

Crossroads of Knowledge

Jacob Bull
Margaretha Fahlgren *Editors*

Illdisciplined Gender

Engaging Questions of Nature/Culture
and Transgressive Encounters

 Springer

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Chapter 1

Illdisciplined Gender: Nature/Culture and Transgressive Encounters

Jacob Bull

1.1 Introduction

I set out to critically engage with the concept transgressive encounters. Given the heritage and weighty presence of the term transgression in Feminist, Queer, Trans and Gender Studies debate, such a discussion would be a review of Gender Studies. From activism to texts, we can trace the multiple heritages, ties and examples of transgression within the broad category of gender research: the historical moments where particular forms of gendered power have been successfully challenged; reinterpreting, refracting and redirecting the production of knowledge; operating as a conduit between different academic disciplines; engaging issues outside of disciplinary domains; and subversive bodily acts and the fleshy politics of everyday life; thinking and doing gender research is a transgressive act. I do not want to draw a line between academic debate and activism. Thinking is, after all, doing, and doing generates new knowledge as exemplified by scholars such as Gayatri Spivak who have constantly crossed between ‘activism’ and ‘academic’ (see, e.g., Spivak 1999). This is not to suggest that all transgressions are similar but to emphasise how they share a common thread, providing critical perspectives and articulating different questions. Gender Studies has shifted across academic and disciplinary boundaries and occupied spaces in the borderlands between disciplines, on fringes, ‘inside’ and ‘outside’ the academy as well as in dedicated research institutes and departments. In a description of ‘intellectual activism’, Patricia Hill Collins (2013) describes two core mechanisms by which lines are blurred between activism and the academy. These two mechanisms are ‘speaking truth to power’ and ‘speaking truth to people’. The contributions to this volume might sit most squarely in the former – they speak

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from within the academy, from a particular context, and they offer the experience of *doing* interdisciplinary research in particular *spaces*.

This collection draws on work conducted in a particular context within the Swedish academic system, the Vetenskapsrådet (Swedish Science Council)-funded GenNa: Nature/Culture Boundaries and Transgressive Encounters research programme (Vetenskapsrådet 2007–2011, Dnr: 2006–7267).

1.2 The GenNa Programme: A Space for Doing Interdisciplinary Research

The Centre for Gender Research at Uppsala University aims at creating a space to promote lasting interdisciplinary encounters and networks across the borders between the cultural and natural sciences. By bridging the organisational and scientific divides, the Centre has become a meeting place for researchers from different disciplinary backgrounds in a way that is unique in gender research. It has drawn together researchers with backgrounds in the natural, physical and medical sciences as well as from across the humanities and social sciences. The research programme ‘Nature/Culture and Transgressive Encounters’ has been a key force in the creation of this space and such encounters.

The aim of the GenNa programme was to promote empirical investigations and theoretical reflections on the way gender and gendered knowledge are produced in the borderland between the cultural and the natural sciences and in the knowledge-producing interactions between empirical research, theory and teaching. By situating feminist research in spaces between the humanities, social, natural, life and physical sciences, the Centre is exceptional.

The starting point for the GenNa programme was interdisciplinarity as it addressed contemporary questions and themes that are investigated and theorised within the humanities as well as the natural and social sciences. From this point of departure, the programme created a platform for interdisciplinary research, theory development and teaching engaging issues in the borderland between ‘nature’ and ‘culture’. It developed new themes that transgressed disciplinary boundaries. Research groups focused on the relationship between gender and embodiment and the diffuse boundaries between humans and non-human animals, brought together Gender Studies and Physics and critically engaged with questions of pedagogy from a gender perspective. The GenNa programme therefore had a broad remit and engaged questions at the intersections of theory, policy and praxis.

The discussions that the GenNa programme initiated were transgressive as they crossed disciplinary divides of theory, method and subject matter. These ‘transgressive encounters’ are of utmost importance if we are to engage fully in contemporary debates. Such debates might not be limited to the academy. By speaking to issues of gender and embodiment; by questioning the raced, classed, gendered and sexed definitions of ‘the human’ and offering more-than-human (after Whatmore 2002)

dimensions to our understandings of society; by scrutinising the gendered politics of Physics and the production of knowledge through Physics; and by interrogating the impact of gendered power on the spaces, content and experiences of science education, the programme fulfils Hill Collins' demands for intellectual activism as it speaks truths to power. But as Hill Collins notes, the possibilities of performing this form of intellectual activism are often easiest from 'within' positions of power (2013, 39). The GenNa programme, as it has established the Centre for Gender Research as a leading European institution in gender research and as a partner in a strong international network of research, has offered an ideal space for the production of such interdisciplinary work. But this position 'within' has also required compromises.

1.3 Doing Interdisciplinarity

Canning et al. (2010) highlight the multiple risks to particular ways of doing science and research in interdisciplinary settings. In particular they highlight the risk of traditional hierarchical valuations of 'scientific' over social science or humanities perspectives limiting particular epistemologies to particular issues (p.147). This tension was constantly negotiated under the GenNa programme as the assumptions that the methodologies and traditions of the social sciences are only applicable to the 'social' or 'cultural' realm were constantly challenged. While Canning et al. critique the role of the social sciences and humanities within a predominantly science arena, it has been suggested that similar resistance might be felt where those versed in the natural sciences move into areas previously dominated by other epistemologies, Gender Studies, for example (see Lykke 1996 for a discussion of the contested presence of feminist science studies in feminist debates). My point is that there is a lot at stake in doing Gender Studies in interdisciplinary settings.

Despite there being much at stake, interdisciplinarity and Gender Studies are in many ways intertwined, such that we might say interdisciplinarity is fundamental to Gender Studies. Lykke (2010) would go further. Lykke draws distinctions between multidisciplinary which is constituted by collaborations between disciplines, interdisciplinarity which generates new combinations between existing disciplines and trans- or postdisciplinarity that aims to shape new fields of theorising (Lykke 2010, 18). For Lykke, contemporary feminist¹ research as it offers 'new modes of working' is transdisciplinarity. The 'modes of organisation' that assimilate feminist research into the university structures, such as a centre for gender research, make it postdisciplinary. It is not however only the structures of institutions that shape inter- and transdisciplinary research; the subject matter of Gender Studies is active in this shift.

As the issues addressed in gender research cannot be limited to a single discipline, method or critical lens, we might say that Gender Studies requires trans- and

¹Lykke refers specifically to Feminist Studies.

interdisciplinarity. Moreover the situation in which Gender Studies is conducted is more often than not interdisciplinary if not always postdisciplinary. Although funding streams and university support in Sweden has led to the establishment of dedicated departments and research centres, nationally and internationally gender research is often conducted by one or two individuals within more 'traditional' disciplinary departments. This situation effectively pushes gender researchers into multi- and interdisciplinary discussions (Allen and Kitch 1998). Gender researchers in such circumstances are constantly required to speak to the matters of disciplinary concern using the appropriate theoretical canon and methods, while also engaging with the discussions of gender researchers in other disciplines. I return to my earlier point – gender research in both theoretical and practical guises is transgressive.

Gender Studies has a long heritage of doing multi- and interdisciplinary work. This is not to suggest that Gender Studies has greater claim to interdisciplinarity, but that its heritage, its diverse methodologies originating in art, through literature and sociology to science studies and the sciences, position Gender Studies as an illdisciplined creature; it does not have what Canning et al. (2010) call 'disciplinary rigidity' (p146). The rigidity described by Canning et al. (2010) stems from the history of particular disciplines operating through citational practices creating and conforming to particular canons, methods and areas of interest. In contrast Gender Studies with its roots in Women's and Feminist Studies has a critical often explicitly non-normative scope and transformative or subversive potential. Gender Studies might be conceptualised as a lively knot of researchers, not tied to any one discipline, but sharing multiple heritages, able to turn its gaze on any issue. However, while Gender Studies might be in a unique position regarding interdisciplinarity and it might not have the disciplinary rigidity of the traditional disciplines, Gender Studies is clearly not immune to the disciplinary effect. Whether the result of such pressures is always postdisciplinarity, I would like to leave open, focusing on the individuals with different disciplinary backgrounds and identities working within the setting of the GenNa programme at the Centre for Gender Research.

Like many other centres around the globe, the Centre for Gender Research is to a certain extent reliant on external recruitment. It draws together people from different disciplinary backgrounds. The institution might be postdisciplinary, the work trans- or interdisciplinary, but the people doing the work often have disciplinary backgrounds, continue to speak in disciplinary settings and may return to 'home' disciplines following periods in Gender Studies departments. This embodied, practical and practised process of doing interdisciplinarity within the structures given by institutions such as funding bodies or universities deserves some scrutiny.

Transgressing disciplinary boundaries by individual researchers creates opportunities to do exciting interdisciplinary work in new settings, but as gender research has shown, transgressions also constitute risks and compromises. As we develop the authority to speak to new debates, there is a risk of being considered less qualified to speak in disciplinary contexts. This becomes most evident when considering the structures such as funding bodies and outlets for dissemination that are all shaped by disciplinary expectations.

Lykke (2010) notes that the formalisation of gender research into autonomous institutions, such as the Centre for Gender Research, facilitates the negotiation of university or external funding by giving 'grant status' (2010, 17). This is in part why the Centre for Gender Research has been so successful. However individual researchers are committed to submitting applications to research councils or publications to journals with disciplinary heritages – disciplinary backgrounds guide reviewers and research committees. Disciplinary situatedness is understandable and maybe inevitable; however, it has implications. For example, within research grants or policy discussions, interdisciplinarity can be interpreted as individuals from different but closely related disciplines working together. This is not to dismiss such work but to recognise that there are structures that can limit the progressive potential of trans- and interdisciplinarity.

The prioritising of research councils along traditional divisions of science, social science, humanities and arts is on one level understandable. But it limits interdisciplinary discussions as particular epistemologies and matters of concern are divided up and 'appropriate' methodologies, methods and critical refrains are allocated to different disciplines. Myra Hird (2004) highlights the opportunities created for 'scientific' and 'social scientific' knowledge where the divisions in matters of concern are blurred. In particular Hird emphasises the potentials of the 'new materialist' turn within feminism as we acknowledge that those from the social sciences and humanities might also be interested in 'things', 'matter' and 'objects', rather than the 'purely social' that surrounds them (see also Holmberg 2005 and Braun and Whatmore 2010). Such discussions around the significances of 'matter' and 'the social' be they new materialist or constructivist are precisely where interdisciplinarity needs to be.

Van Loon (2005) highlights how spaces of medical infection and contagion should not be only the domain of the medical sciences for the same reason that understandings of a nuclear power station should not be limited to nuclear physicists. Nuclear power stations are as much a product of and an impact on societies, cultures and politics as they are of nuclear fission (page 50). I read this as an articulation of why we need interdisciplinarity and transdisciplinarity, and yet the disciplinary structures we inherit can resist such approaches. It is unusual for science-orientated funding bodies to fund social science or humanities perspectives (and vice versa). And while some forms of multidisciplinary may have become de rigueur within scientific communities, discussions across the science/social science/humanities spectrum that go beyond the 'add and stir approach' (or token social scientist) outlined by Canning et al. (2010) are rare. Gender Studies in general and the GenNa programme in particular is a space where such connections can occur. It offers an example of how to tread the lines between different funding bodies and facilitate discussions not only between disciplines but between natural, life, physical, social sciences, humanities and arts.

This is not to suggest that Gender Studies is exempt from the processes of disciplining; we teach core texts, we employ feminist informed methodologies, and there are constant negotiations about what is and is not Gender Studies. For example, questions are raised as to whether Post-Human and Animal Studies perspectives are relevant to Gender Studies (for a discussion of the resistance to and relevance of Animal

Studies, see McHugh 2012). Such challenges are not limited to those responding to the questions animal presence raises; despite its transdisciplinary heritage, we are often called to justify our chosen theoretical perspectives. Moreover, the resistance by some feminist perspectives to queer and trans theory and bodies highlights how bodies, theories and approaches are included and excluded. For example, calls to unite behind key feminist goals such as critique of the patriarchy of capitalism (e.g., Fraser 2009, 2013) risk overlooking the powerful critiques that come from situations outside of the hegemonic feminism that Fraser speaks from (see Bahndar and Ferreira da Silva 2013). The interventions of feminist new materialisms (Hird 2004) and the critique thereof (Ahmed 2008) similarly illustrate how the subject matter of Gender Studies and the ways it engages with these matters is fiercely debated.

Given the diversity of feminist work and the context within which research is conducted, a core question hangs over interdisciplinary work in ways it would not in disciplinary domains – ‘how can people work together when there is no common method?’ When interviews, texts or mass spectrometers are the things you work with, you do not need them to be explained to you in a funding grant or a research paper; when working in interdisciplinary settings, these methodologies and methods require discussion. In these discussions or in the necessary explications of what a mass spectrometer or a text *really* is, it becomes clear that interdisciplinarity is not only an adjective describing a particular form of research but a verb, something done, a method, a process, a performance. Gender Studies with its history of interdisciplinarity is used to multiple perspectives and methods, borrowing from different disciplines, to address a diversity of issues. It is well versed in how difficult (and rewarding) it is to *do* interdisciplinarity.

This anthology offers some of the outputs, challenges and opportunities created in an interdisciplinary programme that was set up to engage multi-, inter- and transdisciplinary perspectives on issues at the intersections of nature and culture, sex and gender. These chapters are examples of what it is to *do* interdisciplinarity within this setting. With this in mind, many of the contributors use personal narratives woven through the discussions as a method. Other chapters do interdisciplinarity as they experiment with different styles of writing or bring together different theories or perspectives. The purpose of doing so in this context is to emphasise the labour done within multi-, inter- and transdisciplinary work that is not merely a ‘novelty’ that sits outside of disciplinary bounds, but a process, a doing, with situated knowledge and situated consequences, specific challenges and successes. This is not to suggest that work done in inter- and transdisciplinary settings is ‘more difficult’ than the work done within disciplinary settings but that it is a different kind of work. It is ill disciplined in that it transgresses disciplinary bounds while also responding to disciplinary heritages.

The contributions to this anthology reflect the diversity in gender research; some chapters are informed by the natural and physical sciences and Science and Technology Studies and others by Post-Colonial theory, Animal Studies, Literary theory or Feminist Phenomenology. I would offer a broad umbrella that might define Gender Studies as how individual bodies are positioned in relation to gendered power and the impact of that orientation on the opportunities and experiences

of those individuals. However within this broad envelope, the different backgrounds of authors lead them to different areas of concern and different interpretations of what constitutes Gender Studies.

1.4 Structure of the Volume

The volume consists of seven chapters, each drawing on different backgrounds and attending to different topics but all operating as examples of *doing* interdisciplinary Gender Studies. They document and explore the transgressions between different disciplinary heritages, theories and methods. The first four take a more explicit first-person narrative to explore what is at stake in doing interdisciplinary Gender Studies. They document the challenges, experiences and opportunities of doing work where Gender Studies intersects with different disciplines. Not limited to description, each chapter uses these situated accounts to develop theory and exemplify how Gender Studies can inform and be informed by different disciplinary heritages. The following three chapters do not use explicit personal narratives rather they exemplify how Gender Studies perspectives can bring together different disciplinary heritages. Not so much implementing a predefined ‘gender perspective’ as using Gender Studies as a space where interdisciplinary conversations can occur.

The spatial element offers a further dynamic linking the chapters. Transgressive encounters require spaces to be enacted and equally the spaces they are conducted in shape the encounters. Each chapter either reflects on how space, place and identity are active in the research process and/or creates ‘new’ spaces where ‘gender’ research encounters different debates.

Chapter two by Anita Hussénius, Kathryn Scantlebury, Kristina Andersson and Annica Gullberg introduces the concepts of *interstitial spaces* and *transgressive identities* to examine the boundaries of gender and feminist studies, science and education and discuss research practices and positions. Working at the intersection of Biology and Chemistry and Gender Studies, the authors provide examples of how *interstitial spaces* exist between and within boundaries offering possible sites within a defined context (a discipline, a practice, a culture) that may be occupied by an actor/agent working as a “carrier” of different cultural practices, knowledge and theories. The chapter uses *transgressive identities* as a theoretical description and understanding of research practices and positions.

In close conversation with the issues raised by the preceding chapter, Chapter three by Dagmar Lorenz-Meyer reflects on the process of doing gender research within the setting of the physical sciences. By examining the mundane contact zones of presenting and discussing research findings with former research participants, the chapter attends to spaces often considered outside of the research context but that constitute important spaces where gender research is done, communicated and contested.

Chapter four by Jacob Bull engages similar spaces by attending to how resistance was expressed in different academic settings. Occupying a position between

Gender Studies, Animal Studies and Rural Development, the case described illustrates how it can be difficult to get interdisciplinary perspectives recognised even within these three seemingly interdisciplinary settings. The chapter goes on to discuss how these three traditions can benefit one another and give better understandings of the significance of cows in our more-than-human social worlds.

The fifth chapter in the volume also uses first-person narrative to engage with historical and contemporary issues of colonialism in Sápmi, the traditional Saami lands covering parts of northern Sweden, Norway, Finland and Russia, focusing on historical exploitation for hydropower and contemporary mining developments in Sweden. The article also explores alternative ways of writing in academic debate as it introduces yoik (traditional Saami song/narrative) as a method for articulating some of that which is not always captured in more disciplined academic styles.

Chapter six by Jenny Björklund, Ingvil Hellstrand and Lisa Folkmarson Käll confronts the notion of intersectionality with its conditions of materiality and embodiment. Through analysis of two contemporary films *Mammoth* by Lukas Moodysson (2009) and *Antichrist* by Lars von Trier (2009), the chapter underlines how lived embodiment constitutes the very site in which seemingly stable identity categories intersect and have the potential of being both reproduced and transformed. This theoretical position brings to light bodies already marked by intersecting strands of oppression and marginalisation and makes visible the intersectional embodiment of privileged and seemingly unmarked bodies – it marks the unmarked.

By examining the non-normative combinations of stamens and pistils in the descriptions and botanical classifications of Carolus Linnaeus, the penultimate chapter, written by Maja Bondestam, troubles the historical accounts that inform us of an era so clearly associated with binary thinking, the complementariness of genders and the establishment of a substantial two-sex model. By highlighting the queer dynamics in Linnaeus' language and developing the gendered dynamics of the history of science, the chapter demonstrates how the critical lenses of History of Science and Gender Studies compliment one another.

The final chapter in the volume by Fredrik Palm does Gender Studies by developing discussion of the theories of sexual difference offered by Judith Butler and Slavoj Žižek. By engaging these two authors, Palm develops gender theory and demonstrates how Gender Studies and social theory can constantly recombine. In a somewhat ironic twist, the chapter thus introduces the reader to a certain tendency in Butler's work that makes it appear as too straight and as deprived of that original tension or queerness that characterises Žižek's sexual difference.

Uppsala 2014

References

- Ahmed, S. (2008). Open forum imaginary prohibitions: Some preliminary remarks on the founding gestures of the "new materialism". *European Journal of Women's Studies*, 15(1), 23–39.

- Allen, J. A., & Kitch, S. L. (1998). *Disciplined by disciplines? The need for an interdisciplinary research mission in women's studies feminist studies* (Vol. 24, No. 2, pp. 275–299).
- Bhandar, B., & Ferreira da Silva, D. (2013). White feminist fatigue syndrome, *Critical legal thinking – Law and the political*. www.criticallegalthinking.com
- Braun, B., & Whatmore, S. (Eds.). (2010). *Political matter: Technoscience, democracy and public life*. Minneapolis: University of Minnesota Press.
- Canning, C. G., Hird, M., & Smith, G. (2010). The pitfalls of the “add-and-stir” approach to trans-disciplinary public health research. *Critical Public Health*, 20(2), 145–155.
- Collins, P. H. (2012). *On intellectual activism*. Philadelphia: Temple University Press.
- Fraser, N. (2009). Feminism, capitalism and the cunning of history. *New Left Review*, 56, 97–117.
- Fraser, N. (2013, October 14). How feminism became capitalism’s handmaiden – and how to reclaim it. *Guardian*. London: Comment is Free.
- Hird, M. J. (2004). Feminist matters: New materialist considerations of sexual difference. *Feminist Theory*, 5(2), 223–232.
- Holmberg, T. (2005). *Vetenskap på gränsen (science on the line)*. Lund: Arkiv förlag.
- Lykke, N. (1996). Between monsters, goddesses and cyborgs: Feminist confrontations with science. In N. Lykke & R. Braidotti (Eds.), *Between monsters, goddesses and cyborgs: Feminist confrontations with science, medicine and cyberspace*. London: Zed Books.
- Lykke, N. (2010). *Feminist studies: A guide to intersectional theory, methodology and writing*. London: Routledge.
- McHugh, S. (2012). Bitch, bitch, bitch: Personal criticism, feminist theory, and dog writing. *Hypatia: A Journal of Feminist Philosophy*, 27(3), 616–635.
- Spivak, G. C. (1999). *A critique of postcolonial reason: Towards a history of the vanishing present*. Cambridge, MA/London: Harvard University Press.
- Van Loon, J. (2005). Epidemic space. *Critical Public Health*, 151, 41–49.
- Whatmore, S. (2002). *Hybrid geographies: Natures, cultures, spaces*. London: Sage.

Chapter 2

Interstitial Spaces: A Model for Transgressive Processes

Anita Hussénius, Kathryn Scantlebury, Kristina Andersson,
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2.1 Point of Departure

Science education has its origin in the natural science disciplines, and although it has evolved into its own research field, there is still a close connection between the two. Not surprisingly, scientists exert an influence on what science is of most importance to include in the science curriculum for those who learn and also for those who teach science.¹ Concepts, laws, and theories are commonly presented as rigid truths, compared to the way they are communicated and debated within the scientific community itself, and thereby convey a stereotyped positivistic view of science. Moreover, while the curriculum in school explicitly addresses the scientific phenomena and concepts, it also mediates an implicit message of a hierarchy of

¹For example, in the United States, the “committee of ten” decided that high school students would first study biology, followed by chemistry and then physics. Scientists in the nineteenth century introduced this “layer cake” approach to the curriculum which remains dominant in the twenty-first century (DeBoer 1991).

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science practices and who can access and participate in that practice (Harding 1986; Lemke 1990).

For nearly four decades, feminists have critiqued the culture of science as a male preserve and this critique produced a new area of scholarship, namely, feminist science studies. Scholars in feminist science studies have examined structures within science that have excluded, ostracized, and/or subordinated women. There is a need to establish rhetorical spaces for feminists and gender scholars and scientists and science educators to discuss and to collaborate on examining the culture of science and the cultures of humanities and social science from reversible perspectives to the mutual benefit of all stakeholders. Scientists with feminist interests or perspectives and feminists with research interests in science have had limited engagement with each other, nor have they found what Code (1995) called the rhetorical space to engage in discussions, which could produce the research and theories to restructure and revise the disciplines from feminist perspectives. Work aiming to form, create, build, host, support, and strengthen such a research is an organizational challenge. It is not something that is accomplished “just like that” but is rather a continuous, ongoing process. To create encounters between researchers that are more than discussions in a physical space to which we bring our knowledges, experiences, cultural prerequisites, and understandings, we need an awareness of existing boundaries. Such boundaries exist inside and outside academia and inside and outside our heads, bodies, and minds, boundaries that influence what we can achieve and that limit the development of new ideas and knowledge.

2.2 Interstitial Spaces and Transgressive Identities

As scientists and science educators, we four have experiences of being part of, and working within, different disciplinary and organizational boundaries such as natural sciences, feminist and gender studies, teacher education, and compulsory school. In this chapter we use our experiences as researchers and teachers as the empirical data for autobiographies that are presented as a metalogue to discuss how we arrived to transdisciplinary research and theorize the “illdisciplined” nature of that work. In our chapter, we introduce the concept of *interstitial spaces*, that is, imaginary spaces between and within boundaries – such as the boundaries of gender and feminist studies, science, and education – and further define the concept of *transgressive identities* as a theoretical description and understanding of our research practices and positions. As an explanatory concept for the social settings that we operate in, interstitial spaces appeal to us because of the chemical interpretation of the term.

Scientific metaphors for elaborating with boundaries are not something new and have been used by Barad (2003), e.g., diffraction patterns from light as an image of “indefinite nature of boundaries.” In the physical model of light, it has a duality inhabiting properties of being both particle and wave. This makes it (in our opinion) both useful and indistinct as a metaphor. Barad uses it to discuss “how matter comes to matter” (Barad 2003), and although there are similarities between interstitial spaces and Barad’s (2003) conceptualization of matter to discuss non-static

boundaries, the diffraction metaphor is limited for our purposes. A consequence of the existing model of light is that it is impossible that in one and the same experimental setting, at one and the same time, study and observe both the wave and particle properties of light; it is an either-or situation. For our discussion of displacing and deconstruction of boundaries, we therefore introduce the use of another material concept, which entails something else than the closed either-or situation. Interstitial spaces are possible sites within a defined context (a discipline, a practice, a culture) that are occupied by an actor/agent working as a “carrier” of different cultural practices, knowledge, and theories. A “carrier” can use the interstitial space to influence and challenge that context and thus loosen up boundaries. In a sociological view of culture, structure and agency exist in a dialectical relationship. Structures impact the power of individuals to act (i.e., their agency), and conversely an individual acting as a “carrier” can impact structures.

In chemistry, interstices² are the gaps in solid matter that exist between atoms or molecules. Smaller atoms or molecules that are located within the interstices *change* the chemical and physical properties of matter. An example is the introduction of elements as “impurities” into “pure” metals during the manufacturing process. The most common “impure” elements occurring in metals are hydrogen, carbon, nitrogen, and oxygen, which fit between normal crystalline lattice locations. Another example is the softeners in plastics. During the polymerization process, smaller molecules (monomers) add to each other, forming long chains (plastics); other small molecules (softeners) are added to the reaction mixture but are not involved in the chemical reaction. The softeners are not bonded to the polymer molecules but become situated in the interstices between the polymeric chains and thereby result in a plastic with different properties than the same polymer without an added softener.

Interstitial space is a scientific concept that we have employed as an analytical metaphor to reflect on our science experiences and to theorize how those experiences could be generalized in other social settings. In this context, we use interstitial spaces as a theoretical construct to examine the power structures that influence and impact the disciplines. Interstitial spaces may exist within the context of a discipline or between disciplines. These spaces provide individuals the opportunity to experience and challenge the existing culture but also to acquire and develop new cultures and practices. As new knowledge is generated and utilized, it may become integrated into the culture. Thus, interstitial spaces establish a context for transgressive identities to emerge so one can act in ways to transform and change the cultures of disciplines.

We have used Lykke’s (2010) examination of different approaches to cross-disciplinary research and her explanation of multi-, inter-, trans-, and post-disciplinarity research to define our transgressive identities. Lykke (2010) describes the specific research states and their characteristics, for example, transdisciplinarity is the posing and exploring of research questions that do not belong within existing disciplines. Transdisciplinarity research generates new areas of inquiry and ways of generating knowledge that are not the sole purview of a traditional discipline. A

²Interstices are another name for interstitial spaces.

transgressive identity means being a “carrier” of some practices and perspectives that differ from those of a specific culture (which could be a discipline) and those belonging to this culture, although the “carrier” is also integrated into the culture. A “carrier” with a transgressive identity has an awareness and a critical perspective of the culture’s practices and characteristics that other participants may unconsciously accept as norms. At the same time, a transgressive identity places the “carrier” in a position of being “the other.” For example, Kumashiro (2000) uses the notion “the other” for marginalized groups in the society, i.e., that are other than the norm, when discussing anti-oppressive education. Since our use of “the other” is wider and does not necessarily relate to someone marginalized and/or oppressed, we instead choose “carrier” as a term for someone inhabiting non-majority/hegemonic positions.

A *transgressive identity* is a way for scholars to engage in both transdisciplinary research and scholarship while acting agentially to change the discipline. For example, a feminist scholar could challenge science’s patriarchal structures through repositioning the curriculum, changing pedagogical practices, or redefining science to be more inclusive. Furthermore, within education, a feminist scholar may forefront the importance of gender, while within gender studies, her/his challenge may look to change stereotypic views of science. A critical aspect of a feminist transgressive identity is the incorporation of a political agenda to challenge and to change structures that oppress females within the disciplines.

The transgression of disciplinary boundaries by a “carrier” can cause chafing.³ For those *staying within* the discipline, the transgression represents a shift between two knowledge domains and may be perceived as a threat and a weakening of disciplinary positions. In a way, within discipline representatives are forced to reflect on the relevance of claimed boundaries by the presence of this “carrier” in the interstitial space. As an example, a feminist acting as a “carrier” can choose to occupy a space as a political act, thereby attempting to restructure existing orthodoxies. That is one dimension of the concept. In another dimension, these spaces are the sites where transgressive identities can emerge.

2.3 Autobiography as a Methodology

In the following section, we use autobiography and metalogue to illustrate our feminist awakenings and show how our experiences and transgressive identities in interstitial spaces have shaped and defined our research interests and academic lives as feminist science educators. Science educators have used autobiography as a method to analyze the teaching and learning of science (Roth 2005). We use autobiographical data and a dialectical approach with historical reflection and feminist theoretical underpinnings to reflect on how our experiences in studying science in different disciplines and locations produced our transgressive identities.

³Chafing can cause irritation but is also an action that may smooth rough surfaces.

Feminist science education studies engage scholars with diverse backgrounds and unique learning and career trajectories. Each of us has a scientific background in biology or chemistry. Two of us (Anita and Annica) have final degrees in the sciences, while Kristina and Kate have their final degrees in science education. Anita and Annica had extended time as science researchers and transgressed to feminist science education research thereafter, using feminist theories to examine their personal experiences in the academy. In contrast, Kristina and Kate came into the field via “women’s true profession,” that is, school teaching (Hoffman 2003). Through their experiences and choices, they transgressed into feminist science education studies in order to use feminist theories and methodology in their research.

Using a metalogue, our chapter will examine how feminist perspectives interpret our lived experiences in science and science education and how those perspectives and experiences provide direction for us as feminist science educators. Metalogue allows us to keep our individual voices and perspectives; although we are all white middle-class women, we have had different science and science education experiences (Roth and Tobin 2004). Figure 2.1 provides an overview of the trajectories of our feminist awakenings. The two parallel lines in the figure illustrate a career barrier that moved a career direction from one area into another. This figure and its implications are further explained below in the section *Feminist Awakenings: Similarities and Themes*.

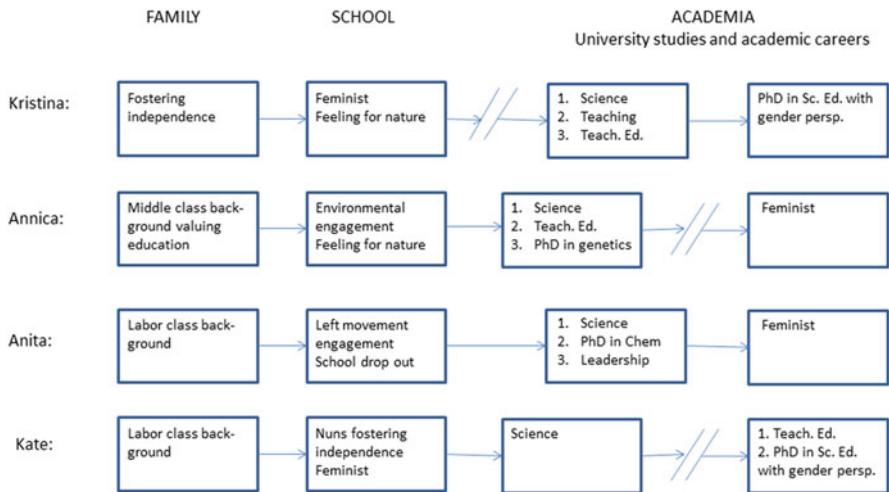


Fig. 2.1 Trajectories toward a feminist awakening

2.4 Feminist Awakenings and Emerging Transgressive Identities

An awakening (e.g., a feminist awakening) might occur when moving from one local setting to another and looking at the old setting with eyes of an outsider but with an insider's knowledge. An awakening might also occur by a single event or by the sum of several events without a physical or philosophical movement from one setting to another. An awakening has occurred when one sees previously hidden patterns, structures, norms, and/or power relations. Our feminist awakening(s) came at different chronological stages of our lives, but a common trigger was the observation that in society, and particularly in science, women were treated differently from men.

2.4.1 *Kristina*

My mother came from a middle-class family in a small town, where my grandmother ran her own business, a flower shop. My grandmother often pointed out that she was the first in her family to have a lower school certificate.⁴ My mother also took that certificate and then studied for nursing. My father grew up in a village. He had a working-class background, with a mother who stayed at home but who had a dream of becoming a teacher. She was very supportive and encouraged my father to take a high school exam through distance adult education (Hermods). He then studied to become a pediatrician. According to socioeconomic conditions, my sister and I were brought up in an upper middle-class family, but my father's working-class background was always very visible in different contexts such as when I met my father's side of the family and how my father talked about his family.

My parents repeatedly presented three strong narratives that influenced my adolescence. First, our mother expressed one's right to voice opinions regardless of your position in society or at work. This was very much in contrast to my grandmother's idea. When my mother studied nursing, she publically challenged the professor in front of the doctors and nurses; my grandmother stated that she should not rebel against authorities! However, my mother never adapted to the hierarchal order at the hospital where the physicians had a higher status and rank compared to the nurses. The second narrative was my father's pride in his working-class background and the advantage of having one foot in that environment and the other in the academy. The third strong narrative was that our family and its individual members were special. My grandmother often pointed out that her daughters were special and so did my mother. Throughout my upbringing, the "mantra" that my sister and I were very special and unique made me feel comfortable in being different or an outsider

⁴Realexamen in Swedish.

in school. For my parents it was also important that my sister and I received a good education to establish our economic independence. Our family assumed that we would attend university and that I would follow in my father's footsteps and become a physician.

Because I intended to become a physician, I made a great effort in school. I liked school and was interested in theoretical subjects. I needed top grades in every subject (a mean value of 5.0) for admittance into the medical training program. But when I finished upper secondary school, I failed the required score by 0.15 points. This forced me to reconsider my career path; I was very interested in nature and chose to study biology.

2.4.2 *Kathryn (Kate)*

My identity as a scientist started in high school; I attended Cabra Dominican College, a Catholic girls' school in Australia. The nuns who ran this school had decided that an academic career was important for "their girls." My mother argued against my enrollment at Cabra because I would not learn useful skills such as typing and shorthand but languages (French and Latin), music, art, math, science, English, and social studies. From starting school, I had consistently been the top student in my grade. In later years, when I had established myself as a feminist researcher, my father and I talked about the upbringing my sister and I had and the life experiences that had led me to become a feminist researcher and a scientist. My father had left school at 14 for an apprenticeship; his father (my father was two when his mother died) had taught him that a measure of good parenting was "that your children should end up better than you." The nun who taught me when I was 11 and 12 years of age, Sister Mary Callista, had told my father I was smart and she expected him to make sure I "went far." By this she meant I should complete high school (which neither my parents nor sister did) and attend university. My first lesson in power was that my father insisted I enroll at Cabra, even though from my mother's perspective when typing and shorthand left the curriculum, the nuns no longer provided a useful education.

My interest in chemistry began when I learned how the macro properties of matter are explained by micro interactions between atoms and molecules. The idea that people, who had never "seen" an atom or an electron, could explain why matter acted in certain ways and predict what would occur in different physical conditions fascinated me. Further, that an exchange of electrons and sharing or a different rearrangement of atoms could change the matter's properties excited me.

2.4.3 *Anita*

When I was 14, I had my first experience in studying chemistry. It was love at first sight. I had a strong feeling that this was “my subject”; this was what I wanted to dedicate my life to. Afterward, I have often wondered what it was that gave me that feeling, why I felt such a strong “identification” with, and to, chemistry. There is no simple answer, but I can see some important factors. One is my background; no one in my family, before me, had a higher education. When I grew up, most of my family and relatives had only completed “folkskola” (i.e., 6 years in elementary school) or less than that. At an early age I became aware that I wanted to “become” something else, that I wanted a different kind of life than the one that marked my childhood. My childhood was hard, and my first awakening came too early. By the age of ten, I had assumed several adult responsibilities. My desire to attain a different and higher status than the one my family held became a major driving force. The high status of science, the image of science as being abstract and difficult, attracted me, and I saw this knowledge domain as a pathway to a better life.

In the 1970s, during adolescence, I protested against the Vietnam War and was part of the political left movement. In that context, my working-class background afforded me “high status”; yet, the movement had contempt for both academia and people with upper-class status. I felt at home in the left movement with such a strong sense of belonging that it took over my wish to become “something else,” and at an age of 18, I had dropped out of high school and started working at a sheet metal, welding, and machine factory. Being one among others in political solidarity, striving for better life conditions at a national and international level was more important than my individualistic strivings to climb a socioeconomic ladder. However, after several years of industrial work, I resumed my studies, completed high school, continued studying chemistry and mathematics at the university, and attained a PhD in organic chemistry. Thereafter, I remained in the academy.

2.4.4 *Annica*

The beginning of the 1980s was a time of transition, not only for me personally leaving my home in a typical factory town to study in the university city of Uppsala, but also for Swedish society. The plush dresses of the 1970s were changed to yuppie suits; ideas about collective solidarity faded away and instead grew an individualistic “do-it-yourself” culture. My interest in nature led to my participation in the environmental movement as an active field biologist and a strong opponent of nuclear power. I chose biology because of my curiosity about nature, and I decided to study courses in molecular genetics. I found it very exciting to see how DNA was replicated and transcribed and how the environment both inside and outside the organism could affect gene expression.

When my undergraduate studies were complete, I engaged in a project to develop a vaccine against a severe diarrhea-causing virus that resulted in a high rate of infant mortality in less economically developed countries. In reality, the work itself was more basic research and had very little to do with the “glorious words” of the grant applications “to reduce infant mortality.” After a while, I realized that if the research funds expended to produce a vaccine against the virus instead were used to purify the water that people drank, the number of viral infections would drastically reduce along with other kinds of diarrhea caused by intestinal bacteria. The development of the vaccine would mainly benefit the Western tourists, who could afford vaccinations. This aspect was not discussed within the faculty since the implicit aim was to attain research funding to further the researchers’ careers. When I became aware of this, I began to question the project as well as the academy, since the diarrhea virus project was just one example of how most research projects worked.

The way the applications were designed contrasted sharply with the existing research culture. There was often competition between individual scientists, and the researchers often had personal feuds. Strong norms governed for how a successful PhD student/researcher should act, such as demonstrating devotion to your research by working in the laboratory throughout the day and during the evenings and weekends. You gained status with the research group by strolling in at lunch and boasting about the results you obtained at two o’clock in the morning. The results were unimportant, but rather the time when they were produced indicated you were a genuine scientist, devoted to your research. I was the only woman in the research group, and although I was not treated badly, I did not feel that I really belonged. I decided not to apply for graduate studies and instead started a teacher training program.

2.4.5 *Kate*

I remember a critical incident from the time as a high school student studying chemistry. Our assistant principal, Sister Helen, had a doctorate in chemistry, but she did not teach us. The nuns had hired a middle-aged man who had experience as an industrial chemist. He could not teach and his response if we asked questions was to call us stupid. Six of us intended to take the public exams in chemistry, physics, and mathematics, and we were considered the brightest students of the school. I knew I was not stupid. The grades we attained on subject-specific exams determined our acceptance into university and which programs of study we could qualify for, such as medicine, science, or economics.

My first feminist act was to challenge the chemistry teacher about his refusal to conduct the required labs (laboratory work). My subordination toward the teacher resulted in a confrontation between myself, the principal (another nun), and Sister Helen. The situation was resolved when Sister Helen offered to tutor those of us willing to spend extra time outside of the chemistry class. The principal would not allow me, or any of the other girls, to disrespect the teacher by not attending his lectures. The teacher was furious that the nuns had offered us a compromise. He

never taught lab, and in later years as a chemistry teacher, I reflected with horror that I did all of the required labs, outside of school hours, without any adult supervision or anyone else in the laboratory. I refused to allow that man to destroy my fascination with chemistry.

2.4.6 *Kristina*

I became aware of the gender order during my university studies. I noticed that the teachers treated students differently according to our sexes. What male students said and discussed was paid more attention to, and taken more seriously, than statements from female students. After completing my bachelor's degree in microbiology, I wanted other experiences. My feminist awakening had begun and I chose to live an alternative lifestyle. I moved to a house in the countryside with three other women and a child. There were no employment opportunities for a microbiologist in the area so I taught at a secondary school. I lived in the countryside for about 10 years, working as a secondary school teacher in science and mathematics. Gender and equity were always important issues in my teaching. But I wanted an intellectual challenge, and more knowledge about teaching and learning, so I returned to the university to study for a teaching degree. After several years, I accepted a position as a lecturer at the University of Gävle in the teacher education program. When I commenced my PhD studies in science education, because of my feminist stance, I formulated research questions around gender perspectives in science education. It became possible for me to explicitly combine feminism with my profession.

2.4.7 *Anita*

Looking back, the years working in the metal industry were crucial for my feminist awakening, although at that time, "class" was more important. When I worked at SKF in Gothenburg and made holders for ball bearings, a Swedish metal industry's ranking and valuation of people, their employees, was shown in a ridiculous way: the largest holders were made by Swedish men, while immigrant women produced the smallest holders. There was an unspoken myth that the work needed strong men to move the heavy, large holders. But cranes were used to lift the heavy holders, and one's personal strength was not a factor. The workers had to wait for the holders to turn in the lathe, and thus the men had an easy work pace, fewer numbers of piece-work, and the best-paid jobs. Immigrant men had the next best position, both in terms of payment and work rate. The Swedish women produced and managed smaller holders that were stacked on a heavy cast-iron bar and then fixed onto the lathe while balancing on one hand. This was a physically demanding job with a high risk of musculoskeletal injuries. Immigrant women completed the dirtiest, most monotonous work, with a high work rate and the lowest pay. Such observations

became my first experience of a hierarchy of superiority and subordination based on gender and ethnicity. At that time gender equality was not an issue on my political agenda, but these experiences became the foundation for something yet to come; it made me sensitive to hierarchies and the way people were valued.

2.4.8 *Kate*

At my university, all qualified students enrolled into first year of science and one studied chemistry, physics, algebra, calculus, and another subject. The decision to major in a science discipline was not made until the second year. There were over 100 science students in my first year and ten of us were female. I was the only female in my chemistry and physics labs and in the math tutorial section. All the laboratory assistants and tutors were men. All of us were white. One of the first chemistry topics taught was hybridization theory and the symmetry of molecules. I struggled to understand the theory and had difficulty with picturing, rotating, and manipulating two-dimensional images of three-dimensional molecules. Thirty years later, my recollection is that the tutor spent most of the laboratory time helping me because I did not understand. I lost confidence in my ability to learn, in part because the 11 male students in my section quickly completed the labs, declared they understood everything, and left me alone with the tutor. I decided to assess whether I should remain at university after I completed my first term exams. If I did not pass, I would leave. I did not discuss my situation with anyone. Our exam grades were listed publically on a notice board in the main foyer of the department; I was one of five students who had passed the exam with an “A.” All of the men in my laboratory section had failed. After 5 years of single-sex schooling, studying with girls who would voice their concerns and “failure” to understand theories, concepts, and ideas, I had assumed that when the men in my lab section declared they understood the material, they did. I learned a valuable lesson about masculine bravado and exaggeration.

2.4.9 *Annica*

While working as a high school teacher, I received an offer to continue as a graduate student at the Department of Genetics at the Uppsala University, where they recently had begun to use molecular genetic methods (e.g., DNA isolation and sequencing) to answer questions in ecology, zoology, and conservation. This was a different department to where I had worked before and I was excited to use the methods I had learnt in my undergraduate education. I studied the genetics of endangered species and my dissertation focused on one of Sweden’s threatened and fragmented species, the sand lizard.

The Department of Genetics partly remained in the spirit of the lone researcher who year in, year out isolated herself/himself in experiments. There was also an underlying masculine hierarchy that was primarily maintained by the department chair. For example, I did not get funding for a conference because I had a baby, while my male peer received funding although he had three small children. However, I applied for funds by myself from external funding agencies and received grants covering both the conference trip and access to the institution's best computer. Furthermore, I had no access to the same social networks as my male colleagues. I had hunting training but was never asked to join their hunting party.

When I subsequently analyze my story using feminist criticism, I can see two "cultures" that were in conflict with my own acquired vision: (1) the reductionist culture that was dominating in molecular biology and (2) the masculine career mentality. I recognize the reductionist approach focusing on genes and the DNA level as described by the biologist Lynda Birke (2000:138–141). There was a high status in mastering the different methods to analyze DNA. But my peers viewed my research in cloning and sequencing an RNA virus, instead of DNA as genetic material, as odd. However, other researchers valued my knowledge of different DNA methods, and I was offered a graduate student position at the Department of Genetics. My colleagues illustrated what Haraway (1997) described as the faith in DNA as "the master molecule" and researchers having a "gene fetishism." According to Birke (2000), the reductionist way of working in biology won legitimacy during the 1900s rather than descriptive research methods because the biologist viewed the reductionist approach as more scientific with its experimental approach and physico-chemical explanations.

I realized that there was a discrepancy between the "world saving" research questions in applications for funding and the actual studies researchers performed in the molecular genetics laboratory. The studies were incredibly narrow, financed with justifications such as reducing infant mortality or solving the riddle of cancer, but in practice these research issues were more complex and involved many aspects other than biology. These research directions reflected Tauber's (1994) view that the experimental power of a reductionist approach had driven the study of biological phenomena into a genetic and molecular level, and in "the process of establishing its hegemony, the holistic basis of an earlier biology was lost" (p. 54).

The second point is the hegemonic research culture that existed, which was expressed by the acquired status of dedicated scientists by doing "cool experiments" on nights and weekends. The message was that research should come first, and if you had children, you were disloyal to the research culture. Evelyn Fox Keller (1985) writes that this culture scares away many women, because it means that they indirectly have to choose between a research career and children. This "choice" should be just as difficult for men as for women, but as long as women have, or are expected to have, the primary responsibility for children and family life, this choice is more obvious for women. And if you choose both a career and a family, the research expectations will impact you. Although I was published in highly ranked journals (such as *Nature*), it was assumed I would finish my career in research after I completed my dissertation. No one discussed with me postdoc

opportunities or further research plans. I was convinced that I did not fit as a researcher because I did not have sharp elbows and because I was not ready to forsake my children (which I thought I must do). During this time as a student and graduate student, I did not immediately think of myself as a feminist. Although I repeatedly noticed a male superiority, when I came in contact with feminist theory and other women who discussed these structures, I became more aware of how these structures shaped the laboratory context. Using feminist criticism as a tool for analysis, it became clear to me that men and women's opportunity to gain legitimacy varied in both everyday contexts as well as in the scientific research community.

2.4.10 Anita

I recognize Annica's description of the hegemonic research culture and the discrepancy between formulations in applications and the enacted research. But when I was a part of it, I did not question it. The main goal was to increase scientific knowledge and that justified almost all practices. My first work experiences in industry opened my eyes and gave me insights about inequality and how class and ethnicity affected the opportunities for influence and success. In retrospect I consider myself as blind in the academic environment, driven by a desire to become something more than my working-class background. But my "tunnel vision" prevented me from seeing the problems in and the negative consequences of research science. I believed success in science was related to meritocracy and I ignored other issues. I learned the science university culture, I acclimated myself to the jargon, I made an effort to be part of it, and it became a part of me. My desire to belong in science and be included in the academic chemistry environment meant that I kept within the boundaries that "defined" this environment, implicitly as well as explicitly – I did nothing and thought nothing that went beyond what was expected. I learned the norm, unaware that it was a norm, I became part of the norm, and I conveyed the norm to others. The "practicing scientist" described by Isabelle Stengers (with reference to Thomas Kuhn) in *The Invention of Modern Science* (Stengers 2000) matches well with me – she/he

is not characterized by critical mind and lucid rationality. Scientists do what they have learnt to do. They treat the phenomena that seem to be the concern of their discipline in accordance of a "paradigm" – which is both a practical and theoretical model – which seems obvious to them, and in relation to which they have little distance. (p. 4)

It is difficult to detect the norm that you are a part of. For me it was a slow awakening, a struggle against my own resistance. After several years experience in leadership positions, including being the only woman among more than 20 department heads in the Faculty of Science and Technology, I no longer could ignore the different working and social conditions that existed, and still exist, depending on whether you are male or female, to succeed and be successful in the academy. I came across

examples where men in leading positions failed their missions, were criticized, and did not get extended appointments. But they did not get “stapled” with their failures. Nor did failing impact their long-term career prospects. After some years, their failures were disregarded and the men returned to the same or other high leadership positions. Women, who were exposed to criticism, legitimate or not, did not have the same opportunities. Their “failures” were stapled to them and were not forgotten, and they did not get a second chance.

2.4.11 Kate

After I completed an honors degree in chemistry, I pursued employment as a chemist; one company told me they would have hired me because I was more qualified, but the other candidate was married and his wife was expecting a child, so he “needed” the position. This was another experience that “pushed” me toward feminism. I needed employment and teaching was a viable option. I completed a Diploma of Education and attained a teaching certificate. During my second year of teaching, the vice principal encouraged me to pursue a master in science education, and I enrolled part time at Curtin University’s Science and Math Education Centre (SMEC). I recalled being the only female in my chemistry program, and there were only a few women in the master program. Although I had one full year of education courses, I did not have a female professor in that time. I began to ask why and assumed that the number of women in science, and chemistry in particular, would have increased during the decade I had started high school (1971) to when I began my master degree. In Australia during the mid-1980s, there had been no discernible increase in the percentage of women in science, especially chemistry. I began to read feminist critiques of science and education. Jane Butler Kahle came to SMEC on a sabbatical leave and she was the first female professor I studied with. Jane supervised my master’s research and I followed her back to the United States to complete my doctoral studies. Further elements of my transgressive identity emerged for me at this time. I looked then, as I do now, toward Jane as a role model in how one challenges the system, the way things are done, and to question why.

My doctoral program afforded me the time to develop knowledge and skills in science education, gender, and feminist studies. My first university appointment at the University of Maine provided me with the opportunity to develop as a feminist scholar. My transgressive identity continued to emerge with my next appointment as an assistant professor in chemistry and biochemistry. I have described elsewhere that others constructed me as a “snake in the nest,” and at times I have experienced “being in a snake’s nest” (Scantlebury 2005). I did not expect to succeed (i.e., get tenure) in the chemistry department. Consequentially and for over 20 years, I have resided in an interstitial space within my department and afforded the status and the power associated with being in a science, rather than education, department. I have limited power within my department, but my transgressive identity in part reminds my predominantly male colleagues of feminist ideals.

2.4.12 *Kristina*

At the University of Gävle, I worked in a “pure” science department. However, the senior lecturers in biology were engaged in teacher education, and they showed an interest in my science education research. My science education knowledge improved the department’s credentials in teacher education. Some colleagues also wanted to know more about my gender/feminist research. Therefore, in my biology department, a gender perspective gradually became “an aspect working within interstices” that influenced my colleagues and their view of science and science education. For example, they requested my input when writing new course curriculum. Perhaps this interest and encouragement depends on how the people in our group define ourselves as a “we” according to our similar background in biology.

The situation at the Centre for Gender Research is more complicated. At the center, I have experienced a more competitive atmosphere compared to the biology department because of how researchers position themselves in relation to each other. An assumption is that the center’s environment would be open to discussions around feminism and gender. However, until recently, I was uncomfortable asking colleagues at the center theoretical questions. Instead of finding a safe, intellectual home, I was aware that asking questions about various theoretical frameworks might show my lack of knowledge in these areas. I did not feel as if my colleagues would help me develop that knowledge and understanding but rather viewed me as lacking intellectual rigor. In this milieu, as in other areas in the academy, educational research has low status, and I felt that others at the center did not value and appreciate my knowledge and expertise.

2.4.13 *Anita*

The years as head of the chemistry department broadened my competence. At an unconscious level, these experiences on a leading position opened my mind to doing “something else” and thereby prepared me for other opportunities. When an offer came across my path, I left the chemistry department and the old, famous, big university for a department consisting of several different disciplines at a smaller university college. The move also resulted in a change of research direction, from physical organic chemistry to science education. That meant a move from “pure” science to education research, from a high-status domain to an area considerably less valued in the academic hierarchy. However, I stayed connected to my alma mater and moved gradually back after a period of 5–10 years, not to my old department but to the Centre for Gender Research in the Faculty of Arts. Upon moving from one academic domain to another, I could feel (physically and mentally) the difference in status between certain disciplines, expressed in various ways in different contexts and, for example, reflected in the way I was treated by other scholars. Although I do not want to do it, in specific situations I consciously use my science

background to position myself and create legitimacy. This legitimacy gives me a different platform to act from than when I decline to take such a positioning. In a similar way, I can recognize how others position themselves, often by diminishing those with another disciplinary background. This positioning is not necessarily the “sharp elbows” that Annica describes, but rather I interpret it as an expression and acting caused by other’s low self-confidence. I think it is the culture of a research environment that determines if, and to what extent, this kind of positioning occurs. A “transgressive identity change” requires one to cope with existing outside the main culture and supports of the discipline. A research environment that supports and encourages inter-/transdisciplinary collaborations has the potential to be a more “comfortable” interstitial space in a hierarchical, competition-driven academia.

2.4.14 Kate

My identity is as a science, not chemistry, educator and/or a teacher educator, and feminism is central in my professional and personal life. For over 30 years, feminism, and being a feminist, has been a core aspect of my identity. Although the word and terms have had negative constructions in academic and popular press, a feminist perspective was, and is, how I view the world. There are times, depending on context, when I consciously choose not to raise a feminist question, perspective, or comment, but I reflect upon my professional and personal life through a feminist lens. I have never worked in a culture that foregrounded gender in an explicit and ongoing manner. The Centre for Gender Research’s researchers conduct their studies on a wide range of topics using diverse methodologies. When I geographically locate in Uppsala, the conversations, ideas, and intellectual discussions enable me to deepen my knowledge about gender and feminism, re-vision and reconceptualize my academic life, and be “pushed back to strength.” Because when I physically leave the center, I interact with others who never consider how gender and feminism impact their lives.

2.5 Feminist Awakenings: Similarities and Themes

The metalogues articulated in this chapter illustrate our different trajectories toward a feminist awakening and the emergences of various transgressive identities. These are summarized in Fig. 2.1. Kristina and Annica expected to continue their education past the years of compulsory schooling. Kristina inherited from her parents a view that education was a pathway to establishing one’s personal independence and a responsibility for one’s self. Both Annica and Kristina had highly educated parents who expected their children to achieve academically. Anita and Kate came from families with a pronounced or silent expectation that after compulsory education, the next stage of one’s life was paid employment. Annica and Anita’s feminist

awakening came later in their lives; for Kristina and Kate, their feminist views began earlier, possibly in part because they also both grew up in “all-female” settings with one or both parents interested in their education achievements. Kate’s setting personal academic goals began at high school where the nuns changed the school curriculum from one that offered training for secretarial positions, teaching, or nursing to a curriculum that placed importance on academic rigor and success in intellectual subjects. And we all experienced high status associated with studying and excelling at science and mathematics at high school.

Throughout our careers, we have experienced what Valian (1998) has termed “microinequities,” which over time can build up into a cumulative disadvantage. For example, Annica’s experiences of not having a proactive mentor and being isolated from the social networking of the research group and the assumption that her children were an indication that she was not serious about her science career translated into her not being offered postdoctoral opportunities or fiscal support to attend conferences. Microinequities occur at an individual level but have impact on a structural level. Anita engaged in, and with, science for most of her career and academic life. But when she moved into leadership positions within the academy, very quickly she noticed a difference in how women and men were evaluated. She noted that men could fail and make major mistakes, yet continue in leadership roles, women were not allowed to make mistakes. For Annica and Anita, the feminist awakening occurred after a series of microinequities that at the time they had not recognized; however, when looking back through a feminist analytical lens, these instances became evident.

Kristina and Kate encountered different barriers (in Fig. 2.1 represented by two parallel lines cutting the arrow) that moved their career direction from “research science” into science education. For Kristina, studying biology instead of medicine sent her on a different pathway. Kate was unsuccessful in attaining a position as a chemist. Her working-class background propelled her to seek employment, and then, as now, teaching offered a flexibility that other careers did not. Teaching also offered Kristina flexibility in establishing her financial and personal independence.

Kristina and Kate entered the academy through teaching and engaging with research in science education. Along with their science credentials, they had also merged feminism into their identities and used feminist theories to critique science education. Annica left teaching to study science at the doctoral level. However, the barriers raised by her male mentors and peers moved her back to a teaching position, albeit at a university rather than a high school.

Looking at our individual trajectories from a retrospective perspective through the theoretical lens developed in this chapter, we have been situated in interstitial spaces several times during our different careers. Initially, when we began studying science, one could argue that we were outsiders; science practices and culture were inherently masculine, but to varying degrees, we observed that culture and learned to survive and in some cases succeed. We did not consciously understand our first interstitial space, the setting of being female in an inherently masculine setting. However, over time we experienced a “chafing” which resulted in a transition from science toward education. This transition implied looking at the world through a

new grid – to learn social science’s research theories, frameworks, and techniques. Again, we were on the outside of a culture and had to learn its practices. Moreover, a big challenge has been to interact with colleagues who do not value research in education, and those colleagues are from the sciences as well as the humanities.

2.6 Taking a Feminist Science Education Stance

A feminist identity has various facets, but at its core is a focus on how power impacts the lives of girls and women. The historical lack of women in science, science’s continued masculine image, and the characterization of women with words such as emotional, caring, and subjective that were viewed as the antithesis of science (e.g., rational, objective, and logical) were all part of the circumstances and context that contributed to a transgressive identity for each of us. As subordinated entities with the disciplines of biology and chemistry, we developed situated knowledge about the culture of science. We noted the changes in our agency and status during and after our transitions from one discipline to another and began asking questions about the patterns we observed within the disciplines. However, the choice to move into working and conducting research in education placed us in a lower status position within interdisciplinarity context of gender research. Further, in science education research, a focus on gender and/or feminist issues is perceived as of limited value. As discussed elsewhere, science education research is dominated by questions that examine participants’ ability to learn scientific concepts, and only a small percentage of published peer-reviewed research focuses on questions about gender (Hussénius et al. 2013a; Scantlebury and Martin 2010).

Our transgressive identities as feminists, scientists, and science educators intersect and thereby influence the choice and direction of research studies. For example, we have chosen a feministic intervention stance to provide prospective teachers with tools to connect them with science and science teaching in a nonhierarchical way. This has been accomplished with two different, but not independent, approaches, where the scientific content of the courses was expanded and supplemented. One approach was to introduce gender theories as a way to examine power through Harding’s and Hirdman’s theories of gender order (Harding 1986; Hirdman 1990), which includes attention to gender constituted at different levels in society. Another approach was to problematize the view of science as an enterprise with objective knowledge claims by examining science as a culture of subjective values. Explicitly making the students aware of the science culture became for many of them a form of confirmation of their own experiences and feelings in relation to the subjects during school. In essays and at seminars, several had testified that they felt stupid, especially in physics and chemistry classes, resulting in a low self-esteem and a negative attitude toward science. When they managed to catch sight of the culture of the science disciplines, they were able to put these feelings outside themselves, giving them a platform for a different approach to the subjects that could strengthen them in their role as future teachers. This knowledge can thus empower

students and help them to transform and make science education more inclusive (Hussénius et al. 2013a, b).

2.7 Interstitial Spaces: A Chafing Borderland

In the academic world, individuals, groups, or entire organizational units can be a “carrier” occupying an interstitial space within an otherwise well-defined (discipline) environment or culture. Just as in the chemical sense of the term (interstitial space), this “carrier” can affect the properties and activities in this specific environment. The effect can be a positive and/or negative experience and embrace or promote resistance. In a positive experience, the “carrier” can be included and contribute to changes in the culture and the production of new culture. Or a “carrier” could experience negative consequences and be outmaneuvered or ostracized, rendering her/him powerless. Interstitial spaces, and those who are in an interstitial space, can be regarded as a chafing borderland.

The interstices that we, the authors of this chapter, operate in as feminists, scientists, and educators have provided us the opportunity to develop our transgressive identities and also offer critiques of science education. Within one interstitial space, we bring the feminist perspective to science or science education; in another space, we problematize education from our scientific experiences. Within both “mainstream” disciplines, some people view our knowledge and use of feminist theories and research as threatening. In other settings, the cultural capital and the power that we have attained through our science credentials are viewed as intimidating. However, as we move between the fields of science, gender, and feminist studies and education, other’s view of our identities and our views of identity may change. The experiences and knowledge we have acquired through our various transgressive identities have provided us with the expertise to challenge power structures and view an interstitial space as one that can strengthen or weaken structures. Moreover, the transgressive identities provide us with the agency to change those structures.

Our transgressive identities also emerge when we have changed our physical location(s) for conducting research, both as scientists and science educators. For example, when located in a science department and conducting gender research, we exist in an interstitial space within the science discipline that can cause chafing to our colleagues and students. Kristina has experienced a chafing borderland during her employment at a science department where her gender-oriented research in science education influenced her science colleagues, as well as a new course curriculum. She chafed and that resulted in a change. In a similar way, Kate with her feminist agenda has influenced her science colleagues at the University of Delaware – they are aware of her presence and that influences their actions. When we operate in environments dominated by humanities and/or social scientists as in a gender research environment, it is our scientific background that can chafe and that puts us in an interstitial space.

Applying the concept of transgressive identities to organizational units, what Lykke (2010) calls transgressive research fields, becomes something more than establishing opportunities for dialog beyond boundaries. A transgressive field has a potential to become an interstitial space within academia, which can chafe the university and be a melting pot for new transgressive research.

References

- Barad, K. (2003). Posthumanist performativity: Toward an understanding of how matter comes to matter. *Signs*, 28, 801–832.
- Birke, L. (2000). *Feminism and the biological body*. Trenton, NJ: Rutgers University Press.
- Code, L. (1995). *Rhetorical spaces: Essays on gendered locations*. London: Routledge.
- DeBoer, G. (1991). *A history of ideas in science education. Implications for practice*. New York: Teachers College Press.
- Haraway, D. (1997). *Modest_Witness@Second_Millennium.FemaleMan_Meets_OncoMouse*. London: Routledge.
- Harding, S. (1986). *The science question in feminism*. Ithaca, NY: Cornell University Press.
- Hirdman, Y. (1990). Genusystemet. In SOU 1990:44, *Demokrati och makt i Sverige*. [Swedish Government Official Report, SOU 1990:44 Democracy and Power in Sweden] Stockholm.
- Hoffman, N. (2003). *Women's true profession*. New York: Harvard Education Press.
- Hussénius, A., Scantlebury, K., Andersson, K., & Gullberg, A. (2013a). Ignoring half the sky: A feminist critique of science education's knowledge society. In N. Mansour & R. Wegerif (Eds.), *Science education for diversity in knowledge society* (pp. 301–316). New York: Springer.
- Hussénius, A., Andersson, K., & Gullberg, A. (2013b). Integrated gender teaching – Within subject courses in teacher education. In A. Lundberg & A. Werner (Eds.), *Gender studies education and pedagogy* (pp. 19–23). Gothenburg: Swedish Secretariat for Gender Research.
- Keller, E. F. (1985). *Reflections on gender and science*. New Haven: Yale University Press.
- Kumashiro, K. K. (2000). Toward a theory of anti-oppressive education. *Review of Educational Research*, 70, 25–53.
- Lemke, J. (1990). *Talking science: Language, learning, and values*. Norwood, NJ: Alex.
- Lykke, N. (2010). *Feminist studies. A guide to intersectional theory methodology, and writing*. London: Routledge.
- Roth, W.-M. (Ed.). (2005). *Auto/biography and auto/ethnography: Praxis of research method*. Rotterdam: Sense Publishers.
- Roth, W.-M., & Tobin, K. (2004). Co-generative dialoguing and metaloguing: Reflexivity of processes and genres. *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research*, 5. Retrieved from <http://www.qualitative-research.net/index.php/fqs/article/view/560>.
- Scantlebury, K. (2005). A snake in the nest or in a snake's nest: Peer review for a female science educator. In W.-M. Roth (Ed.), *Auto/biography and auto/ethnography: Praxis of research method* (pp. 331–338). Rotterdam: Sense Publishers.
- Scantlebury, K., & Martin, S. (2010). How does she know? Re-envisioning conceptual change from feminist perspectives. In W.-M. Roth (Ed.), *Re/structuring science education: Reuniting sociological and psychological perspectives* (pp. 173–186). New York: Springer.
- Stengers, I. (2000). *The invention of modern science*. Minneapolis, MN: The University of Minnesota Press.
- Tauber, A. I. (1994). *The immune self: Theory or metaphor?* Cambridge: Cambridge University Press.
- Valian, V. (1998). *Why so slow? The advancement of women*. Cambridge, MA: MIT Press.

Chapter 3

Failed Encounters or the Challenges of Rendering Gender a Matter of Concern

Dagmar Lorenz-Meyer

3.1 Introduction

A key ambition of the Gender and Physics (GenPhys) group in the GenNa programme has been to generate, explore and conceptualise the contact zones between the physical sciences, science and technology studies and gender studies.¹ Initially developed for the analysis of (post)colonial encounters, contact zones refer to ‘social spaces where disparate cultures meet, clash, and grapple with each other, often in highly asymmetrical relations of domination and subordination’ (Pratt 1992: 4). Its component term contact is derived from Latin *contingere* (from com- ‘together’+tangere ‘to touch’) and emphasises the relationality of ‘touching together’, being moved, rubbing up against one another and other improvisational dimensions by which ‘subjects are constituted in and by their relations to each other’ (ibid: 7). In academic research cultures, the subjects relationally constituted in encounters include researchers and matters of concern.

¹Teaching encounters at departments of physics included the course *Physics and Gender* (<http://www.fysik.su.se/~sararyd/fog/Kursinformation-Fysik-och-genus.pdf>) and the *International Summer School: Diversity in the Cultures of Physics* (http://www.physik.fu-berlin.de/einrichtung/ag/ag-scheich/projekte/archiv_summer_school/index.html). Research encounters included the two international symposia: *Interferometric Investigations of Physical Knowledges and Gender in the Making* (2011) and *Materialities and (Dis)embodiments of Naturecultures* (2012) that we co-organised at the Centre for Gender Research as well as individual research projects by the group members. On this basis an interdisciplinary reader develops the notion of interference to bring into conversation heretofore dispersed texts that explore the situated interactions of gender and physics in the making. Here the physical phenomena of propagation, diffraction, resonance and refraction are used to conceptualise the histories, epistemologies, cultures and knowledge transfers of physics and gender.

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Gender, as part of the embodied practices through which researchers are differently (per)formed in such encounters and as an analytical focus on the production of sexual difference, has been one ‘participant’ in making particular contact zones in research and teaching encounters. As a topic of conversation, it has instigated concern and collaboration but also unease and ‘miscomprehension, incomprehension... [and] absolute heterogeneity of meaning’ (Pratt 1991: 37) that I will explore in this chapter.

A series of negative replies from prominent science and technology studies scholars in response to invitations to participate in the symposium ‘Interferometric Investigations of Physical Knowledges and Gender in the Making’ illustrated how gender can also become a hindrance for constituting contact zones. As one professor explained his declination of our invitation:

Certain issues are clear – probably even too clear – about the gender dimensions of [the topic we asked him to address]. Women complain about being denied authorship in large collaborative publications, or to see their contribution reduced... historians of early modern copyright have documented not just actual exclusion from authorship but even legally defining the author as male. But because, sadly, exclusion and bias is what one can easily guess whenever gender is involved, that might not be a very interesting paper to hear (or write). (Professor, email 13.10.2010)

What made an engagement with gender superfluous, boring and ultimately irrelevant in this response was its assumed predictability and monotony; gender was figured as a known entity, a ‘matter of fact’ rather than a diverse ‘matter of concern’ (Latour 2004) that was heterogeneously assembled in different practices. As Latour has argued, while in both matters of facts and matters of concern a ‘number of *things* ... participate in the gathering of an object’ (Latour 2004: 235), in matters of facts these mediations and practicalities are stabilised, taken for granted and rendered invisible. In matters of concern by contrast, their diversity, multiplicity and contentions come to the fore – response and responsibility are called forth.

The inability to render gender/genderings a matter of concern had particularly struck me after presenting research findings to physical scientists who had participated in an earlier ethnographic study on gender and knowledge making in a renowned research Institute in the Czech Republic. The presentation that I had given together with Marcela Linková (Institute of Sociology of the Academy of Sciences of the Czech Republic) in 2010 had embedded investigations of gender, multiculturalism and science-society relations within a discussion of the Institute’s institutional transformation geared towards enhancing scientific excellence.² By drawing attention to ‘neglected things’ (Puig de la Bellacasa 2011), we had hoped to generate concern, engagement and accountability, while the participating scientists appeared to refuse many of the stories and interpretations we offered.

²The research that we reported on had been conducted as part of the project ‘Knowledge, Institutions and Gender: An East-West Comparative Study’ (KNOWING) that explored epistemic contexts and cultures in the natural and social sciences in five European countries. For more information, see www.knowing.soc.cas.cz.

This chapter revisits this failed encounter. It takes up the question of how some of my interventions in the seminar may have inadvertently co-produced unconcern with gender and lack of responsibility. What resources and opportunities does this failure imply for telling stories about gender differently so that they open new availabilities (Despret 2004) – rather than telling a different story? How might gender become a matter of concern when feminist researchers may also be invested in rendering gender orderings a matter of fact in contact zones where they are routinely rendered irrelevant? Empirically, I will draw on different materials: our invitation letter, my lecture slides and the tape-recorded seminar discussion as well as fieldnotes on responses I had received immediately after the seminar. That is, I will retrospectively analyse the assemblage of things, slides and voices that made up this particular encounter.

I begin the reanalysis by briefly describing the conditions of possibilities for this event and our expectations. In the following two sections, I explore in more detail the numbers, narratives and theoretical perspectives that I had used in the seminar to provoke engagement with gender and the responses of seminar participants. I then go on to contrast the apparent unconcern for gender with a part of the seminar discussion where participants were moved to articulate their implications in relations of power and accountability. The conclusion discusses some implications for enhancing contact and responsibility for acting with gender.

3.2 The Seminar

The presentation entitled ‘Opportunities and perils in the pursuit of scientific excellence’ built on prior fieldwork that Marcela Linková and I had conducted in different laboratories between 2006 and 2008. Specifically it responded to the interest of our busy research participants in an *oral* presentation of some of our findings, not a written report. An announcement of the lecture was mediated by a senior laboratory leader who had distributed our invitation letter on an internal mailing list and in the seminar acted as chair. In an accompanying email, he had advertised the event as the presentation by a team of sociologists about results of ‘an interesting experiment, where we turned from the subjects of scientific inquiry to its objects’ (laboratory leader, email 12.7.2010). Referring to the restructuring of the Institute that had taken place during our research, our findings on the ‘transformation of the Institute and its gendered aspects’ were expected to be ‘very critical’ and to generate an ‘interesting and lively discussion. Not to be missed!’ (ibid.).

While the email expressed interest in a collegial cross-disciplinary encounter, the expectation that our presentation would be ‘critical’ and lead to ‘lively’ discussion signalled the anticipation of dissent. This expectation may have arisen from the awareness that during our fieldwork, we had heard a wide range of grievances and criticism about the restructuring as well as doubts whether gender relations really were relevant in academic research (institutions). The wording also began to suggest that the self-reference of having been ‘objects’ of research did not express

concern or discomfort of being ‘objectified’ so much as denoting the object’s ability ‘to object to what is told about them’ (Latour 2000: 115).

The seminar took place in the Institute’s conference room where participants were seated around a large table. Although some of our key informants had since left the institution and others had sent last minute apologies, the seminar turned out to be well attended with around 35–40 participants, ranging from the Institute’s vice director to postdoctoral researchers and PhD students and including laboratory leaders and senior scientists as well as another social scientist who participated in the KNOWING research (see footnote 2).

In our introductory remarks, Marcela and I had repudiated the mode of criticism. We suggested that ‘rather than being critical, we want to discuss some of the challenges of the course [the Institute] has taken in the last few years and see whether there may be things that would help [it] further on its path towards major international scientific recognition’ (lecture transcript). As we had discussed in planning the seminar, our intention had been to open up what we felt had been obfuscated by the narrow focus on enacting scientific excellence primarily as maximising ‘outputs’ in terms of publications in high-impact factor journals, international patents or business ventures. What could it mean to attend to issues such as gender equality or science-society relations as an integral part of excellence at an Institute that was financially and academically well endowed and considered a national success story? In other words, we figured that if conventional endeavours to pursue excellence met with things that could embody distinction but were seemingly excluded from its remit, new ‘interference patterns’ (Haraway 1997) might emerge.³ The last lecture slide identified tensions between a deficit model of science-society relations and a broader engagement with social actors, between the increasing number of internationally mobile early-stage researchers and the decreasing number of permanent positions and between care and enterprise in laboratory organisation and their genderings as three areas of concern for launching the seminar discussion.

3.3 Mobilising Gender Stories and Statistics

Gender relations in research were explored more explicitly in the second part of the talk. Here, I had assembled statistics and stories about gender from documents, fieldnotes and interviews on PowerPoint slides as crucial collaborators intended to engage listeners affectively and reflexively and to incite concern and responsibility with respect to how gender had materialised in specific relations. I started this part with a fieldnote on a humorous if adversarial encounter. The fieldnote flagged the issue of a gendered division of labour and participation. It helped me to put up for

³As Law has argued referring to Haraway’s notion of interference, ‘some things are endlessly produced and are very real. Others are not. Interference takes the form of enacting realities, tropes in speech and action, that will make a difference in the configurations of the real’ (Law 2004a: 4).

exploration some of the ways in which gender relations were naturalised, laughed off and declared a non-issue.

I'm invited to attend a 90th birthday party at the Institute: a joint event of a scientist turning 60 and his junior colleague turning 30. When I go to congratulate an older scientist asks, was I not the one doing research on women in science? When I nod, he laughs and says: 'What's there to discuss? Look at him (and he turns to his junior colleague), he has two children and his wife stays home with the kids – what's there to discuss? Otherwise he could not have children!' (Fieldnote, lecture slide)

In one sense the presentation that followed constituted a considered response to the rhetorical question 'what's there to discuss?' Here, I will re-examine how I had thematised these concerns. In the lecture, I had used the episode to discuss how gender relations were constituted as oppositional through work responsibilities in a way that rendered male scientists' work orientations and women's childcare responsibilities as normal, natural and unremarkable. I also pointed out that this naturalisation corresponded to the absence of gender equality policies at institutional and national level, practices that had distinguished some of the research institutions studied in the KNOWING partner countries.

While this casual shrugging off had been one response to encountering gender (embodied in the fieldworker) that I wanted to address, in hindsight I think that opening with this encounter and accompanying commentary unreflectingly performed distance and difference between researcher and research participants, presenter and listeners. Specifically it enacted a mode of lecturing and critique where the facts appeared to be established. As Law (2004b: 3) states: 'Critique enacts a world that poses itself as a contrast, another possibility, an escape', in this instance that women and men could participate equally if the values and institutional practices were set right.

In order to further establish unequal participation as an issue that mattered at the Institute and beyond, I presented descriptive statistics on the gendered distribution of academic positions in Europe. Based on European education statistics (Eurostat), the so-called scissor diagram illustrates the distribution of women and men in different academic positions, ranging from undergraduate students to 'grade A' positions (usually full professors) across all disciplines. Two separate graphs show that in 2006 (similarly to 2010), more women than men were undergraduate students, but at the level of PhD studies, the proportion of men rises and increases up to a representation of 82% men to 18% women in the highest academic grade (89% men to 11% women in science and engineering) (European Commission 2009, 2012).

Acknowledging that these highly aggregated figures level out differences between disciplines and countries and therefore are merely indicative of an overrepresentation of male scientists in higher academic positions,⁴ I had used the diagram as a starting point for introducing the theoretical perspective of gender studies as one that asks how such distributions come about. As I put it in the lecture:

⁴A disaggregation of Eurostat data by countries shows that the percentage of women in grade A positions continues to be highest in countries and sectors where wages, resources and prestige are lowest. In 2010 these were the higher education sectors in Romania, Latvia and Croatia.

In Gender Studies we do not stay with the idea that there are biological women and biological men and you get those patterns just because women are not ambitious enough. Our data clearly shows that at the beginning of the career men and women have the *same* aspirations of doing a career in science [...] Gender as a social scientific concept does not mean women – it is developed to contest the naturalisation of sexual difference, the idea it's innate identities that are expressed in those kinds of statistics, and it's an interest in examining power and inequality, looking at how leadership or the imagination of the scientist get associated with masculinity, how sexual difference becomes *institutionalised*...' (Lecture transcript)

There are a range of problems with mobilising 'the political power of statistical representation' (Lawson 1995) to render the institutional materialisation of gender differences a matter of fact – and gender studies a legitimate tradition of enquiry – and then playing on the potential of statistics to provoke questions about how these categories and patterns are generated to transform them into a matter of concern. To start with the obvious: statistics such as Eurostat define gender as sex category (West and Zimmerman 1987). They count what kinds of academic positions are occupied by individuals already formed and identified as male or female at one point in time. This common-sense representation makes it counter-intuitive to pose the prior question of how categories of masculine and feminine get produced and co-constituted in particular practices in ways that may or may not coincide with sexed bodies. Furthermore, by connecting the different participation counts for men and for women along the axis of progressive academic positions, the diagram reproduces what the European Commission (2012: 100) continues to call 'a typical academic career', i.e. the linear progression from undergraduate to full professor. As we had pointed out earlier in the lecture, given the shortages of group leader positions, this career is achievable for only a very small proportion of academics. Even when representing the over-representation of men in higher academic ranks, the diagram makes it hard to challenge the normality and indeed the masculinity of this ideal fiction of career.

In retrospect, my well-intended introduction of what a gender studies' perspective does underplayed the indeterminacy and tensions of gender as an analytical category and knowledge object that neither maps onto sex (category) nor is completely independent of the sexed body (e.g. Moore 2004). Emphasising the distinction between sex and gender, I presented gender as a delimited sociocultural object – even when I posited 'that gender of course is messy, it's incoherent, we have a range of masculinities and femininities that we see [in different practices], because gender does not exist purely as such, it always intersects with age, with culture...' (lecture transcript). In other words, claims that gender was not about 'biological women and men' sat uneasily with the illustrative character of the scissors diagram that confined concerns about the 'masculinisation' of science to the unequal distribution of men and women in higher academic positions.

In the event, the attending scientists did not contest the gender statistics. But they did contest my casual passing over biology and mobilised their own 'facts of nature' to explain the gendered distribution of positions – at least in private. After the seminar, the researcher cited in the introductory episode ('what's there to discuss?') told

me that he had taken a picture of the slide during the lecture and rhetorically asserted that ‘had not evolution shown that females always tended the cubs?’ (fieldnote, 17.7.2010), and the seminar chair cited his observation that two female colleagues at the Institute had not acted on his suggestion to apply for a lab leadership position as evidence for the fact that lab leaders needed to be ‘alpha males’ and women overall lacked the testosterone to lead the laboratory as a successful enterprise (ibid.). These reactions were so unexpected that I was speechless.

My attempts to enlist statistical data and a gender studies’ perspective to establish and problematise the gendered patterning of academic positions in the seminar thus appeared to provoke the reassertion of gender as a solid biological matter of fact – albeit not publically in a way that the diversity of sex and reproduction in nonhuman species (Hird 2009) or the role of affect and hormones as emergent forces in running a laboratory (Lorenz-Meyer 2014) could have become a matter of discussion in the seminar. Circumscribing and disciplining gender as a social construct, and the posture of knowing in advance how gender played out organisationally, brought forth a solidification of both gender and science rather than movements and joint explorations in the contact zone.

3.4 Narratives of (Un)concern

In order to bring out the multiplicity of gendering practices at the Institute, the lecture had juxtaposed different actor narratives. For example, I placed the understanding that ‘the major problem is not discrimination against female scientists – it’s a lack of places in nurseries and kindergartens’ (lab leader, email 15.4. 2006) that located causes and responsibilities for the absence of women in leadership positions firmly in other social institutions alongside an account that spoke about how gender distinctions materialised through personal and institutional inaction *within* science.

I think it’s not that the professor decides “I will not support you because you are a woman”. I don’t think that they are realizing it somehow but they don’t consider women, they do not even get the idea that a woman could also be a leader. ... The [prestigious] Purkyně fellowship so far was never awarded to a woman. And at least I personally do not believe that there wouldn’t be a single woman who would be worth receiving such support. But this is because the institute has to suggest somebody for the stipend. This is for me the explanation. Because there are many good women. I know many receivers of Purkyně who have a much worse record than me. But nobody ever suggested me [...] They think “We have to get this man. He is very successful and he has a family so he has to have enough money”. [...] But they never think about some woman who may not even be married. So these are two things which mean that she basically does not need that much money (laughs). And if she would have a family she would not be useful as a scientist (laughs). (Interview, lecture slide)

This account of a senior scientist working on a part-time contract talks about the gendering effects of silence, inaction and lack of support in science inferred from the gendered patternings of grant awards (as well as personal experience of how in contrast to her male colleagues her own advancement had never been discussed in the lab). It shifts the focus away from the provision of childcare to homosocial prac-

tices within scientist communities. Age, juniority, marital status and perceived sex category are described to intersect in ways that produce gender difference in career advancement. But in contrast to other stories of gendering practices such as my (essentialist!) formulation that women in the lab often played down ‘their’ femininity – which instantly was contested by questions ‘how did you measure that?’ and by pointing to impracticalities of ‘dressing up’ in the lab – this account was met with indifference in the seminar: it did not trigger other, confirming or contesting accounts; it did not appear to unsettle the persuasive association of women with embodied motherhood – in fact, it did not appear to resonate with or activate the experiences of those present. In Pratt’s terms, the narrative remained incomprehensible.

This impression of unconcern was condensed when junior researchers approached me after the seminar and wanted to know why I thought that women did not become lab leaders, and a woman who was just starting out exclaimed: ‘I don’t believe I could not be lab leader if I wanted to!’ (fieldnote, 17.7.2010). The account also contradicted the conviction of group leaders that ‘you recognise talent when you meet it’ (seminar chair, *ibid.*), which implied that the academy was in principle meritocratic. Reflecting on the ‘robust clinging to a meritocratic explanation’ in the face of conflicting evidence, Scully (2002: 400) has suggested that ‘if we begin to doubt that the university is a meritocracy, then redistribution might be required, and that is a frightening unknown’ (*ibid.*). Thus, drawing attention to previously invisible and taken-for-granted genderings can be profoundly unsettling: it puts ideas and identities on the line, particularly perhaps when scientists at the Institute actively struggled for the institution of meritocracy through consequential research assessment (Linková and Stöckelová 2012) or when their personal living arrangements were at stake and ‘they would have to ask questions about what their wives were doing at home’ (Claudia Born, *pers. com*; 19.7.2010). Hence, questions of gender are passed over.

Gender was also constituted in the seminar encounter in ways that delegitimised accounts such as the one cited above. The comment of a senior scientist that ‘perhaps it’s a pity’ that no male researchers had participated in the observational research clearly suggested that our embodied presence as female researchers and presenters, combined with relative juniority, and in my case foreignness, was read as a deficit if not an outright bias.

Methodologically, one difficulty with juxtaposing actor accounts that contradict each other is that the presenter orchestrates these different ‘voices’. I had done this rather explicitly by headers that linked the narratives to the notion of ‘hypervisibility of childcare’ and ‘invisible discrimination’, respectively. In retrospect, I think that these notions too quickly and unambiguously attempted to prefigure ways of reading/listening. Different readings of these stories could have been sought. Juxtaposing narratives ought not to be limited to two (Keller 1987), and the presenter might benefit from becoming a ‘care-taker,... somebody interested in [the system’s] becoming’ (Despret 2004: 124) rather than a judge or master. As with the introductory episode, I now feel the presentation could have benefitted from a greater variety of accounts that commented on and refigured each other: the highly

successful male lab leader who had actively shared in childcare and planned to take paternity leave, the concern of the seminar chair that placing his students in other laboratories felt like ‘marrying off my daughters’ and the characterisation of experimental practices as women’s work – such practices and accounts interfered with the idea(l) of a 12-h day, an uninterrupted, (child)care-free career and a testosterone-driven risk-taking masculinity as the sole ingredient for running a laboratory.

3.5 Acting with Contestations

The failure to respond to gender orderings does not mean that scientists were unconcerned with power and accountability in science and unresponsive to our interventions. For example, the seminar chair had described the fact that often at Czech universities ‘people of merit are not in the positions of power’ (seminar transcript) as a key motivator for instituting stringent quantitative research assessment at public research institutions. Such measures were seen as routes to undo the earlier political legacy where leadership and access to resources were conditional on affiliation to the communist party. This ethos and optimism was in tension with our findings that assessment regimes had led researchers to ‘change the topics of their research to go where the funding is’ (seminar transcript).

Chair: Is it *really* so that impact factor assessment and striving for publications is changing the scientific subject? Are we doing research differently because we know that next February {inaudible: there will be} this chart of an impact factor per person per year?

Male junior lab leader: It could influence the long-term direction you are heading in. If there is something that looks hot, maybe you try a few things ... you are also looking at what is hot and gets attention, no?

Chair: What is hot is attractive because it’s interesting but I do not change {inaudible: I would be ashamed} I do what I think is interesting [...] So, is this really so?

Female senior scientist: Partially yes. Like I would be really interested in doing simulations that are important for atmospheric systems but there is *much* more funding in the biological sciences, and it forces me to also do simulations of biological systems.

Chair: Well this is funding not assessment

Female senior scientist: Also, because it is more difficult to get funding, so it’s more difficult to get published in this area, so I *need* to look at different areas as well.

Female vice director: ... I want to join [the chair] and say that there is a pressure for assessment but I would still say most of us just do the science because of their interest. (Seminar transcript)

What is noteworthy in this encounter is that in contrast to discussions about gender, research participants engage and disagree with each other, here about the assertion that research interests were unaffected by external assessment. It was those who did not occupy senior group leader positions who challenged the autonomy of science and articulated how their research practices were influenced by what is considered competitive, fundable and publishable and entangled with relations of power. These relations became tangible and articulated when researchers felt their own rooms of manoeuvre restricted.

The intervention by one of our coresearchers to also look at ‘how editors of major journals make very questionable choices about what they publish or not in order to keep their Impact Factor’ (seminar transcript) activated a range of experiences related to participants’ memberships in editorial boards and their role as readers and reviewers of how the yardstick of IF to measure excellence was subject to manipulations rather than the quality of published papers. In the statement concluding the discussion, the chair issued a targeted call for accountability.

OK, we could talk about impact factor forever. A very important topic would be how major journals actually *shape* the way science is being done and what’s being done, the power of these guys is *incredible* and it’s actually not accounted for. *These* people decide what is excellence, what is science, what is hot and what’s worth to be funded. (Seminar transcript)

At this point the experience that research is influenced by editorial and funding decisions appears to be a matter of fact. The call for accountability was directed at unaccountable editors of high-IF journals who allegedly establish the criteria for what counts as good science, although it notably remains unclear how (and to whom) accountability should be rendered. Crucially this move draws a boundary between ‘innocent scientists’ and ‘powerful editors’ that obfuscates the variegated contacts and roles that senior lab leaders have as editors, reviewers and mentors in networks of publishing and hiring/promotion where by their own accounts they ‘see quality when they meet it’ and trust the recommendations of esteemed colleagues.

What openings or resources might this adversarial encounter about the embeddedness of knowledge making in relations of power and the delimited call for accountability offer for rendering gender a matter of concern? While we did not manage to do this here, the encounter points to the possibilities of drawing out and further explores tensions and ambivalences around research practices and the ways these are differently assessed by different actors. A fruitful approach to examining the ecologies of gender and excellence could jointly explore the interrelations between the frustrations and calls for accountability of those who are centrally located in science, namely, research group leaders, with those who find themselves outside of the standards and norms in more marginalised locations (Star 1991).

3.6 Conclusion

In this chapter I have revisited the mundane contact zone of presenting and discussing research findings with former research participants outside of my own epistemic communities. Even though such presentations are often encounters in and through which researchers hope to make a difference in particular configurations in the field (Wareing and Sabri 2013), they are rarely accounted for by researchers and funders (Gunaratnam 2007) or explored as contact zones in their own right. In the event examined here, research participants were interested in the findings but also refused, ignored or were disbelieving of the ways in which I had identified gender in

day-to-day practices, practices that created differences that mattered. Contrary to my expressed intention, this contact zone did not appear to generate ‘something unexpected, ... something not ruled by the logic of the reproduction of the same’ (Haraway 2008: 223) and build on ‘pre-ordained notions of participation’ (Manning 2011). The refusal had prompted the question of how stories about gender might be told differently so that (research) bodies become moved, interested and engaged (Despret 2004; Haraway 2008) and a matter of concern.

A re-examination of the ways in which I had mobilised – and disciplined – stories, theoretical orientations and statistics in order to contest the invisibility and irrelevance of gender point to at least three manoeuvres which in light of participants’ responses appear inadequate for rendering gender a matter of concern. First, in presenting gender studies’ theoretical orientation and my empirical material, I had emphasised gender as a sociocultural construct and passed over issues of biology that after the event some of the participants articulated as central explanatory constructs. Failing to admit nature and biology as topics of discussion forestalled a nuanced exploration of interactions of sex and gender, for example, about the ways in which affects and hormones are not simply given but were generated in particular relations such as encountering peer review (Lorenz-Meyer 2014).

Second, in mobilising statistics and stories, I had omitted a discussion of the particular technologies through which gender was rendered visible, knowable or tangible in particular instances and that cannot be abstracted from what gender ‘is’ in those situations. Gender statistics, for example, make sex classifications salient categories that can be counted and thereby effectively materialise one version of gender as sex category; field observations that femininities were played down in the laboratory had failed to moot how our own embodiment as researchers had turned attention to taken-for-granted bodily practices and their effects. Third, the impulse to focus on ‘findings’ at the expense of practicalities by which objects become knowable had obscured the very movement and method of my inquiry in which genderings had to be gathered and carefully assembled in their particular renderings and effects in the field. In other words, even though I had attempted to work from tensions within and between statistical representations and actors’ accounts, I had often performed commentary rather than describing multiple ontologies and offering for joint exploration how different practices aligned, clashed or got neutralised.

Making the hybridities, entanglements and practicalities of gender explicit and taking care that potential allies – male coresearchers, dissident research participants – participate in contact zones of discussing research interventions has resonances with Hirschauer and Mol’s call (1995: 380) to ‘do contingency in writing’ (and presenting!). These authors have proposed to stage the concerns and the questions of many actors in ways that ‘do not seek to control what they achieve. Perhaps [the stories we tell] will move the world only if they themselves are also moving’ (ibid).

In a similar vein, Ahmed (2002: 145) reminds us that opening an encounter up is also failing to grasp it. We can never fully know what effects our intervention may (yet) have, not least because a research presentation is part of the multiple interven-

tions of fieldwork as well as other dissemination practices. Neither can we know in advance who our allies may be. For example, when the first woman professor was appointed to the Institute's international advisory board in 2010, I was told that it was the lab leader who had ruled out the possibility of women's discrimination and at the seminar had been cast as the embodiment of the quintessential 'alpha male' who insisted on the nomination of female candidates. Echoing our emphasis on challenges of multiculturalism and science/society relations, the Institute's mission now includes a pledge to 'create an inspiring, multicultural, friendly, and at the same time competitive environment for the professional growth of scientific employees [and to] cooperate, [be] open, and widely communicate with the public, media, and schools'. Gender equality, however, continues to remain absent as stated intent. At the time of writing, this was evident in a new tender for junior group leaders. Accompanied by a neatly ordered picture of an attractive white woman scientist smilingly holding up a flask of turquoise fluid and a white male scientist in lab coat, tie and protective glasses looking over her shoulder, the call explicitly 'encouraged... applications from non-Czech scientists' as the Institute 'aims to enhance its character as an international research centre'. Juxtaposing the happy imagery of partnership and its implicit hierarchies with the lively messiness of science and gender is an ongoing task for as Haraway (2008) has emphasised building contact zones is not a one-off event: it requires training, response and sustained interaction.

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References

- Ahmed, S. (2002). *Strange encounters: Embodied others in post-coloniality*. London/New York: Routledge.
- Despret, V. (2004). The body we care for: Figures of anthropo-zoo-genesis. *Body & Society*, 10, 111–134.
- European Commission. (2009). *She figures 2009: Statistics and indicators on gender equality in science*. Brussels: Directorate General for Research.
- European Commission. (2012). *She figures 2012: Gender in research and innovation. Statistics and indicators*. Brussels: Directorate General for Research.
- Gunaratnam, Y. (2007). Where is the love? Art, aesthetics and research. *Journal of Social Work Practice*, 21, 271–287.
- Haraway, D. (1997). *Modest_Witness @Second_Millennium*. New York/London: Routledge.
- Haraway, D. (2008). *When species meet*. Minneapolis: Minnesota University Press.
- Hird, M. (2009). *The origins of sociable life: Evolution after science studies*. Basingstoke: Palgrave MacMillan.
- Hirschauer, S., & Mol, A. (1995). Shifting sexes, moving stories: Feminist/constructivist dialogues. *Science, Technology and Human Values*, 20, 368–385.

- Keller, E. F. (1987). On the need to count past two in our thinking about gender and science. *New Ideas of Psychology*, 3, 275–287.
- Latour, B. (2000). When things strike back: A possible contribution of “science studies” to the social sciences. *The British Journal of Sociology*, 51, 107–123.
- Latour, B. (2004). Why has critique run out of steam? From matter of fact to matters of concern. *Critical Inquiry*, 30, 225–248.
- Law, J. (2004a). *Enacting naturecultures: A note from STS*. Published by the Centre for Science Studies, Lancaster University at <http://www.lancaster.ac.uk/sociology/research/publications/papers/law-enacting-naturecultures.pdf>. Last accessed 4 Mar 2014.
- Law, J. (2004b). *Matter-ing: Or how might STS contribute*. Published by the Centre for Science Studies, Lancaster University at <http://www.lancaster.ac.uk/sociology/research/publications/papers/law-matter-ing.pdf>. Last accessed 4 Mar 2014.
- Lawson, V. (1995). The politics of difference: Examining the quantitative/qualitative dualism in post-structuralist feminist research. *Professional Geographer*, 47, 449–457.
- Linková, M., & Stöckelová, T. (2012). Public accountability and the politicization of science: The peculiar journey of Czech research assessment. *Science and Public Policy*, 39, 618–629.
- Lorenz-Meyer, D. (2014). Reassembling gender: On the immanent politics of gendering apparatuses of bodily production in science. *Women: A Cultural Review*, 25, 78–98.
- Manning, E. (2011). Fiery, luminous, scary. *SubStance*, 40, 41–48.
- Moore, H. (2004). Global anxieties: Concept-metaphors and pre-theoretical commitments in anthropology. *Anthropological Theory*, 4, 71–88.
- Pratt, M.-L. (1991). Arts of the contact zone. *Profession*, 186, 33–40.
- Pratt, M.-L. (1992). *Imperial eyes: Travel writing and transculturation*. London: Routledge.
- Puig de la Bellacasa, M. (2011). Matters of care in technoscience: Assembling neglected things. *Social Studies of Science*, 41, 85–106.
- Scully, M. A. (2002). Confronting errors in the meritocracy. *Organization*, 9, 396–401.
- Star, S. L. (1991). Power, technology and the phenomenology of conventions: On being allergic to onions. In J. Law (Ed.), *A sociology of monsters* (pp. 26–56). London: Routledge.
- Wareing, S., & Sabri, D. (2013). ‘*Institutional research: Symbiosis or oxymoron?*’. Paper given at the conference *Ethnographies of higher education: Researching and reflecting “at home”*, Prague 22–24 May 2013.
- West, C., & Zimmerman, D. H. (1987). Doing gender. *Gender & Society*, 1, 125–151.

Chapter 4

Images of Cows, Stories of Gender

Jacob Bull

4.1 Incongruous Cows, Clumsy Conversations

Shortly after beginning a project on the role of animals on the construction of rural identities, I gave a terrible presentation of my new topic. Hoping to get feedback, from a range of gender scholars on what I thought was an exciting new theme, I blundered from point to point, not through lack of preparation, but as a result of the realisation as I presented the material of a chain of incongruity, ignorance and inopportunities which emerged and operated in a loop positioning me and my work further and further 'out of place'. My topic, material, theoretical approach and delivery were all in tension with that of my audience. I am not accepting full responsibility for the incongruity, nor suggesting that the response was hostile; the presentation triggered some interesting discussions. However, the feeling I was left with was that animal studies were beyond the remit of gender studies and how animals are active in the creation of gendered identities (in this case masculinities) was irrelevant or counterproductive to the development of gender studies. This was the first time that I had had to justify animal studies within gender studies. It was not the last; I am constantly having to make that argument.

Shortly after this failure to present some of the meetings between gender studies and animal studies, I found myself in a group meeting again discussing my cow project. This time the setting was animal studies, but my project once more generated unintended tensions. This incongruity was a result of opinions that any project, which attends to agricultural animals and does not have as its expressed motive a desire to end such systems of exploitation, is incompatible with the wider agenda of animal studies. I should note that this is not the view held across animal studies, but it is indicative of a divide between 'animal studies' and 'critical animal studies'. My

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failure to express my position carefully enough again created a conflict that could have been avoided or reduced. The enduring reflection however was that there may not be room for cattle within animal studies.

A third failure (and the last one I want to discuss here) occurred when I attended a conference aimed at rural development within the Nordic Region. Here I presented my material in the setting of a session on animals in rural development and combined my animal studies approach with gender perspectives to suggest how images in artificial insemination catalogues for the dairy industry constructed particular ideas about animals and how these shaped and were shaped by rural gender relations. The response was mixed, but there was a strong sentiment of disbelief and vociferous challenges to the relevancy of my approach, topic and findings. I was later to discover that for some rural development studies, a 'gender perspective' goes no further than asking whether the paper owner of the farm is a man or a woman.

What I want to do in this chapter is to some extent make amends for some of my earlier blunders and highlight how animal studies relate to gender studies and how animals and gender perspectives might contribute to narratives and practices of rural development. To achieve this I will give an example of how gender studies negotiate its boundaries, how it unsettles (other) disciplinary cartographies and how this illdisciplined character shapes individual researchers and projects. To achieve these goals I will discuss the images from trade magazines for the dairy industry – in particular images from the sales catalogues from the artificial insemination industry. The images in these catalogues, as they are used to sell the material of certain bodies (sperm) with the promise of changing the bodies of others (cows) in order to alter the productivity (milk) of the farm, offer a neat illustration of how these different dynamics of gender, animals and society fit together. The chapter begins by laying out the connections between animal studies and gender research; it then moves into the way that cows presented commodifies the female body and fits uncomfortably with the narratives of farming as a caretaking practice. The third section, by examining the way that bulls are presented in the same catalogues, highlights how the masculinities (as opposed to feminities) of agriculture are tied in with ideas of nation and rurality. As I centre the cattle in the analysis and draw in perspectives on rural gender relations, I highlight how notions of rural gender relations get played out with cattle and have implications for cattle. By following this route I demonstrate how issues of rural development require a more dynamic, multispecies understanding of rural socialities.

4.2 Making Connections: Animals and Gender Studies

Carl von Linné, in his treatise documenting differences between species, describes 'humanlike' creatures thus:

ANTROPOMORPHA. Dentes primores utrinque quator, aut nulli
 HOMO. Nosce te ipsum.
 Homo variae:

Europaeus albus
 Americanus rubescens
 Asiaticus fuscus
 Africanus niger (von Linne 1740:34)

His description, once he gets past the reference to teeth, defines Homo with the phrase *know thyself* (Nosce te ipsum). Humanity in this description does not need (or at least Linne fails to offer) further definition. While this phrase connects to an ancient Greek and then Roman proverb warning against conceitedness, that it appeared on anatomical drawings and treatises of the time (Schupbach 1982) emphasises the literal meaning of the phrase. Humanity, therefore, is not a description but an imperative – and one legible only to those who would and could read Linne’s treatise. He goes on to classify four variants of humanity based on skin colour and continental location. This categorisation was made more explicitly hierarchical by Blumenbach (Gould 1996). Thus, race and class are at the very core of Linne’s definition of the human. This, according to Agamben, is an example of the anthropological machine. For Agamben, the anthropological machine is the process by which the human is defined from positions where the definition of the human is already presupposed (Agamben 2004). Such definitions follow the tautological reasoning epitomised by the Linnaean definition. We could make the gender issues embedded in the anthropological machine more apparent by shifting from Anthro (or Antro) to Andro – ‘manlike’ – and connect to the question of gender directly. Indeed Butler (2004) highlights how questions of gender and definitions of human nature are always intertwined:

Gender likewise figures as a precondition for the production and maintenance of legible humanity. [And that] for the human to be human, it must relate to what is nonhuman, to what is outside itself but continuous with itself by virtue of an interimplication in life. (Butler 2004:11/2)

Butler continues, drawing on work that has critiqued the anthropocentrism of academic enquiry, to suggest that definitions of gender are always in an ‘interimplication’ with (more-than-human) life. The violent category of human is, ideologically, historically and practically contingent on a ‘non-humanity’. Indeed we can follow feminist scholars to suggest that species ought to be included in intersectional analysis (Bryld and Lykke 2000) as we examine how issues of race, class, gender, ability, sexuality (for example) and species intersect.

Moving beyond the ideological or grand narratives, animals are involved in human negotiations of identity. In agriculture particular species define identities as farmers get categorised and perform different forms of farming (dairy, hill sheep, intensive chicken) according to species. Equally, in hunt cultures the presence of particular species, such as the otter or fox in capacities as ‘vermin’, ‘predator’ or ‘quarry’, facilitates the creation of ‘moral landscapes’ through which certain practices are legitimised (Matless et al 2005). Furthermore, animals are also given more

active roles (rather than oppositional) in the understanding of space, place and identity. Animals can become inherently bound up with national identities (Potts and White 2008) and crucial in the performance of diaspora identities (Jerolmack 2007). Furthermore, particular animal species can be instrumental in the co-construction of collective identities (Fortwangler 2009). Work such as that by Sanders (2003) discusses the way that people identify individual animal characters, and this is given further personal resonance in the interaction between pet and owner (see, e.g. Fox 2006). What is evident from all of these accounts is that animals can be considered as active agents in the definition of identities. The gendered nature of these processes is made obvious when we consider the terms such as ‘crazy cat lady’, ‘horse girl’ or ‘dog person’.

While animals are always present in ideological terms and are often crucial in the articulations of identities, they are also materially present in human lives. They are caught up in systems of production and consumption which render their bodies as food or clothing (see, e.g. Donovan and Adams 2007). Furthermore, the processing of food to energy within the ‘human’ body is reliant on a diverse range of microbes that occupy the human gut. Further, the way that genetic material passes between species (human induced and otherwise) both historically and in contemporary science and agriculture binds us to the more-than-human in profound ways (see Holmberg and Ideland (2010) for a greater discussion of dilemmas and silences around transgenic animals). Medicines that prolong human life are tested on animals, pig valves appear in human hearts, animal derived blood products, hormones and tissues mesh with human bodies (See for example Folker et al. 2009). Animals also pose threats to human lives as demonstrated by the intimate intertwinings of prions, human and animal bodies as played out through the BSE crisis in the UK (Whatmore 2002) or the challenges posed by external parasites and the diseases they carry (Hatley 2011). Thus, animals are actors in the processes by which human health and well-being are secured and challenged (Hinchliffe and Bingham 2008). Equally, industries, transport systems and homes are built around animal power and presence (Fox and Walsh 2011), and animals, as they are bound up with religious practices, are both sacred and profane dependent on context (Redmalm 2013). Animals drive conservation agendas and indicate environmental quality (Bull 2011), but they also disrupt human processes, for example, the presence of particular species preventing or defining how urban development might proceed (Hinchliffe and Whatmore 2006). Thus human cultures, bodies and societies are not built without animals, but on animals, with animals and because of animals.

While all of these spaces and processes by which animals are materially present, such as the home or the laboratory are implicitly gendered, gender dynamics also play out between bodies. While human bodies cannot escape the influence of gender and therefore all interactions between humans and other species are inherently gendered, interactions can be explicitly gendered in the medical or scientific arenas or within agriculture, its female bodies, their products and reproductive capacities which are exploited in order to produce eggs and milk for human food. And following similar lines, Donna Haraway (2012) recounts how interspecies webs connected horses, pharmaceutical companies and middle-aged women through the production

of HRT treatments. In all of these issues, it becomes evident that there are gendered histories that transcend species boundaries, histories that impact on the lives of individuals and shape bodies and modes of relating. What follows through this chapter is an analysis of how these histories are continually negotiated between species and through species difference.

4.3 Phenomenal Udders and Perfect Hip Scores

Cattle are sold in straws, in thin tubes of frozen sperm. The bulls from which these straws are taken are sold through a range of firms and are presented in particular ways. The catalogues use a combination of images, quantified characteristics and qualitative descriptions that highlight the ‘desirable’ traits or qualities of the particular bull, carving up bodies and making inheritable characteristics (see also Grassini 2005). But they also offer personal accounts from farmers who have used this bull before. In the catalogues a bull is often given an entire page with a typical page including the bull’s name and its various identification codes (both HBN and in the Genus Breeding Ltd. catalogue number¹) along with one or two images of the progeny from that bull. Alongside the images are a series of quotations from farmers who have used the bull’s genetic material in their herd. These operate as qualitative summaries or accounts of their personal experiences with the offspring of the bull. Beneath this, there is a series of charts and diagrams that express the quantified measures as deviations from a standard.

This dual approach of describing fitness – i.e. the quantified and subjective (or qualitative approach) – reflects wider trends as agriculture becomes a space where the sometimes competing discourses of scientific productivity and ‘traditional’, localised knowledge combine (Holloway and Morris 2012). The scientific connection with industrial agriculture is clear in the statistical expression of a cow’s fitness as deviations from a norm. However, while AI catalogues demonstrate one way that forms of scientific knowledge shape contemporary agriculture, it does not define dairy farming as different forms of scientific knowledge combine with personal experience and local knowledge. For example, Coldwell (2007) has shown that the increased recognition of farmers as environmental managers has altered the role and expectations of the farmer from manual work to sustainability-sensitive business values. In slight contrast, Riley and Harvey (2007: 404) identify ‘how current [farming] practices are underpinned by a cumulative understanding that often stretches back over many generations’. The importance of this ‘genealogical knowledge’ (ibid) is demonstrated in these catalogues, by the use of personal experience in the sales material of the cattle. This suggests that while statistics offer much for the

¹ Unfortunately Genus Breeding Ltd. has not given permission to reprint images from their catalogues. However, their catalogues are available online and the specific images are available from the author.

decisions regarding bull choice for a herd, the practised and practical eye that can judge an 'excellent cow' as informative as the quantified scores for hips or legs.

Turning to the quantified scores which measure cattle, there are two levels of quantitative data – the measurements of, for example, fat or protein content of the milk or the quantity of milk produced by the offspring of these bulls and quantified assessments of the quality of, for example, legs, rump width or teat placement. These scales seem to offer a means of standardising the form of a cow with zero being 'breed average for the population'. The offspring of these bulls scaled relative to this 'standard' and are part of a scientific tradition that translates animals and animality to facts and figures. These quantified standards are then depicted either in the qualitative descriptions or in symbols. There are symbols that indicate sires that produce offspring that are well adapted to grassland systems, have high fertility and produce fertile daughters or whose offspring produce milk that is good for cheese making. These symbols are accompanied by a short description. For example a diamond with the letters RSG above indicate 'Diamond sires are 'Rock Solid' [another symbol/standard] bulls with over 1000 milking daughters. Therefore recognising sires with outstanding Second Crop success and ensuring genetic accuracy' (Genus ABS Breeding Catalogues 2009/2010). An image of a calf 'Identifies sires within the Genus ABS stud with the easiest Calving Ease ratings based on hundreds of observations. Calving Ease sires enable cows to get off to the best possible start after calving' (Genus ABS Breeding Catalogues 2009/2010). These symbols, however, are not standardised across different companies and so what constitutes high 'calving ease' ratings differs between catalogues. This 'ease' ranges from the stress caused to the parent, to the likelihood of live offspring from the first pregnancy, to 'unassisted calving'. Importantly, this lack of standardisation and transparency requires farmers to understand the complexity of such scales. By assuming knowledge it also belies the genealogical knowledge and the 'practised eye' that allows farmers to assess calving ease or indeed body scores. In light of this complexity, these quantitative measures are simultaneously less than scientific and more than science. That is to say that they constitute a hybrid knowledge between science and genealogical knowledge which undermines scientific validity but also strengthens understandings by blurring the boundaries between local, personal, cultural and scientific knowledge (after Bear 2006).

Having identified the hybrid knowledge required and presented in the facts and figures of the quantified and qualitative assessment of cattle, I want to now turn to the way that cattle are presented and represented in the images of these catalogues and the narrative about animals, rurality and identity which they depict.

First, it should be observed that these catalogues are selling the genetics of male cattle. Despite this, female cattle are used to sell this genetic material. Through this use, the genetic influence of the female genes in the calves is silenced. Or rather, while it is acknowledged as important, it is passive. The sale of the genetic material of male cows by using offspring fails to recognise the genetic influence of female parent. It fails to recognise that more than 50 % of the genetic material of both the illustrative cattle and the future (on-farm) offspring is provided by the female cow. Therefore, the male cow is seen as a mechanism to improve the farm and the

productivity and as having a potent agency that can improve a herd, whereas the female cow is constructed as fixed. This attitude connects to a much longer discourse that identifies how ideas about 'nature' are associated with female subjectivities, facilitating and reflecting masculine dominance of both women and nature (see, e.g. Merchant 1989). This makes some practical sense that the individual bull and his genetics have the possibility of changing the genetic makeup of the herd considerably as his genetics are 'mated' with the cows in the herd. Indeed Holloway et al. (2011) demonstrate how farmers make judgements about the inheritable characteristics of the potential bull in relation to the herd in an effort to 'improve the genetics' of the herd with the addition of 'better genetics' from the AI catalogues (pages 534/541). What is incongruous in this process of selection is that it is the female bodies of cattle that are most affected by the coordinates of industrial agriculture. Calving ease, milk production and hip scores all affect the dairy cow more than the bull(ock). Furthermore, just as Brandth (2006) identifies with regard to the gender division of labour on farm, these images continue to code the domestic, everyday and routine tasks of the farm life as female with the active and 'defining' activities of agriculture as male.

The passivity of the cows is illustrated by the cover of the Genus Breeding Ltd. Spring 2010 catalogue for dairy cattle. It shows five cows in a field. The cows are in a perfect line, each of uniform height and similar stature. They are all facing away from the camera, with their heads down. The udders of each cow are clearly displayed; they are full and swollen and once more uniform. Of those heads that are visible, all are wearing a halter, and the numerical marks that identify each animal are obvious on the rumps of most of them. The tails are well groomed; indeed the entire cow is clean and immaculate; these are *ideal* cows; one might suggest they are commodified cows.

The commodification of animals in production is not a new issue,² but this commodification is also symbolic of rural gender relations. Carol J. Adams in her book *The Pornography of Meat* (2003) demonstrates the ways in which depictions of animals in a range of media and for a range of purposes explicitly or implicitly draw on pornographic images. While it cannot be considered that such relationships are straightforward and unidirectional, the images in artificial insemination catalogues, either intentionally or unintentionally, draw on similar themes. In a similar way to how much (heterosexual) pornography emphasises a passive, available, submissive and objectified female subjectivity and her genitalia, the images in these catalogues prioritise the reproductive organs of the cow. They highlight the passivity and the seemingly uncontentious appropriation of the (re)productive capacity of female subjectivities into the systems of production that are farming. If we follow Adams argument, the images objectify the cow, commodify the bovine body and operate in

²Haraway (2008) highlights the zoonotic implications of H5N1 in global systems of production and consumption. Equally Stassart and Whatmore (2003) identify how food scares highlight the 'metabolic intimacies' between species and animal agency in bridging trust between systems of production and consumption.

Fig. 4.1 ‘Think legs and milk’



a mutually referential relationship with pornography, communicating heterosexual male hegemony.

The picture from the Skånesemin catalogue (Fig. 4.1, above) appears above the caption ‘tänk ben – och mjölk’ (think legs – and milk). This image along with the cover of the Genus catalogue can easily be read in line with these sexualised themes. The passive posture; the clearly displayed, full udders; and the careful grooming, with tails swept out of the way, combine the reproductive and productive role of the cow – the human (male) dominance of the animal. This is how the female cow is depicted in these catalogues. In over 100 pages of the 2009/2010 season catalogues, each with up to 12 pictures per page, we only face seven female cows head on (they are all either facing away or are sideways), three of these images are on the catalogue covers. This normalises the passive, objectified and commodified positioning of the female cow and her body.

It must be observed that this positioning of the female cow is not synonymous with thinking of them as sexual objects (see Adams 2003: 14); thus, the viewing of female cattle in these images is not to be equated with erotic desire for cattle. Indeed there are practical reasons why cows are depicted in these ways. Within dairy farming cows are kept precisely for their reproductive capabilities, and it is the udders that the farmer will encounter on a daily basis. Hip scores and risk of mastitis are crucial to the well-being of the cow and the functioning of the farm, productivity and the daily interaction between farmer and cow. However, depicting cattle in this way goes beyond the functional; these images are expected to be read in a particular

way, part of which reducing the female cow to a faceless reproductive object and is in tension with some aspects of the practices of animal caretaking.

Within the practices of selecting breeding animals, Holloway et al. (2011) note how there are complex relations that require farmers to make decisions about individual animals, the herd and the farm. These decisions are combined economic, welfare and aesthetic judgements that position the farm and the animals within the systems of production and also within the wider expectations of breed standards or the national herd. These decisions have traditionally existed within the frameworks of genealogical knowledge as mentioned above, but as Grassini (2007) and Holloway and Morris (2012) highlight, the shift towards increased emphasis on genetics has brought this genealogical knowledge in tension with the contemporary technologies. These tensions are not simple 'traditional' versus 'genetics' systems but complex interrelations where groups and individuals invest in different 'truths' at different moments (Holloway and Morris 2012:71). The paradox that generates these tensions can be mapped onto the representations in the catalogues as practical need to assess udder form results in a focus on udders (or hip scores or teat placement) to the exclusion of an appreciation of the wider embodied context between udder and cow, cow and farm and cow and farmer.

In reference to farming, work on embodied rural identities has identified how the bodies of farmers are defined through labour as they are shaped by the performances required by farming. Brandth (2006) highlights the connection between the body of farmers and the output of the farm. The ability of the farmer to perform activities associated with farming is crucial to the productivity of the farm. Moreover, the farm and the labour it requires have an impact on the health and well-being of the farmer (Brandth 2006:19). Equally it is recognised that bodies are relational and thus are situated within a wider discourse which codes particular activities as (in) appropriate for male and female bodies. Therefore, bodies become sites where the ideas and ideals of rural life can be created, reinforced or contested (Saugeres 2002). Continuing this theme, Brandth (2006) also identifies how discourses of farming engage with issues around emotional attachment to place but also rely on a strong idea about the individual body, the lonely farmer. Moreover she goes on to identify how 'working with animals is corporeal work and contains aspects of care work and emotional work' [emphasis added] (Brandth 2006: 20). Peter et al. also describe how farmers talk about animal caretaking as 'humbling' as the animals are 'troublesome' (2000: 227). By troublesome they mean that they do not fit so easily into the discourse of domination that is clearer in analysis of crop production. I would suggest, however, that such narratives do not negate masculine domination, indeed as Merchant (1989) shows that there has been a long tradition of subjugating nature and animals through the systems of colonialism, capitalism and science. Thus, noting that animals are 'troublesome' or 'humbling' does not negate the processes of domination. What I am suggesting, therefore, is that male, female and animal bodies are sites which are inherent to patriarchal gender ideologies [and] contribute to reinforce and legitimate unequal gender relations of production in farming (Saugeres 2002: 643). However, I would agree with Peter et al. to suggest that the masculinities of agriculture are an impediment to development (2000:216), and recognising

that the routines and daily life of animal caretaking involves sensitive, emotional and embodied practices and knowledge offers new, more sensitive and sustainable routes for agriculture. The images in AI catalogues construct and perpetuate particular agendas which obscure the embodied knowledge of farming and the encounter with animals as part of animal caretaking.

4.4 Rurality and the Beast: Placing Rural Masculinity and Bulls

The contrast between depictions of female cows and male cows in these catalogues is marked. In the 2009/2010 season catalogues, we never see a male cow from the rear; they are always shot from the side or are facing the camera. Thus, whereas female cows have udders, bulls have faces and names. These bulls are named in ways that emphasise agency and dynamism – names such as Solo, Dynamite and Rancher (Genus Friesian Directory 2009/2010). These names connect to the hyper-masculine construction of rural masculinity, emphasising individuality and progress and connecting grand narratives of masculinity such as the cowboy and the pioneer. Given this idea of dynamism, set against the passive and domestic setting of female cows, and coupled with ideas that position the bull as ‘half of the herd’, through this section I want to show how the gendered bodies of animals are used to create ideas of nation and rurality. Through this I want to contrast how different bodies are connected to different spaces. Whereas female cows are constructed as sites of farm based productivity, the ‘dynamism of bulls’ works at farm, regional and national levels.

Two images taken from the covers of the Genus catalogues illustrate how animal bodies, landscape and nationality are combined in nationalistic narratives. The cover of the Cornerstone Breeding Club magazine shows the image of a bull that has been draped with the Union Flag and superimposed on to the iconic English landscape of Stonehenge. The cover of the 2009 Dairy Directory sets the bull against a landscape that, while not containing the same significance of Stonehenge, is still rich in symbolism of Englishness with green rolling fields, distant hills and dry stone walls. In both images there is little which indicates that these are part of contemporary industrial agriculture. Rather they create an air of timelessness, thereby positioning the Holstein-Friesian as the ‘natural’ ‘British’ cow and naturalising black-and-white dairy farming. Potts and White (2008) show that animals and their use become imbued with notions of national identity, and I would suggest that the Holstein-Friesian expresses a very particular set of ideals and ideas about human-animal relations favouring productivity and profitability. In this regard the Holstein-Friesian is a very ‘white’ cow as it is connected to particular spaces and reflects very western, indeed Anglo-Saxon, ideas about the use of animals and their role in systems of production. Thus, the identity work that these breeds are doing is to assert and reaffirm a white ethnicity on rural space.

The draping of the flag across the back of the animal is at some level a recognition of the cultural significance of the animal, if not necessarily a recognition of it as a cultural product. In tension with this, the bulls are presented in ways that draw on the ‘wildness’ of the animal and use the rural space to emphasise these characteristics. The bulls in these images are unbounded, unfettered and unlimited. Combined with the absence of any domestic space, this constructs the male cow as wilder, freer, more ‘natural’ and less domesticated than their female counterparts. The bulls are presented in ways that emphasise muscular strength (see Fig. 4.2). The strength, the stoicism of the bull and the ‘wildness’ of the bull reflect wider social imaginings.³

These catalogues are drawing on the perceived wildness of the beast, but are also a demonstration of its domestication – human production has domesticated every aspect of the cow’s lifecycle including its reproductive capabilities (see also Adams 2003: 147). The cover of Skånesemin catalogue states ‘you always draw the longest straw’ (Drar du alltid det längsta strå). This statement highlights the removal of chance and emphasises the human control over the reproductive capacities of non-human animals. Thus, AI catalogues represent competing processes as they construct the ‘wildness’ of the bull and also the human control of this ‘wildness’. How then is this dual discourse of domestication and wildness managed in the catalogues?

Throughout the catalogues, the bull is placed in the rural setting. In this instance, the landscape is not a mute external field across which we scribe human meaning; it is an active agent in the definition of identities. Consequentially, the ideas of rurality are active in the construction of animality and maleness. The above image (Fig. 4.2) shows a Swedish Red Bull photographed in a field. The image is a standard side-on shot, but on closer inspection, the forelegs seem to float and the shadow ceases midway across the picture. This cow has either been overlaid onto the picture of the rural landscape, or the item that the bull is standing on (a common technique to better display the profile of the bull) has been edited out as it is in tension with the rurality of the field and hedgerow. Thus, ‘the rural’ space is playing an active role in the definition of the animality of the bull and the maleness of the bull.

These animals therefore are ‘rural animals’ and the superimposing of them on rural landscapes is accepted. The editing out of whatever (more obviously human-made) structure the bull is standing on is understandable. It permits the musculature of the shoulder to be better displayed and levels the back of the animal, but it does not reflect the lived realities of cattle; it does not reflect the way that an animal moves; and by positioning the bull in a rural space without explicit references to technology, contemporary culture and domesticity, it does not reflect the spaces in

³ See, for example, Garry Marvin’s interesting account of *Being Human in the Bullfight* (2007) that identifies the significance of the battle between *nature* and culture *within* the *corrida* (both the bullfight itself and the arena). The victory of the matador over the bull is indicative of the conquest of intelligence over strength (Page 203) and the cultured, restrained urban over the unruly and wild rural space, a conquest made all the more significant through the bringing of the wild bull into the urban space where the *corrida* is located (page 199).



Fig. 4.2 Stora Hallebo, Skånesemins tjurkatalo, 2009, page 21

which bulls find themselves. The farm and the spaces in which these animals are kept can be relatively confined. For example, DEFRA guidelines for permanent quarters for bulls should not be less than 48 m² (Defra 2003). But these themes are not only reflecting social imaginings of the bull as a wild beast, or the human domination of nature, they are also reflecting rural gender relations and perpetuating discourses of gender stereotypes.

The positioning of the bull in the rural space permits ideas about rurality and animality to infuse one another. Buller (2004) suggests that ‘rare breeds go beyond gene pool conservation; rusticity, albeit ‘recreated’, is held to bring society closer to a natural history’. Holstein-Friesians and Swedish Red Cattle are not rare breeds, but as the above images show, they are caught up with systems of authenticity that connect cultures of nature and cultures of rurality to the presence of iconic animals. This permits all of the ideas about the wild and remote rurality to emphasise ideas about animal identities. Furthermore, it positions them in dialogue with human identities. Thus, as David Bell has shown how particular rural spaces are active in the construction and performance of rural masculinities (2007), so too are rural masculinities and ideas about nation are played out through and with the bodies of particular animals.

4.5 Gender, Animals and Rural Development

As I mentioned in the introduction, when I’ve presented this work to rural development audiences, there has been strong resistance to what and how I talk about these issues. There is a reticence to see these images as gendered and a flat refusal that

they involve intertextual references with pornography. Conversely when I present this to an audience familiar with gender research, these images get described as ‘cow porn’, and it is regularly observed that I ‘did not need to work hard at my analysis’. This polar response – seeing the images on one hand as clearly gendered and sexualised and on the other a denial of these themes – emphasises how more-than-human perspectives add to the discussions on both sides of this divide. I have through the chapter mentioned how gender studies and animal studies rub up against one another, and I’ve highlighted how the simple reading of these images as pornography fail to recognise the complex practices of caretaking involved in contemporary dairy farming. In this final section, I want to deal with the denial I’ve encountered in presenting this work to a rural development audience.

Through the examples offered here, I have continued work such as that by Birke (2002) to take gender studies beyond the humanist framework and examine how animals are both mirrors of rural gender relations and active in them. The first aspect that of mirroring is demonstrated by how ideas about masculinities and femininities get transferred onto the cattle. The way that the cows are marketed in these catalogues mirrors very stereotypical ideas and ideals about masculinity and femininity – they demonstrate the way that gender and sexuality (human and bovine) get tied up with sex, nation and rurality. At the same time, the cattle and their bodies are active in the construction of rural masculinities and femininities; it is through bodies that these stories are made.

The way that the issues around male fitness, rurality and technology are negotiated through the image of the Swedish Red Bull illustrates how bodies, space and discourse are in dialogue with one another. The musculature of the body is emphasised by the rural space and omission of technology; the bull is made more masculine by the rural space and the masculinities of the rural (beyond cattle) are re-inscribed. My point here is that the relationship between discourses of gender is not merely scribed onto the bodies of cattle but that bodies, space and discourse form a loop where ideas about masculinity inform performances of rural space, which shapes the bodies of cows which re-inscribes stereotypical imaginings of (rural) masculinities.⁴ Thus, each aspect of the ideas of masculinities and rural space confirms and emphasises the other as discourse is played out with bodies in space. This is beyond cattle mirroring rural gender relations but an inclusion of nonhuman bodies in the performance and definition of rural masculinities and femininities.

Holloway and Morris (2008) offer an interesting discussion of how genetic markers such as those discussed in this chapter have become increasingly dominant within the breeding of livestock in the UK. The way that AI catalogues promote ‘genetic indicators’ raises questions about the relationship between genetics and the corporeal – ‘They seem to be present in the animal body but also become in some ways ‘just’ information’ (2008: 1718). This dual status of the genetic connects to Haraway’s discussion on how ‘the gene’ is not a thing (a discrete knowable object) but a ‘knot in a field of relation of relatedness. It’s a material-semiotic entity; a

⁴Equally the direction is not important bodies that define spaces which shape discourse, which defines bodies.

concretisation that locates (in the mapping sense of locates) and substantialises inheritance' (Haraway and Goodeve 1998:94 emphasis original). I agree with Holloway and Morris (2008) when they suggest that the genetic industry is impacting on the animal breeding practices, particularly as it attempts to locate and concretise the abstract notions of productivity in the increasingly specific sites – i.e. in bodies, sperm and genes. However, this chapter has attempted to discuss how gender dynamics are also tied into this material-semiotic knot.

Material such as that offered by the artificial insemination catalogues discussed here is part of a wider discourse that creates and perpetuates 'traditional' gender relations in rural space. The implications for rural society are at least twofold. First, the maintenance of traditional social structures limits the advent of new perspectives, approaches and techniques thereby reducing agriculture and rural society ability to reach environmentally, socially and economically sustainable futures. This is exemplified by work such as that by Nördström-Källström (2008) that highlights how hyper-masculine ideas have implications for individual farmers as narratives of the individual, lonely, tough farmer continue to push people into situations where they believe they should be able to cope on their own – having implications for mental and physical well-being. Thus, gender perspectives highlight how human-animal encounters have implications at both social and individual levels. The second implication is more corporeal.

As the discussion of the presentation of female cattle in the AI catalogues shows, not only that animal bodies are sites where rural gender relations are negotiated, working with animal bodies (as opposed to plants) becomes a way for gender stereotypes to be challenged. Working with animals is undeniably corporeal work involving practices of care and as such challenge the unidirectional power relations suggested of agriculture (see also Holmberg (2011) for a discussion of similar issues in relation to animals in the laboratory setting). As mentioned above, however, acknowledging the difficulty of and corporeality of human-animal encounters does not necessarily negate the systems of oppression; it does, however, emphasise that the affect/emotional embodied nature of rural work and societies needs to be recognised. What this chapter suggests is that this attention to the embodied nature of relations should not stop at the human.

Holloway and Morris (2008) also identify how the fixing of particular traits in genes and therefore as inheritable and expressed in the herd have impacts for the animals involved – breeding for particular carcass weights changes the bodies of animals; breeding for resistance to particular diseases may undermine immunological robustness against other disease strains. This wider consequence of corporal dynamic of inherited trait breeding is often overlooked. Similarly the denial by the rural development sector of the gendered narratives embedded in and created by the images in AI catalogues fails to comprehend the embodied consequences of the material-semiotic knots created by the images. These conservative narratives of rural gender relations not only have impacts for rural societies and overlook the embodied and emotional dynamics of animal caretaking, they also have impacts for the animals themselves.

Firstly, the reliance on AI as the mode of reproduction for cattle in the dairy industry (see Wilmot (2007) for a review of the development of these technologies) to the point that the organic sector also permits AI though it rejects other violent procedures (Soil Association 2011) demonstrates that there are few animals within the coordinates of dairy agriculture who reproduce without such interventions in their sexuality (see Adams (2003), McHugh (2011) and Rudy (2012) for further discussion of the issue of human interventions in animal sexualities). Given the prevalence of AI within Western dairy industry, and not forgetting that the dairy industry is based around the appropriation of the reproductive capacities of cattle, the larger point becomes the way that ideas about inheritable traits shape the bodies of male and female cows differently.

As mentioned earlier, traits such as calving ease are poorly defined in the industry; teat position and length, udder strength and size, milk production or fat or protein content of milk affect cow (not bull) bodies. Thus, welfare questions become questions of gender, and the narratives within these photographs as they draw on stereotypic notions of masculinity and femininity emphasise the active role of bulls, and the passive role of cows hides the gendered and embodied impacts of the emphasis on inherited trait breeding schemes. On one hand, the way that such indicators of 'improvement' pay attention to issues such as teat placement and mastitis incidence or udder strength recognises the gendered dynamics within welfare; however, as they are part of the drive towards productivity, they also emphasise how certain bodies bear the burden of productivity.

Thus, through this chapter as I connect animal studies and gender studies and relate it to rural development, I have illustrated how advancements might be made by making connections between different interdisciplinary settings. By including animals into our analysis of the gendered spaces of dairy farming, we get a better idea of how gendered rural identities are created and performed in more-than-human socialities. What it also shows is that as we engage with questions about rural development and building 'sustainable rural futures', a gender perspective flags up new directions for rural societies and animal welfare. As we attempt to understand rural gender dynamics and rural development, we must also consider them as more-than-human socialities.

References

- Adams, C. J. (2003). *The pornography of meat*. New York: Continuum.
- Agamben, G. (2004). *The open. Man and Animal* (trans: Attell, K.). Stanford: Stanford University Press.
- Bear, C. (2006). Salmon by numbers: Quantification and understandings of nature. *Scottish Geographical Journal*, 122, 185–203.
- Bell, D. (2007). Feral masculinities: Urban versus rural in *City Slickers* and *Hunters Blood*. In R. Fish (Ed.), *Cinematic countrysides* (Inside popular film). Manchester: Manchester University Press.

- Birke, L. (2002). Intimate familiarities? Feminism and human-animal studies. *Society and Animals*, 10, 429–436.
- Brandth, B. (2006). Agricultural body-building: Incorporations of gender, body and work. *Journal of Rural Studies*, 22, 17–27.
- Bryld, M. M., & Lykke, N. (Eds.). (2000). *Cosmodolphins: Feminist cultural studies of technology, animals and the sacred*. London: Zed Books.
- Bull, J. (2011). Encountering fish, flows and waterscapes through angling. *Environment and Planning A*, 43, 2267–2284.
- Buller, H. (2004). Where the wild things are: The evolving iconography of rural fauna. *Journal of Rural Studies*, 20, 131–141.
- Butler, J. (2004). *Undoing gender*. Abingdon: Routledge.
- Coldwell, I. (2007). New farming masculinities: ‘More than just shit-kickers’, we’re ‘switched-on’ farmers wanting to balance lifestyle, sustainability and coin. *Journal of Sociology*, 43, 87–103.
- DEFRA. (2003). *Code of recommendations for the welfare of livestock: Cattle*. London: DEFRA.
- Donovan, J., & Adams, C. J. (2007). *The feminist care tradition in animal ethics*. New York: Columbia University Press.
- Folker, M. P., Svendsen, M. N., & Koch, L. (2009). Lifeworlds of the pig: Towards a cartography of porcine/human entanglements. In H. Tora (Ed.), *Investigating human/animal relations in science, culture and work* (Crossroads of knowledge, no. 10, pp. 142–153). Uppsala: Uppsala University.
- Fortwangler, C. (2009). A place for the donkey: Natives and aliens in the US Virgin Islands. *Landscape Research*, 34, 205–222.
- Fox, R. (2006). Animal behaviours, post-human lives – Everyday negotiations of the animal-human divide in pet-keeping. *Social and Cultural Geography*, 7, 525–537.
- Fox, R., & Walsh, K. (2011). Furry belongings: Pets, migration and home. In J. Bull (Ed.), *Animal movements: Moving animals* (Crossroads of knowledge, no. 17, pp. 97–117). Uppsala: Centre for Gender Research, Uppsala University.
- Gary, M. (2007). Being human in the bullfight. In L. Kalof & A. Fitzgerald (Eds.), *The animals reader: The essential classic and contemporary writings* (pp. 197–208). Oxford: Berg.
- Gould, S. J. (1996). *The mismeasure of man* (2nd, Rev. ed.). New York: W.W. Norton & Co.
- Grassini, C. (2005). Designer cows: The practices of cattle breeding between skill and standardisation. *Society and Animals*, 13, 33–49.
- Grassini, C. (2007). Managing cows: An ethnography of breeding practices and uses of reproductive technology in contemporary dairy farming in Lombardy (Italy). *Studies in History and Philosophy of Biological and Biomedical Sciences*, 38, 488–510.
- Haraway, D. (2008). *When species meet*. Minnesota: University of Minnesota Press.
- Haraway, D. (2012). Awash in urine: DES and Premarin® in multispecies response-ability. *Women’s Studies Quarterly*, 40, 301–317.
- Haraway, D., & Goodeve, T. N. (1998). *How like a leaf: An interview with Donna J. Haraway*. New York: Routledge Press.
- Hatley, J. (2011). Blood intimacies and biodicy: Keeping faith with ticks. *Australian Humanities Review*, 50, 63–76.
- Hinchliffe, S., & Bingham, N. (2008). Securing life: The emerging practices of biosecurity. *Environment and Planning A*, 40, 1534–1551.
- Hinchliffe, S., & Whatmore, S. (2006). Living cities: Towards a politics of conviviality. *Science as Culture*, 15, 123–138.
- Holloway, L., & Morris, C. (2008). Boosted bodies: Genetic techniques, domestic livestock bodies and complex representations of life. *Geoforum*, 39, 1709–1720.
- Holloway, L., & Morris, C. (2012). Contesting genetic knowledge practices in livestock breeding: Biopower, biosocial collectivities and heterogeneous resistances. *Environment and Planning D: Society and Space*, 30, 60–77.
- Holloway, L., Morris, C., Gilna, B., & Gibbs, D. (2011). Choosing and rejecting cattle and sheep: Changing discourses of (de)selection in pedigree livestock breeding. *Agriculture and Human Values*, 28, 533–547.

- Holmberg, T. (2011). Mortal love. Care practices in animal experimentation. *Feminist Theory*, 12, 147–163.
- Holmberg, T., & Ideland, M. (2010). *Dilemma med transgena djur – forskningspraktik och etik*. Uppsala: Crossroad of Knowledge Series Centre for Gender Research, Uppsala University.
- Jerolmack, C. (2007). Animal practices, ethnicity, and community: The Turkish pigeon handlers of Berlin. *American Sociological Review*, 72, 874–894.
- Matless, D., Merchant, P., & Watkins, C. (2005). Animal landscapes: Otters and wildfowl in England 1945–1970. *Transactions of the Institute of British Geographers*, 30, 191–205.
- McHugh, S. (2011). *Animal stories: Narrating across species lines*. Minneapolis: University of Minnesota Press.
- Merchant, C. (1989). *The death of nature: Women, ecology, and the scientific revolution*. San Francisco: Harper & Row.
- Nordström Källström, H. (2008). *Mellan trivsel och ensamhet: om sociala villkor i lantbruket* (Acta Universitatis agriculturae Sueciae:74). Uppsala: Doktorsavhandling. Institutionen för stad och land, SLU.
- Peter, G., Bell, M. M., & Jarnagin, S. (2000). Coming back across the fence: Masculinity and the transition to sustainable agriculture. *Rural Sociology*, 65, 215–233.
- Potts, A., & White, M. (2008). New Zealand vegetarians: At odds with their nation. *Society and Animals*, 16, 336–353.
- Redmalm, D. (2013). Holy bonsai wolves: Chihuahuas and the Paris Hilton syndrome. *International Journal of Cultural Studies*, 16, 1–17.
- Riley, M., & Harvey, D. (2007). Landscape conservation, farm practice and the meaning of the countryside: An oral history approach. *Social and Cultural Geography*, 8, 391–416.
- Rudy, K. (2012). *Loving animals: Toward a new animal advocacy*. Minneapolis: University of Minnesota Press.
- Sanders, C. R. (2003). Actions speak louder than words: Close relationships between humans and nonhuman animals. *Symbolic Interaction*, 26, 405–426.
- Saugeres, L. (2002). The cultural representation of the farming landscape: Masculinity, power and nature. *Journal of Rural Studies*, 18, 373–384.
- Schupbach, W. (1982). *The paradox of Rembrandt's 'anatomy of Dr. Tulp'*. London: Wellcome Institute for the History of Medicine.
- Soil Association. (2011). *Producer support: Organic beef and dairy production*. Bristol: Soil Association.
- Stassart, P., & Whatmore, S. (2003). Metabolising risk: Food scares and the un/re-making of Belgian beef. *Themed 'alternative food networks' issue of Environment and Planning A*, 35(3), 449–462.
- von Linne, C. (1740). *Systema naturæ* (2nd ed.). Stockholm: Keiswetter.
- Whatmore, S. (2002). *Hybrid geographies: Natures cultures spaces*. London: Sage.
- Wilmot, S. (2007). From 'public service' to artificial insemination: Animal breeding science and reproductive research in early 20th century Britain. *Studies in History and Philosophy of Biological and Biomedical Sciences*, 38, 411–441.

Chapter 5

TechnoVisions of a Sámi Cyborg: Reclaiming Sámi Body-, Land-, and Waterscapes After a Century of Colonial Exploitations in Sábmme

May-Britt Öhman

5.1 Hear the Ulledevis vuolle!

<i>Ulledevis vuolle</i>	<i>Ulledevisá vuolle (Lule Sámi)</i>
<i>I yoik the Ulledevis</i>	<i>Juoigasta v dal</i>
<i>To the sound of reindeer bells</i>	<i>Ulledevisá vuolev</i>
<i>And the grunt of the reindeer calves</i>	<i>Mija máttarádjáj álloednama</i>
<i>About our ancestors' reindeer grazing lands</i>	<i>Ulledevisá lágo</i>
<i>About the willows where the reindeer clean their antlers at fall</i>	<i>Juoigadav dal</i>
<i>At Ulledevis –where the heritage from the ancestors,</i>	<i>Aktan biellojienajn</i>
<i>Where the Sarvvá (male reindeer)</i>	<i>Ja ruovgadin gájt áldo ja miese</i>
	<i>Ulledevisá allegietj' guolldobárij nann'</i>

(continued)

“Sábmme” is the Lule Sámi word for the territory of the Sámi people. This territory stretches over four nation states, Norway, Sweden, Finland, and Russia. Part of the territory is also known as “Lapland” in English or “Lappland” in Swedish. I don’t use “Lapland” because for me, and many other Sámi, it is a colonial naming of our territory and “Lapp” is a derogatory name for Sámi persons. “Lappland” was also a geographical denomination of a specific territory – one out of the 25 Swedish “*landskap*” traditional provinces. These traditional provinces have long ceased to serve any administrative function. Sweden is now divided into a number of administrative regions called “*län*.” “Lappland” covered parts of inland Norrbotten and Västerbotten, whereas Sábmme covers a much larger area including five of the counties – Västernorrland, Jämtland, Gävleborg, Västerbotten, and Norrbotten – collectively known as “Norrland” (see Hägerstrand and Sporrang 1993: 95; Lundholm 1993: 132, and Lundmark 2008). The North Sámi word “Sápmi” is more well known and more commonly used than “Sábmme”; however, I prefer to use the Lule Sámi word as this is the language that has been used in my family of Lule Sámi origin. There are nine different Sámi languages. In Sweden, the three major Sámi languages are North Sámi, Lule Sámi, and South Sámi (Sarivaara et al. 2013).

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<i>With their branched antlers still</i>	<i>Máttarádjáj sáhko</i>
<i>Gives us reindeer happiness (good fortune)</i>	<i>Mija njoallos áldo</i>
<i>And still we hear the voice of the Vátjav (female reindeer)</i>	<i>Tjaládi gájt tjavtjan</i>
<i>And the grunt of the reindeer calves</i>	<i>Ulldevisá árdâjn ja rádojn</i>
<i>On the lands around the birches at Ulldevis</i>	<i>Guoljodi gájt sarvvá ájn Ulldevisá nann'</i>
<i>May the big horned at Ulldevis</i>	<i>Ja giellamoajve guoddi</i>
<i>Ornament the land around the birches</i>	<i>ádjáj guottses vuorbev</i>
<i>At Ulldevis</i>	<i>Ma dievdi jalggis lágojt Ulldevisá nann'</i>
Mattias Kuoljok/Apmut Ivar Kuoljok	Mattias Kuoljok/Apmut Ivar Kuoljok

I start by asking the reader to hear the *vuolle*¹ “Ulldevis” by Mattias Kuoljok, yoiked by his son Apmut Ivar Kuoljok.² The Sámi tradition of yoiking can be described as the creation of a picture, expressed in phrases and song. The yoik is a personal and collective empowerment, and, at the same time, it is an embodied storytelling (Cocq 2008; Stoor 2007). Yoiking is a way of narrating history, present-time, and future while rejecting any attempt to objectify. Therefore, yoiking may be considered to be challenging the currently prevailing Hi-Story – the notion of history within which colonizers document and record stories (Öhman and Wyld 2014; Battiste 2000). Johan Turi, the first Sámi author to have published a book about Sámi life in Sámi language, states that³:

Sámi singing is called yoiking. It is a practice for recalling other people. Some are recalled with hate, and some with love, and some are recalled with sorrow. And sometimes such songs concern lands or animals, the wolf, and the reindeer, or wild reindeer. (Turi 2011 [1910]:161)

In the Ulldevis *vuolle*, Kuoljok is yoiking a landscape, and he yoiks his vision, of reindeer happiness, a prosperous future – a *TechnoVision*. *TechnoVisions* are our individual human visions – our understandings of the past and present and our dreams of futures, which we communicate in different media to our fellow humans. This specific *vuolle* and *TechnoVision* was made known to me by Apmut Ivar Kuoljok, who approached me after I presented my postdoctoral research at the Ájtte museum during the Jokkmokk Winter market in February 2009. Since then we have

¹“Yoik” means “to sing” and “vuolle” is the song/narrative. As Stoor (2007:20) explains: “The term *vuolle*, *vuolle*, *vuelie* and *luohti* all means the same thing, it is yoik melodies which can have text content, but does not necessarily have that.”

²This yoik was made by Mattias Kuoljok (1897–1965). See Kuoljok Lind et al. 2004 as well as the CD by Kuoljok (2005). It can also be listened to on Spotify. The text is translated from Swedish to English by the author. The Lule Sámi language version above is provided by Apmut Ivar Kuoljok, the son of Mattias Kuoljok, and language-edited by Karin Tuolja in 2012. A yoik seldom remains the exactly the same but is developed and the person yoiking it may add his or her own perspectives. This is also the case with this yoik.

³Johan Turi was the first Sámi to publish a book written in his mother tongue, North Sámi, about Sámi from a Sámi perspective. The book has been translated into several languages and is considered an important document of the situation of the Sámi in Scandinavia at this time (see also Cocq 2008:17).

stayed in touch. Jokkmokk is a town and a municipality located in Sábmme, by the Lule River. Jokkmokk is home to me. My family has lived in this area for as long as anyone can remember and for as long as there are records. I stay in Jokkmokk several times per year, for both research and for personal journey into my own history as well as visiting my mother's family home (Öhman 2010a). Each time I return to Jokkmokk, I visit Apmut Ivar and his wife Sonja, and we share what is happening in our lives. I opted to start with this *vuolle* to Ulldevis, the Lule Sámi *vuolle* by Apmut Ivar's father Mattias where he tells of the reindeer grazing lands at a particular spot – a place where the reindeer calves are born in spring and early summer, before their migration towards the mountains. On the political map, they migrate towards the Swedish State border and on into Norway. The *vuolle* tells of the connection to this specific location, where the ancestors also passed, and of the importance of this place for the well-being of the humans following their ancestors and the reindeer.

Kuoljok's *vuolle* is simultaneously a place, land, sovereignty, and memory expressed in an ancient and still very much alive Sámi tradition. To me, listening to Apmut Ivar's *vuolle* fulfills several of the purposes of *yoik*, the collective empowerment – it makes me feel strengthened; I feel the land and the waters – I rejoice and feel that I stand stronger as I am made to remember important parts of the history about my own river valley.

This article is my *yoik*. Yoiking is my inspiration and method. I construct my *yoik* with other people's narratives, *yoiks*, and stories – consisting of verbal communications as well as documents, books from both inside and outside academia, complimented with my own personal experiences and memories from my time as a student, PhD student, scholar, and Sámi activist. I draw in particular on my research since 2008 focusing on the Lule River valley and the inhabitants from different aspects. Some of this work is described in Öhman (2010a).⁴ My sources are interviews, participatory observations, and personal communications, both in person and in the cyberspace. I have made interviews and I also keep a log book with entries since June 2008. I have organized three workshops in Jokkmokk, April, May, and July 2013, to which local people attend to discuss different aspects on mining. As part of the participatory observations, I have been present in social media, to a major part in different Facebook groups. From late 2011 onwards, these groups have become significant means both for mobilizing local resistance against mining in Jokkmokk and offering general discussions about mining. I have been communicating via Facebook, both with persons questioning and opposing mining exploitations and persons promoting mining, since summer 2012. This communication has taken place both on the open groups, on a daily basis, and in personal direct exchange when visiting Jokkmokk and during the workshops. In particular I have been involved in the Facebook group “Inga gruvor i Jokkmokk” (No Mines in Jokkmokk)

⁴When I started my PhD research in January 1999, I also started looking into the Lule River, studying the hydropower exploitation in this river, my home river, first as a way to understand hydro-power plants better and later on I started drawing some parallels to the exploitations in Tanzania. See Öhman and Sandström 2004 and my PhD Thesis, Öhman 2007.

set up November 30, 2011, by Tor Lundberg Tuorda. In July 2013, the group transferred to “Gruvfritt Jokkmokk” (Mine Free Jokkmokk). I joined the “Inga gruvor” group on July 11, 2012. Another Facebook group that I have been part of is “Gruva i Jokkmokk Ja eller Nej” – Mine in Jokkmokk Yes or No – where the majority of the participants writing are pro-mining. I joined in September 2012 and left in July 2013. Since then, more people who are against mining have started writing there. Both groups are “open,” meaning that their content is open to view even without being a member of the group, although it requires membership of Facebook. When I entered these groups, I presented myself and my background, both as a researcher and also my family background and relationship to Jokkmokk. I explained that I am a researcher and that I would make use of discussions and interactions within my ongoing research work. I made my position regarding mining in Jokkmokk clear, stating that as an expert on issues around dam safety, I consider it very risky to place an open-pit mine next to an already regulated river and that I do not think that whatever can be gained in terms of local employment opportunities during 20–40 years can make up for extreme risks for water pollution and dam failures (June 8, 2013).

I have aimed to work in a decolonizing manner in my approach, both on Facebook and in personal encounters. Among others, within in my discussions both on Facebook and within personal encounters, I have entered aspects and historical facts of colonization and the impacts on the local livelihood, on the interpretation of industrial exploitation, and how different understanding of industrialization – colonization – have resulted in an escalation of conflicts. I have also attempted at discussing ways to heal from these conflicts, instead of further fuelling of those.

In this chapter, I draw on my personal experience, my memories, and my connection to the places in the Lule River valley and Jokkmokk, in particular, in an ego-histoire inspired methodology. This includes drawing on my insights and understandings as a Sámi person and scholar. Not many years of my life have passed without me spending at least a week in Jokkmokk. In 1999, when I started my doctoral thesis, I started coming here more often. Since 2008 I have been spending about 2–3 months per year in the area. My research on both hydropower regulations and on my own family history and Sámi heritage has become part of my everyday life. This in combination with the everyday Facebook interactions that further blurred the boundaries between my life as a researcher and the rest of my life.

The ego-histoire approach, as suggested by Nora (1989), asks the historian to look back at themselves and to write the self into their work. Nora’s (1989) work of “lieux de mémoire” – sites of memory – forms part of my approach, as the idea that memories, history, are always connected to places and contexts and fit with the indigenous connection to land. This methodology pairs well with the Sami tradition of Yoiking.

Yoik is a verbal art, mixing spoken word and songs (Stoor 2007). My yoik is in this case written words – as I adapt to the academic format with references – but there are moments when the academic style limits expression. I then recall other’s yoik songs or spill out my words that are sung. My own personal parts of yoiksong should be read as me shouting, humming, or whispering. These parts appear in italics, without reference.

This yoik was born out of my frustrations over the losses of memory, history, language, territories, and waters – losses that I and my fellow Sámi face. My frustration is both over these losses and also the continued way Sámi people are made invisible within the current Swedish, Fenno-Scandinavian, European, and also International academic systems. During my 12 years of schooling in the 1970s and 1980s, Sami history was never even mentioned. In the 1990s, as an undergraduate university student, I was never introduced to any studies, not even one single article, paper, or lecture, about Sámi history within any of my university courses. Today, having received my PhD and working within the academic system, when I talk with colleagues, friends, and family, I realize that almost nothing has changed.

Despite the recognition of us, the Sámi, as an indigenous people by the Swedish Parliament in 1977 and the establishment of the Swedish Sámi Parliament in 1993 (and similar developments in the neighboring states of Norway and Finland), we are still made invisible – invisibilized.⁵ Our history, culture, languages, and traditions are to a large extent erased from academia, from the books of the whole school system, within museums, as well as from the society in general. In the few exceptional cases when Sámi history is displayed, we are commonly framed as either victims or the *other*: as exotic human beings whose traditions are about to disappear. We are described as a vanishing culture, in ways similar to many other indigenous peoples in colonized territories around the world.⁶

The current situation of invisibilization and othering of the Sámi and our history, tradition, and culture in Sweden (and in the other Fenno-Scandinavian Nation States) contributes to the creation of highly problematic epistemological contexts. The absence of Sámi history, culture, and tradition from education at all levels and being reduced to museum objects, victims, or exoticized lead to the lack of understanding of Sámi cultures and livelihoods, a void in understanding and an actual possibility for state representatives of ignoring the importance of the connections to the animals, lands, and waters (see, e.g., Kuokkanen (2007 and 2008) and Svalastog (2014)). This invisibilization supports a continued and even increased colonial exploitation of Sámi traditional territories as well as of us Sámi as a people. The exploitation includes an increased number of concessions for mining explorations, the expansion of already established mines, ongoing and planned wind power devel-

⁵I use the term “invisibilization” as a direct translation from the Swedish word “osynliggörande” – which means the act of making someone invisible. In the Scandinavian academic context, “osynliggörande” is commonly applied within discussions and analyses of gendered power structures – referring to a phenomenon where social and economic activities performed by women are being neglected or made invisible, declared unimportant, or even ridiculed (Ås 1979). Invisibilization has been used by several other scholars in similar discussions on Nation States vis-a-vis indigenous peoples and ethnic minorities. For instance, drawing on Skutnabb-Kangas (2000: 354), Haig (2003:123) defines the concept as follows: “‘Invisibilisation’ is the deliberate removal, or concealment, of the overt signs of the existence a particular culture, with the aim of rendering that culture invisible. It is part of the logic of invisibilisation that the policy and its implementation remain covert, because overt formulation would mean increased visibility.” See also Öhman (2007: 52 ff).

⁶There is a quite extensive body of literature available engaging these issues, I would recommend Fur (2008), Ojala (2009), O’Brien (2010), Ledman (2012), and TallBear (2013).

opments, and the expansion of military testing and training areas. These activities affect the livelihoods of the local inhabitants in terms of relationship to the land- and waterscapes, with direct impacts on, for example, water quality or a risk of contamination of the surrounding area with toxic metals. These activities also impact on the identities of the inhabitants and their relationships, to each other as well as to the land- and waterscapes. To indigenous peoples – and speaking for Sámi in particular – the links between land and identity are strong. The concept “indigenous peoples” in its current understanding refers to the attachment to a territory, colonized/dominated by outsiders.⁷ This is indeed true for the Sámi; our cultures and identities are destroyed and erased along with the landscapes and waterscapes that constitute a major part of Sámi livelihood (see, e.g., Beach 1997; Battiste 2000; Martin 2003; Åhrén 2008; Kuokkanen 2008; Byrd 2011).

As a Sámi scholar, I am a witness as to how the majority of research projects on Sámi-related issues are being pursued by non-Sámi scholars (see, for instance, Svalastog (2014)). I am concerned how the majority of knowledge is produced about Sámi and Sábme by outsiders and that at the same time it is difficult for people to claim Sámi identities and operate within academia. I have met scholars who identify as Sámi, but do not publicly claim Sámi heritage. My understanding from the conversations I have had with people in a similar position to myself is that people consider claiming Sámi identity to be unbeneficial (at best) or even detrimental to their academic careers. Indeed to claim Sámi identity is both a personally painful and difficult task as one’s intentions in publically claiming a Sámi identity may be questioned by both the Swedish academic community and the Sámi community (Åhrén 2008). Like our fellow indigenous peoples, we, the Sámi People, need to struggle to make our voices heard and to empower ourselves to do this reclaiming.

Whenever I am in academic contexts, I mention my Sámi background. Whenever I talk of Sámi history and the losses of lands and waters, I feel as though I am passing on a secret or a reality that is not supposed to exist. In these instances, I feel that I am disturbing a set order and that my presence is making others, the normal Swedes/Europeans, uncomfortable. Or, as a fellow indigenous woman who is Native American put it at the National Women’s Studies Association in 2010, “we

⁷During the more forty-year history of indigenous issues at the United Nations (UN), considerable thinking and debate have been devoted to the question of definition of “indigenous peoples.” However, no definition has ever been adopted by any UN-system body. One of the most cited descriptions of the concept of the indigenous was provided by Jose R. Martinez Cobo, the Special Rapporteur of the Sub-Commission on Prevention of Discrimination and Protection of Minorities, in the Study on the Problem of Discrimination against Indigenous Populations: “Indigenous communities, peoples and nations are those which, having a historical continuity with pre-invasion and pre-colonial societies that developed on their territories, consider themselves distinct from other sectors of the societies now prevailing on those territories, or parts of them. They form at present non-dominant sectors of society and are determined to preserve, develop and transmit to future generations their ancestral territories, and their ethnic identity, as the basis of their continued existence as peoples, in accordance with their own cultural patterns, social institutions and legal system”(Martínez Cobo 1987:379).

have no business breathing” (Öhman 2010b).⁸ As indigenous peoples, we’re not even supposed to be alive, to be there – to be here – claiming space and air with our bodies. As Sámi, we’re supposed to vanish, to disappear, and to die. Or we are supposed to become Swedish and accept a supposedly Swedish culture⁹ and ways of thinking, writing, and living.

Sharing this experience with most indigenous peoples around the world, I, as others before me, find that feminist research may serve as a remedy for healing. The Australian aboriginal scholar Bronwyn Fredericks states:

I argue that Aboriginal women need to define what empowerment might mean to themselves and I suggest re-empowerment as an act of Aboriginal women’s healing and resistance to the on-going processes and impacts of colonization. (Fredericks 2010:546)

Being an aboriginal – indigenous – Sámi, I work towards finding my own definitions of what empowerment might mean to me. I work with re-empowering myself for my healing and my own resistance work. I find that the feminist research field is a good platform to start the work for us Sámi (women and men) to make our voices heard while empowering ourselves to dare do this reclaiming. But, and there is a huge but, feminist research needs to be informed by indigenous studies and implement decolonizing methodologies, to be useful to Sámi and other indigenous peoples. Today, we, the Sámi – as many other indigenous peoples – find ourselves in a state of crisis. For a long time, our Sámi cultures, our bodies, and our history have been and currently are under heavy attack by the Nation States that we have been colonized by. We need to reclaim our space, including academic spaces. We need to combine feminist research with decolonizing methodologies.

I listen to another indigenous sister, New Zealand Maori scholar Linda Tuhivai Smith (1999:97–98), who states in her book “Decolonizing Methodologies: Research and Indigenous Peoples” what decolonizing is about. For her, decolonization is a process of recovering from fragmentation – putting ourselves back as whole persons – as well as about re-centering indigenous identities as a whole:

While the West might be experiencing fragmentation, the process of fragmentation known under its older guise as colonization is well known to indigenous peoples. Fragmentation is not an indigenous project, it is some-thing we are recovering from. While shifts are occurring in the ways in which indigenous peoples put ourselves back together again, the greater project is about re-centering indigenous identities on a larger scale ... Decolonization, once viewed as the formal process of handing over the instruments of government, is now recognized as a long-term process involving the bureaucratic, cultural, linguistic and psychological divesting of colonial power. (Tuhivai Smith 1999:97–98)

⁸This is a quote from a presentation at NWSA, National Women’s Studies Association, annual meeting, Atlanta, November 2010 (in Öhman 2010b). When I heard this statement, it was overwhelming to the point that I did not take note of the name of the woman stating it. This statement and the way it was said, in gesture and almost whispering, has haunted me ever since.

⁹In *Försvenskningen av Sverige* (The Swedification of Sweden), three professors of ethnology, Ehn et al. (1993), analyze the elements that constitute a perceived Swedishness and how this identity has developed within different spheres of the Swedish nation state during the twentieth century. A similar analysis on how school children have been educated to become part of the Swedish national identity is made by Anne-Li Lindgren (2002).

The greater project, thus, is to not just recover but to re-center my own indigenous identity. It is my task to involve bureaucratic, cultural, linguistic, and psychological institutions and divest them of colonial power. What this means for me in practice, I do not really know yet. I am in the process of establishing my definitions and my methods. However, I consider writing this chapter in the form of a yoik as an attempt to break out from a very narrow academic framework of writing that does not lend itself to the situations I want to express. It is to write in a way appropriate to speak about the Sámi and our history, to explain to those who have not encountered these issues before, and also to write in a way that empowers me and hopefully also other Sámi persons. I want to reimagine the struggles faced by Sami people in academic discourse. I want to challenge that discourse, mold it in ways that allow me to articulate the histories so often neglected, and bring different modes of expression to the fore. Writing my yoik in these pages, to blend writing styles and move between traditions, is to express how Sami ways of understanding landscape and waterscapes respond to the bureaucratic, cultural, and linguistic pressures of colonial power. To yoik through academic texts is to demonstrate how Sámi understandings of landscape are only ever partially captured and fragmented through systems of governance and how those same systems of governance draw out the very excesses they do not articulate as “profits.” My essay therefore is a cyborg, a blending of traditions, an impure product of messy relations tied in ways that make the issues faced by Sami people visible in ways that “pure” forms can never express. As such it expresses what I feel, experience, and live, and significantly, it yoiks the complexities facing those who currently live in Sábmme.

My academic context is the field of “history of science and technology” and, more particularly, feminist technoscience. I realize that postcolonial feminists, as well as indigenous feminists, are bringing forward important points and challenging the white Western feminist’s mainstream and exclusive ideology. Yet, indigenous peoples all around the world seem to be connected by one factor – we all belong to territories under attack by modern Nation States (see, e.g., Laula 1904; Battiste 2000; Kuokkanen 2008; Fredericks 2010). We all share a recent history of – and ongoing – massive industrial colonization, and feminist technoscience approaches seem to carry appropriate tools to deal with this traumatic situation. Feminist technoscience methodologies are close to indigenous methodologies as they reject the idea of scientific “objectivity.”

Feminist technoscience and postcolonial work along with humanimal studies, queer feminism, feminism, and disability studies all challenge the arguments of *disembodied objectivity* and argue for bringing back of the very physical bodies of the researchers themselves into academic research. In this respect, the “cyborg” in the title of this chapter, therefore, refers to Donna Haraway’s cyborg metaphor in her *Cyborg Manifesto* (1991a). I draw on this cyborg in the various aspects as discussed in the text, seeing us humans as cybernetic organisms, the blurred boundaries between fiction and fact which we continuously negotiate, and that we are always partial – scientific objectivity is but a myth. The Cyborg Haraway articulates highlight the need for reassembling ourselves and our identities:

A cyborg is a cybernetic organism, a hybrid of machine and organism, a creature of social reality as well as a creature of fiction. Social reality is lived social relations, our most important political construction, a world-changing fiction. The international women's movements have constructed 'women's experience', as well as uncovered or discovered this crucial collective object. This experience is a fiction and fact of the most crucial, political kind. Liberation rests on the construction of the consciousness, the imaginative apprehension, of oppression, and so of possibility. (Haraway 1991a: 149)

The cyborg is resolutely committed to partiality, irony, intimacy, and perversity. It is oppositional, utopian, and completely without innocence. [...]Nature and culture are reworked; the one can no longer be the resource for appropriation or incorporation by the other. The relationships for forming wholes from parts, including those of polarity and hierarchical domination, are at issue in the cyborg world. (Haraway 1991a: 151)

The cyborg that Donna Haraway envisions supports and gives me comfort in my attempts at integrating my thoughts, to reassemble my identities – the embodied attachments to the past, the present, the future, the land- and waterscapes, our stories and memories, animals, and technological artifacts. In Haraway's *Cyborg Manifesto*, I find the support to, as a scholar, be partial, ironic, and intimate. I feel the support to escape the annoying and rigid dualisms found in academic writing and to dare resort to what Haraway refers to as heteroglossia:

Cyborg imagery can suggest a way out of the maze of dualisms in which we have explained our bodies and our tools to ourselves. This is a dream not of a common language, but of a powerful infidel heteroglossia. (Haraway 1991a: 181)

I find an escape from the dualisms and a way to argue how important it is that I – May-Britt – tell my history through my yoik method. It does matter whose bodies provide the stories and in what languages they are told. Colonialism matters, indigeneity matters, bodies matter, landscapes and waterscapes matter. My Sámi body, with all its aspects, matters. Donna Haraway wrote the *Cyborg Manifesto* as a means to engage feminists in technoscience, to challenge technology and science from within. My chapter has a similar objective, one of making feminists of all kinds see us, the indigenous, and for us indigenous feminists to engage, so as to challenge technoscience from within. The idea of seeing us humans as cyborgs, interconnected with humans, nature, and machines, speaks to me. Being part of machines and machinery, science, and technology is a quality not often understood as "indigenous." Indigenous peoples are more often associated with nature and animals, as being part of the landscape. Yet just as, all indigenous peoples, all humans, we the Sámi are closely connected to machines and machinery, science, and technology.

Technoscience can be used both for destruction and liberation. Consequences of technology can be both positive and negative. "Technology" is often considered to be related to large-scale machines, such as hydropower plants. However, reindeer herding, fishery, *duodji* (Sámi handicraft), and living off what is available in the water- and landscapes are advanced technologies. To be able to contribute to a change, to restore identities, to save our landscapes and waterscapes, this needs to be recognized and I argue for a change from within. I opt to do this my way, the Sámi yoik way, *my own Sámi yoik way*. Yoiking TechnoVisions.

With these words I go on; I yoik you the story about Sámi people. I, remembering and recalling places, people and events with both love and pain at the same time, yoik my call for an academic – an activist – struggle for survival and change. I yoik Sábme, and for the reclaiming of our bodies, landscapes, waterscapes, history and right to a future.

Hear my vuolle!

5.2 The Colonization of Sábme

The territory of the Sámi, called Sábme, stretches across the borders of Sweden, Norway, Finland, and Russia, as illustrated above in Fig. 5.1. As the Sámi author Johan Turi (2011 [1910], 161) states, “maybe we were actually always here.” Sábme has been inhabited by the Sámi for as long as any human can remember. Although there is currently a specific region in the North – the current reindeer herding grazing lands – that is considered to be Sábme, the Sámi have lived all over and have traded for centuries with what is now called the Fenno-Scandinavian region (Zachrisson 1997). Defining the first human inhabitants in this region has become a controversial political issue, where archaeologists are called to provide testimonies in courts over disputes of current traditional land rights between Sámi reindeer herders and other local inhabitants (Ojala 2009). I, along with others (some of them



Fig. 5.1 Sábme (Sápmi) as seen from the North Pole. Map available at the website of the Sámi Parliament in Kiruna/Giron, Sweden. Illustration: Pär-Joel Utsi/Nils-Gustav Labba (Source: www.samer.se)

currently beyond their physical bodies),¹⁰ argue that we've been here since time immemorial, probably even surviving the last ice age on what is currently called the Scandinavian Peninsula (Turi 2011 [1910]; Cleve von Euler 1936). Current archeological findings give evidence that we, the Sámi people, have been here at least since the last ice age (Zachrisson 2005; Ojala 2009: 134–137).

When the modern Nation States formed from the sixteenth century and onwards, Sweden and the neighboring States colonized Sábmme, the State borders were demarcated, and the Sámi people were divided, becoming citizens of different Nation States (see Kvist 1994; Sörlin 2002; Lantto 2010; Lundmark 2008). Patrik Lantto, professor in history at the Centre for Sámi Studies at Umeå University, describes this process:

The partitioning of the territory between the states, the structuring of reality captured in maps and political rhetoric, changed the social and economic reality of the Sami as well as the Sami themselves; from simply being Sami to being Norwegian, Swedish, Finnish or Russian Sami. Citizenship had become a tool for a stronger control and eventual assimilation of the Sami. (Lantto 2010: 553)

From this time onwards, we, the Sámi People, have been subjected to colonization. This colonization has included destruction of both lands and waters, destruction of reindeer grazing lands, and a destruction of our cultural identity through, among other State-led policies, the removal of children from their families into boarding schools and intentional destruction of our Sámi cultural expression such as yoiking and our language.

Tove Skutnabb-Kangas (2000) describes the impositions on cultural expression as linguistic genocide or linguicide. Given that language is part of a human bodily expression, the connection she makes to genocide is understandable. In the early twentieth century, a “Lap should be Lap” policy was introduced in Sweden. This policy categorized Sámi People using racist stereotypes, with descriptions of the Sámi as savage and close to nature, reinforced by legislation and State practices. For example, in 1913, the Swedish Parliament implemented legislation informed by racist ideals to keep the “genuine” Sámi in a perceived natural state and seeking to avoid turning them into “bad Swedes” and created compulsory nomadic schools (Lundmark 2008). The goal of the nomadic schools was to keep Sámi children from tasting the modern life. The clergyman in Karesuando, Vitalis Karnell, one of the experts in the State Commission preparing for the reform, stated in 1906:

When the Laps start establishing associations and having their own journal, when they start educating themselves, then they are finished as Laps and they become the most miserable persons one can imagine. [...] Do promote the Laps in all ways, make them moral, sober and somewhat educated humans, but don't let them sip at the cup of civilisation in other

¹⁰ With “beyond their physical bodies,” I mean that they have passed on, they are no longer walking in their human bodies on this earth but that their thoughts, ideas, and writings are still part of what inform my understandings.

things, it will in any case only be a sipping, but it will not and never will bring a blessing. The Lap should remain Lap. (Karnell 1906, quoted in Lundmark 2008: 139)¹¹

In addition to the school reforms, other segregation policies were also introduced. Sámi people who were not nomadic reindeer herders were to become Swedes and preferably end their tending of reindeer. Their children were to go to the Swedish schools, in “real” houses with heating, while the nomadic Sámi children were only permitted to attend schools in tents or in school buildings constructed to resemble the *goathie*, or *lavvo*, the traditional Sámi tent used in migrations¹² (Mörkenstam 1999; Lundmark 2002a). Through the Swedish State policy of “Swedification,” people like my family – forest Sámi owning reindeer but also practicing agriculture – were to be transformed into *Modern Swedes*. Becoming a Swede meant giving up the reindeer herding (and the owning of reindeer), renounce the Sámi language, and not wear Sámi traditional clothing (see Sörlin 2002; Lundmark 2002a). The legislation shaped living with reindeer into a gendered politics of belonging, tying together people, place, and reindeer through marriage. For instance, with the reindeer herding law of 1928, reindeer-owning Sámi women who married a non-Sámi-categorized man lost their rights to reindeer ownership, while a Swedish-categorized¹³ woman marrying a Sámi reindeer-owning man got these rights in addition to rights of hunting and fishing (Amft 2002; Åhrén 2008).

These specific policies were part of wider events, actions, and racist oppressions. What follows is a summary of some of the state-sanctioned aggression towards Sámi people. The list includes both specific events and the more general consequences of different policies.

- The theft of territories by administrative measures, turning lands owned by Sámi into State property during the late nineteenth century (Kvist 1994; Lundmark 2008).
- Sámi being recruited as forced labor for mining projects in the seventeenth century. In Alkavare, Kedkevare, Nasafjäll Sámi in large numbers. Corporal punishment, such as flogging, beating, and also being dragged in water, possibly under the ice of frozen lakes in wintertime, could be used as punishment for disobedience (Kvist 1994; Sörlin 2002: 78; Lundmark 2008).

¹¹ Translation from Swedish by M-B Öhman.

¹² “Goathie” is in North Sámi, “gäätie” in Lule Sámi, and “kåta” in Swedish. Also the word “lavvo” or “lávvu” is used in Sámi. As with the tipis of the First Nation people of the Great Plains, the construction style of the goathie/lavvo differed between groups and according to purpose.

¹³ Within the Swedish state, censuses have been made since 1749, initially being made every year. From 1860, they were made every tenth year. Ethnic categorizations were introduced in the mid-nineteenth century, starting with describing the Sámi as a “foreign tribe.” Five years later, the Tornedalen Finns were similarly categorized, and within two decades, groups such as Roma and Jewish people were distinguished separately. Thus, in the census entry for each person, there would be a box for any ethnicity other than Swedish. If the person was considered to be Swedish, the box was left empty. This system was in practice up to the Second World War (see, e.g., Elenius 2001: 267).

- Forced dislocations – for example, of North Sámi from Karesuando southwards, after the dissolution of the union with Norway in 1905 – disrupting the ways of life of both the receiving Sámi communities and the displaced Sámi communities and thereby creating never-ending conflicts between these two groups of Sámi (Kvist 1994; Udtja Lasse 2010; Marainen 1996; Lantto 2010; Ekerlid 2013). Moreover, illegal (by International law standards) State-border-based reindeer-grazing conventions between Sweden and Norway disrupted traditional reindeer, and thus Sámi, migration routes (Udtja Lasse 2010).
- Numerous different laws creating sharp categorizations between Swedes and Sámi according to reindeer-owning rights, ultimately resulting in conflicts and court processes over land rights and compensations between relatives. A feature of these *Reindeer Grazing Acts*, as pointed out by ethnology professor Hugh Beach (1997) and Sámi scholar of Ethnology Dr. Christina Åhrén (2008), was the beginning of a series of fractional divisions of the Sámi, leading to a situation of conflicts between different groups – the main dividing line being between those that own reindeer and those that do not own reindeer. The first *Reindeer Grazing Act of 1886* limited reindeer grazing, hunting, and fishing rights to reindeer-herding Sámi. These rights were restricted under the *Reindeer Grazing Acts of 1928 and 1971*, and the Sámi rights of herding, fishing, and hunting were thereafter considered privileges granted by a benevolent State (Beach 1997; Borchert 2001; Åhrén 2008; Silversparf 2014).
- Hydropower exploitations, which have turned most of the major river courses in Sábmme into staircases, with reservoirs and dry beds, also making the now regulated water courses and lakes more dangerous both for humans and animals (Öhman 2007 and Öhman 2015). Åsa Össbo in her doctoral dissertation – which is the first major academic work analyzing the history of hydropower exploitations in Sábmme from a postcolonial perspective – summarizes the consequences:

The transformed landscape aggravated reindeer herding as grazing grounds, migration routes, settlements and, areas for collecting berries and shoe-hay were inundated. Fishing became a harsh and unsafe activity, the catch often deteriorated both in quality and quantity. Cultural landscapes disappeared or changed, and new methods for land-use affected reindeer herding and the complementing livelihoods. (Össbo 2014: 261)

- Destruction of reindeer-grazing lands, water quality, and landscapes that serve as mental resting places. State-sponsored clear-fell forestry leaving a barren, logged area rather than applying forestry practice which leaves the forest with all its ecological, cultural, emotional, and personal significance for the inhabitants, human and nonhuman, to enjoy (see, e.g., Sörlin (2002); Sandström and Widmark (2007); Lindkvist et al. (2009); Mikaelsson 2012).
- Recently wind farms have been developed across Sábmme. They constitute yet another major intrusion in reindeer-grazing lands, where the quest for renewable resources is falsely considered unproblematic. For further discussion on this topic, see, for example, Sasvari and Beach (2011), Helldin et al. (2012), and Berglund (2013).

- During the 1950 and 1960s, the Swedish Military conducted tests to simulate the blast of a nuclear bomb. Sweden ceased the nuclear bomb development in the 1960s. The military presence however continues through domestic military training grounds and an open invitation to foreign military to train in Sábmme (see, e.g., Sommarström 1991; Jonter 2001; Sörlin and Wormbs 2010; Wallerius 2011; Öhman and Mikaelsson 2014; Thunqvist 2014). In 2001 the Vidsel Test Range (controlled by the government *Administration for Defense Materiel* (Försvarets Materielverk, FMV)) and the Esrange Space Centre (owned by the State owned Swedish Space Corporation, SSC) were combined into the North European Aerospace Test range (NEAT). It is the largest land base test area in Europe, located on the Swedish side of Sábmme. On their websites, the state-owned companies invite foreign customers to test their military equipment in “restricted air and ground space” with “no population” (FMV). SSC welcomes both domestic and foreign customers with the following words: “With 24,000 km² restricted airspace and 3,300 km² restricted ground space we provide this unique vast restricted overland airspace to our customers. The terrain is varying and consists of forests, fields, bogs, lakes, hills and low mountains” (SSC). Tests are performed throughout the year, often with short notice for the people living in the area to evacuate (Öhman and Mikaelsson 2014).
- A State-supported policy for the protection of predators, which thrive in reindeer-herding areas, where the hunting of these predators by Sámi reindeer herders leads to prosecution and whereas compensations for the loss of reindeer due to these predators do not cover the actual losses (Beach 1997; Jonsson et al. 2012).
- From 1913 to 1962, Sámi children were separated from the families and taken to specific residential/boarding schools, where the use of Sámi language was prohibited by law (see, e.g., Henrysson and Flodin 1992; Kuokkanen 2003; Lundmark 2008).
- Current mining ventures are disrupting reindeer-grazing lands, poisoning water resources, endangering nearby high-risk dams, and thereby risking the health and lives of thousands of local inhabitants (Lawrence 2009; Lundberg Tuorda 2014; Persson and Öhman 2014; Öhman et al. 2013).
- From the end of the 1600s until the 1900s, representatives of the Swedish State Church – the Church of Sweden – destroyed Sámi traditional cultural and religious practices, by banning the yoik and religious practices and *noaidis* (shamans), and also devastated Sámi sacred sites and drums (see Rydving 1993; Kuokkanen 2003; Granqvist 2004; Virdi Kroik 2007). In 2006, the Church of Sweden published an inquiry regarding the historical and current relationship between the Church of Sweden and the Sámi, in which the authors recognized the participation in the colonization of the Sámi and suggested among other recommendations that an apology was made (Ekström and Schött 2006). No apology has so far been issued by the highest representatives of the Church of Sweden. Sámi traditional religious practices are not officially condemned by the church but neither are they accepted by all representatives (Svenska Kyrkan 2012).

- Since the 1600s, Sámi human remains (and also important Sámi cultural and religious artifacts) have been collected by representatives of Swedish institutions and museums. The Swedish Sámi Parliament demanded in 2007 that the Sámi human remains be returned and reburied in their respective areas of origin ([Västerbottens Museum](#)). By 2014, despite years of discussions and the identification of more human remains, this request has not been granted ([Enoksson 2007](#); [Ojala 2009](#); [Heikki 2011](#)). Furthermore in the late nineteenth and early twentieth century, research on Sámi (and also ethnic minority groups such as Jewish people and Roma people) in Sweden was pursued with an in particularly open racist ideology. The Sámi were othered through skull and body measurements and photographic documentation. For this “research,” Sámi human remains, skulls and skeletons, were plundered from graveyards. In 1922 the Swedish Parliament, Riksdagen, passed a law setting up the National Institute of Racial Biology, the first national institute of its kind in the world, in Uppsala. The aim of this institute was to procure “genuine” skulls of the Sámi race as material for the racial biological research ([Ojala 2009:242](#); [Lundmark 2002b](#)). The Institute was not closed until 1958 ([Hagerman 2006](#)). This is a painful – and suppressed – part of Sámi history, which only now starts to be discussed from a Sámi perspective by the artist Katarina Pirak Sikku, in her exhibition named “Nammaláphán” ([Pirak Sikku 2014](#)). The photographs for the Institute of Racial Biology are still available to the public on request at the Uppsala University library. The photos – although not the nude photos – are currently being digitalized and also posted online on the Uppsala University library website and can be delivered upon request to anyone in digital version or as photo within 5–10 working days ([Uppsala Universitetsbibliotek](#)).

Piling up these atrocities, crimes, and abuses is a painful task. I would rather not have it in this chapter at all. It hurts to write about it. Many Sámi already know about these events. Being reminded, and at the same time witnessing how the colonization is currently reinforced, brings about feelings of hopelessness and devastation. I feel the consequences of these events and aggressions on Sámi livelihood and culture in my own body. It is a cacophony of feelings of anger, shame, sadness, and vindictiveness.

The cacophony of feelings is not only mine; members from my Sámi network who know I am working on this chapter ask me to mention the suicides among Sámi people and the reindeer herders in particular. It is an issue which has been given more attention recently through studies and through very recent tragic events as young Sámi reindeer herders give up, not being able to stand the pressures. The findings in a recent report present it crudely:

Severe circumstances and experience of ethnicity-related bad treatment seems to contribute to increased levels of suicidal plans and attempts in subgroups of Sami. ([Omma et al. 2013](#))

To me this is not just colonization. I feel that what has happened and continues to happen is genocide. But I need to strengthen myself, to not fall into despair. I listen to Lovisa, a young Sámi artist. So I ask you to listen with me to the song and

yoik by Lovisa Negga, in Lule Sámi, Mihá ja Gievrra – Proud and Strong: Gut duosstel álggusittjat, Ja bálos gieladimev, Ane dal gielav, divna tjoavdá dân – You feel insignificant but will last forever, The one who dares say something, Will defend the mute, So use your voice, and free us all....(Negga2013).

I draw on Sámi traditions, on my akku – my foremothers (Hirvonen 2008; Wuolab 2004) – to talk back, talking back to the Empire; I am talking back and claiming space, memory, place, sovereignty, waters, land, my body and belonging. I breathe. I collect strength to go on. Proud and Strong!

5.3 Cyborg Identities

This article draws on my personal experiences and insights and relates to my life as being in the body of what, on the surface, may seem to be a stereotypic Swedish woman – blonde, blue eyed, white skin, and with a typical Swedish name. Since childhood I was trained in a positivist tradition, as the Swedish State had wanted when they took the reindeer-herding rights away from my family; I was trained to be a *Modern Swede*. I believed I was *Swedish!* However, there were so many strange silences, voids that I couldn't understand. When I, at the age of 42, embarked on a new research project, I was thrown into old, but at the same time completely new, body-, dream-, land-, and waterscapes. I was suddenly Sámi (Lundby 2010). The silences became understandable. I also discovered that I share this experience with many other Sámi women and men of different ages.

When I received funds from the Swedish Research Council for a postdoctoral scholar position with the title “Situating perspectives on the hydropower exploitation in Sápmi” and had the opportunity to be affiliated with the Centre for Gender Research and the GenNa program, not only did I embark upon a journey into a totally new-to-me research field but also found myself on a both unexpected and rather confusing journey into *me* – my physical appearance, memories, and my own history (Öhman 2010a). Learning new knowledge about my family history and about my physical appearance being recognized as stereotypical Sámi, I realized that the “other,” the “indigenous” is me (LaRocque 2010). This insight has come to change my whole perception of science studies and of history production and I feel obliged, as a scholar, to work to find other ways of producing, writing, and teaching. I feel obliged to find a way that brings out voices that are silenced, to find my own voice. This is also a process of healing for me. I wish to share it with other Sámi and indigenous persons with similar experiences, to help us all heal and to, following Tuhivai Smith (1999), re-center our indigenous identities.

I do not stand alone in this work. I am trained within the discipline of history of Science and Technology, a discipline within which there are much earlier works challenging what I refer to as “Hi-Story.” That is, the High-Story, the history of the winners, the colonizers, the settlers, and the ones getting the benefits, which proves that technology and science is never innocent (Winner 1980; Hecht 1998). Among others, Michael Adas (1989) has shown that the illusion of Western technological

superiority is one of the fundamental parts of the justification for paternalistic “civilizing” missions, as well as the rapid spread of European hegemony. Yet, most history of science and technology work is strangely disembodied and detached. I am trained to write as if history doesn’t matter, as if it isn’t personal. But how can it not be personal? Here, feminist scholarly work comes to the rescue, and in particular the work of feminist technoscience pioneers such as Evelyn Fox Keller (1982), Vandana Shiva (1988, 1993) Donna Haraway (1991a, b), Sandra Harding (1991), Lena Trojer (1990), Christina Mörtberg (1997), Birgitta Rydhagen (1999), and Kimberly TallBear (2003, 2012, 2013).

To me, the inclusion of indigenous voices – Sámi in general and Sámi women in particular – is indispensable. Having been subject to severe oppression, violence, and linguicide, we Sámi people even forget our own history and deny our memory. This process of forgetting and denial is a result of the internalization of the colonial practices of ridicule and shame. How could I have grown up without knowing I was Sámi? Why did no one tell me about this until I was 42 years old (Öhman 2010b)? And why do I share this experience with so many other Sámi persons? How should I deal with all of this, without breaking myself? What academic frameworks are available to me to formulate my own questions and responses?

My approach is to take a step further, to develop a further understanding that includes my own indigenous perspectives, my indigenous feminist technoscience perspectives, while elaborating on decolonizing methodologies. My approach also includes attempting to provide a space for regeneration and healing for myself and others. In this work, I am much strengthened by all the support I have received, from colleagues, friends, research funders, and supporters within the Sámi society and my academic environments.¹⁴ I am also strengthened by my encounters with fellow indigenous scholars from around the world, for example, from the United States, Kimberly TallBear (2003, 2012, 2013), who is also combining feminist technoscience and indigenous work; from Australia, Frances Wyld, who is working with storytelling as methodology (Wyld 2011a, b, and c); and from Japan, Kaori Arai (2012), who is working with her own history in the context of her grandfathers’ resistance against hydropower exploitations. Although not within the field of indigenous studies but writing and analyzing from within her own body with a disability, Minae Inahara’s (2006) excellent work on phenomenological perspectives on living with cerebral palsy in a society where the norm and consequently desire is “abled-bodiedness” is truly inspiring and helpful in my own quest to understand what colonization and oppression has done to me, my body, and other Sámi persons, in terms of our self-shaming and self-hatred.

I am also much encouraged by the two Sámi female activists that paved the way for early Sámi resistance at the beginning of the twentieth century: Elsa Laula Renberg (1877–1931) and Karin Stenberg (1884–1969) (see Laula (1904), Stenberg and Lindholm (1920), Hirvonen (2008), Stoor (2011)) whose lives and texts I think should be, but to this day still aren’t, part of the Gender Studies undergraduate cur-

¹⁴There are too many people to mention here, unfortunately only a few of you will be mentioned in this article. But I thank you all for your warm support and encouragements along my way.

riculum at Swedish universities. Another great inspiration is Professor Louise Bäckman, a South Sámi woman born in 1926 in Dearna/Tärna, professor *emerita* of Science of Religion. Bäckman was one of the founders of the Stockholm Sámi association in 1947. At the age 85, she is still active as a researcher and mentor for young researchers.

Inspired and encouraged, I set out for a quest for my own voice. Through the blending of feminist technoscience, storytelling (Öhman and Wyld 2014; Martin 2003), ego-histoire (Nora 1989; Öhman and Wyld 2014), and embodied and lived experiences – a corporeality (Inahara 2006) and the Sámi tradition of yoiking – I create a space for my version of the production of history:

I write my Sámi Cyborg TechnoVisions, reclaiming my body-, water-, and landscape, while at the same time challenging and encouraging you, the reader. You and others, whether Sámi or non-Sámi, indigenous or nonindigenous, academic scholars or not, I challenge and encourage you to show your own subjectivity within your own writings and representations.

I challenge the normative Sweden, expressed in the name of the Nation State where I reside and of which I am a citizen; Sverige – the word itself means in Swedish “the kingdom of the Svealand”. Even within the name of the country of which I am a citizen, I am made invisible. At each moment I mention the name of the nation where I live, I am complicit in the derision and neglect of Sápmi and the Sámi People. My people and my territory are not even part of the name of the Swedish State. I challenge the current normative Hi-Story, the story that has been told by the winners at the cost of erasing the voices of Sámi.

Hear my story!

5.4 Challenging Hi-Story: Dreams of Bright Futures

When I visited Jokkmokk in February 2012 and met Apmut Ivar and his wife Sonja Kuoljok, the existence of an ongoing struggle over life and death, over colliding TechnoVisions became very apparent to me. Something is threatening the future prospect of reindeer happiness. There is a threat to Ulldevis, the whole Jokkmokk region, and the Lule River. The cultural, mental, and physical well-being of the reindeer and the reindeer herders, as well as others, is at stake. Apmut Ivar asked me if I was going to participate in the demonstration against mining explorations in Jokkmokk, which was to take place the following Saturday. I too am a part of this river, the Lule River, in Lule Sámi language named Julevädno. These new events of mining explorations touched me deeply. I was scared. Finding out about this threat, I realized I love this place, more than I knew. Yet I ended up not going to the demonstration; something made me stay away. Maybe it was that I preferred to pretend this new threat did not exist, that there would never be any mining. If I don't see it, it is not happening...not just yet.

But no matter how hard I try to avoid it, I find myself confronted with the reality. In my research, within my activism in Sámi associations, it kept coming back, and

now I find myself in the midst of the struggle, as Sámi, as scholar, as activist, and as a human. Today there are numerous mining explorations going on within the borders of the Jokkmokk municipality, as well as in many other places within Sábmme. Mining prospecting is occurring in the midst of the reindeer migration routes and grazing lands, and next to two high-risk hydropower dams situated on the Julevädno River, which is the source of drinking water for the entire Julevädno Valley (Lawrence 2009; Lundberg Tuorda 2014; Persson and Öhman 2014; Öhman et al. 2013). In Jokkmokk, some representatives of the municipality, the political party in power, and a number of inhabitants seem to be in favor of these plans, dreaming about upcoming job opportunities for the unemployed.

On the Internet, I find a “detailed mineral report from Utevis (Ulldevis)” (Mindat.org 2013), available for any company interested in investing in mining explorations in Sábmme. The Geological Survey of Sweden, a State authority established in 1858 to support the mining exploitations of the “Northern Colony”¹⁵ ... *Norrland- the Northern Land, the colony, as viewed from Stockholm, from the midst of the Svea-rike kingdom of Svear, Sverige...* readily provides maps for any interested company desiring to prospect (SGU 2012). At the same time, Swedish legislation states that prospecting, including activities such as drilling in search of uranium, nickel, copper, iron ore, and any other mineral of interest, is permitted to any interested foreign company. Even if the local municipality is against any future mining exploitation and uses its Swedish law-based right to veto to prevent future mining, prospecting is allowed. But prospecting ventures can go on for up to 3 years or more and are destructive to nature, water, and even to tourism, which is a very important source of income to the municipalities in Sábmme as well as elsewhere in Sweden (see SFS 1991; Andersson et al. 2012; Persson and Öhman 2014).

I recognize these dreams of job opportunities: these visions of a shining bright future through large-scale technological projects. They are a part of my own history and of the history and present-day of my county, Norrbotten. The iron ore, the railway, the steel factory, and the hydropower: a *megasystem*, as the historian of technology Staffan Hansson (2006), has named it. The visions are so strong that you can feel them in your chest as you breath – a promise of happiness. I talk to people in Jokkmokk. I find that the state of excitement over the possibilities of mining among the proponents is almost possible to touch with my hand. It’s in their eyes, in their gestures. In Jokkmokk, September 2012, as I spend time doing participatory observations, I engaged several conversations on the issue, for example:

Anna asked me a question that made me explain that I am a researcher. So she sat down and we started discussing the mining plans. She said is in favour of it. I asked why. She answered “Well then there will be an upsurge”, and showed with her arms in an upwards movement. (Öhman logbook, September 2012)

I name the sensations I see in people TechnoHappiness. Feeling happy due to the prospects of technology, machines coming in. In Jokkmokk, I witness TechnoVisions

¹⁵Axel Oxenstierna, 1583–1654, count, royal advisor in 1609. Chancellor of Sweden 1612–1654 is accredited to have stated “Norrland is our India,” meaning that the north of Sweden was to be considered a colony to use for resource extractions (Bäärnhielm 1976; Larsson 2013).

of a prosperous future based on the sole factor of the establishment of a mine, the use of *big* machines.

In the archives of the Jokkmokk municipality, I have seen the traces of the other dreams – the earlier TechnoHappiness. From 1910 and onwards the Julevädno River was “shackled” by the Swedish State hydroelectric developments (Öhman 2007; Öhman 2015). I recognize the grandiose futuristic TechnoVisions, of more than half a century ago. Like the French dreams of grandeur through nuclear power and colonization (Hecht 1998), Sweden used the north – the North Land, Norrland – as its very own colony (Bäärnhielm 1976; Broberg 1982; Eriksson 1982; Sörlin 1988, 2002; Mörkenstam 1999; Lindgren 2002; Granqvist 2004; Lundmark 2008). In 1956 Åke Rusck, who was the General Manager of the State Power Board, expressed his TechnoHappiness dreams about hydropower exploitation in Sábmme. He chanted a story of how the State Power Board first entered the “pure wilderness” to build the first hydropower station in Porjus, how much electricity the Julevädno, when fully “harnessed,” would produce. And not with one word did he mention Sámi culture and traditions. In the reprint of the speech, published under the title “A 20-year program for 2 billion” in the book with a caption suggestive of “progress” *The Earth, the Forest, the Iron Ore, the Hydro Power in the Norrbotten of Tomorrow*, the construction of the Messaure Dam on the Julevädno is pictured together with a sevenfold image of the Cheops pyramid in Egypt (Rusck 1956: 214; Öhman 2007).

The fantastic futuristic visions – comparing Messaure with the splendor of the ancient Pharaohs – the almost impossible construction actually coming true: the engineers would recreate Cheop’s pyramid, not once but seven times!¹⁶ But the techno dreams of progress were undermined from the start. Messaure was built at the cost of putting the whole Julevädno River valley at risk; a disastrous sinkhole threatened the dam’s very existence, appearing just after the dam had been constructed and filled with water (Bartsch 1999).

Now what about the dreams of a shining bright future, of happiness, and prosperity for Jokkmokk? Four years after the speech by Rusck, the number of inhabitants (by 1960) was 11 533 (Demografiska Databasen; SCB). I’d like you to read the number, slowly, preferably you should read it out loud, as this number has become very important. Exceeding the seemingly magical number of 10 000 inhabitants is of importance for an inland municipality in Sweden. Given that Sweden is relatively sparsely populated, much significance is placed on municipalities achieving city status. There was a strong feeling that in the 1960s Jokkmokk was on the way to achieving this status. Indeed the memories of a time with many inhabitants have become an important component in the current TechnoHappiness discourse about progress in Jokkmokk. This was at the height of construction works for hydropower. However, only 10 years later, as the construction work reduced, the population diminished by one third. Over the years, the decline has continued as the dreams and acts of the hydropower construction era faded away. Since the parliament deci-

¹⁶In a discussion of the design ideals of Messaure, Sörlin and Nordlund describe how “the work of Erik Lundberg, who declared the cuts and sears of nature to be true and rational” (Sörlin and Nordlund 2003:308).

sion in 1993 to protect our last free-flowing major rivers, there are no more new constructions of large-scale hydropower in Sweden (Öhman 2007:63), and the control over the power plants and dams was left to a handful of staff and subcontractors. By the start of 2012, the registered human population in Jokkmokk municipality was just 5000, the same level as it was in 1910, before the grandiose era of hydropower constructions (Demografiska Databasen; SCB).

Today, the discourse in Jokkmokk circles around this perceived loss of inhabitants, as a sign of underdevelopment and of stagnation. An example which sums much of the discussion was made by the political leader of Jokkmokk municipality, Stefan Andersson of the Social democrats, who wrote in a debate article in the national newspaper *Aftonbladet*, on the 25th of September 2013 about this quest for population increase as a good reason for being positive to mines in Jokkmokk:

We in the political majority of Jokkmokk have decided to be in favour of an establishment [of mines](...). The reason for this is the economic injection it would give both to local and regional business. It would bring a large amount of new job opportunities, the possibility for population growth and a possibility for our children and youth to stay in our fantastic municipality if they wish to. [...] The highest priority for the municipality is population growth. (Andersson 2013)¹⁷

The Jokkmokk municipality is not rich in monetary terms. The population is currently declining, as young people move away in search of job opportunities. This happens despite the fact that its artery, the Julevädno River, is the most productive river in the whole of Sweden in terms of electricity and, therefore the most profitable. Throughout the twentieth century, starting from 1910, the Julevädno River was converted from a free-flowing river into an energy-producing factory. Today the river contains a staircase of 16 regulation reservoirs with attached power plants, a total installed capacity of 4350 MW, and an annual output – in normal years – of up to 14 or 15 TWh. The system produces up to a fifth of Swedish hydropower, totaling around 65 TWh/year, and up to 10% of the total of Sweden-produced electricity which is around 150 TWh/year (Vattenfall/Nordlund 2008:3; Hansson 1994; Öhman 2007; Lindholm 2011).¹⁸ The State power company Vattenfall boasts on their website: the Lule River/Julevädno is “producing enough electricity to bring light to the whole of Sweden, 24 hours a day, 365 days per year” (Vattenfall/Nordlund 2008:2). The bright and prosperous future described by Rusck apparently did arrive. However,

¹⁷ [Swedish: “Vi i den politiska majoriteten i Jokkmokk har ställt oss positiva till en etablering, något vi var mycket tydliga med till väljarna långt före valet 2010. Anledningen till vårt ställningstagande är den ekonomiska injektion det skulle ge både lokalt och regionalt näringsliv. Det skulle ge en stor mängd arbetstillfällen, möjlighet till befolkningsökning och möjlighet för våra barn och ungdomar att kunna bo kvar i vår fantastiska kommun om de vill. [...] Det högst prioriterade målet i kommunen är befolkningstillväxt.”]

¹⁸ Electricity production in Sweden is based on equal parts of hydropower and nuclear power up to 90 %, with the nuclear power functioning as a stable base and the hydropower being easier to regulate corresponding to the different needs over the seasons.

the prosperity didn't stay in Jokkmokk. The profit, as well as the electricity, is transferred far away through the transmission wires.¹⁹

The way that the “profits” from the river disappears from the region is problematic for those who live there. Norway has a different system of return to each municipality which returns several billion back (FSV 2013) to local municipalities. With a similar system as in Norway, Jokkmokk could receive around SEK 550 million – per year (Eriksson 2013). The Association for Hydropower Municipalities, made up of representatives from the 34 municipalities located in Sábmme with hydropower stations, has attempted to challenge the losses made (FSV 2013). However, the municipality of Jokkmokk is no longer a member of this association. The leadership of the municipality now dream of a new investment, the mine. I interpret this as a response of already colonized people. I feel the experiences of the arrival of hydroelectric power to the region offer a warning for these new dreams of TechnoHappiness.

Remembering and storytelling are important methods of decolonization (Tuhiwai Smith 1999, 146). But how do we remember when our parents have chosen to forget, because of the pain of the loss? What stories to tell?

Today, even the memory of how productive the Lule River/Julevädno once was in terms of salmon has been erased. When I grew up, what Julevädno was to me was a producer of electricity. But while electricity and profit now flows away from the region, a different wealth once followed the river. So let me yoik the memory to you, a story of spearfishing salmon from my very own stretch²⁰ of the Julevädno, a story that came to me after having started to delve into my Sámi history:

Lars Johan Andersson tells the story: “I was spearfishing in the calm waters in the year 1906, it was the beginning of the spearfishing season, around the 12th of *August*. First, I caught a 20 kilo salmon; then I found another big fish. The first stab I made to the second fish hit over its back, but the salmon was so big that the spear could not enter beneath its spine. Johan Stenman was rowing, and as he turned the boat I tried to push the salmon along the bottom of the river towards the land; I did this as much as the forces of both myself and the salmon allowed for. As we arrived to shallow water I climbed out of the boat, put my right hand into the salmon's gills, and managed with great effort to lift it onto the boat. The salmon immediately fought loose from the spear, and, as it was about to escape out of the boat, Johan hit the fish directly on the head with a log. It was the biggest salmon I've ever

¹⁹Vattenfall annually pays around 24–26 million SEK to the municipality of Jokkmokk, in something called “bygdemedel,” which translates to “countryside funds.” Jokkmokk and other municipalities which are affected by hydropower regulations receive these funds as compensation, and the funds are supposed to be used for development within the municipality. However, in comparison to the actual profit that is made from Julevädno's annual production of 15Twh, this amount is extremely little.

²⁰I refer to this stretch of the river – a limited spot of a couple of kilometers – as my own because of several reasons. First, this area, a so-called homestead has been owned by my family since the 1850s, and by inheritance, it was also my own, coowned with other family members, for a couple of years. Second, it is the stretch of the river where I have spent a lot of time, since childhood, and to which I keep coming back. Finally, I rarely meet any one else when I come here. I can spend hours without meeting one other person here. To me it feels like “my own” stretch, full of memories of my own and of my ancestors.

seen. It weighed 33 kilos, and that considering that it must have lost weight since it had come all the way from the sea.” (Ullenius 1932: 8)²¹

This salmon fishing adventure is but one story out of many from my stretch of the river, Unna Julevädno, one of the many collected by J G Ullenius, a retired teacher, born in Jokkmokk in 1868, in the early 1930s on behalf of the Norrbotten county local heritage association (Ullenius 1932:1). Although living from what nature provides is not an easy life, my family has lived here since time immemorial. We survived, lived, and prospered here on ancestral lands, our indigenous lands. Today when I visit this place, there is no possibility of spearfishing salmon; there are no longer any salmon available at all. The Julevädno is regulated; the salmon are blocked from their migration from the sea. When I wish to eat salmon, I have to buy it from the food shop; it comes in small packages, frozen, cultivated and imported, and carried on trucks from Norway. I opt to reclaim the memory that once Julevädno was a salmon rich river, and I acknowledge the hope among local people, and my relatives, that the river can live again (Personal communications Nilsson 2008; Lundberg Tuorda 2013).

5.5 Challenging Hi-Story: The Presence and Absence of Sámi in Society and Academia

I didn't learn about my Sámi history in school and today Sámi history is not a part of curricula in schools. Some efforts are being made to change this; however, there is still much to do to prevent the erasure of the Sámi history within all educational levels, including academic research and teaching (Svalastog 2014). History of science and technology is not better than any other academic discipline in this regard. What has surprised me is how little space the now expanding field of Gender Research and the teaching of gender studies have made for indigenous and Sámi cultures and even less for those voices speaking for themselves. Within gender studies in Sweden, undergraduate students encounter Black feminists and postcolonial feminists from both the global south and the global north. Yet there is little or no literature made available within undergraduate courses in regard to indigenous perspectives or Sámi studies at the institutions and centers for gender research in Sweden.²² While there have been only two doctoral dissertations published regarding Sámi and gender issues in Sweden within the last decade (Ledman 2012 and Amft 2002) and one ongoing doctoral dissertation project focusing on “Sami contributions to feminism as a social movement and theoretical tradition” at Lund

²¹Translated from Swedish by May-Britt Öhman.

²²This was a pilot study. I went through all literature lists of gender studies for the undergraduate courses at the universities of Umeå, Luleå, Stockholm, and Lund for 2012 available online by August 8, 2012. I looked at the titles and authors of books and chapters. As I am familiar with Sámi literature, as well as gender studies literature, it was quite easy for me to confirm the void of Sámi authors and texts that in particular deal with issues of Sami history, culture, and traditions.

University Centre for Gender Studies (Knoblock 2012), there is more related research going on in the Norwegian and Finnish settings (Ledman 2012: 20–26; Hirvonen 2007, 2008; Kuokkanen 2006, 2012; Stordahl 1990, 2003). Yet, there must be very many students at our universities who are Sámi or who would be able to claim Sámi identity if they were informed about their family history. I only got to know about my Sámi heritage at the age of 42, from a relative, as I started research on my own river and the Sámi living there (Öhman 2010a), and I have understood that similar things happened to other scholars, once they've started researching Sámi culture and history; older family members tell them about their Sámi heritage. Among other examples, Anna-Lill Ledman, who wrote her doctoral thesis on Sámi women in media (Ledman 2012), told me how, while working on her thesis at the age of 35, she was told of her Sámi heritage by close family and relatives (Ledman, pers. comm. 2013).

5.6 Reclaiming Our Body-, Land-, and Waterscapes through Academic Research

Finding a voice of one's own, as a Sámi, is indeed a matter of life and death; of cultural, physical, and mental well-being; and of survival. Being both Sámi and an academic scholar of today is, despite many efforts by earlier and contemporary Sámi scholars, a huge challenge. There is a risk of becoming academically and personally split (see, e.g., Fanon 1952; Battiste 2000; LaRocque 2010; Wyld 2011a). I am angered and feel terribly uneasy when I hear the ridiculing of Sámi traditions, appearances, or the falsely low number of Sámi persons in Sweden, which are all popular themes in dominant media (Sarri 2012; Silversparf 2014). Is my reaction abnormal? Or is it a normal reaction to an abnormal situation of colonization and repression?

Academic research performed by outsiders on the Sámi peoples began in the seventeenth century, with the ethnological work of the political scientist, Johannes Schefferus. Schefferus was followed by the famous non-Sámi Carolus Linnæus (Tunón 2012; Stoor 2008). The stories and narratives might not always be degrading nor diminishing, but they are still from the "outside." They are stories told about the "others." Even a Sámi intellectual, such as my ancestor Nicolaus Lundius, who was a student in Uppsala in the 1670, may be found writing about themselves as the other, highlighting our exotic differences and recreating existing stories told to persons from the outside (Lundius 1905 [1674]; Rydström 2007).

This issue of insider-outsider perspectives on Sámi culture, economy, and life has been discussed within the Sámi community at least since early twentieth century (Stoor 2007). Among others, the author and activist Karin Stenberg claimed that there was extensive research in regards to Sámi but that the views of the research "object" – the Sámi – were always distorted (Stenberg and Lindholm 1920; Stoor 2007). The Sámi scholar Israel Ruogn (PhD in 1943) stated in 1981 that the majority

of research about the Sámi People and their culture and economy has been performed by non-Sámi persons. Ruong explained that there is a need for Sámi individuals to take control over the research and formulate research questions (Ruong 1991; Stoor 2007). In 1974 Keskitalo presented the paper “Research as an Inter-Ethnic Relation,” which the Sámi scholar of Sámi Studies Krister Stoor (2007) describes in his PhD dissertation as the start of the internal Sámi discussion on the inside-outside perspective on academic research (Stoor 2007; Keskitalo 1994). Sámi scholar and professor of religion Louise Bäckman’s work, starting with her dissertation in 1975, also engages in this debate (Bäckman 1975; Bäckman and Hultkrantz 1985) as does Nils Jernsletten in his (1978) article on Sámi yoik. Thus, several attempts have been made by Sámi scholars to go forward, challenging the objectification, the othering. Today, there are more Sámi scholars – at least scholars who openly declare themselves as Sámi – active within the Swedish academic setting. Yet, there remains a lot of hard work to do.

To resist this, we need to deal with our individual and collective memories of colonization and racial biology by recognizing the traces of this history in contemporary society. We need to deal with the fact that there are many Sámi persons that still either opt to hide their Sámi background or live in a situation where their Sámi ancestry and family history has been hidden to them. The wounds are still open. Sámi persons, just like me, who are researchers, are dealing with these stories both personally and within our own research contexts. It is a matter of decolonizing, although it is a slow and painful process.

Our challenge is to work for the development of new research methodologies, ways of writing within an academic setting as well as the teaching of history that can provide us and others in similar positions – other Sámi scholars – with tools to formulate and respond to relevant research questions for Sámi people and individuals. We must continue to challenge the power of what is commonly considered “objective scientific research” (Haraway 1991a, b; Harding 1991). We need to work with decolonizing methodologies, as suggested by Martin (2003), Tuhivai Smith (1999), and Battiste (2000).

A major theme of the decolonizing methodologies discussed by all three scholars is self-presentation, introducing oneself to the readers, to the ones we interview, and to those we wish to interact with. Martin explains: “The protocol for introducing one’s self to other Indigenous people is to provide information about one’s cultural location, so that connection can be made on political, cultural and social grounds and relations established” (Martin 2003). Karen Martin explains that in providing such details, she claims and declares her genealogy, her ancestry, as well as her position as a researcher and author. She continues: “The purpose is to locate myself firstly as an Aboriginal person and then as a researcher. As a researcher, this clearly presents the assumptions upon which my research is formulated and conducted. This also allows others to locate me and determine the types of relations that might exist. So, in providing these details, I am also identifying, defining and describing the elements of Indigenist research” (Martin 2003: 204). My aim is that this chapter works as such a self-presentation of myself as Sámi, my relational contexts, and my intentions as a scholar.

Tuhivai Smith speaks of 25 indigenous projects which may be formulated as decolonizing methodologies. Apart from the method of storytelling which is also described by Martin, the one most relevant to this chapter is “remembering.” Tuhivai Smith writes:

The remembering of a people relates not so much to an idealized remembering of a golden past but more specifically to the remembering of a painful past and, importantly, people’s responses to that pain. [...] This form of remembering is painful because it involves remembering not just what colonization was about but what being dehumanized meant for our own cultural practices. Both healing and transformation become crucial strategies in any approach which asks a community to remember what they may have decided unconsciously or consciously to forget. (Tuhivai Smith 1999: 146)

All three scholars each speak about the role of *healing*. Working as a scholar, applying a decolonizing methodology, is to work with healing of our indigenous communities through different methods, always having the healing in mind. I work with the creation of our own TechnoVisions, my Sámi Cyborg TechnoVisions, to claim dreams and visions that benefit us as a people, as well as myself and others as individuals.

5.7 Yoiking the TechnoVisions of a Sámi Cyborg

While working on this article, the struggle at Gállok (Kallak), a planned mining site on an island in the Little Lule River, in Jokkmokk, became a major issue of conflict and debate. During the summer of 2013, a protest camp at Gállok was established and occupied from beginning of July until early October. Confrontations took place with the police as protesters constructed blockades to stop the prospecting company from accessing the test mining site. The existing conflict between people, both Sámi and non-Sámi, wishing to preserve Jokkmokk from further industrial colonization and those, also both Sámi and non-Sámi, who envision TechnoHappiness in the form of new industrial establishments escalated further. I followed and participated in the debates, in cyberspace in social media, as well as visiting and contributing to the protest camp, participating in and speaking at demonstrations (Fig. 5.2), organizing workshops and seminars, and also presenting papers about different aspects of the mining prospecting (e.g., Öhman et al. 2013). I am involved and I am indeed partial. I have chosen a perspective, where I consider the current industrial exploitation of Sábmme as colonization and destruction of our cultures and traditions, which threaten to erase us and our way of life. However, I see aspects that require further analysis. The TechnoVisions of pasts, presents, futures – whether yoiked by Mattias Kuoljok, his son Apmut Ivar, or sung by representatives of the State Power Company or mining industries – are all about happiness and prosperity. Yet, these TechnoVisions collide in a brutal way; these visions cannot be fulfilled at the same time, at least not on the same piece of land. One of them either has had to make way, or will have to make way, for the other. In the case of hydropower exploitation, the reindeer



Fig. 5.2 May-Britt Öhman speaking on issues of water and dams and risks at the November 17, 2012, manifestation against the current Swedish mineral law and the mining exploitation destroying of lands and waters in Sábmme and elsewhere, at Medborgarplatsen, Stockholm (Photo: Tor Lundberg Tuorda)

herding, the fishery, as well as many other aspects of Sámi culture were severely affected. We did survive, we do survive, but we are indeed traumatized and scarred. For many Sámi, the current struggle against mining companies is yet another struggle for survival, for the continuation of Sámi cultures and traditions, of reindeer herding.

For others, both Sámi and non-Sámi local inhabitants in Jokkmokk, the dreams of prosperous futures are filled with big machines. I challenge the history writers to analyze and write *these* histories to aim at understanding what is at the core of these conflicts. I challenge the history and social science teachers to highlight the conflicting TechnoVisions instead of making Sámi perspectives invisible (see also Fur 2008). To the analysis, I add the need of a context of decolonization, to understand what earlier colonization has done and how it affects us in the present. To understand the desire for TechnoHappiness, the dreams of *big* machines, and why reindeer happiness is not considered equally important in the land of Sámi – but rather often, even by Sámi, referred to something of the past, maybe it is viewed as a remnant of our “primitive” past.

I am a Sámi cyborg; I am a multitude of identities, places, spaces; of the past, present, and the future; of human and nonhuman; and of nature, culture, and technology. I am the Julevädno. I am wired to the hydropower plants and the dams of the Julevädno, via the electric transmission lines, to the rest of Sweden, and to

the neighboring countries, stabilizing your and my own safe electricity provision. I am the electricity providing your and my own modern life. I reclaim my traditions, my voice. I was trained in a positivist academic tradition, to write about the Sámi – about myself – as the other, as objects to be dissected, analyzed, understood, and explained. But I revolt and rebel. This is a scientific academic article of history. This is history of science and technology. This is feminist technoscience. This is Sámi history tradition. This is me, yoiking, calling, challenging, encouraging! We're still here, and we will remain here. We are and will remain and be strong. We resist the destruction of our lands and waters. We reclaim our rivers, our waters, our lands, our stones, our mountains, trees, flowers, our bodies. Our futures!

I end by inviting you to share the yoik song by the group Vajas, with lead singer Ande Somby. I opt for the version with the Isogaisa dance, choreographed by the Norwegian Sámi artist Elin Kåven, available on You Tube (Kåven and Vajas 2011; Vajas 2007).²³

Sparrow of the Wind

Wind Gossip Gossip Winds Wind Gossip Me the Storm Sparrow I am the Sparrow The Sparrow among sparrows Silence knocking Knocking Silence Silence knocking Me the Eagle of Silence I am the Eagle The Eagle among eagles Calm Needed Needed Calm Calm Needed Me the Whirlpool of Calmness I am the Whirlpool The Whirlpool among whirlpools...

Biekkaid Bielločizáš

Biekkii Bigget Bigget dat bekkii beaggims Ja beaggimis bekkii Biekkaid bielločizáš Han ledjen Nu ledjen nu cizáš Cizášiid cizáš Goalki goalkkui Golkumes goalkkui Nu goalkkui nu golkkui Goalkki goaskin Goaskin mun ledjen Nu ledjen nu goaskin Goaskimiid goaskin

Fertii firtet Firtet dat fertii Ja fertemis fertii Fierttuid fieran Fieran mun ledjen Nu ledjen nu fieran Fieraniid fieran

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²³Text in English and in North Sámi is taken from the CD Vajas (2007).

References

- Adas, M. (1989). *Machines as the measure of men: Science, technology and ideologies of Western dominance*. Ithaca: Cornell University Press.
- Åhrén, C. (2008). *Är jag en riktig Same?: en etnologisk studie av unga Samers identitetsarbete*. [Am I a genuine Sami? An ethnological study of identity-work by young Sami.] PhD thesis, Umeå University, Department of Culture and Media, Faculty of Arts, Umeå University, Umeå.
- Amft, A. (2002). *Sápmi i förändringens tid: en studie i svenska samers levnadsvillkor under 1900-talet ur ett genus- och etnicitetsperspektiv*. PhD thesis Umeå Universitet, Umeå University, Umeå.
- Andersson, S. (2013). *En gruva ger våra unga chansen att stanna kvar*. Aftonbladet, September 25. (<http://www.aftonbladet.se/debatt/article17541734.ab>)
- Andersson, A., Eriksson, U., Gustavsson, C. B., Hellstrand, E., Jonsson, K., & Paulsson, K. (2012). *Uranbrytning hotar våra bygder*. Svenska Dagbladet, June 20, SvD Opinion. http://www.svd.se/opinion/brannpunkt/uranbrytning-hotar-vara-bygder_7298513.svd
- Arai, K. (2012). The Ainu community begins to tell its own history: A local history of “Nibutani” compiled by Tadashi Kaizawa. *Oyo shakaigaku kenkyu*, 54, 219–236. <http://ci.nii.ac.jp/naid/110008896626>
- Ås, B. (1979). De 5 herskerteknikker – om ufarliggjöring av undertrykkerens våpen [The 5 methods of domination]. *Årbog for kvinderet*, 1979, 55–88.
- Bäärnhjelm, G. (1976). *I Norrland hava vi ett Indien: gruvdrift och kolonisation i Lappmarken under 1600-talet*. Stockholm: Ordfront.
- Bäckman, L. (1975). *Sájva: föreställningar om hjälp- och skyddsväsen i heliga fjäll bland samerna [Sájva: conceptions of guardian spirits among the Lapps]*. PhD thesis Stockholm University, Stockholm University, Stockholm.
- Bäckman, L., & Hultkrantz, Å. (Eds.). (1985). *Saami pre-Christian religion: Studies on the oldest traces of religion among the Saamis*. Stockholm: Almqvist & Wiksell International.
- Bartsch, M. (1999). *Messauredammen: Dokumentation samt uppföljning av sjunkhål 1963*. Stockholm: Elforsk.
- Battiste, M. (2000). Introduction: Unfolding the lessons of colonization. In M. Battiste (Ed.), *Reclaiming indigenous voice and vision* (pp. xvi–xxx). Vancouver: UBC Press.
- Beach, H. (1997). Negotiating nature in Swedish Lapland: Ecology and economics of Sámi reindeer management. In E. A. Smith & J. McCarter (Eds.), *Contested Arctic: Indigenous people, industrial states and the circumpolar environment* (pp. 122–149). Seattle: Russian, East European, and Central Asian Studies Center at the Henry M. Jackson School of International Studies in association with University of Washington Press.
- Berglund, M. (2013, January 30). *Landets största vindkraftspark byggs på renbetesland*. ÖP, Öm punkt, <http://op.se/nyheter/ompunkt/1.5530421-landets-storsta-vindkraftspark-byggs-pa-renbetesland>. Accessed 23 Feb 2014.
- Borchert, N. (2001). *Land is life: Traditional Sámi reindeer grazing threatened in northern Sweden*. Sametinget. <http://www.sametinget.se/6816>.
- Broberg, G. (1982). Lappkaravaner på villovägar: Antropologin och synen på samerna fram mot sekelskiftet 1900. *Lychnos*, 1981/1982, 27–86
- Byrd, J. A. (2011). *The transit of empire: Indigenous critiques of colonialism*. Minneapolis: University of Minnesota Press.
- Cleve-Euler, A. (1936). *Komsakulturens ålder [The age of the Komsa culture]*. Lindesberg: Own Publication.
- Cocq, C. (2008). *Revoicing Sámi narratives: North Sámi storytelling at the turn of the 20th century*. PhD thesis, Umeå University, Department of Language Studies, Umeå.
- Demografiska Databasen. *Umeå Universitet*<http://rystad.ddb.umu.se:8080/FolkNet/result>. Accessed 12 July 2012.
- Ehn, B., Frykman, J., & Löfgren, O. (1993). *Försvenskningen av Sverige: det nationellas förvandlingar*. Stockholm: Natur och kultur.

- Ekerlid, B. (2013). *De tvångsförflyttade – samer och nybyggare som måste lämna sina hem*. Östersund: Firma Birger Ekerlid, Ekerlids förlag and Gaaltije.
- Ekström, S., & Schött, M. (2006). *Samiska frågor i Svenska kyrkan*. Stockholm: Svenska kyrkan.
- Elenius, L. (2001). *Både finsk och svensk: Modernisering, nationalism och språkförändring i Tornedalen 1850–1939*. PhD thesis, Umeå University, Umeå University, Umeå.
- Enoksson, M. (2007). *Sametinget bildar arbetsgrupp med Historiska museet och Åjtje*. <http://sametinget.dev.imcode.com/2310>. Accessed 20 Mar 2014.
- Eriksson, G. (1982). Darwinism and Sami legislation. In B. Jahreskog (Ed.), *The Sami national minority in Sweden* (pp. 89–101). Stockholm: Almqvist & Wiksell International (in collaboration with Humanities P. for Rättsfonden).
- Eriksson, P.-A. (2013). *Är vi alltid bäst i Sverige – Finns det något att lära från Filippinerna och Norge? Presentation at the workshop “Visioner och visualiseringar för hållbara framtider i Lule äldal”*, May 18, Bokenskolan, Jokkmokk, Sweden.
- Fanon, F. (1952). *Peau noire, masques blancs*. Paris: Seuil.
- FMV. *Restricted ground space*. Försvarets Materielverk. <http://www.vidseltestrange.com/europes-largest/restricted-ground-space>. Accessed 20 Mar 2014.
- Fredericks, B. L. (2010). Reempowering ourselves: Australian Aboriginal women. *Signs: Journal of Women in Culture and Society*, 35, 546–550.
- FSV (2013). *Föreningen Sveriges vattenkraftskommuner*. <http://www.fsv.nu/>. Accessed 10 Oct 2013.
- Fur, G. (2008). Tillhör samerna den svenska historien? *HumaNetten*, 22, 1–10.
- Granqvist, K. (2004). *Samerna, staten och rätten i Torne lappmark under 1600-talet. Makt, diskurs och representation*. PhD thesis Umeå University.
- Hagerman, M. (2006). *Det rena landet: om konsten att uppfinna sina förfäder*. Stockholm: Prisma.
- Hägerstrand, T., & Sporrang, U. (1993). Landskap. In E. Christer & M. Kari (Eds.), *Nationalencyklopedin: ett uppslagsverk på vetenskaplig grund utarbetat på initiativ av Statens kulturråd. Bd 12, [Käg-Malax]* (Vol. 95). Höganäs: Bra böcker.
- Haig, G. (2003). The invisibilisation of Kurdish: The other side of language planning in Turkey. In S. Conermann & G. Haig (Eds.), *Die Kurden: Studien zu ihrer Sprache, Geschichte und Kultur* (pp. 121–150). Schenefeld: EB-Verlag.
- Hansson, S. (1994). *Porjus: en vision för industriell utveckling i Övre Norrland*. PhD thesis, Tekniska Högskolan i Luleå, Luleå.
- Hansson, S. (2006). Technology and social change – A technological megasystem in the north of Sweden. In L. Elenius (Ed.), *Migration, industrialisation & regionalisation: Papers II from the conference the use and abuse of history in the Barents region. Luleå University of Technology, Luleå, Sweden 2004* (pp. 20–31). Luleå: Luleå University of Technology.
- Haraway, D. J. (1991a). A cyborg manifesto science, technology, and socialist-feminism in the late twentieth century. In *Simians, cyborgs and women: The reinvention of nature* (pp. 149–181). New York: Routledge.
- Haraway, D. (1991b). Situated knowledges. In *Simians, cyborgs and women the reinvention of nature* (pp. 183–201). New York: Routledge.
- Harding, S. (1991). *Whose science? Whose knowledge?: Thinking from women’s lives*. Ithaca, NY: Cornell University Press.
- Hecht, G. (1998). *The radiance of France: Nuclear power and national identity after World War II*. Cambridge, MA: The MIT Press.
- Heikki, J. (2011). *Jakten på skelett fortsätter*. Sveriges Radio/Oddasat.se. <http://sverigesradio.se/sida/artikel.aspx?programid=2327&artikel=4405454>. Accessed 20 Feb 2014.
- Heldin, O., Jung, J., Neumann, W., Olsson, M., Skarin, A., & Widemo, F. (2012). *The impacts of wind power on terrestrial mammals*. Stockholm: Swedish Environmental Protection Agency.
- Henrysson, S., & Flodin, J. (1992). *Samernas skolgång till 1956*. Umeå: Forskningsarkivet, Umeå universitet.
- Hirvonen, V. (2007). Skärningspunkter mellan nationalitet, etnicitet och genus. Den samiska kvinnan – medborgare i fyra länder, medlem av urbefolkning. *Multiethnica*, 30, 13–17.

- Hirvonen, V. (2008). *Voices from Sápmi. Sámi women's path to authorship*. Guovdageaidnu/Kautokeino: DAT.
- Inahara, M. (2006). *Abject love: Undoing the boundaries of physical disability*. Unpublished PhD thesis Cottingham: Department of Philosophy, The University of Hull.
- Jernsletten, N. (1978). Om jojk og kommunikasjon. In B. Harald (Ed.), *Kultur på karrig jord. Festskrift til Asbjørn Nesheim*. Oslo: Norsk Folkemuseum.
- Jonsson, J., Alanentalo, K., Lindberget, M., & Danell, Ö. (2012, March 9). *Det är bråttom med en ny rovdjurspolitik*, Svenska Dagbladet, Brännpunkt. http://www.svd.se/opinion/brannpunkt/det-ar-brattom-med-en-ny-rovdjurspolitik_6913487.svd. Accessed 20 Oct 2013.
- Jonter, T. (2001). *Sweden and the bomb: The Swedish plans to acquire nuclear weapons, 1945–1972*. Stockholm: SKI.
- Kåven, E., & Vajas. (2011). *Isogaisa dansen 2011. Music by Vajas: Sparrow of the wind. Choreography and dance by Elin Kåven*. Youtube. http://www.youtube.com/watch?v=wXxqa_BJCOs. Accessed 25 Oct 2013.
- Keller, E. F. (1982). Feminism and science. *Signs*, 7, 589–602.
- Keskitalo, A. I. (1994). *Research as an inter-ethnic relation. Paper delivered at the Seventh Meeting of Nordic Ethnographers held at Tromsø Museum in Tromsø, Norway 29 August 1974*. Rovaniemi: Arctic Centre, Univ. of Lapland. (Proceedings)
- Knoblock, I. (2012). *Ina Knoblock MSc, PhD student*. Centre of Gender Studies, Lund University. <http://www.genus.lu.se/o.o.i.s/30215>. Accessed 08 Aug 2012.
- Kuokkanen, R. (2003). 'Survivance' in Sami and first nations boarding school narratives: Reading novels by Kerttu Vuolab and Shirley Sterling. *American Indian Quarterly*, 27, 697–726.
- Kuokkanen, R. (2006). Sámi women, autonomy, and decolonization in the age of globalization. In H. Frederike & N. Tone Olaf (Eds.), *Rethinking Nordic colonialism. A postcolonial exhibition project in five acts. Act 4: Beyond subject and state? Indigenous interests in the age of globalization* (pp. 3–4). Rovaniemi: Arctic Center, University of Lapland.
- Kuokkanen, R. (2007). *Reshaping the university: Responsibility, indigenous epistemes, and the logic of the gift*. Vancouver: UBC Press.
- Kuokkanen, R. (2008). Globalization as racialized, sexualized violence. The case of indigenous women. *International Feminist Journal of Politics*, 10, 216–233.
- Kuokkanen, R. (2012). Self-determination and indigenous women's rights at the intersection of international human rights. *Human Rights Quarterly*, 34, 225–250.
- Kuoljok, A. I. (2005). Ulldevis. In Boazoolmuif luodit (Ed.), *Davvi Jienat/Northern voices: Juoigama suopmanat/Yoik languages*, Juoigama suopmanat CD2, track 8. Guovdageaidnu: DAT.
- Kuoljok Lind, L., Kuoljok, K. E., & Kuoljok, A. I. (2004). *Renar: en kärleksförklaring* [Reindeer – a declaration of love]. Jokkmokk: Åjtte- svenskt fjäll- och samemuseum.
- Kvist, R. (1994). The racist legacy in modern Swedish Saami policy. *Canadian Journal of Native Studies*, 14(2), 203–220.
- Lantto, P. (2010). Borders, citizenship and change: The case of the Sami People, 1751–2008. *Citizenship Studies*, 14, 543–556.
- LaRocque, E. (2010). *When the OTHER is me: Native resistance discourse 1950–1990*. Winnipeg: University of Manitoba Press.
- Larsson, L.-O. 2013. *Axel oxenstierna. Nationalencyklopedin*. <http://www.ne.se/lang/axel-oxenstierna>. Accessed 01 Nov 2013.
- Laula, E. (1904). *Inför lif eller död?: Sanningsord i de lappska förhållandena*. Stockholm: Wilhelmssons Boktryckeri.
- Lawrence, R. (2009). *Shifting responsibilities and shifting terrains: state responsibility, corporate social responsibility and indigenous claims*. PhD thesis, Stockholm University, Stockholm University, Stockholm.
- Ledman, A.-L. (2012). *Att representera och representeras: Samiska kvinnor i svensk och samisk press 1966–2006*. PhD thesis, Umeå University, Umeå University, Umeå.

- Lindgren, A.-L. (2002). Att utbilda barn till ett nationellt medborgarskap. Folkhemmet och föreställningar om 'vi' och 'de andra'. *Historisk Tidskrift*, 122, 29–53.
- Lindholm, K. (2011). *Elproduktion*. Svensk Energi. <http://www.svenskenergi.se/sv/Om-el/Elproduktion/>. Accessed 18 Aug 2012.
- Lindkvist, A., Nordlund, C., Olsson, O., Westin, K., Nordlund, A., Mineur, E., & Sandström, C. (2009). *Konflikt och konsensus. Intensivodling av skog ur ett humanistiskt och samhällsvetenskapligt perspektiv. Faktaunderlag till MINT-utredningen*. Umeå: Sveriges Lantbruksuniversitet.
- Lundberg Tuorda, T. (2014). Life as a Sami activist: My struggle for a mining-free Gällöck – Jokkmokk and Kvikkjokk. In J. Gärdebo, M.-B. Öhman, & H. Maruyama (Eds.), *RE: Mindings: Co-constituting indigenous/academic/artistic knowledges* (pp. 199–210). Uppsala: Hugo Valentin Centre.
- Lundby, E.-A. (Director). (2010). *Suddenly Sámi*. Norway: Galloping Films Distribution.
- Lundholm, K. (1993). Lappland: Historia. In *Nationalencyklopedin, Bd 12*. 132. Höganäs: NE Nationalencyklopedin.
- Lundius, N. A. (1905[1674]). *Descriptio Lapponiae*. Uppsala: Wretmans boktryckeri.
- Lundmark, L. (2002a). *Lappen är ombytlig, ostadig och obekvä*m. Bjurholm: Norrlands universitetsförlag.
- Lundmark, L. (2002b). Vetenskap i rasismens tjänst: så fick skullmätning av samer vetenskaplig legitimitet. *Tvärsnitt*, 2, 4–15.
- Lundmark, L. (2008). *Stulet land: svensk makt på samisk mark*. Stockholm: Ordfront.
- Marainen, J. (1996). Tvångsförflyttning av samer. In Norrbottens läns hembygdsförening (Ed.), *Norrbotten* (pp. 62–79). Luleå: Norrbottens läns hembygdsförening.
- Martin, K. (2003). Ways of knowing, ways of being and ways of doing: A theoretical framework and methods for indigenous re-search and indigenist research. Voicing dissent, new talents 21C. *Journal of Australian Studies*, 76, 203–214.
- Martínez Cobo, J. R. (1987). *Study of the problem of discrimination against indigenous populations, vol. 5: Conclusions, proposals and recommendation* (pp. 1–4). New York: United Nations/UN Doc. E/CN.4/Sub.2/1986/7 and Addendum.
- Mikaëlsson, S. (2012, October 10–12). *Visions of arctic food futures from the inside: daydreams or nightmares?*. Paper presented at RE-Mindings: Co-constituting indigenous/academic/artistic knowledges and understandings of land-, water-, body-, and lab-scapes. Uppsala Second Supradisciplinary Feminist TechnoScience Symposium, Uppsala: Uppsala University.
- Mindat.org. (2013). Ultevis, Lappland, Sweden. Mindat.org. <http://www.mindat.org/locdetailed-9548.html>
- Mörkenstam, U. (1999). *Om "Lapparnes privilegier". Föreställningar om samiskhet i svensk samepolitik 1883–1997*. PhD thesis, Stockholm University, Stockholms Universitet, Stockholm.
- Mörtberg, C. (1997). *"Det beror på att man är kvinna...": gränsvandrerskor formas och formar informationsteknologi*. PhD thesis, Högskolan i Luleå, Institutionen för arbetsvetenskap, Luleå.
- Negga, L. (2013). *Mihá ja Gievrra*. Lovisa Negga. <http://lovisanegga.bandcamp.com/>
- Nora, P. (1989). Between memory and history: les lieux de mémoire. *Representations*, 26, 7–24.
- O'Brien, J. M. (2010). *Firsting and lasting: Writing Indians out of existence in New England*. Minneapolis: University of Minnesota Press.
- Öhman, M.-B. (2007). *Taming exotic beauties: Swedish hydropower constructions in Tanzania in the era of Development Assistance, 1960s–1990s*. PhD thesis, Stockholm University, KTH, Stockholm. <http://kth.diva-portal.org/smash/record.jsf?pid=diva2:12267>
- Öhman, M.-B. (2010a). Being May-Britt Öhman: Or, reflections on my own colonized mind regarding hydropower constructions in Sápmi. In P. Elovaara, J. Sefyrin, M.-B. Öhman, & C. Björkman (Eds.), *Travelling thoughtfulness – Feminist technoscience stories* (pp. 269–292). Umeå: Umeå Univ., Dept. of Informatics.
- Öhman, M.-B. (2010b). *Travel report May-Britt Öhman USA*, November 1–14 2010, unpublished report, Uppsala, Centre for Gender Research, Uppsala University.

- Öhman, M.-B. (2015). Embodied Vulnerability in Large Scale Technical Systems – Vulnerable Dam Bodies, Water Bodies and Human Bodies. In L. Käll, Lisa Folkmarson (Ed.). *Bodies, Boundaries and Vulnerabilities – Interrogating Social, Cultural and Political Aspects of Embodiment*. Springer.
- Öhman, M.-B., & Wyld, F. (2014). Lands of fire and ice; embodiment as Indigenous in a colonised hemisphere. In V. Castejon, A. Cole, O. Haag, & K. Hughes (Eds.), *Ngapartji Ngapartji in turn in turn: Ego-histoire, Europe and Indigenous Australia*. Canberra: Australian National University Press.
- Öhman, M.-B., & Mikaelsson, L. (2014). When the land became a testing range: Nausta, Udtja and NEAT. In J. Gärdebo, M.-B. Öhman, & H. Maruyama (Eds.), *RE: Mindings: Co-constituting indigenous/academic/artistic knowledges* (pp. 241–249). Uppsala: Hugo Valentin Centre.
- Öhman, M.-B., Sandström, C., & Thunqvist, E.-L. (2013). *Designing dam safeties: Perspectives on large scale dams within the intra-actions of technology, nature and human decision making*. Paper presented at International Commission of Large Dams (ICOLD) 2013 international symposium – changing times: infrastructure development to infrastructure management, August 14, in Seattle.
- Ojala, C.-G. (2009). *Sámi prehistories. The politics of archaeology and identity in Northernmost Europe*. PhD thesis Uppsala: Uppsala University.
- Omma, L., Sandlund, M., & Jacobsson, L. (2013). Suicidal expressions in young Swedish Sami, a cross-sectional study. *International Journal of Circumpolar Health*, 72, 10226. doi:10.3402/ijch.v72i0.19862.
- Össbo, Å. (2014). *Nya vatten, dunkla speglingar: industriell kolonialism genom svensk vattenkraftutbyggnad i renskötselområdet 1910–1968*. PhD thesis, Umeå university, Umeå.
- Persson, M., & Öhman, M.-B. (2014). Visions for a future at the source of the Ume river, Sweden: The battle against the Rönnbäck nickel mining project. In J. Gärdebo, M.-B. Öhman, & H. Maruyama (Eds.), *RE: Mindings: Co-constituting indigenous/academic/artistic knowledges* (pp. 101–117). Uppsala: Hugo Valentin Centre.
- Pirak Sikku, K. (2014). *Nammaláphán: Bildmuséet 31/01-20/04 2014*. Unpublished exhibition folder Bildmuséet, Umeå: Umeå University.
- Ruong, I. (1991). *Samerna i historien och nutiden*. Storuman: Studieförbundet Vuxenskolan.
- Rusck, Å. (1956). Ett 20 års program för 2 miljarder. In F. Thunborg (Ed.), *Jorden, skogen, malmen, vattenkraften i morgondagens Norrbotten* (pp. 203–224). Stockholm: Norstedt.
- Rydhagen, B. (1999). *Feminist sanitary engineering in rural South Africa: A theoretical framework*. PhD thesis, Luleå tekniska universitet, Luleå tekniska universitet, Luleå.
- Rydström, O. (2007). *Nicolaus Lundius – en samisk 1600-talsintellektuell*. Folket i Bild arkivet. http://web.fib.se/visa_kors_info.asp?Sidrubrik=Kultur%20allts%E5!&e=e004&DocumentId=99&Avdelning=016&Meny=034. Accessed 01 July 2012.
- Rydving, H. (1993). *The end of drum-time: Religious change among the Lule Saami, 1670s–1740s*. PhD thesis. Uppsala: Uppsala University.
- Sandström, C., & Widmark, C. (2007). Stakeholders' perceptions of consultations as tools for co-management: A case study of the forestry and reindeer herding sectors in northern Sweden. *Forest Policy and Economics*, 10, 25–35.
- Sarivaara, E., Uusiutti, S., & Määttä, K. (2013). How to revitalize an indigenous language? Adults experiences of the revitalization of the Sámi language. *Cross-Cultural Communication*, 9, 13–21.
- Sarri, T. (2012, January, 11). *Morbergs lappsämt upprör; Sveriges Radio/Oddasat.se*. <http://sverigesradio.se/sida/artikel.aspx?programid=2327&artikel=4902964>. Accessed 01 Aug 2012.
- Sasvari, A., & Beach, H. (2011). The 2011 Swedish supreme court ruling: A turning point for Saami rights. *Nomadic Peoples*, 15, 130–135.
- SCB, Statistiska centralbyrån. <http://www.ssd.scb.se/databaser/makro/SaveShow.asp>. Accessed 12 July 2012.
- SFS, Svensk Författningssamling. (1991). (Minerallagen/the Mineral Act) :45. <http://www.notisum.se/rnp/sls/lag/19910045.HTM>

- SGU (Geological Survey of Sweden). (2012). http://www.sgu.se/sgu/eng/om_sgu/index.html. Accessed 09 Aug 2012.
- Shiva, V. (1988). *Staying alive: Women, ecology, and survival in India*. New Delhi: Kali for Women.
- Shiva, V. (1993). *Monocultures of the mind: Perspectives on biodiversity and biotechnology*. London: Zed.
- Silversparf, A. (2014). Sámi genealogy research as resistance practice: Countering ethnic cleansing and reclaiming our memory, history and culture. In J. Gärdebo, M.-B. Öhman, & H. Maruyama (Eds.), *RE: Mindings: Co-constituting indigenous/academic/artistic knowledges* (pp. 129–140). Uppsala: Hugo Valentin Centre.
- Skutnabb-Kangas, T. (2000). *Linguistic genocide in education – Or worldwide diversity and human rights?* New York/London: Routledge.
- Smith, L. T. (1999). *Decolonizing methodologies: Research and indigenous peoples*. London: Zed.
- Sommarström, B. (1991). Udtja – Reindeer pastoralism within a missile range. In R. Kvist (Ed.), *Saami cultural research in Sweden 1990*, 5. Umeå: Center for Arctic Cultural Research Umeå University.
- Sörlin, S. (1988). *Framtidslandet: debatten om Norrland och naturresurserna under det industriella genombrottet*. PhD thesis. Stockholm: Stockholm University.
- Sörlin, S. (2002). Rituals and resources of natural history: The North and the Arctic in Swedish scientific nationalism. In M. Bravo & S. Sörlin (Eds.), *Narrating the Arctic: A cultural history of Nordic scientific practice* (pp. 73–122). Canton, MA: Science History Publications.
- Sörlin, S., & Nordlund, C. (2003). Modernizing the national landscape. *The Kenyon Review Gambier*, 25, 305–315.
- Sörlin, S., & Wormbs, N. (2010). Rockets and reindeer: A space development pair in a northern welfare hinterland. In P. Lundin, N. Stenlås, & J. Gribbe (Eds.), *Science for welfare and warfare: Technology and state initiative in cold war Sweden* (pp. 131–151). Sagamore Beach, MA: Science History Publications/USA.
- SSC. Esrange Space Center. SSC Group. <http://www.sscspace.com/esrange-space-center-3>. Accessed 20 Mar 2014.
- Stenberg, K., & Lindholm, V. (1920). *Dat lësh mïjen situd! Det är vår vilja. En vädjan till den svenska nationen från samefolket*. Stockholm: Svenska förlaget.
- Stoor, K. (2007). *Juoiganmuitalusat – jokberättelser: En studie av jokkens narrative egenskaper* [Yoik tales: A study of the narrative characteristics of Sami Yoik.]. PhD thesis. Umeå: Umeå University.
- Stoor, K. (2008). Carl Linnæus from a Sámi point of view. *Tijdschrift voor Skandinavistiek*, 29, 77–84.
- Stoor, K. (2011, November 17–18). 'The power from within': Karin Stenberg – A forest Sámi woman. Key note presentation at The Third Uppsala University Body/Embodiment Symposium, Bodies Knowing Bodies: Interrogating Embodied Knowledges, Center for Gender Research. Uppsala: Uppsala University.
- Stordahl, V. (1990). Samekvinnans plass i organisasjonene. *Ottar*, 2, 42–46.
- Stordahl, V. (2003). Sametinget, kvinner begrenset adgang? Refleksjoner over debatten om kvinnerepresentasjonen på sametinget. In B. Bjerkli & P. Selle (Eds.), *Samer, makt og demokrati* (pp. 219–245). Oslo: Gyldendal.
- Svalastog, A. L. (2014). On teacher education in Sweden, school curriculums, and the Sámi people. In J. Gärdebo, M.-B. Öhman, & H. Maruyama (Eds.), *RE: Mindings: Co-constituting indigenous/academic/artistic knowledges* (pp. 151–169). Uppsala: Hugo Valentin Centre.
- Svenska Kyrkan. (2012). *Rapport från Sägastallamat, en konferens om samerna och Svenska kyrkan, i Kiruna den 11–13 oktober 2011*. Svenska Kyrkan. <https://www.svenskakyrkan.se/default.aspx?id=899745>. Accessed 20 Mar 2014.
- TallBear, K. (2003). DNA, blood and racializing the tribe. *Wicazo Sá Review*, 18, 81–107.
- TallBear, K. (2012). *An indigenous ontological reading of cryopreservation practices and ethics* (and Why I'd rather think about pipestone) – As presented at the American Anthropological

- Association 111th annual meeting, San Francisco, CA, on the panel: Defrost: The Social Afterlives of Biological Substance. <http://www.kimallbear.com/1/post/2012/11/an-indigenous-ontological-reading-of-cryopreservation-practices-and-ethics-and-why-id-rather-think-about-pipestone.html>. Accessed 01 Nov 2013.
- TallBear, K. (2013). *Native American DNA: Tribal belonging and the false promise of genetic science*. Minnesota: University of Minnesota Press.
- Thunqvist, E.-L. (2014). Investigating bombshells contaminations of the Waters of the Lule river catchment area some conclusions from a pilot study made with supradisciplinary research methodologies (Nausta, Udtja and Neat). In J. Gärdebo, M.-B. Öhman, & H. Maruyama (Eds.), *RE: Mindings: Co-constituting indigenous/academic/artistic knowledges* (pp. 191–196). Uppsala: Hugo Valentin Centre.
- Trojer, L. (1990). Naturvetenskapen: patriarkatets sagobok och lärobok. *Naistutkimus*, 2, 33–40.
- Tunón, H. (2012). Det samiska initiativet – att vända på perspektiven. In H. Tunón, M. Frändén, C.-G. Ojala, & M.-B. Öhman (Eds.), *Uppsala mitt i Sápmi* (pp. 15–23). Uppsala: Naptek.
- Turi, J. (2011 [1910]). *An account of the Sámi* [Muittalus samid birra]. Thomas A. DuBois (Ed. & Trans.), A translation of Muitalus sámiiid birra, based on the Sámi original. Chicago: Nordic Studies Press.
- Udtja, L. (2010). *Bury my heart at Udtjajaure*. Stockholm: Emma publishing.
- Ullenius, J. G. (1932). *Undersökningsanteckningar rörande skogslappsområden å Lilla Luleälvs båda sidor nedom Jokkmokk*. Norrbottens Museum archive, F:92, (Unpublished research notes, Transcribed by Agneta Silversparf, 2011)
- Uppsala Universitetsbibliotek. Bildsök – Uppsala universitetsbiblioteks bild databas. Rasbiologiska institutets samlingar D26: Skogs och fiskarlappar, f.d. nomader från Jokkmokk. <http://www.uu.se/sv/Sok/Bilder/Bilddatabasen/>. Accessed 20 Mar 2014.
- Vajas, (Somy, Ande, Kristin Mellem and Nils Johansen. Lyrics: Ande Somy) (2007). Sparrow of the Mind. (CD) Sacred Stone. track 8.
- Västerbottens Museum. *Repatriering: Vem har rätten? Seminarium om återförande av samiska kvarlevor och föremål*, Tärnaby, 1–2 oktober 2009. Västerbottens Museum. <http://www.vbm.se/sv/se-and-gora/kurser-och-seminarier1/repatriering.html>. Accessed 20 Mar 2014.
- Vattenfall/Nordlund, M. (2008). *Våra älvar – En resa längs Lule Älv*, [Our rivers – A journey along the Lule river]. Luleå: Tryck i Norrbotten AB. http://www.vattenfall.se/sv/file/Vara-alvar-en-resa-langs-Lule_11336358.pdf. Accessed 19 Aug 2012.
- Virdi Kroik, Å. (2007). *Hellre mista sitt huvud än lämna sin trumma*. Hönö: Boska – Föreningen för bevarandet av samisk kultur och folkmedicin.
- Wallerius, A. (2011). *Den svenska atombomben. Ny teknik*. http://www.nyteknik.se/nyheter/energi_miljo/article3208223.ece. Accessed 20 Mar 2014.
- Winner, L. (1980). Do artifacts have politics? *Daedalus*, 109, 121–135.
- Wuolab, A. (2004). *Skrevet for livet: Samiske kvinner tar til ordet i begynnelsen av 1900-tallet*, unpublished undergraduate essay, (C-uppsats). Umeå: Umeå University, Genusvetenskap.
- Wyld, F. (2011a). Writing the ephemeral of culture: Storm method. *Social Alternatives*, 30, 40–43.
- Wyld, F. (2011b). *Who is the storyteller? Crow the trickster or the great mother; The use of archetypes in re-mythologising the self*. Paper presented at Disturbances: Embodying, Voicing, Challenging Safety and Trust in Land and Waterscapes of Technoscience, Nov 22–24, in Uppsala University, Sweden.
- Wyld, F. (2011c). Experiment on a bird in an air pump; the writing of a life under pressure. *Journal of Australian Indigenous Issues*, 14, 54–62.
- Zachrisson, I. (1997). *Möten i gränsland: samer och germaner i Mellanskandinavien*. Stockholm: Statens historiska museum.
- Zachrisson, I. (2005). Ethnicity- conflicts on land use: Sámi and Norse in central Scandinavia in the iron age and middle ages. In I. Holm, S. M. Innselset, & I. Øye (Eds.), *'Utmark': The out-field as industry and ideology in the iron age and middle ages* (pp. 193–201). Bergen: Department of Archaeology, University of Bergen.

Other Sources

Personal communication Ledman, Anna-Lill, June, 2013.

Personal communication Lundberg Tuorda, Tor, September, 2013.

Personal communication Nilsson, Alf, July 2008.

Personal interview with Lundström, Gunnar, säkerhetssamordnare, the Rescue services, Jokkmokks kommun, 27-10-2010.

Chapter 6

Marking the Unmarked: Theorizing Intersectionality and Lived Embodiment Through *Mammoth* and *Antichrist*

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6.1 A Phenomenological Approach to Intersectionality

In 2009, two Scandinavian films, *Mammoth* (Lukas Moodysson) and *Antichrist* (Lars von Trier), both dealing with shifting power relations, were released. In this chapter, we take scenes from these two films as our point of departure for discussing and developing the notion of intersectionality which is now well established within feminist and gender studies. Intersectionality provides a fruitful analytical framework for understanding how power and privilege are at work in identity categories. However, as Kathy Davis (2008) has noted, due to the ways in which intersectionality has traveled from its “original” US context, there is widespread confusion about how intersectionality, as a theoretical concept, should be used. Following Dorthe Staunæs’ (2003) call for a reconceptualization of intersectionality, this article aims to further discuss and develop intersectionality in relation to the ways in which categories of identity are inscribed as bodily markers and reinforced through embodiment. In order to elaborate on this, we will take a different route than Staunæs’ Foucauldian reconceptualization and confront the notion of intersectionality with phenomenological writings on lived embodiment (de Beauvoir 2010; Heinämaa 2003; Merleau-Ponty 1962; Weiss 1999).

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Lived embodiment is understood as a situation where markers of identity are inscribed and expressed, reinforced, and altered. It is produced precisely as the materialization of intersecting dimensions of identity formations. For our analysis, lived embodiment constitutes an alternative way of theorizing intersectionality, as the notion of the lived body bridges the traditional dualism between materiality and discourse. Therefore, it provides a fruitful path to approaching the conventional notion of intersectionality developed within gender theory. Within a strict framework of gender theory, intersectionality traditionally relies on identity categories as discursive constructions. By thematizing lived embodiment, we avoid the pitfalls of a merely discursive understanding of the sex/gender distinction, which tends to leave the materiality of the body undertheorized (Moi 1999; Young 2002).

In order to bring together the notion of intersectionality with that of lived embodiment, we will look at how intersectional power relations are displayed in scenes from *Mammoth* and *Antichrist*. Significantly, our analysis focuses on the ways in which lived embodiment, as relational and dynamic, inform an intersectional analysis. By turning our attention to cultural representations, we seek to underline a dual conceptualization of embodiment: the material and physical body on the one hand and discursive identity categories on the other (Gatens 1996). For our analysis, this duality points to the ways in which representations in popular culture can be understood as culturally and ideologically saturated imageries that both are produced and reproduce (normative) identity categories. This resonates with what Graham Dawson refers to as “cultural imaginaries” (1994: 48–52). According to Dawson, cultural imaginaries are “those vast networks of interlinking discursive themes, images, motifs and narrative forms that are publicly available within a culture at any one time, and articulate its psychic and social dimensions” (1994: 48). For our purposes, cultural imaginaries serve as a way of conceptualizing the double bind between the lived body and discursive categorizations.¹ As such, these representations participate in the material conditions and sociocultural circumstances under which identity categorizations are structured and sustained.

Our main concern is to discuss and develop the notion of intersectionality, using scenes from the films as a particular lens through which intersections of power and dominance are brought to light (and constituted) as embodied, relational, and dynamic. These two films are particularly well suited since they so clearly deal with shifting power relations between what we identify as marked and unmarked bodies. More specifically, they highlight how the constitution of seemingly unmarked bodies precisely as unmarked takes place through the marking of other bodies as different. The dynamic of marked and unmarked bodies brings to light how bodies are always already marked by intersecting strands of oppression and marginalization. In addition it makes visible the intersectional embodiment of privileged and seemingly unmarked bodies, i.e., it marks the unmarked.

Further, the films illustrate the fruitfulness of confronting the notion of intersectionality with the notion of lived embodiment. In *Mammoth* power and privilege are

¹ Dual conceptualizations of the body are further developed by Ingvil Hellstrand (Hellstrand 2011: 13), particularly in relation to bodily representations in fiction.

represented as relational and flexible, yet fixed by conventional identity categories of gender and race. In *Antichrist* power and privilege instead shift and change within a “closed circuit” of a white middle-class heterosexual couple in isolation, and the film thus demonstrates how even hegemonic identity categories can become marked if we pay attention to lived embodiment. We are not aiming for a full analysis of either film, but rather to highlight how intersectionality tied in with the notion of lived embodiment provides a fruitful framework for understanding power and privilege.

6.2 Intersectionality and the Body: Why Lived Embodiment?

A main concern in relation to the analytical framework of intersectionality is, as already mentioned, the various ways in which it has traveled beyond its “original” US context. Coined by Kimberlé Crenshaw (Crenshaw 1989: 139, 1991: 1242–1245), the term “intersectionality” gained prominence with Patricia Hill Collins’ development of the notion in her work on black feminism (Collins 2000: 228, 299). While reflecting an old concern within feminist theory, namely, how to account for differences of power and privilege between women, intersectionality in Crenshaw’s and Collins’ terms highlights intersections of race and gender as key for understanding the marginalization of women of color in the USA. Further, other feminists of color argue that sociocultural patterns of oppression are bound together and shaped by intersecting power structures, relying also on for instance class, sexuality, ethnicity, nationality, and age (Anzaldúa and Moraga 1981; Lorde 1984; Spivak 1988).

While theories of intersectionality have their roots in these feminist accounts of power imbalances, in a worldwide context, it is used to understand and bring to light the interweaving of a wide array of identity categorizations in various locations and situations. As such, it has proved to be a productive alternative to a single focus on gender which does not account for the structures of power and privilege based on implicit or explicit workings of other identity categorizations (Davis 2008; Gressgård 2008; Lykke 2005, 2006, 2010; McCall 2005; Søndergaard 2005). Some scholars have also brought to the fore that intersectionality can be a useful tool for understanding the power of privileged and hegemonic identities (Hearn 2011; Levine-Rasky 2011; Mattsson 2010; Staunæs 2003).

Within the field of intersectionality theory, a few attempts have been made to theorize embodied aspects (Hearn 2011; Jensen and Elg 2010; Villa 2011). Outside of the field of intersectionality studies, important contributions have been made to theorize the relevance of the body for identity categories, such as race/ethnicity, sexuality, and functionality, but these are not primarily focused on the intersections of identity categories (e.g., Ahmed 2006; Garland-Thomson 1997; hooks 1992; Weiss 1999). In relation specifically to visual representation, Richard Dyer (1997) interrogates the significance of embodiment in the racial imagery of white people by white people. However, scholars in visual culture, such as Dyer, can be said to be more concerned with bodies as signifiers or representations, not as material exist-

tences (see also, for instance, de Lauretis 1987). While using cultural representations, our analysis goes beyond the idea of bodies as representation by also taking into account the concrete materiality of the bodies in intercorporeal situation. This entails that we consider not only the bodies as they are represented in the films but also how these bodies have a material existence that form the ways in which the representation of them can be understood.

In feminist theoretical exploration of the body and embodiment, the phenomenological notion of the lived body (Leib, *corps vécu*) has taken on a significant role. Feminist thinkers have mainly been drawn toward the potential of the notion of the lived body as a forceful disruption of the mind/body dualism which underlies theories of sexed bodies and gendered identities. As the growing number of feminist phenomenologists has shown, the notion of the lived body offers a productive way of rethinking sexual subjectivity and identities beyond the stifling sex/gender paradigm (Heinämaa 1999, 2003; Käll 2009b; Weiss 1999; Young 2002).

A phenomenological understanding of the lived body puts focus on the body as being a necessary condition of possibility for experience, understanding, and knowledge. As de Beauvoir writes, “it is not the body-object described by scientists that exists concretely but the body lived by the subject” (2010: 49). The body is not first and foremost an object of knowledge but is rather the foundation of all objects, including bodies, as well as of all objective categorization of bodies as bodies of different kinds (Heinämaa 1997: 291; Käll 2009b). This account raises questions of how to understand the relation between the body as it conditions how it is categorized and ascribed a specific identity and the body as an object marked by this identity. The ways in which bodies are categorized and objectified are implicated in the ways they condition this very categorization. As such, different strands of identity such as sex, gender, race, ethnicity, sexuality, age, and ability are lived out and intersect in singular embodied existences while also being identified as specific and separate on the basis of how they are embodied.

We argue that the significance of the body and embodiment cannot be overlooked when theorizing and taking seriously the notion of intersectionality in understanding formations of identity. Dynamic and shifting intersectional crossing points are always embodied in concrete singular lives. Recognizing the body as foundational in processes of categorization, but not reducible to the categories it founds, is imperative for our project of embodying intersectionality. The notion of lived embodiment offers resources for understanding the body as simultaneously both object and subject. As object the body is the site for markers of identity providing grounds for identification and group formation. As subject, it continuously escapes and resists the identity categories through which it is defined and spoken about, which restrict it but at the same time give it the freedom to speak and act from a specific position.

In accordance with Maurice Merleau-Ponty’s and Simone de Beauvoir’s respective developments of the phenomenological notion of the lived body, we understand the body in terms of an intercorporeal situation. Merleau-Ponty’s notion of intercorporeality (1962: 354, 1964: 168, 1968: 138–139) has been used to productively emphasize the dynamic social, cultural, and historical situatedness of singular

embodiment.² For de Beauvoir, the body is not a thing, rather “it is our grasp on the world and the outline for our projects” (2010: 46). The ways bodies are situated in relation to each other and to already formed and established categories of identity shape the different ways in which they are made visible as well as invisible, marked as well as unmarked. The many interrelated and often conflicting identities of singular bodies are made meaningful as they are lived out and situated in relation to concrete and imaginary others.³ While situatedness is universal to all bodies, the specific ways in which they are situated depend on the positioning of them as marked or unmarked. This in turn frames their different possibilities for agency, making certain potentialities of ways of living more or less probable.

6.3 Negotiations of Embodied Power Relations: *Mammoth* and *Antichrist*

Both Moodysson’s *Mammoth* and von Trier’s *Antichrist* provide useful insights into how embodiment conditions and is conditioned by intersectional identity categories within structures of power. *Mammoth* raises questions concerning globalization, gendered and racialized inequalities, and capitalism.⁴ For our analysis, *Mammoth* deals specifically with intersectional markers of identity and how bodies are and become marked or unmarked in relation to one another. Therefore, we focus on characters and narrative development. The narrative takes place in three different locations, New York City, the Philippines, and Thailand, and is centered on a dual-career heterosexual couple, Ellen (Michelle Williams) and Leo (Gael García Bernal). They are married and live in New York City with their daughter Jackie (Sophie Nyweide) and Jackie’s nanny, Gloria (Marifa Necesito), who is in America in order to provide for her two sons left back home in the Philippines. When one of her sons gets hurt, Gloria decides that it is time to leave New York and go back to her family. With Ellen left in New York dealing with her demanding and time-consuming work as a surgeon and with feelings of inadequacy as a mother, Leo goes to Thailand on a business trip where he also meets the prostitute Cookie (Natthamokarn (Run) Srinikornchot). The narrative ends with Gloria leaving, Leo’s return, and a reestablishment of status quo.

²According to Merleau-Ponty, the intercorporeal being of bodies is the very condition and ground of their singularity. Lived bodies/embodied selves continuously emerge in mutual interrelation in what has been termed a process of selving and othering in which the boundaries between bodies are continuously drawn and redrawn (Käll 2009a). See also Rosalyn Diprose (2002) and Gail Weiss (1999).

³See Moira Gatens for a discussion on how conceptualizations of the concrete, corporeal, and biological body rely on historically, culturally, and socially specific identity categories (1996: 8–10).

⁴For more detailed analyses of the film’s representations of social and gender inequities, see Anna Westerståhl Stenport (2010) and Nilsson (2014). For a discussion of spatial and material dimensions of the film, see Björklund (forthcoming).

In *Antichrist*, the narrative also centers on a heterosexual couple represented by a He (Willem Dafoe) and a She (Charlotte Gainsbourg). As white and middle class, these two characters are interesting for our analysis precisely because they are, initially, seemingly unmarked bodies in relation to an intersectional analysis. This resonates with what Staunæs calls a “majority-inclusive approach” (2003: 105), an approach describing how identity categories do not belong to certain actors, but rather how they are (re)produced and maintained in relation to other categories. We will show how privileged and seemingly unmarked identity categories reveal themselves as not actually unmarked when analyzed with a notion of intersectionality that takes lived embodiment into account. Therefore, with *Antichrist*, we do a close reading of particular scenes where these aspects are brought to the fore.

Following the tragic death of their son, the couple takes time-out from their respective careers and retreats to their remote country house Eden. This retreat is intended to serve as a way of working through issues of grief that have caused the mother to suffer a nervous breakdown. Instead of finding a (masculinized) cure for (feminized) grief, the narrative turns into a struggle between the two protagonists, intertwined with traditional dichotomies of nature and culture, emotion, and rationality. In the end, She escapes from the country house, whereas He is literally (and in classic horror film style) consumed by the root system of the surrounding woods coming to life.

While quite different, both films display how relations of power are inscribed on singular bodies and how these bodies in turn are sites where intersectional identities are lived out and made manifest in intercorporeal exchange. The cultural imaginaries invoked reflect and reinforce the significance of the lived body in an intersectional analysis. Both *Mammoth* and *Antichrist* highlight how embodiment simultaneously conditions and is conditioned by intersectional identity categories within structures of power relations. By examining scenes and characters from the films as local and minute representations of an intersecting matrix of embodied identities and systems of domination, we demonstrate how intersectional identities mark bodies in specific ways and how, as a consequence, embodiment is formed by and forms intercorporeality.

6.4 Narratives of Late Modern Families: Relational Power between Characters in *Mammoth*

In *Mammoth*, the central character Ellen is embodied as a white, upper middle-class, heterosexual North-American woman. She is a professional surgeon in addition to being a wife and a (bad) mother. Through her profession Ellen is represented as an active subject who distances herself from other people’s bodies as objects, referencing the idea of scientific discourse as neutral. This distancing relies on the objectification of the bodies she works on which in turn reinforces her role as a subject. However, drawing on the notion of lived embodiment, we contend that the

very foundation of her detached attitude is her own embodiment. Also, as both Dyer (1997) and Ruth Frankenberg (1993) point out, part of the privilege of an unmarked body is their own understanding of themselves as unmarked. Nevertheless, the fact that her concrete work as a surgeon undeniably takes place in the flesh, the encounter between Ellen and her patients brings out with clarity that all encounters between embodied subjects are fundamentally intercorporeal.

In contrast to Ellen, Gloria, the nanny, is embodied as a woman of color and working class and represents a different ethnicity and nationality. Although both Ellen's and Gloria's professions are care related and directed at other people, Gloria's work is specifically directed at one person, namely, Ellen's daughter Jackie. This results in two different embodied representations of care, reflecting and reinforcing dominant cultural imaginaries. While Ellen comes across as a distanced, busy doctor, Gloria represents the caring mother figure, and this is emphasized in the narrative by the way Jackie responds to the two women. Because of the obvious racial and class issues involved in the capitalist economy of care (Hochschild 2003), Gloria's body gets marked as Other. In relation to Gloria, Ellen embodies privileged identities, which underlines how privileged identities become invisible when contrasted with the Other's subordinated position and marked body.

However, in relation to her husband Leo, Ellen's body becomes visible and marked, particularly in the context of sexuality and parenthood. In their relationship, Leo is the rational subject, while Ellen is characterized by her striving to embody liberated female sexuality and by her continuous failures in performing (good) motherhood. For example, when Ellen asks Leo if they have any porno movies at home, he responds that he threw them away in fear that Jackie might find them. Here Ellen's body becomes marked by sexuality, which within a Western framework of conflicting cultural imaginaries of femininity is incompatible with motherhood. She is thereby marked as a bad mother simply by being a sexual subject. Leo on the other hand stays unmarked and comes to embody the voice of reason and good parenthood by not subjecting their daughter to the possibility of finding pornography in their home. Further, since Ellen is so devoted to her career, she is unable to live up to certain established identity categories of womanhood concerning mothering. Although Leo is as much parent as Ellen, his body is never limited by parenthood, thus representing conventional masculinity, or what R. W. Connell has referred to as "hegemonic masculinity" (2005: 71–76). Although Leo's last name is Vidales, referencing his Latino appearance and slight accent, he passes as white and North-American, particularly in Thailand. Interestingly, in Thailand he (perhaps paradoxically) embodies the rich white man.

When in Thailand, Leo suffers a crisis and strives to embody a new and less traditional/patriarchal masculinity. He distances himself from the sex-buying Western businessman culture represented by his colleague Bob. In fact, his need for a different masculinity results in Leo taking a break from the uncomfortable businessman life in Bangkok and going to a more remote place in Thailand. Aiming at a different mode of living, he refuses to check in to another expensive hotel and instead rents a cheap bungalow on the beach. He literally steps out of the privileged position he finds restricting by attempting to embody a young backpacker,

for instance, through dressing his body in cheap clothes and by wearing a copy of the expensive watch he usually wears. However, he cannot escape the fact that he has money and therefore power, something that is illustrated by his paying the prostitute Cookie to go home and not sleep with any more men one night. Although not in the same apparent way that his colleague Bob buys women in Bangkok, Leo still winds up buying Cookie under the pretense of protecting her. As such, he maneuvers himself into a position of control over her body, and in the end, he does end up having sex with her. Eventually, the cultural imaginaries represented by Leo and Cookie are restricted by established intersectional identity categories governed by gendered and racialized imbalances. The stability of Leo's privileges as a white, Western male illustrates Staunæs' approach to intersectionality as "a process of 'doing'" (2003: 102), in which the relationality between social categories of identity and the subject is brought to the fore. These imbalances allow him space to act within existing structures, while her limited space for taking action is kept in place.

This reading of *Mammoth* shows how embodiment is always situational, meaning that the body is situation but is also in situation. Both Ellen and Leo represent shifting identities in relation to bodies marked as Other. In different ways, their relationships to Gloria and Cookie, respectively, illustrate how privileged identities become invisible and seemingly unmarked in intercorporeal exchange. In contrast, both Gloria and Cookie are third world women who rely on their bodies precisely as objectified Others to support themselves. In the relationship of Ellen and Leo, however, the female body is marked as Other in spite of a range of other privileging categories of identity, and hegemonic masculinity remains invisible and disembodied. The differentiating range of agency and power for different bodies illustrates clearly how embodiment is always intersectional.

6.5 Scenes from a Marriage: Shifting Power Dynamics in *Antichrist*

In the following section, we want to move on from the analysis of embodiment as intersectional identities in various social relations as portrayed in the narrative of *Mammoth* to an analysis that deals specifically with the body as intercorporeal situation in relation to only one other concrete body. How do power relations shift and change in a seemingly "closed circuit" dyad of a white middle-class heterosexual couple? Our purpose in discussing embodiments of hegemonic power is to make visible how power imbalances are reproduced and transformed in intercorporeal exchange even in privileged relationships between privileged subjects. Seeing white racial imagery precisely as white, and especially in cases where whiteness is not contrasted with other colors, offers a way, as Dyer argues, of dislodging whites from the unmatched powerful position of being "just human" (Dyer 1997: 2) and thereby also enables a making visible of how other privileged categories of identity intersect with the specificity of whiteness.

The opening scene in *Antichrist* is a sex scene featuring the two protagonists' naked bodies, where She is facing the camera and He is facing her with his back to the camera. He is moving his naked body/penis onto/into her, and She is partly looking out into the camera/room and partly closing her eyes in a representation of pleasure. Their child moves into the camera frame and climbs onto the windowsill from where he falls slowly downwards together with drifting snowflakes outside. The camera follows the child's fall before returning to the mother, who partially observes the child's movements, but refrains from acting in order to pursue her moment of pleasure.

In a mirrored sex scene that takes place near the couple's retreat in the woods, a country house called Eden, the protagonists have sex up against a big tree. This outdoor scene relies on an allegory of the original relationship between Man and Woman in Western cultural imaginaries: the Garden of Eden. Again, they are naked, and She is facing the camera. He is moving his naked body, particularly the buttocks referencing the penile thrusts in the opening scene. She is in part looking out into the camera/forest and again partly closing her eyes in a representation of pleasure. She observes/imagines the forest coming alive: the roots of the tree become arms, and the soil becomes flesh.

These two mirrored scenes are iconic in the sense that they exaggerate traditional cultural imaginaries connecting Woman and sexuality as unpredictable and dangerous, even fatal (Doane 1991; Vance 1984). At the same time, the representation is also one of Man as rational agent, much like the power imbalances we have discussed in *Mammoth*. In the first scene, Woman's sexual drive is stereotypically represented as problematic and excessive in so far as it is expressed at the expense of motherhood. The death of their son provokes different reactions from the mother and the father. She suffers a mental breakdown, collapses during the funeral, and is later hospitalized. In contrast, He takes on the stoic and pragmatic role in their relationship. Arguably, these aspects contribute to an overdetermination of what functions as a fundamental incompatibility between the masculine and the feminine, between Man and Woman, here understood as cultural imaginaries of domination. This is particularly underlined when He, a therapist by profession, decides to remove his wife from the hospital to Eden. He argues that She is unable to grieve properly and that a move from an urban and clinical environment to a rural wilderness will provide a more "natural" environment for both grieving and recovering. Importantly, She, an academic working on a thesis on witch-hunts, is cast in the role of victim and hysteric. As such, She is identified more with the topic of her research rather than with the rational position of the researcher. This gendered imbalance echoes traditional dichotomies of mind/body and culture/nature.

The power relations however gradually shift from one of masculinely coded dominance to one of unpredictable feminized power. In the second sex scene, female uncontrollable sexuality is literally intertwined with nature, represented by the anthropomorphized coming alive of the earth. The Christian myth of the Garden of Eden as the cradle of civilization is revealed as a contrast to impulsive nature. Significantly, this scene represents a move away from the domesticated space of the couple's urban home in the first sex scene and from the clinical space that therapist

and patient usually inhabit. The bodily transformation of the earth to arms and bodies also references the many buried victims of religious, male-dominated witch-hunts that is brought to life through her thesis work. The anthropomorphized forces of nature can thereby be read as Woman's revolt against Man's hubris.

In a third scene that could be said to reflect or distort the two aforementioned scenes, She has knocked Him unconscious and nailed him to the floor by pushing an iron rod through his thigh. This brutal molestation highlights his vulnerable body. He has until now embodied traditionally masculinized categories of power and dominance which has rendered him seemingly disembodied and distanced, much like Ellen's position in relation both to her patients and to Gloria as well as Leo's position in relation to women in *Mammoth*. At the same time, She takes on the role of the violent penetrator. Her violent action changes conventional power dynamics and, at the same time, makes him visible as body. While He is nailed to the floor, She masturbates beside him before She cuts off her own clitoris. Her actions illustrate a rejection of the identity category of Woman, interlocked with conventional hierarchies of domination. This references again Staunæs' approach to intersectionality as forms of "doing", or in this case doing away with, identity categories. In line with Christian mythology and cultural imaginaries, She comes to embody and enact the duality of the category of Woman as both whore and Madonna: the perverted masturbating whore who (re)claims sexuality for herself and the sacrificial Madonna who removes her clitoris for the sake of purity. By embodying both of these oppositional cultural imaginaries, She succeeds in uncovering the inherent tensions in the embodied identity category of Woman and the impossibility of uniting these two cultural imaginaries. Within a traditional notion of intersectionality, the category of Woman can contain both these figures, but as this example shows, this becomes impossible in an embodied understanding of intersectionality. The attempt at unification voids the identity category of Woman, and She disappears.

As such, the film ends with her vanishing in the woods, resisting the very terms on which intersectional identity categorizations are built. As we have seen, intersectionality brings out the relational character of embodied identity while at the same time making manifest how the body is fundamental to an intersectional analysis. Instead of just understanding the initially stereotypical identities of He and She in terms of privileged and unprivileged positions, our reading of *Antichrist* exposes the complexity of different intersectional strands of identity: it is not the identity categories in themselves, but the shifting dynamics of how they are embodied and continuously materialized within hierarchical structures of power and privilege that enables and restricts possibilities for agency.

6.6 An Intersectionality in the Flesh

Through our theoretical engagement with *Mammoth* and *Antichrist*, we have demonstrated the significance of lived embodiment in an intersectional analysis. This move not only brings to light bodies already marked by intersecting strands of

oppression and marginalization but also makes visible the intersectional embodiment of privileged and seemingly unmarked bodies. Intersectional analyses of identity always carry the risk of marking bodies in unwanted ways and of perpetuating the invisibility of privileged bodies. Unprivileged and oppressed bodies are thus forced to carry the weight of intersectional categories of identity.

Reading *Mammoth* through an intersectional lens focusing on identity categories rather than their embodiment would have brought out with clarity what is already visible, namely, the multiple markings of the specific bodies of Gloria, Cookie, and Ellen's patients as Other. On the one hand, such an intersectional analysis serves to illuminate the already heavy burden of intersectional categories of oppression. On the other hand, this heavy burden may be reinforced by our analysis. In opposition, putting the notion of intersectionality in productive dialogue with the notion of lived embodiment gives us not only an intersectionality in the flesh but also a framework that can account for mechanisms of both oppression and privilege. Ellen's interaction with the bodies she works on might come across as relying on a traditional dichotomy between mind/subject and body/object. However, her very work as a surgeon takes place in the flesh: it is an encounter between her own body—her active hands—and the patients' living flesh. In this intercorporeal exchange, Ellen becomes as embodied as her patients.

Also Leo's privileged position and seemingly unmarked body are made visible through our focus on intersectionality and lived embodiment. When leaving Bangkok, Leo attempts to escape categories of hegemonic masculinity that have left him seemingly disembodied and at the same time completely useless; all the business transactions are handled by his colleague Bob, and Leo's only function is to sign the final contract. By adopting a backpacker's lifestyle, he situates himself in a way so that he can interact with less privileged bodies and to make his body visible and open for intercorporeal exchange. This becomes manifest partly through the bodily practices he engages in, such as swimming in the ocean and riding an elephant, but Leo also invites a different kind of intercorporeality by dressing down and showing more of his skin. His body becomes more visible as body.

There is nevertheless a difference between Leo's body and the marked bodies of Gloria and Ellen; while the two women's bodies passively become marked as Other in relation to unmarked bodies, Leo is actively choosing his bodily visibility as he enters a new location and moves from urban spaces, such as New York and Bangkok, to a remote paradise island.⁵ The move from the urban to the rural "paradise" points to a desire to escape and to return to nature, much like the couple's retreat to Eden in *Antichrist*. However, Leo is unable to escape his own privileged position. While trying to protect Cookie's body from other men, he in fact gains control over her body and reestablishes his own identity as disembodied. These structures of power are forcefully brought out with the aid of traditional intersectional theories focusing on identity categorization. In addition, our explicit focus on the embodiment of intersectional identities makes visible that Leo's seemingly disembodied identities

⁵The interaction between subjects and places is of key importance also in other films by Moodysson (Björklund 2010).

are embodied. In fact, his embodiment is a condition for his intercorporeal exchange with others, and this becomes particularly clear in his sexual encounter with Cookie.

In *Antichrist* it becomes even more manifest that an explicit focus on embodiment is productive for an intersectional analysis. Focusing merely on the intersections of identity categories would not contribute to a better understanding of the complexities of the power asymmetries represented in this film, since the protagonists are both in positions of privilege as white, heterosexual, Western, well-educated, and upper middle class. As such, He and She are both seemingly unmarked and disembodied in a fundamental way. We have shown that intersectionality coupled with theories of lived embodiment provide a more sophisticated tool for analyzing power asymmetries. In a traditional intersectional analysis focusing on identity categories, these categories run the risk of being stabilized and immobile. A notion of embodied intersectional identities manages to destabilize existing categories, such as “Woman,” by recognizing the inherent tensions in such categories as well as their intercorporeal constitution. For instance, as we have seen, the category “Woman” is revealed as void when She tries to embody conflicting stereotypical cultural imaginaries of femininity at one and the same time.

Antichrist seemingly confirms stereotypical patterns of gendered power asymmetry by placing He as active, rational, and civilized subject and She as passive, emotional, and connected to nature. However, the power asymmetry drastically shifts as She refuses to occupy the position to which He has assigned her. When taking on the role of penetrator and nailing him to the floor, She brutally forces him out of his disembodiment, thereby making his embodiment visible and tangible precisely as unmarked.

In spite of her fundamentally privileged position, a conventionally gendered matrix of domination subordinates her in relation to him. As a consequence, She is objectified as Other by him. The notion of lived embodiment brings forward the body as simultaneously both subject and object. The body cannot be reduced to an object, and as subject it continuously escapes and resists being locked into categories of identity. In *Antichrist* we see these attempts at escape and resistance as She refuses to submit to the category of “Woman” while at the same time letting herself embody the impossible tension inherent in this category, embodying both the cultural imaginaries of whore and of Madonna. Her character thereby sheds light on the paradoxes and complexities of identity categories as they are embedded in power relations.

What happens in both films is that the unmarked positions of privilege become visible as they are situated in relation to other bodies. Different identities mark bodies so that the same body can potentially be marked in one situation and unmarked in another. As we have seen, Ellen comes across as unmarked and disembodied in relation to her patients and to Gloria since they are embodied and marked as Other. However, in relation to Leo, Ellen becomes marked by parenthood and sexuality, as well as the conflict between them, while he stands out as unmarked and disembodied. *Antichrist* demonstrates in violent ways different manifestations of the embodiment of unmarked positions of privilege. Our analysis underlines how identity categorizations are inscribed on and in the body and how lived embodiment consti-

tutes the very site in which seemingly stable identity categories intersect and have the potential of being both reproduced and transformed.

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References

- Ahmed, S. (2006). *Queer phenomenology: Orientations, objects, others*. Durham: Duke University Press.
- Antichrist*. (2009). Dir. Lars von Trier. Zentropa Entertainment.
- Anzaldúa, G., & Moraga, C. (1981). *This bridge called my back: Writings by radical women of color*. New York: Kitchen Table Press.
- Björklund, J. (2010). Queering the small town: Lukas Moodysson's film *Show Me Love*. *Women's Studies: An Interdisciplinary Journal*, 39, 37–51.
- Björklund, J. (forthcoming). Arrogant perceptors, world-travellers, and world-backpackers: Rethinking María Lugones' theoretical framework through Lukas Moodysson's *Mammoth*. In L. F. Käll (Ed.), *Bodies, boundaries and vulnerabilities*. Dordrecht: Springer.
- Collins, P. H. (2000). *Black feminist thought: Knowledge, consciousness, and the politics of empowerment*. New York: Routledge.
- Connell, R. W. (2005). *Masculinities* (2nd ed.). Berkeley/Los Angeles: University of California Press.
- Crenshaw, K. (1989). Demarginalizing the intersection of race and sex: A black feminist critique of antidiscrimination doctrine, feminist theory and antiracist politics. *University of Chicago Legal Forum*, 1989, 139–167.
- Crenshaw, K. (1991). Mapping the margins: Intersectionality, identity politics and violence against women of color. *Stanford Law Review*, 43, 1241–1299.
- Davis, K. (2008). Intersectionality as buzz-word: A sociology of science perspective on what makes a feminist theory successful. *Feminist Theory*, 9, 67–85.
- Dawson, G. (1994). *Soldier heroes: British adventure, empire and the imagining of masculinity*. London/New York: Routledge.
- de Beauvoir, S. (2010). *The second sex* (trans: Borde, C. & Malovany-Chevallier, S). New York: Alfred A. Knopf.
- de Lauretis, T. (1987). *Technologies of gender: Essays on theories, film and fiction* (Theories of representation and difference). Bloomington/Indianapolis: Indiana University Press.
- Diprose, R. (2002). *Corporeal generosity: On giving with Nietzsche, Merleau-Ponty, and Levinas*. Albany: SUNY Press.
- Doane, M. A. (1991). *Femmes fatales: Feminism, film theory, psychoanalysis*. New York: Routledge.
- Dyer, R. (1997). *White: Essays on race and culture*. London/New York: Routledge.
- Frankenberg, R. (1993). *White women – race matters. The social construction of whiteness*. Minneapolis: University of Minnesota Press.
- Garland-Thomson, R. (1997). *Extraordinary bodies: Figuring physical disability in American culture and literature*. New York: Columbia University Press.
- Gatens, M. (1996). *Imaginary bodies. Ethics, power and corporeality*. London/New York: Routledge.
- Gressgård, R. (2008). Mind the gap: intersectionality, complexity and 'the event'. *Theory & Science*, 10. Available at: <http://theoryandscience.icaap.org/content/vol10.1/Gressgard.html>. Accessed 2 Jan 2013.

- Hearn, J. (2011). Neglected intersectionalities in studying men: Age(ing), virtuality, transnationality. In H. Lutz, M. T. H. Vivar, & L. Supik (Eds.), *Framing intersectionality: Debates on a multifaceted concept in Gender Studies* (pp. 89–104). Farnham: Ashgate.
- Heinämaa, S. (1997). Woman – nature, product, style?: Rethinking the foundations of feminist philosophy of science. In L. H. Nelson & J. Nelson (Eds.), *Feminism, science and the philosophy of science* (pp. 289–308). Dordrecht/Boston/London: Kluwer Academic Publishers.
- Heinämaa, S. (1999). Simone de Beauvoir's phenomenology of sexual difference. *Hypatia*, 14, 114–132.
- Heinämaa, S. (2003). *Toward a phenomenology of sexual difference: Husserl, Merleau-Ponty, Beauvoir*. Lanham: Rowman & Littlefield.
- Hellstrand, I. (2011). The shape of things to come? Reproductive politics in contemporary science fiction series Battlestar Galactica. *NORA – Nordic Journal of Feminist and Gender Research*, 19, 6–24.
- Hochschild, A. R. (2003). *The managed heart: Commercialization of human feeling* (Twentieth anniversary edition with a new Afterword) Berkeley: University of California Press.
- hooks, b. (1992). Eating the other: Desire and resistance. In *Black looks: Race and representation* (pp. 21–40). Cambridge: South End Press.
- Jensen, S. Q., & Elg, C. (2010). Intersectionality as embodiment. *Kvinder, Køn & Forskning*, 19, 30–39.
- Käll, L. (2009a). Expression between self and other. *Idealistic Studies*, 39, 71–86.
- Käll, L. (2009b). A being of two leaves – On the founding significance of the lived body. In J. Bromseth, L. F. Käll, & K. Mattsson (Eds.), *Body claims* (Uppsala University series in gender research: Crossroads of knowledge, 9, pp. 110–133). Uppsala: Centre for Gender Research.
- Levine-Rasky, C. (2011). Intersectionality theory applied to whiteness and middle-classness. *Social Identities: Journal for the Study of Race, Nation and Culture*, 12, 239–253.
- Lorde, A. (1984). *Sister outsider*. New York: Crossing Press.
- Lykke, N. (2005). Editorial. *European Journal of Women's Studies*, 12, 243–247.
- Lykke, N. (2006). Intersectionality – A useful concept for feminist theory? In T.-S. Pavlidou (Ed.), *Gender Studies: Trends/tensions in Greece and other European Countries* (pp. 151–160). Thessaloniki: University of Thessaloniki.
- Lykke, N. (2010). *Feminist studies: A guide to intersectional theory, methodology and writing*. New York: Routledge.
- Mammoth*. (2009). Dir. Lukas Moodysson. Memphis Film.
- Mattsson, K. (2010). Genus och vithet i den intersektionella vändningen [Gender and whiteness in the intersectional turn]. *Tidskrift för genusvetenskap* [Journal for Gender Studies], 2010, 6–22.
- McCall, L. (2005). The complexity of intersectionality. *Signs*, 30, 1771–1800.
- Merleau-Ponty, M. (1962). *Phenomenology of perception* (trans: Smith, C.). London/New York: Routledge.
- Merleau-Ponty, M. (1964). *Signs* (trans: McCleary, R.). Evanston: Northwestern University Press.
- Merleau-Ponty, M. (1968). *The visible and the invisible* (trans: Lingis, A.). Evanston: Northwestern University Press.
- Moi, T. (1999). *What is a woman?* Oxford/New York: Oxford University Press.
- Nilsson, E. (2014). 'Let's pretend we are the only people in the universe': Entangled inequalities in Lukas Moodysson's *Mammoth*. *Scandinavica*, 53, 55–67.
- Spivak, G. (1988). Can the subaltern speak? In L. Grossberg & C. Nelson (Eds.), *Marxism and the interpretation of culture* (pp. 271–313). Chicago/Urbana: University of Illinois Press.
- Staubæs, D. (2003). Where have all the subjects gone? Bringing together the concepts of intersectionality and subjectification. *NORA – Nordic Journal of Feminist and Gender Studies*, 11, 101–110.
- Stenport, A. W. (2010). Moodysson's *Mammoth* (2009): Mothers, mammals, and mega-money. In *SASS (Society for the Advancement of Scandinavian Study)*, 100th annual meeting, Seattle, USA, 22–24 April 2010 [Unpublished Conference Presentation].

- Søndergaard, D. M. (2005). Making sense of gender, age, power and disciplinary position: Intersecting discourses in the academy. *Feminism and Psychology, 15*, 189–208.
- Vance, C. S. (Ed.). (1984). *Pleasure and danger: Exploring female sexuality*. London/New York: Routledge.
- Villa, P.-I. (2011). Embodiment is always more: Intersectionality, subjection and the body. In H. Lutz, M. T. H. Vivar, & L. Supik (Eds.), *Framing intersectionality: Debates on a multifaceted concept in Gender Studies* (pp. 171–186). Farnham: Ashgate.
- Weiss, G. (1999). *Body images: Embodiment as intercorporeality*. London/New York: Routledge.
- Young, I. M. (2002). Lived body vs. gender: Reflections on social structure and subjectivity. *Ratio, 15*, 410–428.

Chapter 7

When the Plant Kingdom Became Queer: On Hermaphrodites and the Linnaean Language of Nonnormative Sex

Maja Bondestam

The reproduction of animals and plants constitutes nature's most refined and most hidden phenomenon. All natural scientists to this day have zealously sought the origin of life and the source of all living things, but no one has been able to find it.

(Carl Linnaeus [1759]; 1962)

7.1 Introduction

The Swedish botanist Carl Linnaeus was not as in awe of the origins of life as the epigraph might imply, he did, however, in the middle of the eighteenth century present comprehensive findings about bisexual reproduction of animals and plants (Linnaeus 1962). In nature, he saw men, women and hermaphrodites and showed in his classification of the plant kingdom a full repertoire of nonnormative sexual combinations of stamens and pistils. In this essay, I have identified Linnaeus' gender-coded depictions of the plant kingdom and examined how his language, categorisations, representations and controversies about meaning constituted a key arena in which the conceptualising of men, women and hermaphrodites took shape.¹ It is remarkable how the Linnaean language of a queer plant kingdom was possible in an era that historians tell us is so clearly associated with binary thinking, the complementariness of genders and the establishment of a two-sex model (Laqueur 1990). Linnaeus' sexual system has been discussed in previous research but, hitherto, without taking the hermaphroditic, nonnormative and queer aspects of his botany seriously. In the following chapter, therefore, I explore the roles Linnaean botany played in the emergence of a new sexual body. I question whether the plant

This essay is an expanded version of Chap. 2 in Bondestam (2010).

¹The formation of scientific concepts and the politics of language, representations and the corporeal are discussed in Cooter 2010; Davidson 2001, and Daston 1994.

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kingdom's hermaphrodites and 'sexually unconventional' plants were really so difficult to place in and were excluded from eighteenth-century culture and science as has previously been claimed?

7.2 Plants with Sexual Organs

It was not until the eighteenth century that the idea that plants, just like animals and humans, have sexual organs and reproduce sexually was firmly established in science. As the author of a schoolbook in science for children stated in the latter half of that century: 'It has been found that Plants, like Animals, have sexes, that is, males and females, whose union is essential if reproduction is to take place' (Regnér 1780). In a manuscript from 1729, Linnaeus had developed the much-discussed theory of the botanist Sébastien Vaillant that flowers are the sex organs of plants – a thesis that was taught to Swedish children in the 1780s. Linnaeus had also adopted Vaillant's analogous description of the anatomy of animals and plants. The nutrient sap was assumed to go from the plant stem into the seedpod, 'what Vaillant calls the ovaries or Ovarium' and then to reach the 'filaments standing around it', that is, the stamens, which, following Vaillant, Linnaeus called the *vasa spermatica* (Eriksson 1969).

In earlier centuries, assumptions had also been made that the reproduction of some plants is divided into two sexes, but this was by no means a universal concept. The theory that the flower is the reproductive organ of the plant was far from generally accepted, and no lasting efforts had been made to identify structural and functional analogies between the sexual anatomy of plants and animals. Stamens were described by some earlier botanists, for example, not as a pollen-spreading phallus but as a kind of organ for the excretion of the plants' waste products and as entirely immaterial to reproduction. However, by the middle of the eighteenth century, with the comprehensive dissemination of Linnaeus' works, most botanists had been reconciled with the thought that plants have sexes and use them to reproduce (Cook 2000; Lindroth 1978; Eriksson 1969). Herein lay a fundamental similarity between humans and plants and proof that nature comprises a coherent unit.

By observing the sexual organs of plants, the stamens and pistils, it was possible to systematise and classify the entire vegetable kingdom using a simple principle. Linnaeus based his system on the number of stamens, or as he expressed it, men, thus dividing the plant kingdom into 24 distinct classes (Lindroth 1978; Schmitz et al. 2007). In the sexual system, Class I plants, Monandria, were distinguished by their flowers having one stamen, or 'one husband in the marriage', followed by Class II, Diandria, whose distinctive feature was that the flowers of the plants house two stamens or that there are 'two husbands in conjugality', whereas Class III, Triandria, are characterised by the flowers having three stamens or the fact that there were 'three husbands in conjugality' (Linnaeus 1735).² The remaining classes were

²Translations from the Latin to the English are made by Dr Anna Fredriksson.

also based on the number and relations of stamens, or male parts, with the exception of Class XXIV, Cryptogamia, which were characterised by the circumstance that their nuptials are celebrated in secret. ‘They blossom inside the fruit, or else they elude our observation by being tiny’ (Schmitz et al. 2007). This class subsumed mosses, lichens, ferns, horsetails, algae and fungi and guided by the notion that plants and animals follow one and the same plan and that nature is always consistent; Linnaeus concluded that cryptogams also have female and male plants and reproduce sexually. These 24 classes of plants were then divided into some 65 orders, based on the number of pistils, or women, in the flower (Lindroth 1978; Broberg 1975) (Fig. 7.1).

The historian of science Londa Schiebinger points out that Linnaeus’ sexual system was not only a matter of discovering a given order of nature but also of actively reading the laws of nature through a lens of social relations and traditional gender hierarchies. The number of stamens, or male parts of the plant, determined what class the plant was to belong to, while the number of pistils, or female parts, determined what order. In the taxonomical tree, class is higher than order, and it is clear that Linnaeus gave priority to the male parts in determining the status a particular plant has in the plant kingdom. ‘He read nature through the lens of social relations in such a way that the new language of botany incorporated fundamental aspects of the social world as much as those of the natural world’ (Schiebinger 2004). The new language of botany was coloured by the gender relations and the social context in which Linnaeus worked, but as we will see, it also influenced eighteenth-century botany in terms of understanding human gender and sexuality.

7.3 Metaphors and Analogies

What did it entail in the eighteenth century to call plant parts *female* and *male* and how are we to understand Linnaeus’ numerous likenesses between the reproduction of plants and human love relationships? For Linnaeus, the analogy functioned as a fundamental scientific method, and in the 1729 manuscript mentioned above, *Praeludia sponsaliorum plantarum* or ‘Prelude to the Betrothal of Plants’, he developed for the first time the theory of the sexual reproduction of plants as a universal phenomenon. The preface pointed out ‘the great analogy that exist between plants and animals in terms of their similar means of propagating their species’, and, inspired by Vaillant, Linnaeus then described a clear correspondence between the sexual anatomy of plants and humans (Linnaeus 2007). The seed of the plant corresponded to the egg, the pod corresponded to the ovaries, the stamens were the plant’s penis, the pistils were the womb and the stigma was analogous to the woman’s vulva (Broberg 1975). Moreover, Linnaeus described anatomical and sexual similarities between the bodies, sex organs and sexual lifestyles of plants and humans. In their youth, plants were assumed to be sterile, in their middle years, the most fecund and in old age withered. The flower was the genitals of the plant, and the fruit its foetus. The parts of the flower included the ‘ovarium’ and the

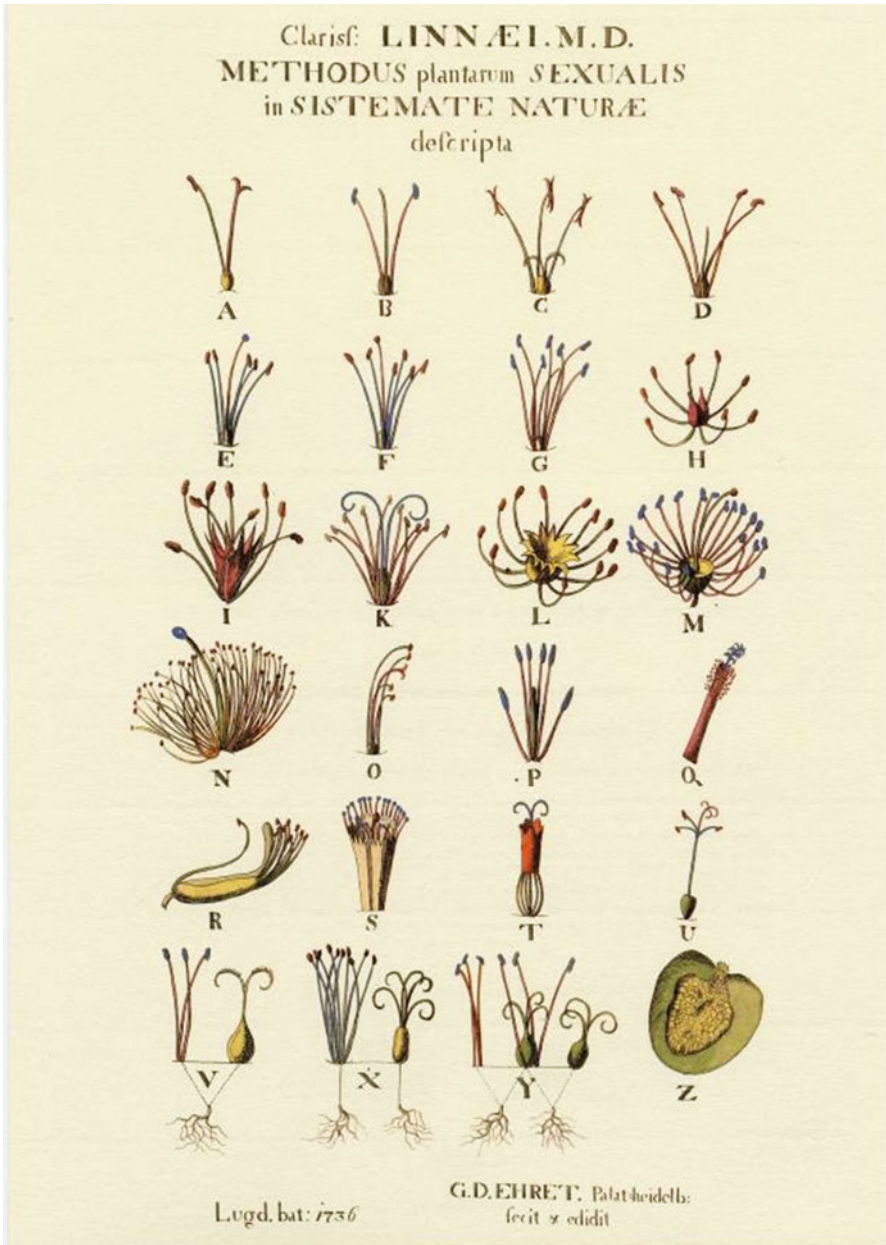


Fig. 7.1 *Male classification.* Georg Dionysius Ehret's illustration to Linnaeus' sexual system shows how the number and interrelations (Ehret 1736) of stamens determine the 23 classes of phanerogams

‘testiculos’, and the flower petals were a bed with finest sheets where brides were embraced by courting grooms (Linnaeus 2007).

In other words, Linnaeus presented an anthropomorphic image of plants, using in his writings expressions like suitor, bridegroom, husband, maiden, wife, hermaphrodite, eunuch, concubine and harlot, which set up a transfer of meanings from one form of life to another. To be sure, nature was divided into kingdoms, but the synonymous use of words like stamen and man shows that they were not mutually exclusive entities. Instead, Linnaeus constructed fundamental connecting lines between humans and plants, blurred differences between them through his use of language and made it possible to understand and experience human reproduction in terms of plant reproduction and vice versa.³

This abundant use of similes and metaphors has been explained by Linnaeus’ deep roots in an older scientific tradition. Since antiquity nature had been seen as evidence of the ubiquity of divinity and the fundamental similarity between all things created. The idea was that creatures and things, bodies and souls and humans and plants were not distinctly separated but stood in relation to, imitated, and adapted to each other in a comprehensive interplay, and the body and its individual organs were interpreted as metaphors for a grander order of things. Anatomy was regarded as lending life and a concretisation of higher truths and hierarchies that were beyond the reach of the senses. Consequentially, an undeveloped organ, for example, could be read as a sign of the body’s lack of warmth and perfection (Laqueur 1990). Well into the Renaissance and in the new anatomy of the fifteenth century, human reproduction was interpreted as the small sign of a grander order, of the fertility of nature and the power of the heavens. The functions and forms of individual bodies reflected and were determined by earthly hierarchy, by cosmic order and by the wonders of creation. The human being constituted a map or a compilation of the universe, and the self-renewing macrocosmic order was secured through the features found in ordinary, mortal bodies (Laqueur 1990; Foucault 1973; Johannisson 1997).

Linnaeus, too, assumed that plants and animals followed the same plan, and the discovery of sexual reproduction confirmed the fundamental thesis that everything living comes from eggs. In fertilisation, the flower’s stamen corresponded to the penis in animals, and the pistils to the womb, and this ingenious analogy was established by none other than the Great Creator (Lindroth 1978). The notion of nature being constructed in accordance with an underlying pattern, or prototype, can be traced to Plato, but it also shaped Linnaeus’ view of nature, and to this day, it remains significant in that it relates to the conviction of modern science that nature obeys a limited number of laws whose force is universal (Eriksson 1969).

³The power of analogy and metaphor to organise, open up and lock in scientific visions is discussed in Schiebinger 2004; Broberg 1975, and Stepan 1996.

7.3.1 *A Heterosexual Norm in the Understanding of Nature?*

The fact that Linnaeus conceptualised the fruitification of plants in terms of human sexual anatomy, ages and sexual life systematically influenced the conversation, theories and arguments on the subject. Regarding the sexual analogy between humans and plants, Elizabeth Heckendorn Cook maintains that Linnaeus presented a virtually matrimonial love relation between monogamous married men and wives as normative for plant reproduction. This is in spite of the fact that only one class of plants out of 24, Monandria, with one stamen and one pistil, is in any way reminiscent of the normative human romantic dyad. The majority of plants, in fact 20 of Linnaeus' 24 classes, can hardly be described in terms of their reproductive organs as either male or female. On the contrary, most plants are self-fertilising hermaphrodites, with male and female reproductive organs within one and the same flower. Cook maintains that Linnaeus' propensity to humanise and heterosexualise the relation between stamens and pistils obscured this fact (Cook 2000). Rather than imagining a third sexual category that would have been able to match this so common hermaphroditic sex structure, she says, Linnaeus minimised the normative heterosexual encounter between female and male to an act that plays out within one and the same flower. She discusses a paragraph from *Praeludia* that illustrates Linnaeus' similes between botanical reproduction and heterosexual marriage:

The actual petals of the flower :/petala:/ [corolla] contribute nothing to generation. Instead, they serve only as Bridal beds that the great Creator has so gloriously provided, adorned with many delightful fragrances, where the bridegroom and his bride may celebrate their Nuptials with so much greater solemnity. Now that the bed has been thus prepared, it is time for the Bridegroom to embrace his beloved Bride, and offer her his gifts. By this I mean that one sees how the testicles open and pour fourth *pulverem genitalem* [the generative powder], which falls on the *tubam* [the tube] and fertilizes ovarium [the ovary]. (Linnaeus 2007)

Pollination is depicted in the text as an erotically charged scene from a wedding night, and, as Schiebinger has pointed out, Linnaeus not only sex-coded the plants, he turned them into wives and husbands. The sexual relations of plants did not involve stamens and pistils but rather andria and gynia, which derive from the Greek for husband (aner) and wife (gyne), and Linnaeus' texts are full of tender embraces between properly married couples. To him, plant sexuality was romantic and erotic, sometimes extramarital and sometimes an expression of sanctioned love between husband and wife. 'Linnaeus saw plants as having sex, in the fullest sense of the term' (Schiebinger 2004). According to Schiebinger, eighteenth-century botanists embraced Linnaeus' descriptions of plants as being divided into female and male plants but found it difficult to imagine them as hermaphroditic. They could not or would not, as she writes, recognise an alien sex category (Schiebinger 2004).

Schiebinger and Cook are correct in saying that Linnaeus based his descriptions of plant reproduction on the marital relation between husband and wife. He consistently called plant stamens as men (husbands) and their pistils as women, or wives, and saw reproduction as a result of a sexual relation between them. Unlike Cook, however, I wish to emphasise that in his depictions of the vegetable kingdom,

Linnaeus did not limit himself to the conventional union of the day between husband and wife. Sometimes he presented plant reproduction as analogous to sexual encounters between men and women in splendid bridal beds but far more often as conforming with hermaphroditic, same-sex and polygamous connections. Abandoned concubines being fertilised by married men, who moreover are living with properly married hermaphroditic couples, are another metaphor for plant reproduction that can hardly be described as being governed by a monogamous heterosexual norm. Linnaeus used human sexuality as his point of departure in his portrayals of plant reproduction, but he hardly limited himself to any sexual conventions when he described their various combinations of male and female organs.

In *Systema Naturae*, which from 1735 was disseminated among Europe's botanists, Linnaeus characterised the 24 plant classes on the basis of how men and women combine in various constellations. The flowering rush (*Butomus*) has nine stamens and six pistils, which Linnaeus rendered as nine men living in matrimony with six women. The water lily was placed in the group Polyandria, Monogynia, and described as 'Twenty men and more in the same bridal chamber with one woman'. The stamens – 'men' – could be organised as two sets of brothers that 'emerged from a double stem as if from a double mother [womb]', as in leguminous plants, for instance. It also happened that 'the men' were unequal. Four big ones could dominate two smaller ones, as in the order Tetradynamia – 'quadruple' – which is now regarded as part of the cruciferous family (Brassicaceae) (Schmitz et al. 2007). In his classification work, Linnaeus faithfully followed the number and combinations of stamens and pistils in the flower, and the result was a truly motley presentation of sexual encounters.

Polyadelphia can also be regarded as one of the plant kingdom's unconventional unions between and within the sexes. This eighteenth class is characterised by the fact that 'the men have achieved a union of their sexual parts' (Schmitz et al. 2007). Also of interest in this context is Linnaeus' 20th class, Gynandria, where the stamens are described as fastened to the pistils or 'the men oddly bound to the women' (Schmitz et al. 2007). Here men and women did not live in a marriage-like relation but were rather bound to each other in the same way that human hermaphrodites were assumed to join two sexes in one body. An alternative term for this group of plants in the eighteenth century was 'Ambiguous' (Linnaeus 1777). Linnaeus' 23rd class, Polygamia, is distinguished by the fact that 'Husbands and wives and unmarried individuals cohabit in several bridal chambers. The flowers are hermaphrodites and males or females of the same species' (Schmitz et al. 2007).

Linnaeus quite simply did not present any conjugal lover relationship between monogamous men and women as normative for the reproduction of plants. Nor did he, as Cook claims, have any difficulty in imagining plants as hermaphroditic. Indeed, the combination of the sexes in one individual was central for Linnaeus, and in the flower, he identified the plant's reproductive organs, man and woman, testiculos and ovaria, as either divided into two different plants or combined in one and the same plant. In the latter case, he referred to the plants as hermaphrodites: 'Hermaphrodites are all those that have both testicles and ovaries', wrote Linnaeus

and anticipated late nineteenth-century medical definitions of so-called true hermaphrodites in humans (Linnaeus 2007).

In *Prælua*, Linnaeus made the most of the comprehensive analogy between plants and animals and the set of regulations shared by all species. Spring sunshine prompted all of nature to long to mate, and physical love life was evinced by both animals and plants:

In springtime when the delightful Sun comes closer to our Zenith, it awakens life in all living things that have lain low, quelled, in the cold winter. Behold, how all Creatures that have gone about heavy and chilled in the winter become more hale and hearty; Behold, how all the birds that have been silent in the winter begin to sing and chirp; Behold, how all the insects come out of their hiding-places where they have lain half-dead in the winter; Behold, how all the plants and trees that were withered in the winter stir, rise up and turn green; and humankind itself is given a new lease of life. [...] This Sun imparts such joy of life of all creatures as to be indescribable; the courtship of Black Grouse and Capercaillie, and the spawning of fish, may be seen; in short, it is the breeding season for all animals. [...] Indeed, Love assails the very plants, since among them both *mares* [males] and *foeminae* [females], and Hermaphrodites too, hold their nuptials. And this is what I have now set out to describe and demonstrate from the genitalia of the plants themselves: which are male, which female and which hermaphroditic. (Linnaeus 2007)

The plant kingdom is divided into three sexes here – men, women and hermaphrodites – joined in love in such a way that the plants' genitalia enter matrimony with each other, also among the hermaphrodites. Linnaeus highlighted the unity of creation and the notion that all of the earth's life forms multiply according to the same patterns. Reproduction, not only in plants but also in animals and humans, seemed to follow the changing of the seasons and to blossom and flourish when the sun returns in the spring.

Linnaeus stressed that nature's many self-fertilising hermaphrodites were not something to be considered peculiar. Above the plants, in the order of nature, there was the animal kingdom, and even in its lowest class certain individuals had hermaphroditic genitals. This circumstance was explained by the fact that the lower animals, such as snails, are incapable of moving quickly and that if reproduction among such animals necessitated that single individuals meet other individuals, the entire species would soon be extinct. Nature seemed to compensate for this lack of mobility among the lower animals by placing both sexes in one and the same individual. The same solution was regarded as even more justified in the plant kingdom, with its stationary plants:

Let no one wonder at the fact that most plants are Hermaphrodites, for one sees in the lowest rank of *Regno animali* [the animal kingdom] how the majority of *Cochleas* [shells] have a similar *genitalium in uno individuo conjunctio* [combination of genitalia in a single individual]. And this is especially for the reason that, as we know, they move very slowly, this being an example of sluggishness that might cause the extinction of the whole genus before one spouse was able to meet the other. This is why Nature has compensated for their sluggishness in this way. Since Nature has attached plants so much more firmly to the spot, there is more reason to make them Hermaphroditic. (Linnaeus 2007)

Certain plants and animals are monosexual and others bisexual, and Linnaeus probably formulated here the first elaborated theory in Swedish science about the place and function of the hermaphroditic sex in nature.

7.4 Reading Humans Through a Lens of Queer Plants

The proposition that plants have sex organs and that pollination reflects the sexual encounter between humans resonated well beyond botanical circles in the eighteenth century. Well-known individuals, for the purposes of satire, could be likened to plants whose combination of stamens and pistils was regarded as decidedly immoral, such as when the sexual parts were uneven in number or pursued their love life in secret. Caricature artists and topical versifiers implied the erotic undertones of botany, and the vicar Richard Polwhele compared Mary Wollstonecraft, for example, with *Collinsonia* – a plant belonging to the labiate family and is recognised by its having two stamens and one pistil. The analogy was that, like the pistil in this flower, Wollstonecraft led a loose love life (Schmitz et al. 2007).

When Linnaeus developed his method for classifying plants, his metaphorical point of departure was human anatomy, human sexual reproduction and human sexual categories, and via the names, categories and divisions deriving from this world, he charged the vegetable kingdom with both sexuality and sometimes objectionable lechery. As mentioned, it was no conventional sexual order he presented, and when the sexual system became known to Europe's botanists after 1735, there were some attacks. The German natural scientist Johann Georg Siegesbeck argued in a work from 1737 that stamens and pistils were unsuitable as the basis of the plant system as sexual immorality was built into this foundation. His argumentation revolved around the thought that 'chaste young people should be protected against Linnaeus' sexual gospel, which harboured lewd features: multiple stamens or men had a common pistil or wife, etc.' (Lindroth 1978).⁴ Linnaeus was seen as bringing together men and women in the most inappropriate constellations, with the men often outnumbering the women. 'Who', Siegesbeck wondered, 'could ever imagine that Almighty God would establish such a muddle – or rather such shameful whore-mongering – in order for plants to reproduce' and 'who could teach young students such a lecherous system without causing offence' (Schmitz et al. 2007).⁵

Siegesbeck's concern about the deleterious influence on young people shows how the comparison between plants and humans played out in the eighteenth century. As Schiebinger has pointed out, that century's botanists read nature through a lens of social gender relations, but the analogy between humans and plants could also work in the opposite direction. Today, we smile somewhat condescendingly at Siegesbeck's concern about the lecherous foundation of the new botany, whereas to him it seemed fully reasonable to read and understand human beings' sexual life

⁴There were other reasons behind Siegesbeck's rejection of the sexual system. See Eriksson 1969.

⁵On contemporary reactions to the sexual system, see also Broberg 1990–1991.

through a lens of queer plants. The ancient analogous way of thinking held eighteenth-century people in thrall. Individual bodies mirrored each other; the plant and animal kingdoms followed the same principles for reproduction, and nature constituted a unity in which there were other reasons behind Siegesbeck's rejection of the sexual system (see Eriksson 1969). Similarity and structural correspondences were uncovered in every imaginable context. Plant reproduction found a direct equivalent in the multiplication of humans based on two sexes, and a wave of shameless associations linked together nature's different kingdoms. Siegesbeck testifies to a worry about this blurred boundary, but it is also possible to postulate that Linnaeus' botany actually legitimated a multitude of sexual anatomies and unconventional sexual associations in nature, making them natural and conceivable.

7.5 The Swedish Father of Modern Biological Classification

To Linnaeus, systematics was the soul of all science, and those who could not bring order to their studies had no chance of attaining wisdom. 'Thus it is also with *Historia naturali*: the knowledge of it among the ancients was nothing but the chaos of a heap of names, the remembering of which was fully dependent on the memory' (Linnaeus 1907). Nature was assumed to contain more than 100,000 names of different minerals, plants and animals, and without any superordinating principle for naming and ordering all natural objects, the disarray was seen as substantial.

Before science was developed, everything stood in Barbary, but after everything was given some regularity, the situation is rather improved, and it is not a matter of remembering the name of the thing itself, but rather its visible Characteristics will tell me its name, once I have examined it in regard to Class, order, genus and Species. (Linnaeus 1907)

To Linnaeus, to know, classify, name and arrange things in nature was the prime purpose of the scientist, and he argued for a method of nomenclature based on the thing itself. However, in this respect, he was hardly different from his predecessors. Premodern natural scientists' way of seeking knowledge, meaning and content has been associated in the history of science with an understanding of nature as being closely tied to words, symbols and names. Prior to the seventeenth century, understanding a plant or animal entailed penetrating the whole semantic network that linked it to the world. Both as a whole and in its individual parts, nature had an errand, a purpose and a goal; it evinced a harmonious interplay of invisible forces that connected everything large and small. It was therefore also important to afford weight to the words, fables, stories, properties and metaphors that surrounded creatures and things. For those wishing to understand God's meaningful and moral nature, it was essential to read and interpret emblems, symbols and concealed reflections. Nature consisted of a weave of signs and similarities between the micro- and the macro-cosmos; it was full of concealed meanings, and having knowledge of a certain phenomenon was a matter of understanding it within the framework of a comprehensive context. As Michel Foucault has described, the job of the interpreter

was not so much to observe, isolate characteristics and arrange animals and plants from a first-hand perspective as to read, explain and relate everything that has been *seen* and *heard* about them, everything that it has been possible to read, both from the book of nature and from the writings of authors. The names of things were up to that day inherent in what they signified, in the same way as strength was inscribed in the body of a lion. Language existed in nature, among plants, minerals and animals and was studied as such as a kind of specimen of natural history, as it was part of the weave of similarities and correspondences that were the world. It was not so much that sixteenth-century natural scientists preferred relying on authors from antiquity to the precision of the unprejudiced eye, but rather that nature as such was perceived as *inscribed*. Nature was interwoven with words and signs and comprised, to those capable of reading it, a single grand text (Foucault 1973; Laqueur 1990; Lindroth 1975).

In the seventeenth century, students of natural history began to analyse and classify living creatures in accordance with their manifest characteristics to a greater extent, and it came to be of central importance to explain humans and nature, plants and animals and heaven and earth in one single neutral language. The wealth of knowledge accumulated in antiquity and the Middle Ages about the virtues of plants, the strengths of animals, hidden correspondences and sympathies was relegated to the background. The search for analogies and metaphors waned, and the body began to be viewed as a structure, a composition or an arrangement of individual parts and organs. Mapping, transcribing, conserving, confronting and combining such structures, that is, forms, spatial arrangements and the number and size of the elements became the new job of science. The purpose was to establish the relatedness of living creatures and the unity of nature and to quickly be able to recognise a particular individual and its place in creation. The principal goal of classification was about determining the *character* that made it possible to group individuals and species in more general units and in practice involved seeing, isolating characteristics and identifying features that corresponded and differed across different individuals, regrouping and arranging everything living as species and families. In the popular collections of natural specimens, herbariums, gardens and tableaux of the seventeenth and eighteenth centuries, all the words that had previously been woven together with animals, plants and minerals were unravelled and removed. The groups and individuals appeared in terms of anatomy, form, habits, birth and death as stripped of all semantics and all encapsulating language. Minerals, plants and animals were placed, one after another, within these rectangular rooms, with their bodily surfaces visible, and grouped in accordance with their general characteristics. They became the bearers of nothing except the fact that they had been named from the outside, were members of one class or another and were placed in relation to each other following a particular logic (Foucault 1973; idem 1994).

Linnaeus was in the midst of this shift. As mentioned, he was deeply rooted in the older scientific tradition that focused on what was general and typical in nature, on analogies and correspondences between and within the kingdoms and species. At the same time, we can say that Linnaeus also blazed a trail for the scientific

approach that was organised around observation and classification. In his sexual system, the entire focus was on stamens and pistils. They could be quickly isolated and identified; they could be counted and arranged with neutral certainty and could serve as *visible characters* that generated the plant's name and place in a lucid table. Just as in the past, the name could be linked to the body it designated but in a relatively impoverished form. Plant classification was a matter of seeing a few things systematically, paying attention to visible signs and articulating the number, form, relationship and placement of stamens and pistils in a generally applicable description acceptable to everyone. Nature's particulars could be identified, named and arranged in a way that did not require any background knowledge and that eliminated all uncertainty. If they focused on certain predetermined characters, anyone confronted with a plant could provide one and the same description of it. Reality could be articulated unequivocally on the condition that a great deal of knowledge, identities and differences was ignored. The field of vision was reduced to black and white and to surfaces, lines, forms and reliefs, and the tangled weave of things and signs that characterised nature prior to the eighteenth century was slowly unravelled (Foucault 1973) (Fig. 7.2).

Linnaeus' sexual system probably contributed to both a narrowing and a broadening of how sex could be understood in the eighteenth century. By identifying and counting stamens and pistils, it was possible to arrive at precise answers regarding what class and order a specific plant belonged to and where it was placed in relation to others. Difference and identity went hand in hand, and the plant class as such existed only in the sense that it could be distinguished from other units in the universal table. A specific group of plants *was* what other groups of plants *were not*. In the sexual system, it was the sex organs that were the basis of identification, then the differences and identities were organised, and these organs provided certainty and became the characteristic of the plant in question. To be sure, this elevation may have emphasised the essential and relational meaning of the reproductive organs and made them appear to be unmarked by language, representations and culture.⁶ Moreover, by examining certain readily readable characteristics, it was possible to set up uniform categories and draw sharp boundaries between one thing and another, though probably at the expense of individual exceptions and traditional boundary lines.

This is not to say that Linnaeus laid the groundwork for the emergence and establishment of the binary sexual system in eighteenth-century science. Binary means twofold and refers to something that can assume one of two different values, and even though the plant kingdom in Linnaeus' botany was linked to sex, the individual plants, like the plant kingdom as a whole, were not characterised by two exclusive groups. Stamens and pistils were indeed the basic organs that underpinned the classification, but also essential was the combination of these organs, and, as mentioned, Linnaeus' 24 classes of plants were strikingly sexually heterogeneous. In the

⁶On bodily characteristics, language and fragmentation regarding whether a collection of organs are subsumed under the category of sex, see Butler 1990. On identity, difference and knowledge, see Foucault 1973.

REGNUM VEGETABILE.							
N	O	P	Q	T	U	V	Y
FOLIANDRIA	OIDYNAMIA	TETRADYNAM	MONADELPH	SYNGENESIA	GYNANDRIA	MONOECIA	POLYGAMIA
<i>St. Mares et Foeminae</i>	<i>St. Mares et Foeminae</i>	<i>St. Mares et Foeminae</i>	<i>St. Filices et Lycop.</i>	<i>St. Actaea exalta</i>	<i>St. Mares et Foeminae</i>	<i>St. Mares et Foeminae</i>	<i>St. Mares et Foeminae</i>
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Fig. 7.2 The plant kingdom. In its first edition from 1735, Linnaeus' well-known work *Systema Naturae* consists of large tables of the mineral, vegetable and animal kingdoms. The excerpt above shows some of the subgroups of the vegetable kingdom

individual plants, female and male organs were joined in innumerable constellations, and furthermore, Linnaeus presented three clear sexual categories. Alongside *Mares* and *Foeminae*, men and women, stamens and pistils, there were also hermaphrodites, which were common among plants and uncommon among the higher mammals.

Linnaeus has been called the Swedish father of modern biological classification, and with the dissemination of the sexual system, the dividing of minerals, plants and animals into various subcategories may have appeared to be a simple procedure (Haraway 1989). It was a matter of studying things systematically, and classification is one of the most important languages of eighteenth-century science. Interestingly, Swedish forensic medical scientists that in the latter half of the century had begun to name and arrange human hermaphrodites in different subgroups adopted several of the terms and categories that had been developed in botany. Sexually ambiguous individuals were referred to in the early eighteenth century simply as hermaphrodites, while in the forensic medicine that emerged in the second half of the century, they were divided into a number of subcategories and could be classified with great precision, such as ‘2nd degree first Variety of Burdach’s Gynandria’ (Traffenfeldt 1816). It was all about sex parts, and in the medicolegal context, human hermaphrodites were ordered under names like *Gynandria*, *Cryptogamia* and *Androgyntia*. Just as with Linnaeus, it was the number, form, position and size of the specific element or organ that served as the basis for the taxonomy. Other knowledge concerning life, experience and sense of self seemed superfluous in the process aiming to identify and determine the sex of a body (Bondestam 2010).

7.6 The Species in Its Original, Double and Perfect Form

In the introduction to *Systema Naturae*, Linnaeus presented a number of observations regarding the three kingdoms of nature, stressing that individuals within each species can be traced to a strain that either ‘consists of a hermaphrodite (as is general among plants) or a pair, naturally in that case a male and female (as is in most animals)’ (Linnaeus 2005). As it was never thought that any new species might arise, these hermaphroditic, or alternatively separate-sexed, strains could in turn be traced to some Omnipotent and Omniscient Being, namely, God, whose work is called the creation (Linnaeus 2005). In other words, the hermaphrodite was defined as an original strain, created by God. In the lecture *The emergence of the inhabitable world*, in 1743, Linnaeus similarly pursued the thesis that each species has existed from the beginning of the world in a single sexual couple or, in the case of hermaphrodites, in a single individual. At the moment of creation, the species were housed in paradise – a single island on the earth at the equator. This original nature was assumed to include all types of climate and soil, and a single individual comprised the starting point for all the current specimens of a plant species.⁷ But what did Linnaeus actually mean by stating that each species derived from *a single individual*?

⁷According to Gunnar Eriksson, Linnaeus’ main purpose with the lecture was not to establish the stability of the species concept but rather to make the words of the Bible reasonable to a modern natural scientist. See Eriksson 1969. On Linnaeus’ early species concept, see Broberg 1975.

10. By a *single sex couple* we understand a single man and a single woman among each and every species of living beings, where the sex organs are divided into two parts and the two sexes are equipped with one part each. 11. Among living beings there are also certain classes that are equipped with a combined sex organ. For this reason, it is my thesis that of these, one single individual was created by God in the beginning. 12. According to the Scriptures, man and woman ‘became one flesh’, as neither is complete *per se*, because they possess only one kind of sex organ. 13. It is perfectly obvious to common sense that a single individual of hermaphrodites and a single couple of other living beings were created by God in the beginning. (Linnaeus 1978)

Linnaeus explained that sexual business has been divided into two individuals in some cases, but that man and woman, each separately, must be considered incomplete, as they only possess one type of reproductive organ. United in *one flesh*, in a sexual couple, in an individual or in the form of a hermaphrodite, the original strain stood out as more complete than the man and the woman, each taken alone, and here we hear echoes of both the word of the Bible and Plato’s myth of the dual archetypal human. The union of man and woman – the hermaphrodite – constitute the individual brought forth by God from which every species was assumed to descend from.

In other words, Linnaeus placed great importance on sexually divided reproduction as an original and God-given guarantee for the continuation of species and at the same time regarded sexual difference as less important variety within one and the same species. He stressed that a plant expert, in his classification work, should ignore the varieties, as they are plants of the same species, altered by some chance cause. As Gunnar Broberg has shown, to elucidate his reasoning, he adduced examples from the diverse world of human beings. The human species could be divided into a number of varieties, but Linnaeus underscored that ‘size, place, time, colour, smell, taste, utility, sex, monstrosity, hairiness, longevity, number, etc. do not constitute distinguishing characteristics on which to define a species’ (Broberg 1975). Fruitification enabled the eternal continuation of the species, while sex differences, according to Linnaeus, were of subordinate interest, at least when it came to systematising and classifying nature.

Nothing is simple, however, about Linnaeus’ attitude to sex. At the same time, as he expressed his lack of interest in nature’s sex-distinguishing markers, he maintained, as mentioned, that the division of plants into different classes and orders could be based on the organisation of stamens and pistils. Why were the sex organs of plants the basis of Linnaeus’ systematisation of the vegetable kingdom? Sten Lindroth explains this against the background of Linnaeus’ deep roots in Platonic philosophy. It was fruitification that made plants and testified to their innermost being (Lindroth 1978). Gunnar Eriksson also states that Linnaeus perceived fruitification as so constant in living nature that it should constitute the basis of systematisation. For the same reason, the foundation for the system had to be the most essential parts for fruitification. Flowers preceded each fruit, and therefore, the essential parts of the plant should be the sex organs of the flower – the stamens and the pistils (Eriksson 1969).

Schiebinger interprets Linnaeus' interest in the reproductive organs of plants not as an expression of his deep roots in Platonic philosophy but as something new. She describes how botany in the Middle Ages and the Renaissance had primarily been studied in relation to the healing properties of plants and their utility to humans and how, in the eighteenth century, it began to involve more abstract and universal methods of classification. As she sees it, this shift coincided with another fundamental revolution – the transformation of the relation between men and women that got underway in the late seventeenth century throughout Europe and culminated in the French Revolution. The sexual organisation of botany cut deeply into the political landscape and ultimately had to do with the scientific conceptions of sex differences that found expression all over Europe in the eighteenth century (Schiebinger 2004).

Like Thomas Laqueur, Schiebinger has shown how binary thinking emerged at the end of that century, according to which thinking the categories of man and woman were perceived as opposites, not comparable and essentially different. In the eighteenth century, anatomists and physiologists devoted themselves to a quest for material and measurable sex differences, and biological woman and man, respectively, were seen as following distinct templates for perfection (Schiebinger 1989; Laqueur 1990). The different social roles of gender were presented as inscribed in nature, and Schiebinger has identified a central notion of the sexes as complementary. This proclaimed that men and women are not physical and moral equals but rather complementary opposites, thus making inequalities seen natural. The private, caring woman arose as a complement to the public, rational man, and it was to satisfy a continued gendered division of power and labour, not merely by chance nor because of its ingeniousness, that Linnaeus' sexual system found such wide dissemination in the eighteenth century. Gender-coded images had a prominent place in Linnaean language usage at the same time as botanical taxonomy recapitulated the most prominent aspects of European gender hierarchy (Schiebinger 2004).

It seems reasonable to think that the in-depth studies of plant sexuality in the eighteenth century coincided with a scientific or, fundamentally, political interest also in the sexual character of humans. Metaphors have been regarded as arising and taking root in culture not so much by chance but because what they present corresponds so well with people's collective experiences and because what they conceal corresponds to so little (Lakoff and Johnson 2003).

In the eighteenth century, however, despite emerging ideals concerning the differences between the sexes and a division of life and work into the private and the public, there was also scope for sexual transgression, hermaphroditism and 'unconventional' desires. In seventeenth- and eighteenth-century Sweden, the hermaphrodite was an accepted category that enabled physicians, vicars, midwives, forensic medical scientists, jurists and parents to classify individuals of ambiguous sex. It was uncommon but nevertheless not unknown for individuals to have both men's and women's names; to identify with the *communis generis*, the general sex; and to during their lifetime alternate between a female and a male sex. Traces of Plato's powerful man-woman, Ovid's effeminate man, Galen's spectre of sexual possibilities and the false and non-functioning hermaphrodite of Aristotle were regularly expressed in science and court material before 1850, and the opportunity to occupy

spaces of sexual ambiguity appeared to be much greater than has latterly been the case. Hermaphrodites constituted a category of their own in prison and parish registers, appeared in court cases and forensic medicine, and their physical conditions were taken seriously in connection with christenings, weddings and divorces. Nothing indicates that early modern Swedish hermaphrodites were punished officially solemnly for being ambiguous, that they were seen as monstrous crimes against God or nature or that they were more often accused for crimes of sodomy than other people. Instead, they appear as accepted and integrated into society, as qualified for marriage and work, although in the social role of either man or woman (Bondestam 2010).

7.7 A Queer Kingdom

As Linnaeus' scientific endeavours occurred within a specific context, it is pertinent to ask how his influential depictions of nature's three sexes related to the renegotiations of gender relations in the eighteenth century. People knew long before Linnaeus that human bodies not always unambiguously male or female, and for the famous botanist, the old category of the hermaphrodite made it possible to pay attention to double-sexed plants. His work was clearly rooted in both the older tradition that was about finding likenesses and analogies in nature and in the newer project that was about classifying and ordering nature on the basis of a number of simple characteristics: 'Out of two opposites, all creation in the world takes place' (Broberg 1975). Two opposites, female and male, were at the foundation of the generation of humans, animals and plants. However, it could be argued that it was not complementarity and two opposed sexes as such but rather the more comprehensive *fruitification* and *sex-divided reproduction* that constituted Linnaeus' foundation. After all, reproduction was also sex divided in the hermaphrodites Linnaeus described, albeit localised in one and the same individual. To Linnaeus, there was nothing surprising in this.

In summary, we can state that the same-sex, polygamous and hermaphroditic marriage of plants unabashedly took its place in Linnaean botany and that Linnaeus' depiction of this was quickly adopted in Swedish science (Celsius 1744; Dahlman 1748; Bergman 1756; idem 1757; idem 1774; Retzius 1772; Fischerström 1785; Brander 1785; Modeer 1792; Illiger 1818). Three sexes – men, women and hermaphrodites – could be distinguished in nature. They were stricken by love, took their places in unexpected anatomical and sexual constellations and provided a functional and efficient way to reproduce the species. Sexual union was the life-giving foundation on which all of nature relied, and in the new botany, the hermaphrodite took its place as an original and God-given individual from which every species was descended.

Established concepts and categories, like analogies and metaphors, not only have the power to organise, open up and lock in scientific vision, they are also habit-forming on a more everyday level, as they arrange our arguments and legitimate our

explanations and proofs. This is especially the case when language divisions disappear into what we take for granted, when they become naturalised and normalised (Bowker and Star 1999). Following the dissemination of *Systema Naturae*, sexual encounters between nine men and six women in one and the same bridal chamber by no means became a taken-for-granted norm for cohabitation in Swedish peasant culture, or anywhere else, but, conveyed in terms of the anatomy of a flower, they were not either an insignificant representation of nature. In the frame of botany, Linnaeus brought forward and gave authority to a number of sexual subcategories and with more conjugal combinations of men and women than was commonly conceived of at that time. His sorting and classification created a sphere of sexual boundary breaking which became used, not only in the learned understanding of plants and sexually ambiguous animals and humans but also in a more every day sense. Combinations of male and female sexual organs definitely seemed to exist in nature and not even in the eighteenth and nineteenth centuries, when physical differences were medicalised as the scientific definitions of true hermaphroditism had become narrower. Linnaeus's dynamic zone of sexual possibilities was totally forgotten. Instead, Linnaeus's work was used rhetorically, to underscore identities, exemplify lack of decency, illuminate thoughts of development, progress and civilisation and make politically important distinctions between social classes and ethnical groups.⁸

Instead of seeing Linnaeus' many hermaphrodites in nature and depictions of erotic encounters between various groups of stamens and pistils as an inconceivable and silenced parenthesis in eighteenth-century culture and science, we can take them as evidence that the conceptions of sex and body that took shape around that century were more dynamic and sexually heterogeneous than is commonly appreciated. Linnaeus' analyses of the plant kingdom and the division of nature into different classes and orders were not insignificant for the emergence of set and unequivocal categories nor for the establishment of the binary sex system. At the same time, however, we must realise that Linnaean botany also staked a claim for a space of dissonance – for anatomical hermaphroditism, disrupted categories and manifold and nonnormative sexual encounters – and created a stimulating zone that could make unexpected relations, actions and encounters stand out as possible, albeit unconventional.⁹ With the new botany, the vegetable kingdom, and to some extent also human sex categories and sexual unions, had a *queer* dimension that is perhaps more difficult to digest today than it was for people in the eighteenth century.

⁸The hermaphrodite was still an important category in Swedish science in the early twentieth century when physicians, psychiatrists and sexologists were trying to define how so-called sexual perversions such as exhibitionism, fetishism, masochism and paedophilia and also homo- and bisexuality could appear. These nonreproductive desires had no connection to men's and women's supposedly 'natural physical cravings' for procreation and were perhaps considered, at least in case of bisexuality, as some kind of psychological equivalent to hermaphroditism. See Bondestam 2010.

⁹On dissonance in relation to stable and apparently self-evident categories concerning sex and sexuality, see Rosenberg 2002.

Illustrations

- Ehret, G. D. (1736). *Methodus plantarum sexualis in sistemate naturae descripta*. Leiden. (Copperplate, 20, 5 × 33 cm. Photo: Uppsala University Library).
- Linnaeus, C. (1735). *Caroli Linnæi ... Systema naturæ, sive regna tria naturæ systematice proposita per classes, ordines, genera, & species*. [The system of nature, or the three kingdoms of nature, systematically proposed in classes, orders, genera and species]. Lugduni Batavorum: apud Theodorum Haak. Photo: Uppsala University Library.

References

- Bergman, T. (1756). “Om [On] COCCUS aquaticus. Lin Faun. Suec. N. 752”. *Kungl. Svenska Vetenskapsakademiens Handlingar*. [Proceedings of the Royal Swedish Academy of Sciences], third quarter.
- Bergman, T. (1757). “Afhandling om iglar”. [Dissertation on leeches], *Kungl. Svenska Vetenskapsakademiens Handlingar*. [Proceedings of the Royal Swedish Academy of Sciences], fourth quarter.
- Bergman, T. (1774). *Physisk beskrifning öfver jordklotet*. [Physical description of the globe], vol. 2, 2nd ed. Uppsala: tryckt hos Joh. Edman, kongl. acad. boktr.
- Bondestam, M. (2010). *Tvåkönad: Studier i den svenska hermafroditens historia*. [Bisexual: Studies in the history of the Swedish hermaphrodite]. Nora: Nya Doxa.
- Bowker, G. C., & Star, S. L. (1999). *Sorting things out: Classification and its consequences*. Cambridge, MA: MIT Press.
- Brander, F. R. (1785). *Kort begrep af naturalhistorien, hwaruti, efter ... Carl von Linnés samt ... Joh. Gotsch. Wallerii lärogrunder, de hufwudsakeligaste kännemärken upptagas, til naturaliernas stadgade ätskilnad i allmänhet; första begynnare til tjenst*. [Brief concept of natural history, in which, based on Carl Linnaeus’ and Joh. Botsch. Wallerius’ teachings the main characteristics are taken up for the established differentiation of natural specimens in general; for the beginner]. Västerås: tryckt hos Johan Laur. Horn.
- Broberg, G. (1975). *Homo sapiens L: Studier i Carl von Linnés naturuppfattning och människolära*. [Studies in Linnaeus’ conceptions of nature and humans]. Stockholm: Almqvist & Wiksell.
- Broberg, G. (1990–1991). “Fruentimmersbotaniken”. [Women’s botany], Svenska Linnésällskapetets Årsskrift. [Yearbook of the Swedish Linnaeus Society].
- Butler, J. (1990). *Gender trouble: Feminism and the subversion of identity*. New York: Routledge.
- Celsius, A. (1744). *And. Celsii ... Hus-hålls almanach för året efter Jesu Christi födelse, 1745*. Uträknad til Stockholms meridian. Hwarjemte bifoges vidare underrättelse om nyttan af växternes olika kiön. [Household almanac for the year after the birth of Jesus Christ, 1745. Computed for the Stockholm meridian. To which is appended information about the utility of the different sexes of plants]. Stockholm: tryckt hos Lars Salvius.
- Cooter, R. (2010). *The turn of the body: History and the politics of the corporeal*. Arbor: Ciencia, pensamiento y cultura, no. 743, may–junio.
- Dahlman, C. (1748). *Karl Dahlmans Eskilssons ... Inledning til svenska humlegårds- skogs- och ängsskötselen*. [Karl Dahlmans Eskilsson’s ... Introduction to Swedish care of hop gardens, forests, and meadows] Stockholm: tryckt hos Lars Salvius.
- Daston, L. (1994). Historical epistemology. In C. James, A. I. Davidson, & H. Harry (Eds.), *Questions of evidence: Proof, practice, and persuasion across the disciplines*. Chicago: University of Chicago Press.
- Davidson, A. I. (2001). *The emergence of sexuality: Historical epistemology and the formation of concepts*. Cambridge, MA: Harvard University Press.

- Eriksson, G. (1969). *Botanikens historia i Sverige intill år 1800*. [The history of botany in Sweden up to 1800]. Uppsala: Lychnos-bibliotek.
- Fischerström, J. (1785). *Utkast til beskrifning om Mälaren..* [Draft of a description of Lake Mälare]. Stockholm: tryckt på auctors kostnad, hos J.C. Holmberg.
- Foucault, M. (1973). *The order of things: An archaeology of the human sciences*. New York: Vintage Books.
- Foucault, M. (1994). *The birth of the clinic: An archaeology of medical perception*. New York: Vintage Books.
- Haraway, D. (1989). *Primate visions: Gender, race, and nature in the world of modern science*. New York: Routledge.
- Heckendorn Cook, E. (2000). Perfect flowers, monstrous women: Eighteenth-century botany and the modern gendered subject. In H. Deutsch & F. Nussbaum (Eds.), *“Defects”*: *Engendering the modern body*. Ann Arbor: University of Michigan Press.
- Illiger, J. C. W. (1818). *Försök till en fullständig systematisk terminologi för djur- och växtriket, övers. och tillökt av Gabriel Marklin*. [Attempt at a complete systematic terminology for the animal and plant kingdoms, transl. and expanded by Gabriel Marklin]. Uppsala: Zeipel och Palmblad.
- Johannisson, K. (1997). *Kroppens tunna skal: Sex essäer om kropp, historia och kultur*. [The thin shell of the body: Six essays on body, history, and culture]. Stockholm: Norstedt.
- Lakoff, G., & Johnson, M. (2003). *Metaphors we live by*. Chicago: University of Chicago Press.
- Laqueur, T. (1990). *Making sex: Body and gender from the Greeks to Freud*. Cambridge, MA: Harvard University Press.
- Leys Stepan, N. (1996). Race and gender: The role of analogy in science. In E. F. Keller & H. E. Longino (Eds.), *Feminism and science*. Oxford: Oxford University Press.
- Lindroth, S. (1975). *Svensk lärdomshistoria: Stormaktstiden*. [History of Swedish Learning: Sweden as a Great Power]. Stockholm: Norstedt.
- Lindroth, S. (1978). *Svensk lärdomshistoria. 3. Frihetstiden*. [History of Swedish learning: 3 The age of liberty]. Stockholm: Norstedt.
- Linnaeus, C. (1735). *Caroli Linnæi ... Systema naturæ, sive regna tria naturæ systematice proposita per classes, ordines, genera, & species*. [The system of nature, or the three kingdoms of nature, systematically proposed in classes, orders, genera and species]. Lugduni Batavorum: apud Theodorum Haak.
- Linnaeus, C. (1777). *Herr architektens och riddarens d. Carl von Linné's Indelning i örtriket, efter Systema naturæ*. [Carl Linnaeus' classification of the herb kingdom, based on *Systema naturæ*] (trans: Swedish by J. J. Haartman), 2nd ed. Västerås: tryckt på Joh. Laur. Horrns bekostnad.
- Linnaeus, C. (1907). *Caroli Linnés Pluto Svecicus och Beskrifning öfver Stenriket [Carl Linnaeus' Pluto Svecicus and Description of the Mineral Kingdom], published by Carl Benedicks*. Uppsala: Almqvist & Wiksell.
- Linnaeus, C. (1962). *Tvåkönad alstring [Bisexual reproduction] (Generatio ambigena): Akademisk avhandling under Linnés presidium*. [Academic dissertation under the presidency of Linnaeus]. Uppsala: Valda avhandlingar.
- Linnaeus, C. (1978). “Den beboeliga världens tillväxt”. [The emergence of the inhabitable world]. In *Om jämvikten i nature* [On equilibrium in nature], introduction and commentary by Gunnar Broberg; texts transl. into Swedish by Anders Piltz. Stockholm: Carmina.
- Linnaeus, C. (2005). *Om undran inför naturen och andra latinska skrifter* [On the awe of nature and other Latin writings], introduction and selection by Knut Hagberg. Stockholm: Natur och kultur.
- Linnaeus, C. (2007). *Förspelet till växternas bröllop: Faksimil med svensk transkription och engelsk översättning av Præluudia sponsaliorum plantarum 1729* [Prelude to betrothal of plants: Facsimile with a Swedish transcription and an English translation of *Præluudia sponsaliorum plantarum 1729*]. Uppsala: Uppsala universitetsbibliotek.

- Modeer, A. (1792). "Inledning til kunskapen om maskkräken i allmänhet", *Kungl. Svenska Vetenskapsakademiens Handlingar* [Proceedings of the Royal Swedish Academy of Sciences], fourth quarter.
- Regné, G. (1780). *Första begrepen af de nödigaste wetenskaperne, til tjenst för svenska barn*. [Basic concepts of the most necessary sciences, in the service of Swedish children]. Stockholm: tryckt hos A.J. Nordström.
- Retzius, A. J. (1772). *Inledning till djurriket efter Carl von Linnés lärogrunder*. [Introduction to the animal kingdom based on Carl Linnaeus' teachings]. Stockholm: tryckt på nya informationsinrättningens bekostnad. Hos Carl Stolpe.
- Rosenberg, T. (2002). *Queerfeministisk agenda*. [Queer feminist agenda]. Stockholm: Atlas.
- Schiebinger, L. (1989). *The mind has no sex? Women in the origins of modern science*. Cambridge, MA: Harvard University Press.
- Schiebinger, L. (2004). *Nature's body: Gender in the making of modern science*. New Brunswick: Rutgers University Press.
- Schmitz, H., Uddenberg, N., & Östensson, P. (2007). *System och passion: Linné och drömmen om naturens ordning*. [System and passion: Linnaeus and the dream of the order of nature]. Stockholm: Natur och kultur.
- Trafvenfeldt, C. (1816). *Årsberättelse om svenska läkaresällskapets arbeten*. [Annual Report of the work of the Swedish Society of Physicians].

Chapter 8

Unyoking Sexual Difference: Law, Universality, and the Excluded Other

Fredrik Palm

8.1 Introduction: Feminist Theory, Sexual Difference, and the Excluded Other

The question of sexual difference has long played an important role in feminist discourse, not only because it mirrors the binary distinction that originally defined the feminist struggle, but also, since it draws attention to the ways in which processes of gendered power and exclusion are concretely embodied. In particular one dividing line seems to orient the discussion about the potential value of the notion of sexual difference within contemporary feminist discourses, separating feminist thinkers who view it as yet another essentialist reintroduction of heteronormative and binary logic, from those who conceive of it as a radical interrogation of phallogocentrism that recognizes not only the symbolic but also the material forms of phallic power. And although it is to some extent fair to say that feminist discussions of sexual difference often have echoed the broader – or, rather, more influential – issue of the sex/gender distinction, it seems as if at the root of this debate there is a clear lack of consensus around the basic concepts and stakes of the discussion. In this situation it is perhaps productive to distance and disentangle these discussions from each other in order to discern the specific ways in which the notion of sexual difference enters their respective standpoints. For instance, if sexual difference theorists have suggested a political strategy like “strategic essentialism,” it is crucial to stay sensitive to the concrete meaning of the term “essentialism” as well as the challenge this form of essentialism might pose to the whole constructionist/realist debate. Indeed, one might ask if not sexual difference theorists such as Luce Irigaray (1985), Moira Gatens (1995), and Rosi Braidotti (2006) – like Haraway and her early defense of feminist objectivity (1988) – prefigured the current turn to

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materialism within feminist theory (materialist feminism). In that sense it is important to recognize not only how these thinkers place the material and the symbolic on the same “plane of immanence” (Deleuze and Guattari 1994: 35), for example, how Braidotti defines substance in terms of one “intelligent flesh-mind-matter compound” (2006: 184), but also the way in which sexual difference as part of such substance is always figured in terms of concrete processes of becoming (Holmberg and Palm 2009: 203). For Braidotti then, the *topos* of sexual difference is fundamentally an interrogation of and intervention in the abstract and universalist logic of phallogocentrism; it is an interrogation that acknowledges the concrete situatedness of such a project and thus denies the possibility of addressing it from a position outside this phallogocentrism – that is, sexual difference is treated as a traditionally hegemonic and privileged signifier of difference (Braidotti 1997: 37).

Despite these cautionary notes, there are still sentiments among feminists that the notion of sexual difference presents us with a reintroduction of heteronormative thinking. This is not least the case in queer feminist thinking, for instance, as expressed in Judith Butler’s work on psychoanalytical understandings of sex and gender (Butler 2004: 174pp.). As we return to later on in this essay, Butler is ultimately dismissive of sexual difference due to the way in which it secretly substantializes sex and gender relations. And, rather than simply rejecting this view, we might note the way in which even the above-evoked qualification of sexual difference theory – that is, as a deconstructive effort targeting sexual difference as primarily a privileged signifier of difference – contains a minimum of obscurity. This might be best illustrated by considering how for Braidotti sexual difference is above all a concrete political practice; however, she nevertheless reasserts that sexual difference in her understanding “is primary insofar as sexuality is a central axis of subjectification” (Braidotti 1997: 37). It is precisely such slips between a strategically situated and concretely based resistance and ontological assertions of the original or primary status of sexuality that seem to motivate a further inquiry into the debate on sexual difference. It is thus no coincidence that Gayle Salamon in her book *Assuming a Body* (2010) draws attention to the ways in which both Luce Irigaray and Elizabeth Grosz tend to reify heteronormative understandings of gender and sexuality. Approaching Irigaray and Grosz from her concern with issues of transgender and transsexualism, Salamon shows how both these thinkers, with their shared emphasis on the primary status of sexual difference, structurally exclude the preoccupation with questions of transgender and transbodies. Thus, she discusses how Irigaray in her defense of sexual difference not only seems to suggest that relations “within sexual difference” (i.e., between individuals of the “same” sex) are not actual relations but also posits homosexuality as a flight from what thus appears as the universal problematic of sexual difference (as if homosexuality equaled a numb interaction with the “same” and for that matter could be conceived of in terms of a disavowal of difference) (Salamon 2010: 142). Likewise, Salamon argues that sexual difference in Grosz’s *Volatile Bodies* becomes an absolute notion of the infinitely pliable body encountering its limit in sexual difference, so that even if the materiality of the body in general might be subjected to a total

makeover, “no such transformation is possible in the realm of sexual difference” (Salamon 2010: 151).

This is not to deny the radical impetus of sexual difference theory. Irigaray’s theories hand us the instruments to situate difference “at the heart of relation” and offer to interrogate the “generative power of the border between self and other” (Salamon 2010: 142). Since Irigaray’s *The Speculum of the Other Woman* (1985) initialized feminist inquiry into the role of sexual difference in Western philosophical and psychoanalytical thinking, it is impossible to shy away from the continuous interrogation of the ways in which the political economy of phallogocentrism structures our contemporary everyday reality. Thus, even though this essay shares Salamon’s concern over the way in which feminist theories on sexual difference have tended to reproduce a binary notion of gender and sex that excludes marginal genders and sexualities that do not conform to this notion, it nevertheless insists on the important role of this notion in feminist understanding. Not only does the discourse on sexual difference provide an immense body of profound feminist reflection, it also – perhaps like no other single feminist discussion – situated at the very core of feminist concerns the question of how to combine thorough reflection on the materiality of gender and sexuality with a concrete interrogation of contemporary forms of power. We could of course choose to focus on the discourse of sexual difference as an example of how binary thinking is returning in feminist thinking. But, more productively, we could – to follow Salamon – interrogate what sexual difference might be beyond binary logic or, as she says, if we “unyoke it from natural materiality” (Salamon 2010: 151). Indeed, even according to Braidotti’s definition of sexual difference theory, we ought to understand it not in opposition to such a gesture of unyoking, but as the very movement of concrete theoretical unyoking as such. In response to Rita Felski’s critique, she states

Insofar as this political project [of sexual difference feminism], in European culture, coincides historically with the decline of classical humanism, it also opens up spaces for alliances or “conversations” between sexual difference and the other axes of differentiation that constitutes subjectivity. Mimesis has to do with inner multiplicities and multiple differences: not only does it not exclude them, but, on the contrary, it reveals their mutual interdependence and makes it possible and necessary to set them in a dialogue with each other. [...] [I]n my work, I connect nomadic subjectivity with the political feminist strategy of asserting sexual difference as affirmative mimesis. Mimesis as strategy repetition is also made up of borrowing and lending across cultural, disciplinary and other boundaries. Consequently, I think that Felski’s defense of hybridity, which I share entirely, would profit from and not be antithetical to the strategy of mimetic repetition. (Braidotti 1997: 36–37)

It is thus possible to read sexual difference as not once and for all destined to reproduce heteronormativity, which Salamon points to by way of Grosz’s and Irigaray’s respective reassertions of gender binarism. If this essay engages in a kind of defense of sexual difference, it does so from the perception of the latter as an essentially unyoking notion. Through the ongoing meditation on how such an *unyoking* of sexual difference could be imagined, it places itself – perhaps somewhat controversially – in the context of Slavoj Žižek’s Lacanian analysis of the relation between law, desire, and the political act. Taking a step back from the

explicitly feminist discussion about sexual difference, it rather situates itself in the context of the debate on sexual difference as it played out between Judith Butler and Slavoj Žižek (for instance, in their coauthored with Laclau *Contingency, Hegemony and Universality* (Butler et al. 2000)). This move is motivated by a sense that Žižek's work, with its structural account of unyoked sexual difference, communicates with feminist discussions on sexual difference in a productive way. An important feature of Žižek's position is that sexual difference is not simply understood in terms male/female and/or masculine/feminine. Rather the account that will be developed below suggests that "sexual difference" for Žižek embodies a universal or necessary dimension of all symbolic existence – a dimension which is simultaneously constitutive of desire and of our relations to others and always already blocks desire and relationality from within. In that his account simultaneously creates and impedes desire and relationality, it is also significant that it hinges on his formulation of *the excluded other of sexual difference*, which Salamon – much in the same way as Butler – conceives of in terms of transgender and transbodies. Contrary to the latter, Žižek insists on the necessity of not positivizing the space of the excluded other, and, as we will see in this essay, this has to do with the way in which he relates the question of sexual difference not only to the Lacanian thinking of fantasy, law, and desire but also to his own interrogation of what a political act might be in this theoretical context (Palm 2007).

8.2 Act, Performativity, and Exclusion

As Žižek's and Butler's polemic about sexuality, radical theory, and political action spans a number of years and contexts, it seems reasonable to take it as a point of departure for our attempt to approach Žižek's idea of sexual difference. This is particularly fruitful considering Butler's and Žižek's shared skepticism about the post-modern notion that our reality can be seen as a system of free-flowing signifiers, which they rebut by drawing attention to how our daily acts constantly fall back on a more fundamental performativity, construction, or symbolic support (in Žižek "fantasy," in Butler the *heterosexual matrix*), a support that per se is grounded in a *contingent exclusion* that constantly exerts influence on our acts in the present. It is at the point of this exclusion that the difference between their positions becomes important, inasmuch as Butler formulates the excluded as a positive content that could be incorporated in the symbolic but for contingent reasons is not (Butler's "homosexuality"), whereas Žižek sees it as something originally excluded that of necessity cannot be expressed through an unequivocal symbolic identity (Žižek's "real," expressed, among other ways, in sexual difference). What the following discussion will do is therefore to distinguish in Butler and Žižek two distinct conceptions of how we should formulate the relation between sexual difference and political action. The terminus of this discussion involves the issue of the constitution of the fundamental fantasy that always already shadows all symbolic action. That the "positing" of this fantasy must be conceived as a deeply problematic act

with political consequences is equally important in Žižek and Butler. However, if Butler organizes her account of this problem around the opposition between the prohibitive symbolic law and its excluded other, to Žižek the question is ultimately less about how the law remains penetrated by that which it excludes than about how it is penetrated in a way that is fully contingent on how fantasy is conceived per se.

8.3 The Heterosexual Matrix's Performative Exclusion of Homosexuality

When J L Austin in his classic *How to Do Things With Words* (1975) formulated his groundbreaking notion of performativity, a vital element in his argument concerned the crucial role of the utterance in language. Against the expressionistic notion that a particular language act aims to express something that precedes the utterance, Austin stresses how language as performativity, more than anything else, refers to the success of one's own speech act. When Judith Butler later picks up the concept in relation to the question of how gender is (re)produced, it is also with the intention of formulating a theoretical position where the self-evident point of departure is that gender must be regarded as something that is continuously produced. Of course, this production has long been so fundamental to our heteronormative gender order that we seldom – if ever – perceive our participation in it as anything other than our giving expression to a natural fact. When things go wrong, we therefore also tend to deny their actual status as markers for the ongoing but also fundamentally unstable, production of heterosexuality. It is also in this sense that she posits parody as a strategy to disrupt, shift, and renegotiate the “heterosexual matrix.”

What makes Butler's theory of performativity interesting to Žižek is the way in which she avoids what could be called a conventional constructionist position by formulating performative practices as *invested* with enjoyment.¹ This means that Žižek and Butler share the view that the subject's internalization of society's structures (which takes place through performative acts) cannot be regarded as a passive appropriation of them. On the contrary, it is a matter of a virtually boundless investment on the part of the subject. The subject has sacrificed something in order to appear in the symbolic, and this “something” returns in the very eroticization that Butler observes in society's regulative power mechanisms and procedures. This means that Butler elaborates her idea of how the heterosexual subject has to sacrifice all other forms of sexuality and in particular homosexuality against the background of the psychoanalytical idea of the universal taboo against incest. More specifically, it is Freud's arguments about the incest taboo, along with the Lacanian interpretation of it, that constitute the object of Butler's discussion.

To Butler, the incest prohibition is both an object of criticism and a resource in the development of an understanding of the exclusion by heterosexuality of the

¹ Žižek's criticism of Butler in *The Ticklish Subject* is especially based on Butler's *The Psychic Life of Power*.

homosexual charge (cathexis), which also leads her to conclude that the incest taboo not only prevents various forms of violence such as sexual oppression and abuse but also serves as an instrument for violence (for instance, against homosexual people) (Butler 2004: 160). I think it is fair to represent Butler's idea of the incest prohibition as an instance which constitutes an immanent part of the heterosexual matrix by making its very establishment possible. This reading is confirmed by her systematic rendering of homosexuality as something (at least partly) outside and prohibited by the heterosexual law, which runs as a thread throughout her early analyses in *Gender Trouble* (Butler 1990) (especially the second chapter "Prohibition, psychoanalysis, and the heterosexual matrix") up to her recently formulated view of incest in *Undoing Gender*² (Butler 2004). And even though she is at the same time fully aware that homosexual relations (as well as other alternative forms of sexuality) constantly run the risk of relapsing in various ways into new reproductions of the matrix, there is always a critical limit in her text which separates the identifications or "passionate attachments" that are rejected from those that are constituted by the incest prohibition.³ Thus, the driving force in her analyses is the exploration of heteronormativity but also the marking of a possible radical position of resistance at the boundary of the heterosexual matrix.

An important part of this discussion is Butler's (1997) well-known analysis of Freud's "The Ego and the Id" (Freud 1991). In this analysis she approaches the origin of the gender order by reevaluating the Freudian concept of *melancholy*. Butler starts out from Freud's view that the melancholic refusal to relinquish the object of love that is forbidden by the castration/incest taboo must be regarded as an important part of all formation of psychic identity. This object is not something that the child rids itself of in any simple sense. For if it disappears as a direct target of the child's desire, at the same time it lingers in the child's psychic economy. That is, its disappearance as direct target marks the onset of a curious process of internalization by which the child transforms it to an object of identification insofar as she from that point on will confuse herself with the object. It is evident that this melancholic internalization should not be seen as a simple identification with the mother or father. Rather it is always already doubled, divided in its ambivalent approach to the object which the child simultaneously wants and cannot have. Thus, the melancholic's "introduction of passionate attachment" is characterized from the outset by the accusations and the anger that is directed toward the object in connection with its loss. The melancholic assumes the accusatory voice but comes to direct it against himself/herself, as his or her frustration (owing to the prohibition) cannot be channeled anywhere else. From now on the subject identifies herself through a certain identification with the object of desire by which she places herself in the position of the accused. This idea of melancholy contains the embryo for the idea of the *superego* that Freud elaborates in "The Ego and the Id" (1991). The formation of the

²Take, for example, her statement that the incest taboo is challenged either *from within* by the incest itself or *from the outside* by alternative organizations of sexuality (see Butler 2004, p. 158).

³The concept of passionate attachments is formulated by Butler in *The Psychic Life of Power*.

superego (via the so-called ego ideal) begins to relate and judge itself in relation to the surrounding world (Butler 1990: 61). We can therefore say that the subject's conception of itself is produced by the phantasmal superego directing its gaze at something that the subject believes itself to be, but that is actually the retained object of desire. Or as Butler herself writes, "melancholic identification permits the loss of the object in the external world precisely because it provides a way to *preserve* the object as part of the ego, and, hence, to avert the loss as a complete loss" (Butler 1997: 86). And to Butler, this can also be applied to the understanding of the constitution of gender:

Consider that gender is acquired at least in part through the repudiation of homosexual attachments; the girl becomes a girl through being subject to a prohibition which bars the mother as an object of desire and installs that barred object as a part of the ego, indeed, as a melancholic identification. (Butler 1997: 136)

Butler's point is thus that the positions made available by the heterosexual matrix rid themselves of homosexual passionate attachments without fully ridding themselves of the desire, albeit, with the prohibition of incest, now as a matter of desire grounded in identification. As Butler says, the heterosexual man becomes "the man he 'never' loved and 'never' mourned," just as "the heterosexual woman *becomes* the woman she 'never' loved and 'never' mourned." The heterosexual system thereby stands out as a system that fundamentally represses the lost homosexual attachments, which is why the loss, according to Butler, should be described not merely as not mourned but as in fact not possible to mourn. Thus, what Butler does is to translate Freud's idea of melancholy into a matter of the constituting of gender. But this is not all, for at the same time she seems also to imitate Freud's deduction of a fundamentally incestuous desire from the very existence of the universal taboo against incest – in the same manner the identifications and desires of the heterosexual matrix should point beyond itself and a more original homosexual desire should be able to be derived from the normative prohibitions of this matrix. And, according to Butler, psychoanalysis ultimately does not promote our understanding of this exclusion. On the contrary, it often participates in the heteronormative dismissal of homosexual passionate attachments, not least in the intimate relation, structurally influenced psychoanalysis established between the universal incest taboo and the symbolic positions of the mother and father. In this she maintains that psychoanalysis tends to get stuck in a binary fantasy that misjudges society's social variability and how it is always shaped in contingent processes and practices. Of course, this is also the problem with the psychoanalytical idea of the fundamental importance of sexual difference, and though the conflict between Butler's and Žižek's theories touches on many issues, we are here focusing the discussion on their views on the prohibition or the forbidden, on the one hand, and sexual difference, on the other.

8.4 Excluded Alterity as Positivity or Difference

Continuing the analysis of the excluded in Butler and Žižek, what is problematic about Butler's position, according to my reading of Žižek, is that the excluded is given a positive, symbolic determination by Butler, whereas Žižek tends to give it a negative status. Here we see the gap that distinguishes Žižek from Butler, for while Butler discusses an excluded symbolic position (the homosexual position) and the "hegemonic" struggle between excluded and hegemonic norms, Žižek discusses the excluded real as a kind of boundary or difference that simultaneously enables and renders impossible all symbolic struggle. Therefore, according to Žižek, this difference can ultimately be seen as "quasi-transcendental," and as such it seems to assume the place of something *prior* to the political struggle, as what *originally* gives this struggle its form. Indeed, it is precisely when Žižek speaks of sexual difference in terms of this quasi-transcendental difference that Butler criticizes his argument in *Contingency, Hegemony, Universality*. In particular her concern is with the status that the difference or the limit is given in his work. For when this origin is clad in the heteronormative garb of sexual difference, Butler can only interpret it as the support for heterosexuality. After all, there is probably no more effective theoretical support for heterosexuality than sexual difference beginning to be regarded as unavoidable (Butler et al. 2000: 143). Once again heterosexuality seems to have been assigned the status of a substantive support for the human symbolic order.

For our purposes it is important to recognize that with this criticism Butler rejects Žižek's view of sexual difference as simultaneously being a product of the symbolic as well as marking a surplus of the symbolic order. Starting out from one of Žižek's more sensitive readers, namely, Rex Butler, we should be able to understand this rejection as an indication of a more deeply rooted problem complex in Žižek's text, as a symptom of a certain incompatibility or incomprehensibility. In this context, Rex Butler (2005) highlights how Žižek is constantly oscillating between accusing other interpreters of Lacan (such as Butler and Laclau) of both, confusing the difference between the symbolic (the empirical) and the real (the transcendental), and also keeping apart the symbolic and the real in a manner that makes them abstract. However, in parallel with his accusations, Žižek himself silently oscillates between sometimes finding support in a position where he keeps them separate and sometimes collapsing them into each other. This oscillation leads Rex Butler to question the fruitfulness of the critical exchange between Žižek, Laclau, and Judith Butler in their coauthored *Contingency, Hegemony, Universality* (Butler et al. 2000) – in other words, to doubt the meaningfulness of the confrontation between the three of them. In opposition to this critique, I have in previous work demonstrated how this oscillation is by no means a blind spot in Žižek's work. On the contrary, it conforms to his way of thinking about the intersection of the symbolic and real in terms of a productive short circuit. Rex Butler is not alone in failing to acknowledge the theoretical implications of the role of the short circuit in Žižek's work; it also seems to elude Judith Butler in her criticism of Žižek's talk about sexual difference.

In this context it is instructive to look more closely at how Judith Butler and Žižek formulate their respective notions of the excluded in relation to Hegel's concept of "concrete universality." We can here note that Butler's definition of the universal primarily works on the symbolic level *as that which excludes*, whereas to Žižek the universal is the real and thus, rather, appears as that which *is the excluded*.⁴ This means further that if Butler often discusses the boundary between different competing universalities, Žižek, on the other hand, discusses a certain universal limit that cuts across all identity *regardless of whether the identities are dominant or dominated*. In ontological terms, this means that we see in Butler a number of different discourses that compete for the right of definition in a particular context, while in Žižek we have only *one* discourse. If discourse and universality in this sense often seem to coincide in Butler (insofar as the universal is a universal discourse to her), in Žižek they are strictly separated, as the only thing truly universal, as he sees it, is the limit that cuts across and makes all discourse (im)possible. Of course, the limit also plays a vital role in Butler's work, but she never defines it as universal. For her, the limit or difference is that which always already splits the universal order from within, and insofar as she uses the term "universal," she seems to reserve it for the contingent symbolic content, while difference remains on the side of form. Thus, the limit/difference appears as "the other" of what is concrete.

These disparate perspectives on the universal then affect their interpretations of the Hegelian idea of "the concrete universal." According to Butler, the meaning of this concept is a pliant or plastic universal, always open to renegotiation and expansion. Thereby the central issue is to maintain the openness of this universal for the purpose of being able to expand it. The point of Žižek's discussion is completely different. To him "concrete universality" rather stands for *a concrete symbolic expression* of the fundamental conflict between the symbolic and the real. That is, it is an impossible positivization or symbolic embodiment of that which the symbolic cannot grasp and which Lacan terms the *Thing*. And this is where Žižek situates sexual difference. Not as an instance of heterosexual prohibition against homosexuality or any other specific form of sexuality, but as an expression of the inevitability shared by all symbolic order.⁵

⁴As we will see later on, things are a little bit more complicated in Žižek's text insofar as sexual difference as concrete universality is paradoxically both real *and* symbolic.

⁵As such an expression, Žižek's upward reevaluation of sexual difference is framed somewhat differently than the formulations offered by Rosi Braidotti in *Transpositions* (2006). Braidotti's position is based in a Deleuzianism that sees itself as breaking with the territorializing logic and desire of metaphysics. What is fundamental to her position is the rejection of any form of negative ontology, including all notions of transcendence and absence, in favor of an affirmative or confirmatory movement. Among other things, this means that she embraces sexual difference as affirmative difference. Here the plane of immanence is primary, and difference is understood as being one between elements or moments on this plane. Insofar as Braidotti's argument interrupts the Imaginary belief of phallogocentrism, her position parallels Žižek's. Like Braidotti, Žižek affirms the concrete character of sexual difference as a symbolic-material process of becoming – or as an intelligent flesh-mind-matter compound – and rejects the masculine logic of transgressive desire that feeds on imaginary beliefs in, for instance, Woman and an enjoyment beyond the symbolic. Nevertheless, while Braidotti is quite uncompromising in her refusal of negativity, Žižek ulti-

This is critical to Žižek's critique of Butler's idea of the excluded homosexual passionate attachment, whose exclusion, according to Butler, thereby establishes the heterosexual order (just as fantasy established the symbolic according to Žižek). As mentioned, Žižek accepts Butler's idea that subjectivity emerges from the *foreclosure* of an original attachment, but he maintains that her interpretation of the psychoanalytical concept of foreclosure differs from his own reading. More precisely, the question here is what kind of attachment we are speaking of? To Žižek, as we have already implied, the originally excluded is not a concrete symbolic content but rather some "real" that for structural reasons eludes all symbolic determination. It is an attachment between the symbolic and the real, a relation (or rather a non-relation) that the symbolic itself cannot grasp and which therefore must be at least partially excluded from its economy. Butler, on the other hand, discusses the foreclosed as a new symbolic relation, for example, the homosexual relation, a line of reasoning that Žižek sees as running the risk of masking the universal impossibility inherent in all symbolic order (Žižek 1999: 265).

The problem that Žižek is addressing here goes back to Butler's way of dealing with the very relation between the symbolic order and desire, a relation which in Butler's account – as in Lacanian psychoanalysis more generally – is dealt with in terms of the relation between the *symbolic law* and *prohibition* and *desire*. My interpretation is that the problem with Butler's argument largely involves a conflict between her Foucaultian view of desire as simultaneously forbidden and produced (which broadly coincides with the Lacanian relation between the symbolic law and desire) and the ontological status she assigns to the excluded, as a positive presence within the symbolic, as "an unthinkable" "completely within the culture but entirely excluded from the dominant culture" (Butler 1990: 77). For if we are to speak of a Thing that is forbidden so that desire cannot arise, can we then assign it the positive form of homosexuality? This is the very point of Žižek's Lacanian interpretation of the Thing that castration rids itself of: it does not exist, has never existed, and never exists in any positive sense. As such it is neither relevant to treat it as something which requires recognition or space. If anything is to be acknowledged, it is the absence of any positive form of this Thing. To be castrated in a radical sense – that is, *separated* in accordance with Lacan's terminology – does not entail, according to Žižek, that the subject is deprived of something, but that she has always already lost this Thing insofar as this loss is the very condition of (im)possibility of all symbolic existence. What the subject must therefore rid herself of at all cost is, just as

mately embraces sexual difference precisely as an embodiment of what he sees as the fundamentally negative nature of all existence. Thus, if sexual difference for both Braidotti and Žižek embodies something real or universal insofar as it interrupts the Imaginary, Žižek's challenge of this Imaginary is in the last instance not based in Braidotti's Deleuzian notion of sexual difference as a substance or plane of immanence, but on the Hegelian-inspired notion of sexual difference as identity in difference – insofar as the subject in that which is sexually different encounters something which is more in herself than herself.

Butler says in her criticism of Lacan, the imaginary dream which confuses this Thing with a pre-discursive thing.⁶

This may be where Butler encounters problems with her idea of excluded homosexuality. For is this idea not tending, despite Butler's Foucaultian view of desire, to resemble the Freudian notion that behind every prohibition there must lie a concrete desire? What the Žižekian position brings to the surface is how her fixation with the question of particular sexualities that are excluded via prohibition draws attention away from the question Žižek finds so important, regarding how desire is produced, more generally regardless of its concrete form, and, not least, how desire is always already produced through a certain exclusion – not of something else but of something that is – to use a standard Lacanian formulation, “more in desire than desire itself.” Of course Butler follows Lacanian analysis insofar as she discusses the passionate attachment to same sex relations as something disavowed or repressed by the symbolic order. However, her reading of this “more” in terms of the homosexual desire unfortunately tends to translate this desire into a desire outside the symbolic law or, to an essentially other desire, a proposition that would be theoretically awkward for any politics that seeks to reconfigure the symbolic order to encompass previously excluded desires. In contrast, we might therefore note that Žižek sees the exclusion of this “more” as productive, and even radical. Of course this does not imply that he conceives the exclusion of homosexual desire as radical, since in his account of disavowal no specific form of desire can be exchanged with the disavowed. Rather, disavowal is a fundamental feature of all desire.

Perhaps this difference between Žižek's and Butler's respective positions on the disavowed is best illustrated through the case of Butler's concern with the question of productive prohibition in relation to the function of the heterosexual matrix. In this sense, the incest taboo, as she discusses it in *Undoing Gender*, comes to be threatened or challenged *from within* by the incestuous act or *from outside* by “alternative sexualities” (Butler 2004: 158). This way of formulating the matter implies that alternative desires do *not* seem to work from within the incest taboo. Thus, alternative desire – in contrast to normative sexuality – would not appear to be grounded in the fundamental distinction of the symbolic law. Likewise, Butler's reasoning forces us to draw the conclusion that alternative desires do not presuppose that particular loss that heterosexual desire requires in order to emerge. Alternative sexuality in other words emerges as a complete form of desire not affected by the cut of castration. And perhaps it is this that Žižek's critique warns us against, an implicit idealization of the alternative position in which the relation between prohibition and desire is obscured.

⁶In this context it might be instructive to introduce the distinction in Lacanian psychoanalysis between the Thing and the fantasy object, *objet petit a*, where the latter precisely embodies or fills the absence of the Thing. When Lacan in his seminar on ethics delivers his most important account of the role of the Thing in the psychoanalytical experience, he does so through his famous example of the discourse of courtly love in which the Lady is raised to the level of the Thing. In that sense the Thing could be described as the structural condition of (im)possibility of all symbolic order, while the fantasy object is part of the subjective effort to manage the traumatic presence of this Thing (for example, by way of substituting the concrete Lady for it). See Jacques Lacan (1992).

To be fair to Butler, it follows from her text that idealizations of homosexuality theoretically speaking (if not politically) are just as problematic as those of heterosexuality. And she would be able to support this by pointing out that the very linchpin in her theoretical position has always been the emphasizing of the open character of sexuality and how desire is always already produced in a dialectic between different forms of prohibitions. Indeed, this open character of sexuality can perhaps be said to constitute the very background to all of her criticism of the heterosexual matrix, something that is supported by her view of “concrete universality.” But this only ostensibly leads out of difficulty. For if such an open universal order were possible, the very idea that desire is produced via prohibition would appear to be not entirely necessary. Indeed, why should an open universal order require an excluded opposite? For if Butler insists on a necessary exclusion in this sense, is she not then ironically providing support precisely for what is problematic in the heterosexual matrix? Her idea of the dialectic between law and desire seems in this context to be irreconcilable with her view of the universal. And the problem seems to spring from the unclear relation in her formulation between the openness of the symbolic field, its limit, and that which is prohibited. For instance, her whole discussion of “*resignification*” (the primary example of which is the phenomenon of *drag*) gives us the impression that there is a closure of the discourse that can be opened up. But at the same time both resignification and the open universal are made possible precisely by a limit that splits the discourse from within. It is the intimate relation between this limit – the relation of which to the dialectic between law and desire Butler seldom discusses – and prohibition and the symbolic that Žižek seeks to approach in his discussion of sexual difference. For his idea is that the subject encounters the inner, real limit of all symbolic economy in the object of desire – that is, in this object he or she stands face to face with something that in an original sense cannot present itself without this mysterious and negative mediation.

It is in the light of these issues that we should see Žižek’s privileging of sexual difference and his criticism of Butler’s idea of homosexual passionate attachment. Let us first say that this privileging does not mean that he sees the heterosexual relation as more true or radical than the homosexual. What interests him with sexual difference is its potential of being a symbolic expression that in itself expresses that universal impossibility which he claims is shared by all symbolic order and identity (homosexual, heterosexual, or otherwise). The point of his criticism of Butler involves the fact that homosexual passionate attachment as she discusses it masks rather than expresses this impossibility. In this sense, Butler tends to remove alternative sexuality from the problems attached to desire in the heterosexual matrix. It is here that Žižek draws attention to Butler’s formulation that what heterosexuality has excluded can be described as a more original homosexual passionate attachment to a “same,” a formulation which seems to suggest that it is possible to somehow deduce a forbidden desire mirroring the form of heterosexual desire. According to Žižek, the problem with this thesis is that it does not problematize the passionate attachment per se and that it then loses sight of how all attachment always in advance encompasses an “other” and, perhaps especially, *an unbridgeable gap to an “other.”* Žižek thereby rejects Butler’s idea of a fundamental homosexual attachment in the

heart of heterosexuality. Put differently, as Sarah Kay points out in her discussion of Žižek's critique of Butler, the very identification of a "same" is implicitly predicated upon this "same" having already been separated from something else (Kay 2003: 98) and that this fundamental fact must be understood in terms of a sexual difference (Žižek 1999: 271). In that sense, homosexuality is not of necessity more original than heterosexuality. According to Žižek, homosexual desire, in ways similar to heterosexual desire, masks a fundamental phantasmatic scene in which the subject's relation to the Other is played out before the imaginary gaze that oversees and gives the subject its support. Through the notion of the original and concrete homosexual attachment, Butler plays into the hands of this (impossible) gaze and participates in its masking of what he considers as a more original *dis-attachment* (Žižek 1999: 289). And it is then this *dis-attachment* that sexual difference expresses, that is, the fact that each identity emerges together with an object of desire that it can never entirely integrate, that in relation to the subject remains always already alien or "other."

8.5 Sexual Difference as Real Universality and Radical Repetition

To say that sexual difference expresses the necessary *dis-attachment* or deadlock that accrues to all symbolic order and subjective experience is another way of saying that the deadlock presents itself via fantasy that according to Lacanian psychoanalysis grounds the symbolic order. In relation to this notion of fantasy, it is crucial to note how according to Žižek it – as part of the act of castration – opens up the symbolic, including its very openness. Žižek's criticism of performativity as such is thereby not directed at Austin's notion that "we do things with words" or the constructionist notion that reality is something we constantly have to reproduce for it to be coherent. But, as mentioned, to Žižek this doing (the performativity of the symbolic) is predicated upon a more fundamental act or dimension, which in itself is originally divided. It is at this point in the reasoning that we can formulate a response to Rex and Judith Butler's joint critique of Žižek's – as they see it – mixing of levels. For Žižek's statement that sexual difference must be regarded as pre-discursive can be explained by the very fact that to him it expresses the original conflict that all symbolic existence must go through in order to constitute itself; it is universal when it expresses in its own structure the universal deadlock in the relation between the symbolic and the real. And at the same time this pre-discursiveness is not to be likened to the formalism that Žižek criticizes in Judith Butler. The similarity, of course, is that both sexual difference and Butler's limit express something negative and as such constitute the boundary of the symbolic as well as its productive condition. But the difference is that Butler's limit remains an abstract background to action in the symbolic, while Žižek makes it an act in itself, as the positing of fantasy. This act is like Butler's limit impossible.

However, in contrast to the formal character of this limit, it is crucial for Žižek that such a limit is originally part of a positing act insofar as we have no structural limits outside action.

This also entails that their political strategies are different. The logic in Butler's deconstructive perspective is to strive for openness, in an infinite expansion of the universal through renegotiations of the meaning of the universal. It has already been implied above that Butler's formulation of the radical performative act – via ideas such as those about *drag* and *resignification* – constitutes, according to Žižek, part of the problem with her theory. Butler has at least partially responded to this criticism, maintaining that these strategies should not be seen as the only form of radical political action. Nonetheless, the above reasoning points to the fact that they derive from the way Butler deals with the relation between the symbolic, the real, and sexuality. And if Žižek accuses these strategies of only intervening in the content of the fundamental imagination and not being capable of addressing its form, we should understand this criticism against the background of what we have adduced above in our reading of Butler. To Žižek, *drag*, for example, aims to create a noticeable distance between the subject's action and the heteronormative rule that this action stages and by this symbolic renegotiation to disrupt the norms in question. But the expansion of the universal that constitutes the goal of this operation is easily captured, according to Žižek, in fantasy about the opposition between the subject and the law and the belief, associated with this fantasy, in a possible liberation in relation to the law. In the performative act, we still have a subject that is actively disrupting the law. Behind the Žižekian act, however, stands no subject at all, as the subject only exists in and through the deadlock of fantasy. This deadlock is actually the distinction that grounds subjectivity and already contains everything within it. The idea here is that fantasy does not only protect itself through stability. On the contrary, perhaps its most effective protection is its constant elaboration or, to use Foucault, reformation. Therefore, against practices like *drag*, Žižek posits sadomasochistic performance art in which the subject's phantasmatic relation to the object is repeated without being disrupted. The point would be that this repetition does not disrupt fantasy symbolically. At the level of content, nothing is changed, and it is in this way, by allowing the form to speak, that repetition directly exposes the subject's relation to the law. In this sense, the act – as Žižek says in *Enjoy Your Symptom!* – always has the form of a repetition, where what is repeated is the emergence of the law and the entry of the subject into the symbolic via castration (Žižek 2001: 77). In this repeated act, the subject then returns to the coercive choice of castration that constitutes both the subject and the symbolic. As mentioned, this return cannot be described as active. Žižek rather sees it as something incomprehensible to the subject that assumes the role of an "alien body" in his or her consciousness and where identification with this body can only have the form of an impossible encounter, a short circuiting that places the subject out of joint with itself (Žižek 1999: 374). As such, repetition hardly allows us to understand the symbolic in any univocal sense. If Butler's parodic strategy relies on a certain emancipation from the law, while Žižek's repetitive act works entirely within that law, paradoxically it is precisely this total identification that enables a break with fantasy and a kind of liberation from its

grip, which Žižek describes less as a liberation of the subject than as a kind of “subjective destitution” (Žižek 1997: 177).

8.6 Unyoking Sexual Difference: beyond the Forced Choice of Politics or Apolitics

If Žižek’s notion of the act never seeks to go beyond the structure of fantasy, we might perhaps conceive it as a kind of shadow to what Butler terms as performativity. For if fantasy is “traversed” by the act, this is neither done by a subject who goes beyond fantasy nor is there any actual dissolution of fantasy in this act. On the contrary, the act in Žižek’s work must be thought of in terms of a relinquishing of the very beyond of fantasy, and it is precisely this relinquishing that marks his account of psychoanalytical concepts such as “castration” and “separation.” In this sense, his work can also be regarded as an extension of Derrida’s idea that we can never go beyond metaphysics. Like Butler, Žižek is interested in what our social structures exclude. But the advantage with Žižek’s formulation seems to be that it keeps its terms empty of content, whereas Butler’s argumentation seems to be infiltrated by a confusion between the excluding and an excluded content, which leads to an implicit idealization of the excluded (the excluded sexualities seem to be charged with a subversive but obscure potential, which is lacking in heterosexuality). For that matter, perhaps we could say that something similar is found in Butler’s idea of the limit, which is broadly reminiscent of Derrida’s “condition of (im)possibility” as that which simultaneously makes the discourse possible and embodies that which discourse can never grasp. As we have seen, this limit functions as a background to how her concrete universality is formed. But the relation between this necessarily concrete universality and the law’s prohibition remains obscure, as shown above, and with this the issue of the role of the political in her theory also becomes unclear. We might even be in a position to venture the thesis that this obscurity is essential to the model she leans on in her critique of how sexual difference is used in Lacanian analysis, a model that according to Butler is predicated upon the opposition between the finite and contingent limit of the heterosexual matrix and the necessary and infinite variability of sociality. What is worth noting is that Butler’s own “solution” (the concrete universal) seems to be caught in an unclear position between this infinite variability and the temporary fixation of the former, stuck in an impossible quest to open up a desire that always already is produced via the prohibition of the law. Openness thereby becomes a kind of infinite but also impossible *telos* that concrete universality, like desire, can never attain. In other words, concrete universality in Butler’s text remains a universality plagued by what Hegel termed spurious or “bad infinity.” And if Žižek contributes anything to this discussion, it is by forbidding this unattainable infinity by *treating the prohibition itself and the contingent, totalizing act as the place of the real in the symbolic*. In this way, he shifts the perspective on the very idea of totalization of the symbolic and of its desire. Totalization

is here no longer equal to a totalizing signifier or a simple prohibition that fixes the symbolic order and that we – via a gesture of deconstruction – can then break down or open up.

In order to understand the originality of Žižek’s version of Lacanian psychoanalysis, we must here insist on a crucial feature of his thinking, which I have addressed in my previous work on his notion of fantasy (Palm 2007), that is, his idea that all symbolic order is based in an act of totalization that bears the basic structure of fantasy. That is, this act of totalization – which simultaneously is the act of fantasy – is not merely a false or imaginary instance, but a more radical short circuiting between positive being and negative absence. Often it seems as if “fantasy” in his work is closer to something we might call an unconscious act than a subjective defensive structure in the traditional sense. Also, as a totalizing act, it is not a secondary act which merely totalizes a contingent field of matter-signification, but the very instance that conditions such matter-signification in the first place precisely through its characteristic short circuit of negativity and positivity.

If then there is an unyoking of sexual difference in Žižek’s work, this unyoking has to do with the short-circuited character of fantasy which sexual difference here embodies. That is, sexual difference in this context is a way of inscribing something that is simultaneously necessary and impossible to account for into the political ontology on which we rely on in any political struggle. Sexual difference marks the fact that all politics is rooted in a certain apolitical, arbitrary, or unmotivated gesture yet without any strict symbolic or political content. Other to politics, albeit always already politics. Politics and not politics. Law and not law. This is what seems to be alien to Butler, imagining an apolitical dimension of the prohibition itself. Perhaps we can say that this is what distinguished Butler from Žižek, who, in terms of prohibition, can indeed be said to experiment with a purely apolitical figure in his work with the structural deadlock between the symbolic and the real. My interpretation is that this deadlock, which is crucial in his understanding of sexual difference, is not yet political in his text, but on the contrary must be kept separate from the political struggle, in the same way that antagonism must be kept separate from the field of political struggle in Laclau and Mouffe’s political theory on hegemony (1985). And although we surely never encounter sexual difference outside the political or symbolic order of the law, its radical function is to mark an apolitical excess to this law.

The argument for such an apolitical dimension seems to stand in stark contrast to that of fantasy’s short circuiting of the real and the symbolic. For how can we simultaneously maintain this apolitical and, as it were, timeless dimension of fantasy if fantasy only appears through concrete (social, political, etc.) short circuits between the symbolic and the real? It is this conflict in Žižek’s theory which Rex Butler (2005) has targeted in his reading of Žižek. My thesis, however, is that this conflict must be regarded as constitutive of Žižek’s fundamental lines of thought. Unlike Rex Butler, I maintain that we cannot privilege the simultaneity of the real and the symbolic over this apolitical dimension’s quasi-transcendental status (or vice versa). On the contrary, we must read the very conflict against the background of the short-circuited character of fantasy: every political act contains within it and is made possible by a certain apolitical and timeless instance that nevertheless takes place

only through concrete symbolic expressions. In that sense, Rex Butler misjudges something fundamental in Žižek's text when he claims that Žižek, in his oscillating between these incompatibilities, fails to fully think through the simultaneity of the real and the symbolic (Butler 2005, 132). Indeed, I would argue that when Žižek speaks of something prior to the symbolic or a pre-symbolic, he is referring to this fantasy space or as he in Deleuze's words has put it "philosophical time." Again, this is precisely what Judith Butler's critique of Žižek ignores. For a feminist position developed in accordance with Žižek's standpoint on sexual difference, the vital point would of course not be to reject the notion of the heterosexual matrix's prohibition of homosexuality or to claim the primacy of the heterosexual relation – something which, for instance, Salamon argues that sex difference feminists like Irigaray and Grosz have tended to do. The claim that I have advanced throughout this chapter is that Žižek's position on sexual difference, rather than insisting on the primacy of tropes such as heterosexuality, masculinity, or femininity, highlights the question of how to account for the universal and apolitical dimension of the symbolic law. The claim is that we need to form a political ontology that acknowledges this dimension and that the case of Butler ultimately presents us for possible problems that a theoretical position that does not acknowledge it gets caught up in. Žižek's critique shows us how her all-out or total politicization of prohibition leads to a total politicization of desire, whereupon we must *either* accept that desire is of strict necessity repressive (i.e., excluding in relation to some other which we then might not refer to in terms of another desire) *or* postulate this exclusion as non-necessary so that we are forced to conceive a desire beyond prohibition (and thus we lose sight of the simultaneity of law and desire). With his simultaneous view of prohibition as negative and positive, apolitical and political, Žižek breaks with the obscurity of Butler's "concrete universality" that believes itself to be on the way to an illusory openness that it for structural reasons will never be able to attain.

In conclusion, I would claim that Žižek's position on sexual difference could offer feminist theory a path that simultaneously reckons sex difference feminists insistence on the symbolic-material conditions for any sexual politics and the feminist critique of the essentialist tendency among sex difference thinkers to reify and naturalize categories such as heterosexuality, masculinity, and femininity. The trick of Žižek's position is to maintain the gap between contingency and necessity, particularity and universality, symbolic and real while not maintaining any strict gap between the symbolic and reality or text and materiality. This means that his perspective presents us for a theoretical account that embraces new materialist concepts such as text-matter, material-semiotic, flesh-mind-matter compound, and so on, but only insofar as these are viewed as structured around a certain universal real. The problem with sex difference thinkers like Braidotti, Grosz, and Irigaray, from the perspective of this Žižekian position, would be that *they tend to confuse necessity with the material, bodily aspects of sexuality*. As Salamon's critique of Irigaray and Grosz shows, this often leads to a relapse into a theoretical position where femininity, masculinity, etc. are essentialized. And if I initially referred the reader to Braidotti's "nomadic feminist project," we might here also note how this concept of "nomadic feminism" repeats the very same confusion even though she explicitly

states that her notion of the feminine as a “movement of destabilization of identity and hence of becoming” (Braidotti 2006: 183) marks a clear break with the essentialism-constructivism impasse. To quote a passage from Braidotti’s *Transpositions: On Nomadic Ethics* where she comments on Genevieve Lloyd’s *Part of Nature: self-knowledge in Spinoza’s Ethics*:

Given that the mind is the actual idea of the body, sexual difference can reach into the mind as the mind is not independent of the body in which it is situated. If bodies are differently sexed, so are minds [...] Lloyd stresses the continuing relevance of sexual difference, against the theoretical illusions of an infinitely malleable, free floating gender. Grounded and situated, sexual difference as a mode of embodied and embedded actualization of difference shapes the space-time continuum of nomadic subjectivity. (Braidotti 2006: 185)

Now, to what extent does this passage interrupt the essentialism-constructivism impasse? Does it not, on the contrary, reinforce this impasse precisely insofar as it opposes the necessity of bodily sexual difference to the relativism of constructions? I would argue that this line of argument – despite the nomadic insistence on substance as a process of becoming – maintains the traditional dualism between sexual difference as material necessity and mind, as well as the impasse between theoretical positions that recognize materiality and those trapped in the postmodern myth of gender as a mere cultural process of signification (“free floating” of course associates to postmodern thought). To support this claim I think it suffices to recount Claire Colebrook’s statement that for nomadic feminism, it is not the fact of sexual difference but its denial by postmodern theory that is the actual or real problem (Colebrook 2000). Thus, even if sexual difference theorists explicitly propose that we place materiality and textuality on the same level, they still tend to reproduce the opposition between these traditional opposites to the extent that they keep placing materiality more on the side of necessity than textuality. In contrast, I would claim with Žižek that sexual difference is indeed a symbolic-material process, but one which crucially embodies the very condition of (im)possibility of our emergent reality. As such it is never a simple or unproblematic fact, but is rather an inherently problematic and passionately invested way of orientating ourselves in the world.

As my account of the Butler-Žižek debate probably reveals I am not entirely convinced of the Butlerian alternative to sexual difference theory. Not primarily because she fails to break out of the postmodern belief in the free play of signification. Here I agree with Vicky Kirby’s comment that the most challenging and fruitful dimension of Butler’s theory lies in her early insistence that there is nothing outside discursive performativity (Kirby 2011). In the same sense, I would maintain that it is necessary to acknowledge that there is only one world. In this context, this means that her account in relation to sexual difference is challenging only insofar as it doesn’t stray beyond the necessary bond between desire and law. Consequentially she gets into all kinds of problem when she tries to sketch the contours of those alternative or radical points of resistance-desires that somehow seem to operate from outside this law-desire. It is precisely at this point that she in the same vein as sexual difference theorists confuses the real with a positive and outside-discursive content and loses sight of the real as a structural condition of (im)possibility. And if there is validity to Braidotti’s critique of liberal American feminist theory, it would

in this context perhaps be that the critique of sexual difference theory appears to experience itself as potentially free from the constraints of some real and to argue from a position that idealizes certain alternative positions in the sexual terrain and somehow tends to obscure these alternative positions' actual relation to the dialectics of law and desire. Indeed, it could be argued that such idealizations of the margin stand closer to the power structures that they seek to subvert than they would prefer.

My reading of Žižek's position on sexual difference suggests that we should not use it as a concept to materially separate what is masculine from what is feminine in order to sketch a radical femininity (like sexual difference theorists do). Rather I have tried to show how Žižek unyokes sexual difference from the reification of heterosexuality. In that sense this unyoked sexual difference could function as a theoretical tool against sexual and gender oppression. However, this is not a theoretical position that seeks to map out alternative desires outside the existing symbolic order or law. On the contrary, we should, according to the argument developed in this context, insist on the way in which the unyoked sexual difference presents us for a condition that all subjectivity and political struggle share and which all such struggles need to acknowledge. Not because all struggles are the same or because every struggle is a common struggle, but since it is crucial to embrace this condition in order not to once again relapse into new forms of oppression and idealization. In this sense, Žižek's formulation of sexual difference might function as a productive intervention in current theoretical debates on how feminist political action (in both theory and practice) could be rethought in relation to the deadening essentialism-constructivism impasse.

References

- Austin, J. L. (1975). *How to do things with words*. Oxford: Oxford University Press.
- Braidotti, R. (1997). Comment on Felski's 'The doxa of difference': Working through sexual difference. *Signs*, 23, 23–40.
- Braidotti, R. (2006). *Transpositions. On nomadic ethics*. Cambridge: Polity Press.
- Butler, J. (1990). *Gender trouble: Feminism and the subversion of identity*. New York: Routledge.
- Butler, J. (1997). *The psychic life of power*. Stanford: Stanford University Press.
- Butler, J. (2004). *Undoing gender*. New York: Routledge.
- Butler, R. (2005). *Slavoj Žižek: Live theory*. New York: Continuum.
- Butler, J., Laclau, E., & Žižek, S. (2000). *Contingency, hegemony, universalism: Contemporary dialogues on the left*. London: Verso.
- Colebrook, C. (2000). From radical representations to corporeal becomings: The feminist philosophy of Lloyd, Grosz, and Gatens. *Hypatia*, 15, 76–93.
- Deleuze, G., & Guattari, F. (1994). *What is philosophy?* London: Verso.
- Freud, S. (1991). The ego and the Id. In A. Richards & J. Strachey (Eds.), *On metapsychology: The theory of psychoanalysis*. Harmondsworth: Penguin Books.
- Gatens, M. (1995). *Imaginary bodies: Ethics, power and corporeality*. London: Routledge.
- Haraway, D. (1988). Situated knowledges: The science question in feminism and the privilege of partial perspective. *Feminist Studies*, 14, 575–599.

- Holmberg, T., & Palm, F. (2009). The body that speaks the gap. In J. Bromseth, L. F. Käll, & K. Mattsson (Eds.), *Body claims* (Crossroads of knowledge series 9). Uppsala: Centre for Gender Research.
- Irigaray, L. (1985). *Speculum of the other woman*. Ithaca: Cornell University Press.
- Kay, S. (2003). *Žižek: A critical introduction*. Cambridge: Polity Press.
- Kirby, V. (2011). *Quantum anthropologies. Life at large*. Durham: Duke University Press.
- Lacan, J. (1992). *The ethics of psychoanalysis*. London: Routledge.
- Laclau, E., & Mouffe, C. (1985). *Hegemony and socialist strategy*. London: Verso.
- Palm, F. (2007). *Det Odödas Analys. Om Centralproblematiken i Slavoj Žižeks Samhällsanalys* [Undead-analysis: On the Social Theory of Slavoj Žižek]. Uppsala: Acta Sociologica Universitatis.
- Salamon, G. (2010). *Assuming a body*. New York: Columbia University Press.
- Žižek, S. (1997). *The plague of fantasies*. London: Verso.
- Žižek, S. (1999). *The Ticklish subject: The absent centre of political ontology*. London: Verso.
- Žižek, S. (2001). *Enjoy your symptom: Lacan in Hollywood and out*. London: Routledge.

Chapter 9

GenNa: Nature/Culture Boundaries and Transgressive Encounters, Programme of Excellence in Gender Research 2007–2012

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9.1 Afterword

The Centre for Gender Research at Uppsala University was established in 2003 to serve the whole university. It was given the assignment by the university board to develop research on both social constructions of gender and biological aspects. In 2003 this was controversial among gender scholars in Sweden who feared that it would bring back essentialism, taking gender studies back to an earlier stage. Time has shown the opposite; the bridging of scientific divides has characterized the development of gender studies in later years. In Sweden the GenNa programme has played a crucial role in creating new research groups, bringing together researchers from natural and medical sciences as well as the humanities and social sciences.

The GenNa programme as it investigated how gendered knowledge is produced in the borderland between the cultural and natural sciences has led to groundbreaking research which has changed the landscape of gender studies in Sweden. The aim to find links between theory and practice has been a focus in the GenNa programme which the contributions in this volume show. The research groups which focused on the relations between human and nonhuman animals, gender and science education, and gender and embodiment engaged researches with various backgrounds and previous experiences of work with gender issues. To transgress disciplinary boundaries and find a common ground to develop new research questions, which take into account both theory and practice, takes time. The “transgressive encounters” that were at the core of the GenNa programme made it clear that in order to bridge disciplinary boundaries, it is necessary to be sensitive to the different positions which are joined in the development of gender studies. Understanding interdisciplinarity in this sense is demanding. This is shown in Chap. 3 that describes a “failed

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encounter,” a seminar on fieldwork on gender and scientific excellence. The audience, a group of researchers in physics, did not see how the topic was relevant for their research. The lesson to be learned is the need to adapt to the audience. Instead of emphasizing the sociocultural aspects of gender passing over issues of biology, gender statistics and practicalities should have been highlighted. It is difficult to create contact zones between disciplines and this is also addressed in Chap. 4 in a contribution on how to bridge the divisions between animal studies, rural development, and gender studies. If one succeeds in doing this, the result is a better understanding, in this case of human-animal relations. In the GenNa programme, there was an ongoing discussion about the difficulties which face researchers who transgress disciplinary borders and that building contact zones requires training, response, and sustained interaction. In the GenNa programme, a seminar culture was built which consciously worked to develop transgressive discussions and meetings. Conferences and workshops made it possible for researchers from different fields and countries to meet and exchange experiences of interdisciplinary work with gender in focus. The GenNa programme stressed the importance of trying to understand and respect the knowledge of other researchers and to make differences an asset which would further new knowledge.

Engaging in interdisciplinary research changes the outlook of the researcher. In Chap. 2 the concept of “transgressive identities” is brought up as a way to understand research practices and positions. A transgressive identity is a way for scholars to engage in interdisciplinary research while being active agents in changing their disciplines. The personal histories show that as gender researchers it has been possible to influence science colleagues and as scientists to bring new knowledge to the gender research environment. The transgressive identity has given tools to challenge power structures and made it possible for researchers to be agents in changing those structures. The development and consciousness of a transgressive identity is a result of the GenNa programme.

Transgressive encounters create transgressive identities, i.e., researchers who bridge disciplinary borders and broaden theoretical concepts. Intersectional analysis is challenged in Chap. 6 as running the risk of stabilizing categories as it tend to ignore the body. An alternative way of theorizing intersectionality is looking at how identity categorization is inscribed in and on the body. Through the GenNa programme, body and embodiment were developed as important theoretical concepts in understanding gendered identities and power structures in practice. In this volume the findings of queer dissonances in Linnean botany as well as discussions on theories on sexual differences reflect the aim of the GenNa programme to develop theoretical discussions and to broaden the understanding of complex concepts. These contributions also link theory and practice, a core objective in the GenNa programme.

Questioning traditional academic writing has been a part of the GenNa programme where alternative ways of writing have been developed, thus broadening the concept of academic knowledge and communication. In Chap. 5 this means that academic writing takes on the form of a yoik. The traditional narrative/song of the

Sami people can express the content of the article in a way which is not possible using an academic style. Transgressive encounters demand transgressive writing.

The GenNa programme engaged many young researchers who were open to broadening their disciplinary outlook. They have, during the program, become scholars both in their original discipline and in gender studies. However, in academia today, this is not commonly appreciated which could lead to an academic dead end for the individual scholar. Taking on a “transgressive identity” is necessary to develop new research. This does not only apply to gender studies but to all research that aims to identify, understand, and develop solutions for societal challenges. Academia has not yet fully understood that disciplinary boundaries need to be crossed in new, innovative ways and that this must have consequences for the funding of research. It is of outmost importance that young researchers who have contributed to the development of interdisciplinarity are given the opportunity to continue transgressive research. The GenNa programme started a development in Swedish gender research which needs to be continued.