement, 11/4/1925. See Morrice (1994) for an in-depth discussion of doctors and 'indirect advertising' in the 1920s.
12. Morrice (1994, p. 270 n. 100).
13. Smith (1993, p. 59).
14. Peterson (1978, pp. 282–86).
15. Porter (1992, p. 11).
16. Fox and Lawrence (1988, p. 29).

17. In such cases, as McLaren has argued for late Victorian Britain, doctors' willingness or perceived duty to divulge information or maintain confidentiality was influenced by their patients' class, race and gender (McLaren, 1993). Whereas, for example, in Germany, confidentiality was a legal requirement for doctors, as stated in the Penal Code of 1871, in Britain there was no such legal obligation. But even when physicians were legally bound by medical confidentiality, there were serious challenges to upholding patient privacy. Maehle (2003) argues that there was a noticeable change of ethos in the early twentieth century that started to put public interest before patient privacy. Later chapters explore this conflict in some depth for the case of human heart transplantation.
18. Morrice (1994, p. 255).
19. Concern over occupational health also became a pressing issue. Rosner and Markowitz (1991) exemplifies this for the United States.
20. See Morrice (1994) for further discussion. The first lay member of the GMC's jury was appointed in 1926.
21. Boon (1999).
22. Karpf (1998, p. 39).
23. The Central Council for Health Education was set up in 1927.
24. See Loughlin (2005c).
25. Ibid., p. 305.
26. Another source for such information was the BMA's *Family Doctor* magazine, from 1951, written for the lay public to promote health, prevent disease and explain the workings of the body.
27. His successor, John Maddox, who joined the *Manchester Guardian* in 1954, became an extremely well-known and well-respected journalist, becoming editor of *Nature* magazine in 1966.
28. As with medicine, 'public science' has a long tradition. In the nineteenth century, scientists often wrote for the daily press and gave public demonstrations and lectures to an increasing urban class, frequently using the public forum to legitimize and rehearse arguments, especially at times of controversy. For medico-scientific research, historians have paid particular attention to the use of the media and public by early germ theorists, especially Louis Pasteur. See Bucchi (1997) for a focused study on Pasteur's demonstration of his anthrax vaccine and enrolment of media and public audiences; Hansen (1998) for the media coverage of Pasteur's rabies vaccine; and Tomes (1998) for an analysis of how germ theory was accepted and assimilated into everyday American life.
29. See Werskey (1978) for an account of British scientists and socialists in the 1930s including Haldane and Bernal. Haldane was also involved in documentary filmmaking. See Boon (1993) for Haldane's part in the film *The Smoke Menace* in 1937. Haldane's *Science and Everyday Life* (1939) comprises a collection of articles he wrote for the Communist *Daily Worker*. In the preface to a later edition, printed in 1943, Haldane lamented that the *Daily Worker* (which since 1939 had been suppressed but again permitted to appear) was the only British daily newspaper that published a regular scientific article.
30. See Wildy (1986) for a discussion of the publicity surrounding the introduction of the NHS.
31. Loughlin (2005a, p. 207).
32. Patients were generally shown as obedient receivers of medical charity and pictures of patients alongside benefactors were common, especially of royal visits to

hospitals. Nurses too were very visible components of medical photographs, but with changing depictions: from caring for patients, to raising funds for hospitals, to medical research fundraising, to increasingly sexualized uniformed women (Fox and Lawrence, 1988, pp. 183–84).

33. Fox and Lawrence (1988, p. 50).
34. Lederer and Rogers (2000, p. 494).
35. Before this censorship, in the silent films of the 1910s and 1920s doctors were often caricatured and satirized (Lederer and Rogers, 2000, p. 488).
36. Fox and Lawrence (1988, p. 187).
37. See Loughlin (2005a) for an in-depth analysis of this incident.
38. Loughlin has argued that the story was more complicated than Aird suggested: for the Nigerian twins, Aird had encouraged the use of the United Africa Company PR office, arranged a press conference for journalists to question and photograph the twins' mother and had also brokered a magazine deal for her story. He also had the operation filmed and screened it at the Royal Society of Medicine. His attitude towards the publicity of this operation was in stark contrast to the second operation where the white middle-class parents of those twins demanded confidentiality. Aird, as their close personal friend, defended their wishes (Loughlin, 2005a).
39. The meeting was arranged mainly by the BMA's PR Committee who invited representatives from the numerous press organizations. Details are recorded in *BMJ*, 12/3/1955, p. 677.
40. *BMJ*, Supplement, 29/10/1955, p. 100.
41. This was the definition given by one of PR's 'founding fathers', Edward L. Bernays. The term came into general public usage in Britain after the appointment in 1933 of a 'public relations officer' at the Post Office, Stephen Talents, the 'father of British PR' (Tunstall, 1964, pp. 155–57).
42. Loughlin (2005c, p. 298).
43. Karpf (2000, p. 43).
44. Kisch (1964, p. 27).
45. Tunstall (1971, p. 175).
46. In the 1950s television party political broadcasts were initiated in Britain and televised presidential news conferences in the United States. By the mid-1950s, PR election campaigns had begun.
47. Miller et al. (1998, p. 67).
48. The tactics employed included a whispering campaign against Bevan and distribution of critical articles (Kisch, 1964, p. 32). In America, a parallel story occurred with the medical profession's resistance to government health insurance. Between 1938 and 1945, their PR and lobbying arm, the National Physicians Committee, spent around $1 million to thwart its enactment (Kelley, 1956, p. 69).
49. Tunstall (1964, p. 157).
50. In 1960, the PRO position was discontinued, and the PR Department changed into the Press Information Department. See Loughlin (2005b) for an in-depth study of the BMA, press and PR.
51. Thistlethwaite (1997, p. 3).
52. Loughlin (2002, p. 140).
53. Expounded in Berridge (1998, 2007). Also see Booth (1998) for how the Royal College of Physicians became involved in the campaign against smoking.
54. Kisch (1964, p. 160).

55. Briggs and Burke (2002, p. 255).
56. Cox (1995, p. 5). The main news agencies were Reuters (founded in 1851) and the Press Association (founded in 1868).
57. By this time they had negotiated receiving agency tapes directly, instead of the summaries, and were able to broadcast from 6.00 P.M.
58. Silent newsreel began in Britain in 1910 and sound started in 1929. Newsreels were updated bi-weekly as film showings were changed and they became an integral component of increasingly popular cinema outings. Television was to force the demise of newsreel in the 1950s and 1960s, but it posed little threat when transmission started.
59. Cox (1995, pp. 12–13).
60. BBC programmes which contributed to these developments included *Foreign Correspondent* in 1949, and *Panorama*, *This Week* and *Tonight* during the 1950s.
61. Radio news broadcasters had only started to be identified during the Second World War due to the fear that the Germans might attempt to broadcast fake bulletins (Kumar, 1977, p. 240 n. 20).
62. BBC paternalism was also challenged in radio with a handful of extremely popular but illegal 'pirate' radio stations that played pop music; the first was Radio Caroline, broadcast from the North Sea in 1964. The pirate stations forced the BBC to change its programming and start Radio 1 in 1967; it provided similar popular music and even employed some of the pirate DJs (Briggs and Burke, 2002, p. 227).
63. See Greene (1969) and Cox (1995). Hugh Carlton Greene, Director of News and Current Affairs in 1958, greatly influenced BBC news output and later became Director General in 1960. Geoffrey Cox was Editor of ITN 1956–68 and founder of *News at Ten*.
64. For its first two years BBC 2 was available only to people in London and the Southeast of England who fitted a new aerial.
65. The main conglomerates were Lord Rothermere's Associated Newspapers (*Daily Mail*, *Daily Sketch*, *Evening News*); Beaverbrook Newspapers (*Daily Express*, *Sunday Express*, *Evening Standard*); and Cecil King's *Daily Mirror* Group, renamed International Publishing Group in 1963. Roy Thomson owned the *Sunday Times* and from 1966, *The Times*. The *Observer* and *Daily Telegraph* were owned by private companies and the *Guardian* by the Scott Trust.
66. After the war, newspaper party attachments were much less explicit, with only the *Daily Telegraph* (Conservative) and the *Daily Herald* (Labour) retaining any formal party links; however, as Curran and Seaton (1998) argue, the extent to which other newspapers' political partisanship declined has generally been overstated. Nonetheless, whatever the informal political associations of newspapers, the proprietors, editors, journalists and readers of each newspaper often had significantly different political leanings.
67. Altman, Thomas and Sawers (1962, p. 49). For example, in 1961 the *Daily Mirror* Group took over Odhams, publishers of around 200 periodicals, and also had a stake in Associated Television, which provided programmes to ITV (Briggs and Burke, 2002, p. 212).
68. ITA was the body created by the Television Act of 1954 to supervise the creation of ITV. See Hill (1974) for his autobiography.
69. Hill in Hill et al. (1968, p. 149).
70. The quality newspaper daily circulations in 1968 were 1.3 million for the *Daily Telegraph*, 300,000 for the *Guardian*, and 400,000 for *The Times*. The popular

dailies had a significantly larger circulation (*Daily Mirror*, approximately 4.8 million; *Daily Express*, 3.7 million and *Daily Mail*, 2 million) but these were still generally much lower figures than for television audiences (Negrine, 1994, p. 51).

71. Briggs and Burke (2002, p. 244).
72. Essex-Lopresti (1997, p. 61).
73. *New Scientist* started in 1956 as a weekly popular magazine composed of articles written by scientists, identifying itself with other British weekly journalism such as the *Economist* and *New Statesman*.
74. 'Television in the 1960s', *New Scientist*, 25/2/1960, p. 456.
75. 'The widening use of television in medicine', *New Scientist*, 7/12/1961, p. 604.
76. However, widespread use of video recording was not until the introduction of the Video Cassette Recorder (VCR) in 1971.
77. *Medical Tribune*, 14/4/1966, p. 6.
78. From 1966, these programmes were shown during a 'teaching term' of 6 weeks, at 11.20 P.M., with a lunchtime repeat on BBC 1 that gave them national coverage (Essex-Lopresti, 1997, p. 62).
79. Anderson in Hill et al. (1968, p. 157).
80. Fletcher (1973, p. 79).
81. The controversy over *Your Life in Their Hands* is discussed in Karpf (2000), Lawrence (1990) and more thoroughly in Loughlin (2000b) (and reprinted in Loughlin, 2002).
82. Loughlin (2002, p. 131).
83. *Matters of Life and Death* and *Matters of Medicine* were broadcast in the early 1950s, and in 1954 and 1956 the BBC ran a series *Thursday Clinic*, the forerunner to *Your Life in Their Hands*, which consisted of live outside broadcasts from St Mary's and Paddington Hospitals in London. Medical procedures (such as electroconvulsive therapy) had previously been aired on *The Hurt Mind* in 1957, which aimed to alter prevalent public attitudes towards mental health by focusing on the nature of mental illness and its associated therapies.
84. Lawrence (1990) describes doctors' anxiety of not being in control of television's distributed audience in relation to traditional forms of public medical presentation, such as exhibitions and museums, where the viewers and their interpretation of such material are much more contained (discussed in Loughlin, 2000b).
85. Fletcher was not actually named on the programme, but was named in press articles shortly afterwards.
86. 'A little learning is a dangerous thing' is an often quoted, and arguably decontextualized and hence misrepresented, phrase originally found in Alexander Pope's *An Essay on Criticism* (1711). Similar arguments are found today regarding the internet's potential for increasing self-diagnosis and hypochondria amongst users.
87. *New Scientist*, 22/6/1961, p. 724.
88. Fletcher in Hill et al. (1968, p. 152).
89. Karpf (2000, p. 124).
90. Specialist journalism had originally involved coverage of specific events in the stock market, the courts, sport, and letters from abroad comprising 'foreign correspondence'. In the twentieth century, the emphasis changed to journalists probing deeper into behind-the-scenes politics of events rather than just reporting on the events themselves. Hence, 'lobby correspondents'

became more eminent than the Parliamentary gallery reporters, and 'crime correspondents' more eminent than reporters of the criminal courts (Tunstall, 1971, p. 74). As Tunstall's research shows, some specialist reporting was primarily seen as a means of increasing newspaper advertising revenue, such as motoring and fashion, some used to increase newspaper sales, such as crime and sport, and others to increase prestige rather than revenue, such as foreign correspondence.

91. As the space-race continued into the 1960s, the 'science journalist' became an even more established figure, as the same small inner club of writers met at the same events, shared their stories and built up their expertise. See Dunwoody (1986) on the formation of the 'inner club' of science journalists. Although this focuses on the United States, a similar story can be told for England. Tunstall (1971) demonstrates that the same was true for an increasing number of other groups of specialist reporters in the 1960s, who collaborated with each other whilst also attaining greater autonomy from their editors.
92. Gregory and Miller (1998, p. 31).
93. Loughlin (2005c, p. 301). Included in this group of specialists were Alf Browne from the Press Association (who started as a motoring specialist before moving into science, aviation and then medicine), and Ronald Bedford from the *Daily Mirror* (and previously Reuters), another general journalist turned specialist in science and medicine.
94. Loughlin (2005c).
95. Wilson created the Ministry of Technology in 1964. Although Labour remained committed to scientific and technological development, 'white heat' lost its political salience and was de-emphasized in the party's 1966 electoral manifesto. See Edgerton (2006, pp. 230–69) for a historiographic re-evaluation of Labour's technocratic modernisation programme.
96. Vaughan (1995, p. 125).
97. Oakley (1984).
98. MCCH turned into the National Association for the Welfare of Children in Hospital in the 1960s. For an analysis of this association see Hendrick (2003).
99. Cohen (1964, p. 9). See Grant (2003) for an analysis of the Penguin Specials.
100. Seymour-Ure (1991, p. 244).
101. Curran and Seaton (1998, p. 91). This included the closure of the social democratic *Daily Herald*, re-launched as the *Sun* in 1964. The *Sun* was then bought by Rupert Murdoch in 1969 and completely changed its image, politics and contents, making it a direct competitor to the *Mirror*.
102. Tunstall (1971, p. 12).
103. For example, James Wilkinson from the *Daily Express* recalls how as a 21-year-old graduate, he had a feeling of 'being in the same group' as the junior doctors whose stories he was reporting (Loughlin, 2005c, p. 315).
104. Quoted in Schudson (1978, p. 182).
105. Ibid., p. 160.
106. The satire movement was heralded by *Private Eye* magazine, *Beyond the Fringe* theatre, *The Establishment* nightclub and the BBC's *That Was The Week That Was*. All were 'anti-establishment', although the movement was mainly a product of Oxbridge graduates and in fact many of those being satirized made up the core audiences. Later in the 1960s, *Private Eye* took on an investigative dimension and combined it with satire.
107. de Burgh (2000, p. 23).

108. The *Sunday Times* Insight team in particular made its mark in 1963 by exposing the criminal landlord Peter Rachman's terrorisation of immigrant tenants in his Notting Hill properties. This story followed their exposure of the Profumo Affair, also covered extensively by the *News of the World*.
109. de Burgh (2000, p. 61).
110. Gregory and Miller (1998, p. 45).
111. Karpf (2000) argues this point.
112. Pharmaceutical companies did of course advertise in the more traditional medical journals such as the *BMJ* and the *Lancet*.
113. Thistlethwaite (1997, p. 11).
114. Editorial, *World Medicine*, 1st edition, 5/10/1965.
115. 'The aims and scope of this newspaper', *International Medical Tribune of Great Britain*, 7/4/1966, p. 11.
116. Archives of the Medical Journalists' Association's Executive Committee (Hereafter SA/MJA/1/1), 30/6/1966, Archives and Manuscripts, Wellcome Library for the History and Understanding of Medicine, London. The original committee was Dr Donald Gould (*World Medicine*, *New Statesmen* and *New Scientist*), Miss Kay Kelleher (*Practitioner*), Dr J. Leslie McCallum (*Medical News* and the *Guardian*), Mr Alan Massam (*Medical News*), Mr Paul Vaughan (freelance), Mr James Wilkinson (*Daily Express*) and Mr Don May (*Medical News*) as secretary.
117. SA/MJA/1/1, inaugural meeting of Executive Committee, 1/2/1967.
118. Through later agreement to the categories 'honorary memberships' and 'affiliation', some PR people did become associated with the MJA. On the surface, many journalists tended to talk disparagingly of PROs. PR was often discounted as a mere extension of marketing; ironically PR had an extremely bad public image. In practice though, many journalists did freelance work for PR firms and in the 1960s, as many newspapers and periodicals shut down, journalists increasingly entered the PR field full time.
119. Jonsen (1998, p. 15).
120. Lederer (1995).
121. The first book to expose unethical practices amongst hundreds of non-therapeutic human trials was Albert Mill's *Ärztliche Ethik* in Austria, 1902, which prompted government proscriptions (Cooter, 2003, p. 56).
122. Lederer (1995) and Schmidt (2006).
123. See Weindling (2004) for an in-depth study of the origins of informed consent and the Nuremberg Code.
124. Rothman (1991) and Hazelgrove (2002).
125. Schmidt (2006).
126. The two had quite different positions within the medical establishment, Beecher being significantly more distinguished. Pappworth taught a private course for people taking examinations to attain membership of the Royal College of Physicians, and it was through his pupils, often foreign junior researchers, that he learnt about much of the unsound research being carried out in teaching hospitals (Hazelgrove, 2002, p. 118).
127. Kutcher (2001, p. 55).
128. The British playwright George Bernard Shaw coined the term 'human guinea pig' in 1913. He was an adamant anti-vivisectionist.
129. Meanwhile, the Royal College of Physicians discussed human experimentation during the mid-1960s, and a working party made recommendations in July 1967, but did not make them public until 1973. The 'Committee on the

supervision of the ethics of clinical research investigations in institutions' generally found that clinicians maintained a high ethical standard and warned against stringent bureaucratic, rigid controls, but suggested that the appropriate authority at medical institutions, such as the Board of Governors, should ensure that research undertaken was ethical (Hazelgrove, 2002, p. 129).

130. The WMA had originally formulated a set of rules in the early 1950s which were then updated to form the Declaration of Helsinki.
131. Beecher (1966). This article had first been rejected by *JAMA*. Beecher had initially published on research ethics in 1959: 'Experimentation in man', *JAMA* 169, pp. 461–78, but this article received little professional or public acknowledgement (Harkness, Lederer and Wikler, 2001). Pappworth had in fact collaborated with Beecher on this and supplied information on seven of the reported incidents (Pappworth, 1990, p. 1459).
132. Pappworth (1990, p. 1458).
133. 'Doctors, patients and research', *Medical Tribune*, 25/5/1967, p. 5.
134. Thompson (1972, p. 156).
135. *Medical Tribune*, 28/4/1966, p. 20.

3 Creating the Most Famous Operation in the World

1. Porzio (1969, p. 34). This book, *The Transplant Age*, was one of the first comprehensive explorations of the legal and moral aspects of transplantation.
2. *Daily Express*, 22/12/1967, p. 5.
3. Hawthorne (1968), back sleeve of cover.
4. South African news broadcasts about the heart transplant were transmitted only by radio as television broadcasting was not introduced there until 1976. South Africa had both the financial and technological capacity to introduce television earlier, but the Nationalist Party had ideological objections to the medium (Krabill, 2002). Straight after the operation Barnard informed the superintendent of the hospital and the provincial health affairs administrator, who in turn telephoned the administrator of the Cape Province who then called the Prime Minister, John Vorster. Therefore, as Barnard's recent biographer, Chris Logan writes, within an hour of the completed operation, the South African government had been informed (Logan, 2003, p. 12).
5. Malan (1968, p. 47). Most of the 140 or so foreign correspondents for British news organizations were stationed in the United States and Western Europe (Tunstall, 1971, p. 74), so relatively few foreign journalists are likely to have been present in Cape Town already. South Africa also had strict press laws during the apartheid era.
6. *Financial Times*, 4/12/1967, p. 1; *The Times*, 4/12/1967, p. 1. *Sun*, 4/12/1967, p. 1.
7. News flashes of the first heart transplant are shown in 'The man with the golden hands', part of the 1996 BBC *Knife to the Heart* series.
8. See Kantrowitz (1998) for his own account of this operation 30 years after the event. The operation was filmed, but the film was not publicly accessible at the time. The original slides, donated to the National Library of Medicine, and over 200 images can be viewed at: http://dlxs.lib.wayne.edu/cgi/i/image/image-idx?page=index;c=heartic.
9. Dayan and Katz (1992, p. 32) describe in their work on 'media events' (such as John F. Kennedy's funeral and the moon landing) how live television broadcasts proclaim these events' historicity, supposedly just narrating rather than creating

them. A similar analysis is applicable to the immediate newspaper coverage of the first heart transplant.

10. *Daily Mirror*, 4/12/1967, p. 11. Malan (1968, p. 88) claims that the *Daily Mirror* was the 'arch critic of everything South African', yet even this paper lauded the operation.
11. *Daily Sketch*, 4/12/1967, p. 1.
12. See Bud (1998, 2007) for the making of penicillin into a post-war 'icon'. Penicillin was an enormously effective therapeutic, but also a product of British national pride. Bud explains how the British media portrayed penicillin as an essentially British discovery 'stolen' by the Americans; Adams (1991) gives a sense of the vast media attention given to penicillin in post-war United States; Cantor (1992, p. 173) describes how British newspapers reported the hormone cortisone as a 'miracle-drug' and a 'wonder-drug' treatment for rheumatism in 1949 and 1950, when the first British trials started. See Pieters (2004) for an analysis of this kind of reporting for the later case of Interferon, a 'miracle' cancer therapy of the 1970s.
13. *Daily Mirror*, 5/12/1967, p. 1.
14. In November 1962, *Life* magazine published an article by the journalist Shana Alexander, 'They decide who lives, who dies', about the selection process of patients for kidney dialysis treatment in the United States, which drew national attention to the issue. For more on dialysis see Tilney (2003, pp. 149–55); for the history of penicillin rationing in the United States see Adams (1991).
15. *Daily Express*, 5/12/1967, p. 8.
16. The Reith lectures started in 1948 in memory of John Reith, the founding father of the BBC. They were delivered by radio annually by prominent thinkers of the day. Peter Medawar had spoken in 1959 on 'The future of man'.
17. *The Times*, 11/11/1967, p. 22.
18. Leach (1968, p. 16). 'Battery controlled hearts' referred to the growing technology of heart pacemakers at that time.
19. Ibid., p. 59.
20. Ibid., p. 61.
21. *The Times*, 5/12/1967, p. 9.
22. Ibid., 4/12/1967, p. 1; *Daily Mirror*, 4/12/1967, p. 1.
23. *Daily Mail*, 7/12/1967, p. 8.
24. *Daily Telegraph*, 5/12/1967, p. 15.
25. *Sun*, 7/12/1967, p. 1.
26. *Sun*, 12/12/1967, p. 6.
27. *Sunday Times*, 10/12/1967, pp. 45–46.
28. Prior to Barnard's operation, articles had appeared in the British press about the National Heart Hospital's work on heart and lung transplantation (see Chapter 1).
29. *Observer*, 10/12/1967, p. 2.
30. 'The case of the transplanted heart', *New Scientist*, 7/12/1967, p. 584.
31. 'A change of heart', *New Statesman*, 8/12/1967, p. 806.
32. Gould (1985, p. 38).
33. 'An historic heart', *Economist*, 9/12/1967, p. 1035.
34. *Time*, 3/5/1963, p. 32.
35. *Daily Mail*, 22/12/67, p. 1. The other stories referred to a blizzard in London, a rail crisis, the drowned Australian Prime Minister, Harold Holt, and King

Constantine of Greece having to flee the country after his failed attempt to overthrow the Greek military junta.

36. McRae (2006, p. 205–06).
37. *Sun*, 5/12/67, p. 3.
38. *Daily Telegraph*, 5/12/1967, p. 1.
39. *Sun*, 5/12/1967, p. 1.
40. *Daily Mail*, 5/12/1967, p. 5.
41. Thompson (2000, p. 51).
42. *The Times*, 6/12/1967, p. 4.
43. After this time the policy was reversed as many of the new readers were of a low socio-economic status and advertisers objected to paying the premium rates to reach low-spenders outside of their advertising target. Paradoxically then, the new readers were a financial hindrance to the newspaper as advertising did not keep up with the increased circulation. Therefore, the policy was inverted by raising the cover price and taking a more conservative editorial policy so that between 1969 and 1971, 96,000 'unwanted' readers were lost (Curran and Seaton, 1998, p. 100).
44. There was also a general movement to achieve social 'relevance' in early 1960s cinema, novels and plays; 'social realism' became its dominant mode. See Jordan (1981) for an analysis of the styles used specifically in *Coronation Street* to produce what she terms 'Soap-opera realism', a combination of the conventions of social realism and soap opera. 'Documentary realism' started in the 1930s with photographers detailing the daily lives of ordinary people (Fox and Lawrence, 1988, p. 255).
45. Born (2004, p. 39).
46. Morley and Brunsdon (1999, p. 8).
47. *Daily Sketch*, 6/12/1967.
48. Ian Fleming's final James Bond novel, *The Man with the Golden Gun*, had been published in 1965 (the film was not released until 1974) and there are interesting connections to be made to Barnard's representation here as Bond. For example, the novel starts with Bond's resurrection and the story makes the distinction between an 'old world' and a 'new world', into which the new Bond is resurrected. A parallel could be drawn between Barnard's tampering with life and death and the inauguration of the heart-transplant era.
49. 'Heart man broadcasts from hospital ward', *The Times*, 8/12/1967, p. 1; 'Millions hear new-heart-man on radio', *Daily Telegraph*, 8/12/1967, p. 1.
50. *Daily Mail*, 16/12/1967, p. 2.
51. *The Times*, 14/12/1967, p. 6.
52. Thompson (2000, p. 84).
53. Bedford, 'Newspaper circulation wars', unpublished private communication to author, 9/7/2004.
54. *Sun*, 18/12/1967, p. 1.
55. *Daily Mail*, 22/12/1967, p. 1.
56. *Daily Express*, 22/12/1967, p. 5.
57. This was misleading since the onset of pneumonia was fundamentally linked to the immunological drugs used to avoid rejection of the transplanted organ.
58. Quoted in Malan (1968, p. 70). These sentiments resonated with a general structural shift that occurred in post-war science, through the making of 'biophysics' that promoted a 'physics of life' rather than a 'physics of death', promising medical applications from science rather than weapons and destruction. 'Molecular

biology' was one of the fields that came out of biophysics (de Chadarevian, 2002, p. 130).

59. *The Times*, 22/12/1967, p. 6.
60. Hansen (1998, p. 399 n. 50) cites other earlier examples of medical marvels in the United States including Alexis St. Martin, a patient with a gunshot wound that formed a direct opening from his stomach, and Phineas Gage, who had an iron rod accidentally driven through his skull. Both these men were exhibited across the United States in the 1850s. However, he claims that media interest and public awareness were not of a comparable order to the Newark boys' case.
61. Hansen (1998, p. 374). Although Pasteur was already known throughout Europe, Hansen argues that Pasteur's earlier achievements such as his anthrax vaccine received minimal media attention in the United States.
62. Hansen describes the successive, vast media exposures of organotherapy (1889), Koch's tuberculin therapy (1890), diphtheria antitoxin (1894) and X-rays (1896) (Hansen, 1999, pp. 630, 634). He links the development of this kind of reporting to several transformations within journalism at the time, including the ability to produce innovative graphics and typesetting and the introduction of new techniques such as interviews and public fund-raising subscriptions.
63. Hansen (1998, pp. 395–401).
64. See Altick (1978) and Qureshi (2005).
65. Merrick was not only displayed at medico-scientific meetings, such as the London Pathological Society, but his own house was also open for members of the public to visit; after his death, in 1890, even his bones were open for view in the hospital museum. Dreger (2004) argues that not all forms of human display were forced and necessarily derogatory. Between the late eighteenth century and mid-nineteenth century, many individuals with atypical bodily forms had mutually beneficial relationships with physicians, allowing professionals to publish work on the conditions and thereby improve their own reputations, as well as allowing the individuals to use the written medical testimonies for their own financial gain as part of advertisements and pamphlets for self-exhibition.
66. Dreger (2004, pp. 120–23).
67. Fox and Lawrence (1988, p. 26).
68. Ibid., p. 35.
69. The 112 days of Barney Clark's life with his artificial heart were intimately followed by journalists, as were the lives of the Bijani twins in the run-up to their unsuccessful separation surgery. For more on Clark, the artificial heart and media relations, see Broad, 'Dr Clark's Heart: A story of modern marketing as well as modern medicine', (*New York Times*, 20/3/1983, p. 2). Journalists have relentlessly reported on the life of Louise Brown since her birth. July 2003 was her 25th birthday when she was once again widely photographed and interviewed and guest-starred at an IVF clinic party; her giving birth in January 2007 also made headlines around the world.
70. The pioneering transplant surgeon Francis Moore states in his autobiography that the first kidney transplant was 'scarcely noticed in the press' and the first liver transplant was 'neglected by the press' (Moore, 1995, pp. 197–98).
71. Within medical circles, since the development and use of artificial ventilators, notions such as 'coma dépassé' were being discussed and death was already being reframed as a process rather than a single moment (see Chapter 6). However, there was no consensus amongst physicians on new criteria or definitions of

death and certainly in the lay sphere the beating heart continued to demarcate life and death.

72. Barnard and Pepper (1970, p. 478).
73. Ibid., p. 454.
74. Logan (2003, p. 153).
75. *Daily Telegraph*, 7/12/1967, p. 16.
76. *Daily Mirror*, 5/12/1967, p. 6.
77. Sharp goes further to describe the 'language of gift economy' as the 'most elaborate and pervasive rhetoric [involving] the shrouding of body commodification'. The 'denial of transplantation as a form of body commodification', she argues, is a prerequisite for making transplant ideology socially acceptable (Sharp, 2006, pp. 8, 12).
78. Fox and Swazey (1992, p. 32); Sharp (2006, p. 13). Parsons, Fox and Lidz suppose that the origins of the idea of the 'gift of life' are in fact seated in the Judeo-Christian tradition's notion of an individual's birth itself being a 'gift of life' from God. The mother also *gives* birth to her child (Parsons, Fox and Lidz, 1972, pp. 371, 378).
79. Mazrui (1968, p. 55).
80. Furthering Mauss' seminal 1954 work on the gift relationship, showing that gift-giving creates an obligation for the receiver to reciprocate, contemporary anthropological and sociological studies have also highlighted the deep psychological effects of receiving a transplanted organ due to the recipient's inability to reciprocate. Fox and Swazey (1992) have labelled this the 'tyranny of the gift'. See also Parsons, Fox and Lidz (1972, p. 412).
81. Lock (2002, p. 199).
82. Sharp (1995, p. 360). See Sharp (2006) for an extended study of her earlier work on the psychological and societal implications of cadaveric organ donation.
83. Sharp (2006, p. 14).
84. *Daily Mirror*, 7/12/1967, p. 1. The physical size difference of a male and female heart most likely did not cause the heart to wobble from side to side. Hormonal differences, however, may well exist for male and female organs.
85. *Sun*, 16/12/1967, p. 7.
86. *Sunday Telegraph*, 24/12/1967.
87. Logan (2003, p. 160).
88. Barnard and Pepper (1970, p. 438).
89. Barnard (1991, p. 571).
90. Hyam and Henshaw (2003, p. 308).
91. Macnab (1983, p. 199).
92. The failed attempt at multi-racial rule in neighbouring Rhodesia, marked by the Unilateral Declaration of Independence in 1965, seemed to consolidate the view that the choice was between apartheid or all-black domination (Hyam and Henshaw, 2003, p. 320).
93. The South African white population was divided into two major groups: the English-speaking descendants of the English settlers in Cape Town in the eighteenth century and the Afrikaner majority (who spoke Afrikaans), descended from the Dutch settlers of the mid-seventeenth century. In the nineteenth and first half of the twentieth century, relations between these groups had been politically fraught. When the Afrikaner-led Nationalist Party defeated the more liberal United Party (which drew support from British, Afrikaners and Coloureds) in 1948, they not only passed divisive apartheid laws between white

and black (including the Job Reservation Act and the Group Areas Act) but also created further divides amongst the white population as the civil service was 'Afrikanerized' and Afrikaans made the official language (Hunt, 2002, pp. 278–93).

94. In late 1968, D'Oliviera was selected for the tour; following South Africa's objection, the tour was eventually cancelled.
95. *International Medical Tribune of Great Britain*, 1/2/1968, p. 4.
96. There was also limited training of black medical students at UCT and at the University of Witwatersrand (Wits). These were the first available 'open' centres where non-whites could train from the early 1940s but, after the opening of the Natal Medical School specifically to train black students for black patients, in 1959 the government significantly restricted entrance to UCT and Wits. See Digby (2005) for the career opportunities and aspirations of black South African doctors in the post-war decades.
97. Lewis (1968b, p. 9). For the complex story of black nursing during the apartheid regime, see Marks (1994). See also 'Apartheid in medicine', *Anti-Apartheid News* 4 (1), p. 3. The authorship of this article, written in February 1968, is ascribed to 'a doctor formerly at Groote Schuur hospital, Cape Town, and now a consultant at a London teaching hospital.' *Anti-Apartheid News* was a London-based publication.
98. The *Guardian* reported on 25/4/2003: 'Two men transplanted the first human heart. One ended up rich and famous – the other had to pretend to be a gardener. Until now'. BBC news online published a similar story: 'Gardener behind Africa's heart pioneer (http://news.bbc.co.uk/2/hi/world/africa/3011105.stm, 9/5/2003). Naki's obituaries, based on such secondary sources, in the *Economist*, the *BMJ*, the *New York Times* and several other publications worldwide, all claimed that Naki had been responsible for taking out Denise Darvall's heart, that he had died a poor man, officially a gardener, with little recognition in his working life. Much of this heroic story proved false and was later publicly corrected. See, for example, 'Correction: Hamilton Naki', *BMJ*, 3/9/2005, p. 519.
99. Logan (2003, p. 14). McRae (2006) reprints an internal memo written by Vorster soon after the transplant that states: 'We must take every opportunity for international prestige this breakthrough gives us. . . . We can link a moment of medical history to a positive image for the country after all the propaganda directed against us around the world.' (McRae, 2006, p. 199).
100. Stark (1996, p. 84).
101. Lewis (1968a, p. 9).
102. Barnard's iconic status that emerged at the time of his first heart transplant has subsequently been reinforced and historicized, for example in popular books such as Cady et al. (1998).
103. These included Varco and Wangensteen at Minnesota and Kirklin at the nearby Mayo Clinic in Rochester. Norman Shumway too was amongst the surgical residents at Minnesota during this period. Barnard also visited Houston where Cooley and DeBakey were based, and established a lasting friendship with Cooley there (Logan, 2003, Chapter 5).
104. Cooper (2001).
105. Hoffenberg (2001, p. 1479).
106. Kantrowitz, for example, who performed his heart transplant days after Barnard, recalls his reaction to the news from Cape Town: 'I was stunned. I would not

have been surprised to hear that Shumway or Lower had done the operation, but I had never seen any heart transplantation studies by Barnard' (Kantrowitz, 1998, p. 247).

107. Malan (1968, p. 79).
108. Moloney and Walker (2000) use this phrase in their analysis of the Australian press coverage of Barnard's operation.
109. Mistakenly, Baxter documents in his memoirs that this announcement of the heart transplant was a 'world scoop', made 'within an hour of the completion of the operation and before any release to the news agencies' (Baxter, 2005, p. 190).
110. BBC WAC: Transcript of *Tomorrow's World* (6/12/1967, 7.00 P.M. BBC 1), p. 6.
111. Ibid., p. 7.
112. Barnard was not the first surgeon to be on the front cover of *Time* (see Chapter 1). In 1963, the transplant surgeon Francis Moore had appeared, allegedly to his surprise, on the cover. In his autobiography, Moore writes about the ambivalence by which this was received and judged by his peers, summarizing the reactions as ranging from 'sweet grapes to sour grapes and then to grapes of wrath' (Moore, 1995, pp. 308–10). Ankney (1998) gives an overview of American magazine coverage of Barnard's operation. He claims that this coverage generally gave a pro-American stance and slightly downplayed Barnard's achievements, for example, by asserting that luck played a part in creating the right circumstances for him to perform the operation and acknowledging the influence of his American surgical training. He likens the heart transplant to the medical equivalent of Sputnik, with the Americans shocked at being beaten to this surgical achievement by another competing nation. Nevertheless, the early reportage of Barnard's operation was still, for the most part, extremely complimentary.
113. A member of Barnard's team used this analogy again following Washkansky's death. He was quoted in the American magazine *Newsweek* saying 'We climbed Everest. Next time, we will know how to get down' (*Newsweek*, 1/1/1968, p. 52).
114. Susan Lederer and Bert Hansen have both researched medical imagery in *Life* magazine, its unique form of photojournalism and the creation of 'larger than life', individual heroes through its photoessays: 'Medicine comes to *Life*: American photojournalism, doctors, and disease' (Lederer, presentation at *The Art of Medicine*: *Image-Making and Communication* symposium, Yale University, 16/4/2004); 'How *Life* looked at medicine: Magazine photography and the American public's image of medical progress, 1936–1972', (Hansen, presentation at *Mediating Biomedicine*: *Engaging*, *Resisting*, *Negotiating* symposium at the Centre for the History of Science, Technology and Medicine, University of Manchester, 10/9/2004).
115. These comics were American publications. Whether there were similar British publications or how widely the American comics were distributed in Britain is not documented.
116. Hansen (2004, p. 159). This motto was from the first front cover of *True Comics*, April 1941.
117. Hansen writes for the United States that this genre of comic books disappeared in the late 1940s along with comics' ubiquity in popular culture more generally, as they were challenged for being 'dangerously' influential to young minds and overtaken by domestic television in the 1950s as a primary form of entertainment (Hansen, 2004, pp. 161–62).

118. Logan (2003, p. 169).
119. *South African Medical Journal* 41, 30/12/1967, pp. xv, xliv, xxxv.
120. Ibid., p. xlv.
121. See Ross (1968) for the report of this operation by the lead surgeon.
122. *South African Medical Journal* 41, 30/12/1967, p. 1258.
123. Ibid., pp. 1257, 1277–78.
124. Logan (2003, p. 180).
125. Barnard (1967, p. 1271).
126. An exception was Washkansky's cardiogram, reproduced in the *Sunday Times* (see Figure 3.2) as well as in the medical journal.
127. Kantrowitz was already publicly known for attempting the world's second heart transplant, on 5 December 1967, and DeBakey was renowned for his 'artificial heart' implementation in 1966. Shumway had refused the invitation onto the programme.
128. McRae (2006, p. 238).
129. See http://profiles.nlm.nih.gov/FF/B/B/D/G/ (The Donald S. Fredrickson papers). This meeting was called by the director of the National Heart Institute to obtain an 'up-to-date assessment of the research activities in the field of cardiac transplantation'; the participants included Hardy, DeBakey, Shumway and Kantrowitz.
130. See Thompson (2000, Chapter 5).
131. For example, 73 million people simultaneously interrupted their day to watch the Beatles make their first American debut on CBS's *The Ed Sullivan Show* in 1964, which brought the band into people's everyday lives.
132. The music and television 'stars' of this period to some extent added to the earlier tradition of making 'movie stars' which started in the 1920s.
133. After writing for the *Daily Telegraph* and being editor of *Punch* magazine, Muggeridge became a television reporter for *Panorama* (1953–60) and also had two interview programmes: *Appointment With* (1960–61) and *Let Me Speak* (1964–65). See Chapter 4 for further discussion.
134. See Gitlin (1980, Chapter 5) for an analysis of the making of student leaders into media celebrities in late 1960s United States.
135. Kurlansky (2003, p. 84).
136. Ibid., p. 41.
137. Goldie (1977, p. 297).
138. The word celebrity dates back to the mid-nineteenth century (Boorstin, 1961, p. 57).
139. Boorstin (1961, p. 58).
140. See 'Together in Rome, two experts in the art of manipulating men's hearts', *Daily Express*, 7/2/1968. This article pictured Barnard and Loren together.
141. 'Baxter the wall!', *Private Eye*, 16/2/1968, p. 14.
142. Malan (1968, p. 79).
143. *World Medicine*, 28/10/1969.
144. *Daily Mirror*, 2/2/1968. MacKenzie was a well-known photographer in Cape Town who had previously studied medicine with Barnard in the late 1950s. Barnard contacted him after conducting the first heart-transplant operation, establishing MacKenzie as his 'official' photographer. (Personal communication, Don MacKenzie, 5/10/2007). In a deal with Barnard, Mackenzie was allowed to take exclusive pictures of him which he could then sell, after giving Barnard a fee (Logan, 2003, p. 173).

4 'The Most Extraordinary Programme Ever Shown on Television': A New Medium for Debating Medicine

1. *Sunday Mirror*, 4/2/1968, p. 3.
2. Television has generally been sidelined as a source for medical history, despite its major socio-historical importance. Loughlin (2000a) argues this case for audio-visual sources more generally. Although there is an expanding body of visual and cultural studies literature on medical representation in film, these works tend not to have a historical goal in mind and most medical histories still do not include television material as a serious resource. A key reason for this is because access to archival material is much more limited for television than for print. This is particularly the case for television in the post-war decades when expensive tapes were frequently deleted and reused, loosing all trace of the original footage. Fortunately, a copy of 'Barnard Faces His Critics' was retained at the BBC, and after several years of trying to obtain it, the British Film Institute (BFI) was eventually able to request a copy from the BBC for me to view. I also obtained a transcript of the programme, taken from a telediphone recording (a wax cylinder that recorded sounds, introduced in the 1930s by the Edison company). Parts of the transcript are also published in the BBC's *Listener* magazine (15/2/1968, pp. 202–03), and in Malan (1968, pp. 81–82). Unfortunately there is no evidence of the content of the programme before it was edited.
3. Haller and Cerruti (1968, p. 841). See Bunker (1972) for an insight into the divided opinions of the hospital staff involved in the first heart-transplant operation at Stanford, and between the anaesthetist, John Bunker, and the surgeon, Norman Shumway.
4. *Sun*, 11/1/1968, p. 1.
5. Mitchison, Pickering and Beaconsfield, 'The heart of the matter', *New Scientist*, 18/1/1968, pp. 121–26.
6. Beaconsfield, 'Why was it done?', Ibid., p. 125.
7. 'Scientific, technical and ethical considerations in cardiac transplantation', *BMJ*, 20/1/1968, pp. 177–78.
8. *Observer*, 19/12/1967.
9. *Sun*, 19/1/1968, p. 11.
10. *Daily Telegraph*, 22/1/1968, pp. 1, 12.
11. BBC WAC: T14/2384/1, 5/1/1968.
12. 'The man with the golden hands', *Private Eye*, 19/1/1968, p. 14. However, in Blaiberg's autobiography, he claims that Mrs Haupt consented to the transplant immediately. He wrote: 'At first the words did not come. She was overwhelmed. Then she sobbed, "If you can save someone else's life in that way, you may take my husband's heart" ' (Blaiberg, 1969, p. 49).
13. *The Times*, 5/1/1968, p. 9.
14. The Group Areas Act was established in 1950 and assigned races to different residential and business sections in urban areas. The Consulate-General went on to mention that much of the press comment ignored the kidney transplant from a white to a black person and also that most blood transfusions to black recipients were from white donors (NA PRO: FCO25/721, 12/2/1968).
15. Archives show that in early December the BBC thought that Barnard had promised them the right to film his next transplant operation, forecast for about four to six weeks thereafter, and that they had hoped to offer this as a *Tomorrow's World* special with the operation being the centre of the programme

(BBC WAC: T14/2950/4, 7/12/1967). There had been intense competition between television companies, especially the BBC, and the American companies NBC and CBS, to secure rights to filming the first operations and interviewing patients and relatives. Towards the end of December 1967, NBC had secured a deal with the Blaibergs for $50,000 to have exclusive interviews and films, including coverage of the operation. Filming the operation fell through due to non-cooperation and confusion between the Blaibergs, local and international film crews, Barnard and other hospital representatives. See 'Surgery and show biz', *Newsweek*, 15/1/1968, p. 41.

16. In the late 1950s and early 1960s, there had been an ongoing debate about whether Britain was in 'decline' typified by numerous publications on 'the state of the nation'. See Grant (2003) for an assessment of how historians have used these arguments and texts to understand Britain's socio-political climate of that time.
17. *Daily Sketch*, 31/1/1968.
18. BBC WAC: T14/2384/1. Letter from Michael Latham, Editor, *Tomorrow's World* to Head of Science and Features, Television, 17/1/1968.
19. South Africa House opened in 1933, a high point in British–South African relations. On 3 February 1960, the British Prime Minister, Harold Macmillan, made his historic 'wind of change' speech, speaking out against apartheid. The following year South Africa became a Republic. Trafalgar Square had traditionally been a site for mass demonstrations in London, and South Africa House became the focus for demonstrations concerning this country (Macnab, 1983, p. 199).
20. *Guardian*, 2/2/1968, p. 5.
21. Letter from British Consulate-General to the Information Promotion Department at the Foreign Office in London (NA PRO: FCO25/721, 26/1/1968).
22. *Guardian*, 2/2/1968, p. 5. Interestingly though, the *Tomorrow's World* special opened by displaying on screen several critiques of heart transplantation, including: ' "Heart swapping is direct killing" – Vatican'.
23. *Daily Telegraph*, 2/2/1968, p. 17.
24. *Guardian*, 2/2/1968, p. 5.
25. *The Times*, 8/2/1968, p. 9.
26. 'Broadcast with Prof Barnard declined', Ibid., 2/2/1968, p. 2.
27. See Chapter 3 for Baxter's first telephone interview with Barnard. Unfortunately the BBC WAC was unable to provide me with a transcript of the *Tomorrow's World* programme broadcast on 4/1/1968, 'Heart Man'.
28. The post-structuralist theory of 'intertextuality' (a term coined in 1966 by the French feminist philosopher Julia Kristeva), proposes that 'any one text is necessarily read in relationship to others and that a range of textual knowledges is brought to bear upon it' (Fiske, 1987, p. 108). Applicable within and across different media, television was starting to constitute inter-textual medical debate.
29. Sacks, 'Medicine and mass media', *BMJ*, 2/3/1968, p. 577.
30. See Silverstone (1985) for an ethnography of the making of a *Horizon* programme and a sociological analysis of the programme's production and reception as a case study for understanding how science is presented on documentary television.
31. *Radio Times*, 22/6/1965.
32. BBC WAC: T14/2950/2, 12/10/1965.
33. BBC WAC: T14/2949/1.

34. de Chadarevian (2002, p. 151). Gordon Rattray Taylor was editor of *Eye on Research* and went on to become editor of *Horizon*. The producer of the *Eye on Research* series was Aubrey Singer, and Raymond Baxter was the commentator; both were later involved in *Tomorrow's World*. See Baxter (2005, pp. 178–91).
35. 'The miner and the city', Williams (1968), re-printed in O'Connor (1989, p. 44).
36. Calder (1965, p. 26).
37. Even though the BBC started broadcasting in colour on BBC 2 in 1967, the first colour broadcasts on BBC 1 were not until 1969.
38. Williams (1974, p. 1).
39. Seymour-Ure (1991, p. 76).
40. BBC WAC: T14/2950/4, 7/3/1969.
41. Wright (1997, pp. 12, 55).
42. See Timberg (2002) for the history of TV talk shows in the United States.
43. BBC WAC: TV ART 3, file on Raymond Baxter, 1963–70.
44. The media critic Bernard Timberg describes the viewing experience of 'conversation', in the present tense, as being one of the formative principles of a talk show. Other principles are that it is anchored by a host and gives the appearance of spontaneity although being highly structured (Timberg, 2002, pp. 2–5). These principles bring together 'conversational' programmes which are otherwise difficult to define as a genre. Livingstone and Lunt (1994) describe audience discussion programmes as both 'anti-genre' and 'inter-genre'.
45. 'Barnard Faces His Critics' programme as broadcast (BFHC) transcript, p. 1.
46. Thistlethwaite recalls how only members of the MJA were asked onto the programme but that in fact they were 'being used by the programme as "extras" and sat in blocks of seats over which the camera ranged'. Meanwhile, non-members who were present had to 'crouch in the wings' and were 'not amused' (Thistlethwaite, 1997, p. 29).
47. Muggeridge (1980).
48. Quoted in Silverstone (1985, p. 160).
49. Timberg and Erler (2002, p. 15).
50. Hudson, 'Doctors on the box', *BMJ*, 17/2/1968, p. 448.
51. Hill, 'Doctors on the box', *BMJ*, 10/2/1968, p. 378.
52. Baxter (2005, p. 190).
53. Livingstone and Lunt (1994, p. 56).
54. Ingrams (1995, p. 228).
55. Muggeridge was banished from the BBC's airwaves for a time in the late 1950s after making the audacious claim in an article for the *Sunday Evening Post* that the media were turning the British monarchy into a 'Royal soap opera' (Ingrams, 1995, p. 181–82).
56. Muggeridge was in the public spotlight for two separate incidents either side of his appearance on the *Tomorrow's World* special. Firstly, he had resigned as Rector of Edinburgh University at the start of 1968 after the student council proposed the free distribution of birth control pills (Ingrams, 1995, p. 206). In his annual Rector's speech in January he deplored the students' 'crazy relapse into moral chaos and dementia'. Taking an openly strong Christian stance, he asserted 'Blessed are the pure in heart: for they shall see God'. From this time on, he was publicly referred to as St Mugg. Secondly, the month following the *Tomorrow's World* broadcast, Muggeridge broadcast a BBC interview with Mother Teresa, entitled 'Something beautiful for God', which was one of the most momentous pieces of his career and brought Mother Teresa to fame.

57. Muggeridge (1980).
58. BBC WAC: Transcript of *Panorama* (8/1/1968, BBC 1), p. 3.
59. Professor H.D. Lewis, 'Heart operation', *The Times*, 8/1/1968, p. 7.
60. Ingrams (1995, p. 209).
61. *The Times*, 22/1/1968, p. 13.
62. For example, *Modern Apostles of Unity* (1957), *Growing Together Locally* (1958) and *The Ecumenical Movement* (1960).
63. Foreword by Arthur Macarthur, General Secretary to the United Reformed Church, in Slack (1978, p. v).
64. Muggeridge, 'An interview with myself', Radio 4, *Woman's Hour*, 17/7/1964, transcribed in Ralling and Bywaters (1981, p. 27).
65. Ingrams (1995, p. 209).
66. Muggeridge (1980).
67. *The Times*, 2/2/1968, p. 2.
68. 'Baxter the wall!', *Private Eye*, 16/2/1968, p. 14.
69. BFHC transcript, p. 3.
70. *The Times*, 1/2/1968, p. 9. Not all medics were agreed on the immediate need to enforce donor anonymity, however. For example, the editor of the American *Journal of the National Medical Association*, W. Montague Cobb, expressed concern that 'minority and impoverished groups' would be most affected by the policy of anonymity, vulnerable to their bodies being labelled as 'unclaimed' and their organs removed without appropriate consent. See Lederer (2006, p. 151).
71. BFHC transcript, p. 3.
72. Ibid., p. 5.
73. Ibid., p. 15.
74. Thistlethwaite (1997, p. 30).
75. 'Dissecting Dr Barnard', *Evening Standard*, 7/2/1968, p. 9.
76. Potter, 'Doctors on the box', *BMJ*, 10/2/1968, p. 378.
77. Letter from Lodvic Kennedy, the *Listener*, 22/2/1968, p. 243. As discussed in Chapter 2, it was not a new complaint that a different set of rules seemed to apply to elite practitioners.
78. *Sunday Mirror*, 4/2/1968, p. 3.
79. In the transcript for the programme, whereas all the other contributors are named, the patient is referred to merely as 'sick man'.
80. For example, in his study of *Horizon*, Silverstone writes that this programme's output is limited by the requirements and conventions of '[b]roadcast television, the culture of the BBC, the genre of the documentary film, [and] the particular history and identity of *Horizon*' (Silverstone, 1985, p. 167).
81. Livingstone and Lunt (1994, p. 6).
82. BBC WAC: Box R9/37/3.
83. The figure given for each broadcast in the audience research sheets is the estimated total audience expressed as a percentage of the population of the UK, excluding children under five. *Tomorrow's World* viewers usually averaged about 7 million.
84. Singer (1969, p. 390). See Goodhardt, Ehrenberg and Collins (1975, pp. 97–108) for a brief description of some of the early methods used by the BBC and ITV for deducing 'audience appreciation' of television programmes.
85. *Sunday Mirror*, 4/2/1968, p. 3.
86. BBC WAC: T16/419/2, controllers meeting, 6/2/1968.

87. Potter, 'Doctors on the box', *BMJ*, 10/2/1968, p. 378.
88. *Sunday Mirror*, 4/2/1928, p. 3.
89. 'TV heart man "had no ill effects" ', *The Times*, 5/2/1968, p. 2.
90. *Daily Telegraph*, 2/2/1968, p. 17.
91. *Daily Mirror*, 3/2/1968.
92. *Observer*, 4/2/1968, p. 2.
93. Potter, 'Doctors on the box', *BMJ*, 10/2/1968, p. 378.
94. 'Medicine and mass media', Ibid., p. 330.
95. See Nelkin (1987, p. 84) for a discussion of scientific objectivity versus journalistic objectivity.
96. Tansey and Reynolds (1999, p. 7 n. 17).
97. 'Medicine and television', *International Medical Tribune of Great Britain*, 15/2/1968, p. 5.
98. BBC WAC: T14/2384/1, 12/2/1968.
99. Ibid., 13/2/1968.
100. Singer (1969, p. 390).
101. *The BBC's Medical Programmes and their Effect on Lay Audience* (BBC, 1976) gave a detailed study of a series broadcast in November 1975, *The Changing Face of Medicine*. The first programme, 'Victories', used excerpts from *Your Life in Their Hands* (see Chapter 2), to illustrate medical advances. However, as the report explained, 'As well as talking about the successes and the advances during this period, the programme also discussed some of the practical and ethical problems that had accompanied these advances, the limitations of medical treatment and the fallibility of doctors' (BBC, 1976, p. 21). This suggests that BBC medical programming in the 1970s continued in the new direction.
102. For example, see Glasgow University Media Group (1982, p. 1).
103. NA PRO: MH150/411, D21, 2/2/1968.

5 Hospital–Media Relations in the First British Heart Transplant

1. Tilney (2003, p. 173).
2. *Daily Express*, 4/5/1968, p. 1; *Sun*, 4/5/1968, p. 12.
3. *Daily Mail*, 4/5/1968, p. 1.
4. BBC WAC: Transcript of news, 6/12/1967, 8.50 P.M., BBC 1.
5. NA PRO: MH150/411, D50.
6. Ibid., D19, 7/2/1968.
7. Tansey and Reynolds (1999, p. 18).
8. *Daily Mail*, 4/5/1968, p. 1.
9. *Daily Telegraph*, 4/5/1968, p. 1.
10. *The Times*, 4/5/1968, p. 8.
11. *Daily Telegraph*, 4/5/1968, p. 1. See also 'Heart operation held in secrecy', *Guardian*, 4/5/1968, p. 1.
12. Bedford, unpublished diary, entry dated 3/5/1968.
13. NA PRO: MH151/71, 30/4/1968.
14. NA PRO: MH150/411, M65, 8/5/1968.
15. Ibid., D19.
16. *Sunday Telegraph*, 5/5/1968, p. 19.
17. *The Times*, 4/5/1968, p. 1.

18. *Daily Express*, 4/5/1968, p. 1.
19. Although British surgeons had not held a press conference before, other medical bodies had previously used PROs, distributed PR material and held PR events (see Chapter 2). Barnard and his American counterparts had also given press conferences following their heart-transplant operations. I have found no other references in any secondary literature to a formalized post-operative press conference in Britain, and none of the journalists I interviewed could recall a previous hospital event of this kind. Bedford (1979, p. 14) details that for the conjoined twins cases in the 1950s, the surgeon Ian Aird had given off-the-record briefings to a number of journalists; however, these were not formalized conferences. Loughlin (2005a, p. 207) describes how journalists had been expecting a press conference at the Yorkshire hospital where the second set of conjoined twins were born, but that this never materialized for reasons of hospital anonymity.
20. *People*, 5/5/1968.
21. *Daily Express*, 6/5/1968, p. 8.
22. Tansey and Reynolds (1999, p. 9).
23. BBC WAC: Transcript of news, 4/5/1968, 5.40 P.M., BBC 1.
24. Gould (1985, p. 39). Some of the footage of this press conference can be found in *Pioneers*: *An Affair of the Heart*, BBC education and training video (1996), held in the Moving Image and Sound Collections, Wellcome Library for the History and Understanding of Medicine, London.
25. Bedford, unpublished diary, entry dated 4/5/1968.
26. Ties had previously been worn to group together prominent scientists around a cause in 1954 when the Russian physicist George Gamow, working at Berkeley, founded the 'RNA tie club'. The club included first 16, then 20 members, 'to solve the riddle of RNA structure, and to understand the way it builds proteins' (Judson, 1979, pp. 260–61).
27. 'Backing Britain: The Surbiton revolution', *Economist*, 6/1/1968, p. 12.
28. *Daily Mail*, 18/3/1970.
29. NA PRO: MH150/411, M65.
30. Sandler, 'Cardiac transplantation', *Lancet*, 18/5/1968, p. 1086.
31. *Sunday Telegraph*, 5/5/1968, p. 18. 1968 was an Olympic year; Grenoble had hosted the Winter Olympics in February, and Mexico City was due to host the Summer Olympics in October 1968.
32. *Sunday Telegraph*, 5/5/1968, p. 18.
33. Moore (1995, p. 201).
34. *The Times*, 7/5/1968, p. 11.
35. Archives of the BMA, A/1/1/64: Appendix X of the agenda for the BMA annual representatives meeting, 24–28 June 1968, p. 75.
36. NA PRO: MH150/411, 16/1/1968.
37. Ibid., M66.
38. Ibid., M65.
39. Ibid., M66.
40. *Sunday Telegraph*, 5/5/1968, p. 34.
41. *Sunday Times*, 5/5/1968, p. 5.
42. *Observer*, 5/5/1968, p. 3.
43. KR: GC/238/10/1/3.
44. *Sunday Express*, 5/5/1968, p. 7.
45. *Daily Express*, 6/5/1968, p. 9.
46. *Daily Mail*, 6/5/1968, p. 1.

47. Donald Ross in Tansey and Reynolds (1999, p. 24). Many of these original letters are held in the Keith Ross archives.
48. *Observer*, 5/5/1968, p. 1 and *Sunday Express*, 5/5/1968, p. 7.
49. *Daily Mail*, 9/5/1968, p. 1.
50. Ibid., 10/5/1968, p. 8.
51. Tansey and Reynolds (1999, p. 8).
52. See cover illustration for a photograph printed in *The Times*, 8 May 1968, p. 2, capturing the moment that Barnard arrived at the National Heart Hospital, surrounded by photographers and journalists.
53. See Chapter 1 and Fox and Swazey (1974, pp. 110, 121).
54. This was the world's fifth lung transplant (the first was conducted by James Hardy in 1963). The surgeon Andrew Logan led the team who performed the British operation on 15 May 1968 at the special transplant unit at the Edinburgh Royal Infirmary where Michael Woodruff was director.
55. Tansey and Reynolds (1999, p. 17).
56. Schudson (1978, p. 160).
57. *The Times*, 7/5/1968, p. 2.
58. Thistlethwaite (1997, p. 27).
59. NA PRO: MH170/63, D7A.
60. This was due to the work of Dr Sowton at the National Heart Hospital developing the pacemaker service that year (NA PRO: MH170/63, D14, 6/5/1968).
61. NA PRO: MH170/63, D27, 26/4/1968.
62. Ibid., D21, 29/5/1968.
63. Ibid., D14, 6/5/1968.
64. Ibid., D15, 7/5/1968.
65. Ibid., D21, 29/5/1968.
66. 'Draft brief for the Minister on the financial situation at the National Heart Hospital', Ibid., D2, 28/5/1968.
67. BBC WAC: T14/2384/1, 28/5/1968.
68. MH170/63, D21, 29/5/1968.
69. *Sunday Observer*, 12/5/1968. The *Daily Telegraph* printed a similar article the next day on its front page: 'Shortage of cash at heart hospital: Transplant operations "may be hampered" ', 13/5/1968.
70. *Sunday Times*, 12/5/1968, p. 1.
71. The BHF also placed an advertisement at the bottom of this page appealing for money. It informed the readers of the role the Foundation played in supporting research into heart transplantation and pleaded for people to be generous and make a donation, asking the public to 'remember us in your will'. The positioning of this advertisement relative to the article manifests the interconnection of the interests of the various bodies involved and the use of newspaper space and layout.
72. 'First British heart transplant', *BMJ*, 11/5/1968, p. 1. This was another quick response to the event by a medical journal, bearing in mind that the actual details of the operation were not published in a specialist journal until December of that year (Ross, 1968).
73. NHLI: 00021, 28/5/1968, Institute of Cardiology, minutes of Committee of Management no. 73.
74. NA PRO: MH170/63, D2.
75. The first meeting was held on 8/5/1968 at St Mary's Hospital (NA PRO: MH150/413).

76. Tansey and Reynolds (1999, p. 21).
77. Ibid., p. 12.
78. NA PRO: MH150/411, D43, 15/7/1968.
79. *Daily Mail*, 7/5/1968.
80. BBC WAC: T14/2384/1.
81. Ibid., 21/5/1968, letter from Michael Latham to solicitor, Neville Bleach.
82. Ibid., 29/5/1968.
83. BBC WAC: T14/3003/1, 31/5/1968.
84. Ibid.
85. *The Times*, 29/5/1968, pp. 1, 16.
86. I obtained a transcript of the BBC interview from the BBC WAC and a fragment of the footage is shown in *Pioneers*: *An Affair of the Heart* (BBC, 1996, held in the Wellcome Library's Moving Image and Sound collection, London).
87. *The Times*, 29/5/1968, p. 2.
88. Tansey and Reynolds (1999, p. 21).
89. BBC WAC: Transcript of *Newsroom* interview with West, 28/5/1968, 7.30 P.M., BBC 2.
90. Hilgartner (2000, p. 150).
91. Similarly, the image of Washkansky's 'actual' electrocardiogram, which had been printed in the *Sunday Times* (Figure 3.2) following his operation, also demonstrates this crossover.
92. NA PRO: MH150/411, M66; NA PRO: MH151/71, 19/5/1968.
93. *The Times*, 18/6/1968, p. 8.
94. Ibid., 28/6/1968, p. 1.
95. *Private Eye*, 5/7/1968, front cover.
96. NA PRO: MH150/411, D33, 21/6/1968.
97. Ibid., D43, 15/7/1968.
98. Ibid., D42, 16/7/1968.

6 Managing Medicine's Image in the 'Time of the Heart Transplants'

1. This description is from the title of the American journalist and writer Mark Kurlansky's book – *1968*: *The Year that Rocked the World* (Kurlansky, 2003).
2. NA PRO: MH150/413, 27/6/1968.
3. KR: GC/238/10/1/1 (undated).
4. NA PRO: MH150/411, D44, 22/7/1968.
5. Ibid., D47, 22/7/1968.
6. Ibid., D50, 26/7/1968.
7. Tansey and Reynolds (1999, p. 20).
8. Ibid., p. 24.
9. NA PRO: MH150/411, D56.
10. Gorst remained PR advisor to the hospitals until 1974.
11. NA PRO: MH150/411, D71, 18/2/1969.
12. NA PRO: MH150/413, D52, 9/8/1968.
13. NA PRO: MH150/411, M108, 13/8/1968.
14. Mead (1978, pp. 3–4).
15. NA PRO: MH150/411, 26/7/1968. Similar worries were expressed when hospital–media relations were discussed after the conjoined twins separation operation at Hammersmith Hospital in the 1950s (Loughlin, 2005a).

16. NA PRO: MH150/413, D3, 14/5/1968.
17. Ibid., 6/12/1968.
18. In 1960, the *Star* merged with the *Evening News*, making it one of the two remaining London evening newspapers alongside the *Evening Standard*. In 1980 these two rival papers merged.
19. Press Council (1969, p. 70).
20. Ibid. The Press Council's adjudication was reported in the British daily press on 2/10/1968.
21. Mead (1978, p. 5).
22. Fattorusso (1969, p. 16).
23. Fox and Swazey (1974, p. 124).
24. Marnham (1982, p. 132).
25. *Private Eye* (1968, p. 11).
26. Ibid., p. 2. Original article, 19/1/1968, p. 14.
27. Benn (1988, p. 112).
28. Robin Day (BBC WAC: Transcript for *Panorama*, 6/5/1968, p. 1).
29. Mendelsohn (1994, p. 159).
30. For example, the Church Assembly Board for Social Responsibility in the UK published *Decisions about Life and Death*: *A Problem in Modern Medicine* (1965).
31. Lock (2002, p. 35).
32. 'Breathing machines' that encased the whole body had been built in the nineteenth century. These became more established with a model devised in 1928, known as the 'iron lung', which was then used extensively from the 1930s to help polio patients to breathe. Artificial ventilators were used for the first time to treat patients with severe chest injuries in the 1950s, after which time the technology proliferated in hospital intensive care units (Lock, 2002, pp. 58–59). See also Stanton (2000) for a brief history of ventilators and intensive care units.
33. Richardson (1996, p. 90).
34. Lock (2002, p. 64).
35. See Albury (1993) who argues that 'while eighteenth-century medicine saw disease as an event interrupting life's inevitable progression towards natural death, nineteenth-century medicine began to see death as an event interrupting life's inevitable production of organic diseases' (Albury, 1993, p. 257).
36. Pernick (1999, p. 5).
37. Armstrong (2000, p. 249).
38. Albury (1993, p. 272).
39. Pernick (1999, p. 7).
40. Albury (1993, pp. 271–72).
41. Ackerknecht (1968, p. 20).
42. Lederer (1995, p. 44).
43. Richardson (1996).
44. This was most clearly exemplified by grave robbing and taken to the extreme with the murders in nineteenth-century Edinburgh committed by Burke and Hare, who provided bodies for unquestioning anatomists (Richardson, 2000).
45. Pernick (1999) argues that in the early 1970s, brain death shifted from being explained as a way of protecting physicians from the public's fear of premature organ retrieval to a way of protecting the public from futile and callous medical interventions and to allow 'death with dignity'.
46. See Chapter 5 for a discussion of the coroner's inquest into the death of Britain's first heart donor.

47. See Lederer (2006) for further analysis of this case.
48. As is customary in Japan, Wada Jiro's name is given here with the family name first. The operation took place in August 1968 in Sapporo and the recipient died 83 days later in December.
49. Lock (2002, p. 130).
50. The terms 'irreversible coma' and 'brain death' were used interchangeably in the final report. The characteristics of irreversible coma were unreceptivity and unresponsivity, no movements or breathing, no reflexes, and flat electroencephalogram (Ad hoc committee of the Harvard Medical School to examine the definition of brain death 1968).
51. In the United States, the ad hoc committee's recommendations were also used to devise the Uniform Anatomical Gift Act, enacted in August 1968, to help establish laws for donating anatomical parts and criminalizing the selling of human organs for profit (Sharp, 2006, p. 49). Kansas State was the first place in America to enact a brain-death law in 1970, and Finland the first in Europe the following year. In Britain, two meetings of a Sub-Committee of the Transplant Advisory Panel, in November 1974 and January 1975, resulted in a report on certifying death to the Royal Colleges (see NA PRO: MH150/672). This was considered at a conference of Royal Colleges and their Faculties in 1976, which defined brain death as 'the complete and irreversible loss of function of the brain stem'. This diagnosis of brain stem death, which was published simultaneously in the *Lancet* and *British Medical Journal* in November 1976, is still used today, although is currently under review by the Working Group of the Academy of Medical Royal Colleges, set up in 2004.
52. 'Twenty-Second World Medical Assembly', *BMJ*, 24/8/1968, p. 493.
53. Ad hoc committee of the Harvard Medical School to examine the definition of brain death (1968, p. 337).
54. Similarly, in Britain, the original impetus for formally defining brain death came from the requirements of transplant surgeons, but a brief to the CMO in the latter half of the 1970s, when brain death was being defined in Britain, stressed that the aspect of transplantation 'should be relatively played down so that the whole concept can gain acceptance generally without any of the unfortunate publicity which in the past has compared transplant surgeons to vultures' (NA: PRO MH150/672, f22c, 11/1/1977).
55. Giacomini (1997, p. 1474).
56. Ibid., p. 1478.
57. Ad hoc committee of the Harvard Medical School to examine the definition of brain death (1968, p. 339).
58. Ibid., p. 88.
59. Ibid., p. 87.
60. 'Twenty-Second World Medical Assembly', *BMJ*, 24/8/1968, p. 493.
61. Jonsen (1998, p. 92).
62. Ibid., p. 93.
63. Shapiro (1969, p. 260).
64. The legislation was reintroduced in 1972 and this time the bill was passed. The result was an Advisory Commission on Health, Science and Society to investigate the ethical, social and legal implications of advances in biomedical research and technology (Jonsen, 1998, p. 94).
65. Fattorusso (1969, p. 13).
66. Ibid., p. 14.

67. NA PRO: FD23/842, 'note for file', 23/11/1967.
68. These letters are archived at the National Archives, NA PRO: MH150/394 and NA PRO: MH150/395.
69. This was part of the second international congress of the Transplantation Society.
70. Hardy and Chavez (1968, p. 779).
71. Woodruff (1968, p. 34).
72. Longmore (1968, p. 185). At a similar time, Linus Pauling had made the infamous suggestion that tattooing would be a useful medical identifier for carriers of certain genetic diseases (Pauling, 1968, p. 269).
73. Blaiberg (1969, p. 85).
74. Hoffenberg (2001, p. 1478). Also referenced in Lock (2002, p. 85).
75. Barnard and Pepper (1970, p. 380).
76. Forward to Shapiro (1969).
77. Calne (1970, p. 88).
78. ' "Disastrous" impact on transplant programme is laid to publicity', *Medical Tribune*, 4/7/1968, p. 7.
79. These arguments were again brought up in November 1968 when Calne and Barnard came face to face in a debate over transplant publicity at the Cambridge Union, University of Cambridge.
80. 'Is antagonism to transplant publicity medical arrogance?', *Medical Tribune*, 18/7/1968, p. 4.
81. SA/MJA/1/1, Executive Committee meeting 12/9/1968. This symposium was postponed several times until it was deemed to be out of date. In February 1969, it was renamed 'Society and the new biology' and the committee decided that 'specialists in organ transplants were no longer really necessary'. At the August 1969 executive meeting, the projected symposium date was again delayed until May 1970. The archives have no record of whether or not the symposium eventually took place.
82. Emmett (1969, p. 391).
83. Warren (1969, p. 388).
84. Singer (1969, p. 390).
85. Fletcher (1969, p. 398).
86. 'Too many too soon', *Lancet*, 29/6/1968, p. 1413.
87. See Atkins, 'Problems in transplant surgery', *The Times*, 19/6/1968, p. 9.
88. 'Time has come to call a halt', *The Times*, 18/6/1968, p. 8.
89. Shapiro (1969, p. 260).
90. Porzio (1969, p. 34).
91. *The Times*, 11/9/1968, p. 1.
92. NA PRO: MH150/413, report from a meeting at St Mary's Hospital, 12/12/1968. In November 1968, the Ministries of Health and Social Security were amalgamated to form the DHSS.
93. Taylor (1968, p. 80).
94. Medawar (1969).
95. This was with the exception of Magdi Yacoub at Harefield Hospital, who performed a heart transplant in September 1973; his patient survived for only four hours. The Department of Health was displeased that this operation had taken place and reasserted that no further resources would be directed to heart transplants, but acknowledged that their discouragement could not be equated to forbidding the operation ('Minister's warning on heart operations', *The Times*,

10/9/1973, p. 1). However, no further heart transplants were attempted in Britain until 1979.

96. 'Priorities in medicine', *BMJ*, 11/1/1969, p. 106.
97. The moon-orbit, referred to in the article, took place on 24/12/1968 and beamed down spectacular live photographs to earth.
98. 'First year of cardiac transplantation', *BMJ*, 11/1/1969, pp. 65–66.
99. For example, the kidney-transplant programme in Edinburgh's Royal Infirmary had a 50 per cent one-year survival rate in mid-1968, based on 35 patients treated since 1960 (Woodruff et al. 1969, p. 6).
100. Starzl (1992, p. 105).
101. *Transplantation Proceedings* 1 (2), p. 755. The first number of this journal was March 1969, which published the proceedings of the second international congress of the Transplantation Society in New York, September 1968.
102. One controversial point concerning liver transplantation, briefly mentioned in the media, was the strain that these ad hoc procedures put on the Blood Transfusion Service (see NA PRO: BN13/110 for records of disputes between transplant surgeon Roy Calne and blood-transfusion officials). However, criticism of liver transplantation was by and large not circulated in the press.
103. *Daily Telegraph*, 28/4/1969. Calne had privately voiced these concerns to the MoH directly after Britain's first heart transplant. Writing to Catherine Dennis, Principal Medical Officer, on 20 May 1968, he complained, 'we have had categorical refusals from next-of-kin since and because of the recent publicity concerning the heart case' (NA PRO/MH150/394, D50).
104. That month, heart transplants were prominent in the news again when Denton Cooley in the United States fitted Haskell Karp with an experimental total artificial heart until a human heart could be found for a transplant. Karp's wife made an emotional appeal on television for a new heart for her husband: 'I see him lying there breathing, and knowing that within his chest is a man-made implement where there should be a God-given heart. How long he can survive one can only guess. . . . Maybe somewhere there is a gift of a heart for my husband. Please.' The artificial heart was replaced by a human heart 64 hours after it was implanted but Karp died 32 hours later (McKellar, 2004, p. 19). For an extended analysis see Fox and Swazey (1974, Chapter 7), and for a journalist's account see Thompson (1972).
105. *Evening News*, 19/6/1969.
106. *British Journal of Hospital Medicine* 1969, 2, p. 1288. Proceedings of conference held on 18/4/1969.
107. 'Cardiac transplantation', *Lancet*, 10/5/1969, p. 973.
108. Tansey and Reynolds (1999, p. 19).
109. Ibid., p. 23.
110. After inquiring at Putney Hospital, the CMO, George Godber, reasoned that Putney had no intensive care unit, and the patient may have had a remotely better chance of survival at Guy's, but the most likely outcome was that she would die. Her mother had consented to her daughter's organs being used for transplant and tissue-typing blood tests had already been conducted at Putney.
111. This description was used in a *BMJ* article written in 1979 that looked back on why heart transplants were brought into disrepute in the late 1960s ('Cardiac transplantation 1979', *BMJ*, 13/1/1979, p. 69).
112. *Daily Express*, 29/5/1969.

113. *Daily Mirror*, 30/5/1969. See Cosgrove (1994) for an examination of how the Apollo space photographs were made iconic.
114. In March 1968, the Renal Transplantation Bill was introduced in the House of Commons, proposing a contracting-out system specifically for kidneys. Although it proceeded to a second reading, it did not secure a third, and did not pass when re-introduced again in January 1969. That month, the MoH set up an 'Advisory group on transplantation problems on the question of amending the Human Tissue Act 1961', which included Calne, amongst other surgeons. This followed on from the two conferences on the transplantation of organs held at the MoH in 1968. The Group's findings were presented to Parliament in July 1969, and though they did not reach a consensus on the contracting-out principle, the majority favoured it (HMSO, 1969, Cmnd 4106). Soon afterwards, a Special Committee on Organ Transplantation, set up by the Joint Consultants Committee, unanimously concluded that in the present 'climate of public opinion, any attempt to legislate on the basis of contracting out would be premature and if pressed might well jeopardise the future of transplant surgery' ('Report of the Special Committee on Organ Transplantation', *BMJ*, 21/3/1970, p. 750).
115. Space missions had suffered a number of disasters as well as successes in the 1960s, for example when Apollo 1 was destroyed by a fire, killing all three crew members during a launch-pad training exercise in January 1967.
116. 'Gains and losses', *Lancet*, 14/6/1969, p. 1197.
117. *Medical Tribune*, 19/6/1969, p. 5.
118. Press Council (1970, pp. 49–50).
119. 'Invasion of privacy', *BMJ*, 31/5/1969, pp. 526–27.
120. *The Times*, 3/6/1969, p. 9.
121. Ross (1970, pp. 161–62).
122. Tansey and Reynolds (1999, p. 34).
123. *Daily Mirror*, 19/8/1969.
124. *Daily Telegraph*, 19/8/1969, p. 14.
125. Fox and Swazey (1974, p. 122). News of a proposed 'moratorium' for genetic engineering was widely circulated in the British and American press in 1974, the year Fox and Swazey's *A Courage to Fail* was published. As Susan Wright has described, the scientists' proposal was for 'a partial postponement of some experiments', nonetheless reported in the press as a ' "rare" or "unprecedented" action of scientists' calling for a partial postponement of their own research' (Wright, 1994, pp. 138–39).
126. Tansey and Reynolds (1999, p. 45).
127. Fox and Swazey (1974, p. 126).
128. 'Heart transplants', *Lancet*, 2/8/1969, p. 278.
129. *BMJ*, 17/2/1973, p. 431, and NA PRO: MH150/411, D91B.
130. Letter from Godber to Tilli Tansey, 21/3/1997, included in Tansey and Reynolds (1999, p. 35).
131. Tansey and Reynolds (1999, p. 49).
132. Ibid., p. 53.
133. Ibid., p. 51.
134. Calne (1970), preface.
135. *The Times*, 29/1/1970, p. 1.
136. *Evening Standard*, 5/2/1970.
137. *Daily Mail*, 18/3/1970.
138. 'London diary', *New Statesman*, 27/11/1970, p. 708.

139. *The Times*, 27/7/1971, p. 15.
140. *Life*, 17/9/1971. The patients photographed on this cover were those of American heart-transplant surgeon Denton Cooley who had conducted 22 transplants in one year, starting in May 1968. All these recipients were dead by September 1969. The article inside *Life* magazine was an excerpt from the journalist Thomas Thompson's then forthcoming book *Hearts*: *DeBakey and Cooley*, *Surgeons Extraordinary*, which focused on the fraught personal relationship and extreme competition between Cooley and his once mentor Michael DeBakey (Thompson, 1972).

Conclusion

1. Minutes of a meeting with the surgeons at the DHSS concluded that 'the meeting was emphatic that [heart transplantation] should not be encouraged' (NA PRO: MH150/411, D91B, 27/10/1972).
2. Kidney transplants had increased from 315 in 1971, which in turn was significantly up on the previous few years.
3. *Guardian*, 6/2/1973, p. 13.
4. 'Why was it done?', *New Scientist*, 18/1/1968, p. 125.
5. Letter from Dr Seyfeddine Nabavi (Ex-General Secretary of the Iran Medical Association, Ex-President of Iran Heart Specialists' Association, Ex-Health Advisor to the Prime Minister of Iran) to the BMA (copy in their archives), the WHO, the American Medical Association, and the Ordre de Medicine (Paris), 7/10/1969.
6. Murray (1992, p. 1414).
7. Barnard expressed this view in a lecture to doctors at the National Heart Hospital and later at a press conference (*Daily Telegraph*, 2/5/1972, p. 17).
8. Report to BMA Council, 20/11/1968, from a meeting on 17/10/1968.
9. As suggested by Loughlin (2005c, p. 311), and confirmed through this book's extensive anlaysis.
10. In 1969, the *New England Journal of Medicine* articulated what came to be known as the 'Ingelfinger rule', named after the then editor, Franz Ingelfinger. The rule stipulated that the journal would not publish findings that had been discussed in public by the authors prior to the journal publication. This rule was subsequently adopted by many other biomedical journals, although not without controversy (Kiernan, 2006, p.18). The rule was introduced at the time when the boundaries between academic and popular press were significantly blurring, and hence would have served formally to differentiate the two arenas. Ingelfinger introduced the rule to necessitate the journal's articles to be peer-reviewed before public dissemination, and to prevent other publications from scooping the journal's material (Johnson, 1998, p. 90). In particular, Ingelfinger was concerned about prior publication in paramedicals which were direct competitors for the pharmaceutical advertising money that funded his own journal (Altman, 1996, p. 1383).
11. The economic viability of these programmes was established in Buxton (1985).
12. In earlier parts of their careers in the 1960s, both Magdi Yacoub and Terence English had worked under the mentorship of Donald Ross. A *BMJ* article in 1980 claimed that the reasons for restarting cardiac transplantation were threefold: The encouraging results from Shumway's programme at Stanford; a change in professional and public attitude towards brain death; and an increase in the potential supply of donor organs due to advances in preserving the functional integrity of

hearts between excision and reimplantation (English, Cooper and Cory-Pearce, 1980).

13. Tansey and Reynolds (1999, p. 40).
14. In 2004, BBC news celebrated 25 years of heart transplantation in the UK, referring to the Papworth operation in 1979 as the first (http://news.bbc.co.uk/1/hi/health/3795153.stm). No mention is given to the 1960s National Heart Hospital operations, either in this article or on Papworth's website (http://www.papworthhospital.nhs.uk/content.php?/about). In a recent interview with Sir Terence English, he acknowledged Donald Ross' attempts but affirmed that he had performed the 'first successful UK heart transplant' (Peto, 2007, p. 34).
15. Papworth used a device designed by TransMedics who describe the system as one that enables 'living organ transplants' (http://www.transmedics.com/wt/home/index).
16. See Healthcare Commission (2007).
17. 'Heart transplants halted in Scotland', http://www.guardian.co.uk/society/2007/dec/21/health.nhs, 21/12/2007.
18. Porzio (1969, p. 18).
19. These quotations were reproduced in media reports and on the Healthcare Commission's website: 'Healthcare Commission gives green light to Papworth heart transplants', http://2007ratings.healthcarecommission.org.uk/newsandevents/news.cfm/cit_id/23584.
20. Healthcare Commission (2007, p. 15).
21. 'Call to revamp death definition', http://news.bbc.co.uk/1/hi/health/6987079.stm, 12/9/2007.
22. 'Report of the Special Committee on Organ Transplantation', *BMJ*, 21/3/1970, p. 750.
23. *Observer*, 13/1/2008, pp. 1, 28–30, 32.
24. http://www.guardian.co.uk/commentisfree/2008/jan/15/politics.publicservices, 15/1/2008.
25. See the foreword of the revised 2000 edition of Ruth Richardson's *Death, Dissection and the Destitute* for a discussion of the relationship between late-Victorian body-snatching and the recent Alder Hey scandal.
26. An article in the *BMJ* by social scientists and doctors in 2001 confirmed that media coverage had directly affected donation rates. Alder Hey had hired a PR firm to handle the story, but it was dismissed and replaced by a communications management firm appointed directly by the MoH. Careful media management was also central to the government's response to the scandal, and the Minister of Health was seen to stand firmly on the side of the medical consumers, taxpayers of the NHS ('Press: God and monsters', *BMJ*, 10/2/2001, p. 371).
27. The Human Tissue Act (2004), which came into force in September 2006, replaced the Human Tissue Act (1961), the Anatomy Act (1984) and the Human Organ Transplants Act (1989). It is overseen by the Human Tissue Authority, charged with regulating the removal, storage, use and disposal of human bodies, organs and tissue. The Act has proved unpopular amongst much of the scientific and medical community who view it as restrictive and overly bureaucratic. Even though fully informed consent was the guiding principle behind the new Act, the result is that for transplantation purposes, the consent of next of kin does not need to be obtained by law (Bell, 2006, p. 824).
28. See Nathoo (2008) for a comparison between early heart transplantation and contemporary face transplantation.

29. A similar call was made regarding the announcement of interferon as a 'miracle cancer drug' in the 1970s (Pieters, 2004).
30. Royal College of Surgeons (2003, p. 1).
31. Ibid., p. 13. Other 'societal' drawbacks included the public developing unrealistic expectations about the benefits and risks; that the publicity could 'fuel the notion that a good quality of life cannot be achieved by people with disfiguring conditions'; and that increasing numbers of people would seek surgical intervention, for example 'the ageing rich seeking to look more youthful'.
32. 'US plans first face transplant', http://news.bbc.co.uk/1/hi/health/4259538.stm, 19/9/2005.
33. 'UK full face transplant search on', http://news.bbc.co.uk/1/hi/health/4533278.stm, 15/12/2005.
34. 'Face op woman passes public test', http://news.bbc.co.uk/1/hi/world/europe/4602026.stm, 11/1/2006.
35. *Independent*, 7/2/2006, pp. 18–19.
36. ' "First face transplant" for China', http://news.bbc.co.uk/1/hi/world/asia-pacific/4910372.stm, 14/4/2006.

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Note: The letter 'n' and 'illus' with the locators refer to note numbers and illustrations respectively.