

**SKINS \ SCREENS \ CIRCUITS: HOW TECHNOLOGY REMADE THE  
BODY**

**CADENCE KINSEY  
UNIVERSITY COLLEGE LONDON  
PHD HISTORY OF ART**

I, Cadence Kinsey, confirm that the work presented in this thesis is my own.  
Where information has been derived from other sources, I confirm that this has  
been indicated in the thesis.

## ABSTRACT

This thesis is an analysis of the social, political and historical inter-relationships between moving image technologies, constructions of gender and sexuality, and theories of science and technology. Presented as a series of case-studies on film, video, medical imaging and computer technology in the work of five women artists, this thesis looks at the way in which artistic practice overturns traditional theories of technology as purely ‘instrumental’, theories of the subject in which identity is tied to the body, and the assumption that women do not access technology in a sophisticated way. It considers the various ways in which women artists have engaged with, and subverted, the explicit body in representation through deploying new moving image technologies at the historical moment of their widespread distribution across domestic, artistic, pornographic and medical spheres. It ends by asking what is the political potential in challenging the anthropomorphic and destabilizing the figurative through abstraction?

Beginning with an investigation into the way in which Carolee Schneemann uses the material properties of film to establish a haptic encounter, in which female and feline bodies are caught up in a sexual economy of touch (pet/petting), this thesis then looks at the work of Kate Craig and the mutual expansion of pornography and home-video technology, questioning the emergence of the ‘amateur’ in relation to theories of power and gender; offers a technological and philosophical modeling of medical imaging technology (taking endoscopy in the work of Mona Hatoum as a case study); and re-evaluates the use of binary in information systems *beyond* a limiting analogy with ‘Western binaries’ through the work of Nell Tenhaaf. Using the languages of art history together with science & technology studies, medical discourse and feminism, this research theorises gender, technology and medicine as systems of representation that are all deeply inter-connected.

## CONTENTS

Acknowledgements	5
List of Illustrations	6
Introduction: Technologies of Vision	10
Chapter One	
‘Petting and Personhood: Re-Framing Contacts in Carolee Schneemann’s <i>Fuses</i> ’	34
<i>Pet(ting)</i>	
<i>Tales and tails</i>	
<i>Touching others</i>	
<i>Frame breaks</i>	
<i>Unclean bodies</i>	
Chapter Two	
‘The Recursive Screen: Electronic Vision and the Body Image’	80
<i>Now?</i>	
<i>Reflection/reflexivity</i>	
<i>Feedback</i>	
<i>Video is vengeance of the vagina</i>	
Chapter Three	
‘Pathologising the Body: Mona Hatoum’s <i>Corps Étranger</i> ’	128
<i>The part-body and body parts</i>	
<i>Penetrating gazes</i>	
<i>The endoscope</i>	
<i>Strange bodies</i>	
<i>Textual bodies</i>	
Chapter Four	
‘The Somatic Matrix: Embodiment Versus “The Body”’	179
<i>Coded bodies</i>	
<i>Scaleless scale</i>	
<i>Biotech to info-tech</i>	
<i>Inter/face</i>	
<i>States of superimposition</i>	
Conclusion: Lo-fidelity Embodiment	219
Bibliography	232
Images	253

## ACKNOWLEDGEMENTS

I would like to thank the many individuals and organizations who have contributed to this thesis. In the first instance, I am grateful to the UCL Graduate School for generously providing the funds to complete this research, and to the following archives and art institutions for making their materials available: Electronic Arts Intermix; LUX; The Western Front; The National Gallery of Canada; Anthology Film Archives, especially Robert Haller; The White Cube; and the Centre Georges Pompidou.

For responding so thoughtfully to various draft chapters and articles I am deeply indebted to Carolee Schneemann; Vanalyne Green; Dr Peg Rawes at the Bartlett; Dr Richard Lyus MBBS BSc., at BPAS; Dr Lucetta Johnson at the Courtauld Institute; and Dr Thomas Morgan Evans at UCL. For all sorts of miscellaneous support along the way I must thank my PhD colleagues at UCL Art History and the staff, most especially Professor Briony Fer, Professor Fred Schwartz, Dr Rose Marie San Juan, Dr Alison Wright, and Dr Diana Dethloff.

My final thanks are reserved for my supervisors, Dr Frances Stracey, Dr Maria Loh, and Professor Tamar Garb, who have so generously contributed acres of time, intellectual support and encouragement over the years.

## LIST OF ILLUSTRATIONS

- 1.1 Carolee Schneemann, *Fuses*, 1964-67, 29:51 min, colour, self-shot 16mm film. Collection of Electronic Arts Intermix, New York.
- 1.2 Carolee Schneemann, *Plumb Line*, 1968-71, 14:58 min, color, sound, Super 8mm film. Collection of Electronic Arts Intermix, New York.
- 1.3 Carolee Schneemann, *Kitch's Last Meal*, 1973-76, Super 8mm film, colour, double projection-vertical. Sound on cassette. Collection of Electronic Arts Intermix, New York.
- 1.4 Carolee Schneemann, *Infinity Kisses*, 1981-1987. Xerox ink on linen, 213.36 x 182.88 cm. San Francisco Museum of Modern Art Accessions Committee Fund: gift of Collectors Forum, Christine and Pierre Lamond, Modern Art Council, and Norah and Norman Stone.
- 1.5 Carolee Schneemann, *Vesper's Stampede To My Holy Mouth*, 1992, video, 15 min, colour, sound. Collection of Electronic Arts Intermix, New York.
- 1.6 Carolee Schneemann, note to the Anthology Film Archives on the occasion of restoring *Fuses*, 2007. In the collection of the Anthology Film Archives, New York.
- 1.7 Carolee Schneemann, 'Expanded cinema (free from recollections of New York)', typed and illustrated essay, written in London, 9 September 1970. In the collection of the Anthology Film Archives, New York.
- 1.8 Carolee Schneemann, 'Parts of a body house book' flyer for reading at St Mark's Church, New York, 19 December, 1973. In the collection of the Anthology Film Archives, New York.
- 1.9 Carolee Schneemann, 'Subtle Gardening or Cooking With Apes' flyer for performance at Fylkingen, Stockholm, 2 September 1973. In the collection of the Anthology Film Archives, New York.
- 1.10 Carolee Schneemann, *Personae (J.T. & 3 Kitch's)*, 1958, Oil on canvas, 48x31", private collection.
- 1.11 Carolee Schneemann, *Fur Wheel*, 1962. Motorized construction: lamp shade base, fur, tins cans, mirrors, glass, oil paint, mounted on turning wheel, 35 x 35 x 65 cm.
- 1.12 Carolee Schneemann, *Fuses*, still from film.
- 1.13 *Fuses*, still from film.
- 1.14 *Fuses*, still from film.
- 1.15 *Fuses*, still from film.
  
- 2.1 Lynda Benglis, *Enclosure*, 1973, 7:28min, B&W video, sound. MoMA, gift of Barbara Forshay-Miller.
- 2.2 Lynda Benglis, *Enclosure*.
- 2.3 Diagram showing two waves (magenta and green) with points of crossover ('beats') generating the moiré pattern.
- 2.4 Example of moiré as seen on a screen.

- 2.5 Richard Serra and Nancy Holt, *Boomerang*, 1974, 10:24min, colour video, sound. Collection of Video Data Bank, Chicago.
- 2.6 Richard Serra and Nancy Holt, *Boomerang*. Still showing public access TV logo.
- 2.7 Lynda Benglis, *Now*, 1973, 12 min, colour video, sound. Collection of Electronic Arts Intermix, New York.
- 2.8 Vito Acconci, *Centers*, 1971, 22:43min, B&W video. Collection of Electronic Arts Intermix, New York.
- 2.9 Frank Gillette and Ira Schneider, *Wipe Cycle*, 1969-84, 12:08min, B&W video, sound.
- 2.10 Hans Haacke, *MoMA Poll*, photograph of installation-performance, 1970.
- 2.11 Kate Craig, *Delicate Issue*, 1979, 12mins, betacam colour video, sound. Collection of the Vancouver Art Gallery.
- 2.12 Kate Craig, *Delicate Issue*, still from video.
- 2.13 Kate Craig, *Delicate Issue*, still from video.
- 2.14 Catherine Elwes, *There is a Myth*, 1984, 18mins, colour video, sound. Collection of LUX, London.
- 2.15 Jayne Parker, *Almost Out*, 1985, 90mins B&W video, sound. Collection of LUX, London.
- 2.16 Michelle Citron, *Daughter Rite*, 1978, 53 minutes, Color. Collection of Women Make Movies, New York.
- 2.17 Martha Rosler, *Vital Statistics of a Citizen, Simply Obtained*, 1977, 39:20 min, colour video, sound. Collection of Electronic Arts Intermix, New York.
- 2.18 Lisa Steele, *Birthday Suit: Scars and Defects*, 1974, 13:20mins, B&W video, sound. Collection of Video Data Bank, Chicago.
- 2.19 Marianne Heske, *Phrenological Self-Portrait*, 1976, 8mins, colour video, sound. Collection of LUX, London.
- 3.1 *Webbed I*, 2002, 128.5x195.5x93.5cm, steel, rubber and wood. White Cube Gallery, London.
- 3.2 *Daybed*, 2008, 31.5x219x198cm, black finished steel. White Cube Gallery, London.
- 3.3 *Incommunicado*, 1993, 126.4x57.5x93.5cm, metal cot and wire. Courtesy of Gytha Trust, Tate Gallery, London.
- 3.4 *Corps Étranger*, 1994, 350x300x300cm, video installation with cylindrical wooden structure, video projector, video player, amplifier and four speakers. Centre Georges Pompidou, Paris.
- 3.5 *Corps Étranger*, detail.
- 3.6 *Corps Étranger*, detail.
- 3.7 *Homebound*, 2000, dimensions variable, kitchen utensils, furniture, electric wire, light bulbs, computerized dimmer device, amplifier, speakers. White Cube Gallery, London.
- 3.8 *Electrified II*, 2010, dimensions variable, metal, electrical wire, lightbulb, transformer. Galerie Chantal Crousel, Paris.
- 3.9 *Testimony*, 1995-2002, 2:37min, colour video projection. Galerie Chantal Crousel.

- 3.10 *Deep Throat*, 1996, 89x85x130cm, table, chair, tablecloths, plate, fork, knife, water glass, monitor and DVD player. White Cube Gallery, London.
- 3.11 *Don't Smile, You're on Camera!*, 1980, 40min, live action with video monitor, two live cameras, a video mixer and various props. Photograph of performance.
- 3.12 *Look No Body!*, 1981, 40min, live action with video monitor, sound tape, water hose and a stack of plastic cups. Photograph of performance.
- 3.13 *Don't Smile, You're on Camera!*, detail.
- 3.14 Arthur Lidov, *Down a Long Canal*, 3 November 1962, *LIFE* Magazine.
- 3.15 *Visible Human Project*, 1989 to present.
- 3.16 Tee Corinne, *Cunt Coloring Book*, 1975, published by Last Gasp, San Francisco.
- 3.17 *Our Bodies, Ourselves*, 1969, published by The Boston Women's Health Collective. Photograph showing 1971 edition.
- 3.18 Ida Applebroog, *Monalisa*, 1969, dimensions variable (approx. 30.5x22.9cm), series of ink on paper drawings. Hauser and Wirth, New York.
- 3.19 *Monalisa*, detail.
- 3.20 Suzann Gage, *A New View of a Woman's Body*, 1981, published by The Federation of Feminist Women's Health Centre, WA.
- 3.21 Carolee Schneemann, *Interior Scroll*, 1975, 90.5x183cm, screenprint with handwriting in beet juice, coffee and urine. Lent by the American Fund for the Tate Gallery, courtesy of the American Acquisitions Committee 2003
- 3.22 Hatoum *Jardin Public*, 1993, painted wrought iron, wax, pubic hair. White Cube Gallery, London.
- 3.23 diagram from P.B. Cotton et al, *Practical Gastrointestinal Endoscopy: The Fundamentals*, published by Blackwell, 2008.
- 3.24 diagram from P.B. Cotton et al, *Practical Gastrointestinal Endoscopy: The Fundamentals*, published by Blackwell, 2008.
- 3.25 diagram from P.B. Cotton et al, *Practical Gastrointestinal Endoscopy: The Fundamentals*, published by Blackwell, 2008.
- 4.1 Sol le Witt, [no title] from *The Location of Six Geometric Figures* series, 1975, 40x40.6cm, etching on paper. Tate Gallery, London.
- 4.2 Bruce Nauman, *Dance or Exercise on the Perimeter of a Square (Square Dance)*, 1967-68, 8:24 min, b&w, sound, 16mm film on video. In the collection of the Electronic Arts Intermix, New York.
- 4.3 Nell Tenhaaf, *Species Life* (detail), 1989, four fluorescent lightboxes and Duratrans transparencies, three overall 365x95cm; one 150x29cm.
- 4.4 Nell Tenhaaf, *Species Life* (installation view).
- 4.5 Nell Tenhaaf, *Oedipal Ounce of Prevention*, 1993, overall 193x88cm, two C Prints, fluorescent lightboxes of aluminum, duratrans, plexiglass.
- 4.6 Nell Tenhaaf, *In Vitro (The Perfect Wound)*, 1993, 153.8 x 125.8 x 20.2 cm (overall), 4 fluorescent lightboxes with 24 duratrans



transparencies, Plexiglas. Collection of the National Gallery of Canada, Ottawa.

- 4.7 *In Vitro (The Perfect Wound)* (detail).
- 4.8 Nell Tenhaaf, *UCBM (You Could Be Me)*, 1999, 3:57min, colour, interactive video installation with motion sensors, touch interface, computer, videodisc, sound; electronics and programming by Jeff Mann.
- 4.9 Nell Tenhaaf, *UCBM (You Could Be Me)*, 1999.
- 4.10 Nell Tenhaaf, *Push/Pull*, 2009, part of the research project *Lo-Fi Embodiment*, 2005-2010, York University, Canada. Speakers, camera, fibreoptic cables, LED printed circuit boards.
- 4.11 Nell Tenhaaf, *Push/Pull*, 2009.
- 4.12 Nell Tenhaaf, *Push/Pull*, 2009 (detail of fibreoptic cables).
- 4.13 Nell Tenhaaf, *Push/Pull*, 2009. Sculpture in use.
- 4.14 Victoria Vesna, *BodiesINC*, 1995, example of body.
- 4.15 XX Deudigren, an avatar I built for the MMORPG *EVE Online*, the second largest online gaming environment after *World of Warcraft*.

## INTRODUCTION: TECHNOLOGIES OF VISION

*In February 2010, The New England Journal of Medicine published a paper entitled 'Wilful modulation of brain activity in disorders of consciousness'. The research demonstrated that, using fMRI, individuals classified as persisting in a vegetative state (VS) might have neuroanatomically specific reactions to particular questions: by imagining playing tennis the supplementary motor area would appear to 'light up', thereby indicating a 'yes' response; and by imagining walking around their home the parahippocampal gyrus area would be stimulated, indicating a 'no' response. The conclusion of this research is that patients previously thought to be diagnosed with VS might actually retain some level of awareness, previously undetected with bedside behavioural tests, therefore shifting diagnosis to being in a 'minimally conscious state' (a new clinical 'entity' coined by the Aspen Neurobehavioural Conference Work Group in 2002).<sup>1</sup>*

If, as suggested by this experiment, different types of imaging technology intersect with the body in such a way that they produce new medical, political and aesthetic classifications of the subject, what are the subsequent new epistemological problems associated with those (unstable) categories, and how does the image negotiate this?

---

<sup>1</sup> Monty, Martin M. et. al., 'Wilful Modulation of Brain Activity in Disorders of Consciousness' in *The New England Journal of Medicine*, Vol. 362, No. 7, February 18, 2010. The use of the word 'entity' in this context raises significant questions about the formulation of the subject in discourse surrounding disorders of consciousness.

In this thesis I am concerned with the way in which technologies are used to stage the body/self (i.e. as a means of self-representation) within the context of an unstable body politics, and to investigate the points of overlap between a range of visual cultures: medical, artistic and art historical, pornographic and digital. By the term ‘technology’ I refer both to the sense of a mechanical, electronic or digital device – indeed, this thesis focuses exclusively on these types of image-making machines – as well as to the process or method by which something becomes incorporated into a particular visual language or register.

The practice of drawing could be read as a *technology of vision*, and images of science as a *vision of technology*, but neither will be covered by this study. Instead, it focuses on the material and metaphorical processes that occur in a limited range of artworks that not only deploy technological devices in the practice of image-making, but do so in order to question and contest the very visual languages that those technologies have generated. The selection of case studies discussed in this thesis has therefore largely been determined not by type of technology (although arguably in its analysis of film and video this thesis confronts two mediums that are well established in the discourses of art and art history, and by looking at medical imaging and computer technology it clearly hopes to expand and extend these discourses), but rather has been guided by the practices themselves, in which technology has been encountered in such a way that reveals central questions about its very use.

Some clarification about how technology is understood in this thesis is therefore necessary in order to give definable shape to the term ‘technology’, which is both idiomatic and manifold: it tells us both lots of things and yet very little. Counter-intuitively, an analysis of the term reveals a variable and variegated concept that mutates, shifts and flows (properties more commonly associated with the organic, usually perceived as oppositional to the technological). A general theory of technology is likely to be problematic, given that the term historically covers highly disparate concepts, from bodily prosthesis to skill or handcraft (*techne*) to mechanical devices, including: the applied sciences; industry and manufacturing; machinery and equipment; process and method; and, more peculiarly, the terminology of a subject; and the systematic treatment

of grammar.<sup>2</sup> Technology is not only an electronic, mechanical or digital device, but also a system of representation. In the close relationship between technology and grammar, which this brief analysis reveals, we are reminded of Teresa de Lauretis' important work into the relationship between gender and the technology of grammar. In her influential 1980s text, De Lauretis recognised that linguistic representation itself is a technology of gender, and that there is a linguistic link between the syntax or grammar of Romance languages and the term 'gender'. '*Genre*', she notes, is both French for 'gender', as well as a description of a category of art. Gender is a language (and a construction of linguistic convention) and, as such, must always already be figured in and through (technologies of) representation.<sup>3</sup>

This study has not been born from, but is affiliated to, theoretical projects that sought to productively cross-contaminate (as opposed to 'cross-fertilise') feminism and scientific discourse, as discussed below. While science is by no means synonymous with technology, my interest in the intersections between the body and technology notably extends into certain areas well defined as science, such as medicine or information systems, both of which have been understood to be markedly associated with the masculine. The emergence of these 'cross-contaminated' studies began in the mid-1980s with a challenge to the mechanisms by which certain types of body are produced or controlled within the (interdependent) fields of technology, medicine and ethics: as Evelyn Fox Keller asked in *Reflections on Gender and Science* (1985), how much of the nature of science is bound up with the idea of masculinity, and what would it mean for science if it were otherwise?<sup>4</sup> Fox Keller's study was premised on the notion that both gender and science are not only socially constructed categories (or representations, in my terms) but that they are in fact also mutually implicated in one another's co-constitution. Fox Keller's inquiry into the co-constitution of gender and science is therefore critical to any

---

<sup>2</sup> These definitions are all given by the OED.

See <http://www.oed.com/viewdictionaryentry/Entry/198469>

<sup>3</sup> See de Lauretis, Teresa *Technologies of Gender: Essays on Theory, Film and Fiction*, Indiana University Press, Bloomington and Indianapolis, 1987. See especially the chapter 'The technology of gender' (pp. 1-30).

<sup>4</sup> Fox Keller, Evelyn *Reflections on Gender and Science*, Yale University Press, New Haven and London, 1985 p. 3.

understanding of technology, framed as it is by the masculinist discourses of science and the subsequent disjunction between science and femininity.

The gendering of scientific discourse is posited by Fox Keller as a crucial component in the relationship between science and law, with far-reaching implications for the mantle ‘laws of nature’ (Boyle, 1665), which has historically been thrust upon science: ‘whereas laws of state are open to lawful change, there is no constitutional recourse against a law of nature.’<sup>5</sup> For Fox Keller, a series of divisions has thus subsequently framed scientific discourse that has been central to the basic structures of modern science and society. These are the personal/impersonal, public/private and masculine/feminine. As such, the integration of these binaries into medicine, into science and into the very ‘laws of nature’ serves to reinforce an epistemological regime that divides emotional (female) and intellectual (male) labour within these fields by conceiving of it as ‘natural’.

The assumption implicit in the term ‘laws of nature’ is that science is beyond the relativity of language, even beyond language itself, and thus relies on a particular vocabulary and syntax in order to demonstrate and secure its privileged position. While science is seen to directly interpret something that is entirely outside or independent of the mind, language is seen to interpret that which has already been encountered by perception. Medicine, science and information technology – that is, the technologies used to chart and analyse the laws of nature – thus become encoded in logical structures, jargon and diagrams. In this context, the somatic body is frequently reduced to a superficial representation (a code, x-ray, or chart), which is not only exclusionary (specialists alone have access to interpreting these modes of representation) but also claims that the language of science is transparent and neutral, blinding us to the implicit assumptions behind the claims and purposefully equating scientific objectivity with the masculine. Some 27 years on from Fox Keller, this same challenge to the apparatus of scientific discourse in the context of new imaging technologies – most notably medical and digital – is mounted by my work here.

---

<sup>5</sup> *Ibid.*, p. 131.

In so doing, I hope to produce a critical analysis of the way in which new technologies might repeat problematic tropes of representation, looking to art practice as a potential site for inhabiting the technology in new and productive encounters. In this, I hope to suggest that, by de-instrumentalising the technology, artistic practice might constitute a space of critical analysis in and of itself, and a form of resistance to the traditional emphasis on technology's use-value.

Fox Keller's work on re-evaluating science in the context of feminism was contemporaneous with two other important early works which implicitly form the foundation of my thinking, even if they are not explicitly drawn on in the thesis: Donna Haraway's important essay 'A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century' (1985) and Sherry Turkle's book *The Second Self: Computers and the Human Spirit* (1984). Both Haraway and Fox Keller work from within the institutions of science (Fox Keller is a mathematical biophysicist and Haraway a developmental biologist) and, like Fox Keller, Haraway's early work was concerned with addressing and contesting the masculine bias in science. This project then developed into working the concept of the 'cyborg' as a political strategy for socialist-feminism.<sup>6</sup> As a subject constituted through linkages and affinities, rather than identity, the cyborg could mount a significant challenge to essentialists.<sup>7</sup> She writes, 'there is nothing about being female that naturally binds women together into a unified category. There is not even such a state as 'being' female, itself a

---

<sup>6</sup> For example, see Haraway, Donna J. 'Maps of Power, Maps of Bodies: Feminist Approaches to the Territory of the Life Sciences' in *Modern Language Association*, Special Forum on the Politics of Domination, December 28, 1982; Haraway, Donna J. 'Sex, Race, Class, Scientific Objects of Knowledge: A Marxist-Feminist Perspective on the Social Generation of Productive Nature and Some Political Implications' Conference on Science, Technology, and Development Strategies, Cavtat, Yugoslavia, September 21-26, 1981; Haraway, Donna J. Commentator, Session on 'Feminist Perspectives on Science and Technology' *Toronto meetings of History of Science Society*, October 17, 1980.

<sup>7</sup> In this, Haraway's work on the cyborg emerged during a time in which essentialism in feminism was being widely undermined, and ideas around gender and gender relations were being largely re-configured within the terms set out by social theory. That is to say, that gender became understood as socially determined rather than biological or a natural given. On this see Connell, R. W. *Gender and Power: Society, the Person and Sexual Politics*, Stanford University Press, Stanford, 1987. This anti-essentialist view was particularly strong amongst constructivist feminists. For an overview of this discourse see Locher, Birgit & Prüggl, Elisabeth 'Feminism and Constructivism: Worlds Apart or Sharing the Middle Ground?' in *International Studies Quarterly*, Vol. 45, No. 1, March 2001 (pp. 111-129).

highly complex category constructed in contested sexual scientific discourses and other social practices.<sup>8</sup> The cyborg has subsequently been at the heart of an explosion of studies concerning the body, avoiding the traps of biological essentialism by turning instead to its relationship to technology, and indeed this study is also wholly indebted to it.<sup>9</sup>

Constituted in such a way, the cyborg conducts a series of re-figurations and contaminations across the distinctions between human and animal, organism and machine, and the physical and non-physical, as both a technological object and a discursive formation. The perceived ‘natural’ distinctions, which Haraway identified as being challenged by the cyborg, resonate with the dissolution of boundaries in the artistic practices described in this thesis: the traditional determinations of the ‘human’ in contrast to the ‘animal’ are brought under scrutiny in chapter one, divisions between the organism and the machine in chapters one and two and the distinction between the physical and the non-physical forms the basis for my discussion of ‘virtual’ (or coded) embodied selves/avatars in chapter four.

These divisions, I believe, still represent the border wars being fought today in representations of the subject in medical, digital and artistic practice. However, while this study is perpetually haunted by Haraway’s cyborg, and its foundational implications for political models of subjectivity premised on instability, there are areas in which I must make my study distinct from it, and re-iterate Haraway’s own understanding of the model as an ‘ironic dream’. That the original essay was written in 1985 should open up to question its continuing position at the centre of a discourse that attempts to deal with the body and technology. As with William Gibson’s model of ‘cyberspace’, first described in his fictional novel *Neuromancer* (1984), Haraway’s cyborg has come to be synonymous with forms of technology that it actually pre-dated. In particular, I

---

<sup>8</sup> Haraway, Donna ‘A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century’ in *Simians, Cyborgs and Women: The Reinvention of Nature*, Routledge, London and New York, 1991 (pp.149-181) p. 155.

<sup>9</sup> For an overview of the way in which Haraway’s important article has been taken up by scholars in the secondary literature see Sofoulis, Zoe ‘Cyberquake: Haraway’s Manifesto’ in *The Cybercultures Reader Second Edition*, Bell, D. & Kennedy, B. eds., Routledge, London and New York, 2007 (pp. 365-385).

am referring to the widespread integration and distribution of information systems and the Internet in North American and European cultures.

I am also concerned that an investigation of the literature that Haraway's important essay engendered reveals a strong focus on the potentially liberatory rhetoric of hybridity and multiplicity at play in the figure of the cyborg with its 'monstrous' amalgamation of affinities. Most of these studies, however, tend to neglect the anxiety and unease that attend upon these unstable identities.

Accounts of the cyborg by and large fail to fully confront the historical and cultural denigration and domination of outsider identities, and cannot account for the role of the mutant or the monster in the very regimes of oppression that they might be hoped to destroy. By contrast, my study explicitly stakes a claim in the way in which new imaging technologies might be encountered in artistic practice outside of a traditional instrumental ontology. But in so doing I hope also to reveal the ways in which new forms of technological vision has itself structured forms of oppression: these technologies have been used in ways that both repeat *and* defeat problematic modes of representation. This will be achieved by committing to an analysis of the visual politics associated with imaging technologies in the works of Carolee Schneemann, Kate Craig, Mona Hatoum and Nell Tenhaaf.

My account here of the ways in which technology and the body intersect in the formation of subjectivities is therefore shot through with moments of tension: how has imaging technology interacted with the body so as to repeat conventional accounts of the subject in visual culture, and how might it be used to trouble them? If the subject, as Karen Barad's recent theory of 'intra-action' has argued, is always-already understood through and informed by technology, can it perform difference in order to rupture understandings of a subject-object opposition, or does it provocatively mark the re-entry of the subject into a sphere allocated as Other?<sup>10</sup> This inherent tension in performing difference is brought to the fore most explicitly in the literature that deals with 'virtual' bodies. I have here qualified the term 'virtual' as I wish to problematise any

---

<sup>10</sup> See Barad, Karen *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*, Duke University Press, Durham and London, 2007.



perceived opposition with the constructed space of the ‘real’. The consequence of this would be both to begin to dismantle the primacy of traditional models of the somatic body and its unity – potentially re-locating identity outside of the body in favour of a distributed form of embodiment, which has wide reaching implications for a feminist analysis – and to challenge the domination of postmodernist rhetoric in discourse around computer technologies – most notably that arising from Jean Baudrillard’s analysis of simulacra and simulations.<sup>11</sup>

In *The Second Self: Computers and the Human Spirit* (1984) Sherry Turkle questioned how the emergence of computer technology has affected the way that we think, especially the way that we think about ourselves. In opposition to traditional understandings of the computer as rational, logical and ‘instrumental’ (that is, with a use-value) Turkle instead chooses to read the computer as ‘subjective’ (that is, as a machine that has entered into social life and psychological development). Turkle’s difficult characterisation of information technology as both ‘new and exciting’ and ‘powerful and threatening’ must be at the heart of subsequent debates surrounding it. In her casting of the computer as an evocative object and not as a purely analytical engine, Turkle focused on the use of computers as an expressive medium, rather than as an instrumental means of production and logical organisation.<sup>12</sup> In particular, this involved studying computers in the realms of leisure and learning, rather than just work, with an emphasis on computer programming as a means to create a sort of second world (thus arguably prefiguring the future development of Web 2.0 as a space for social networking, video sharing and online role playing games).<sup>13</sup> In this book, Turkle considered the ways in which computer technologies in the

---

<sup>11</sup> See Baudrillard, Jean ‘Simulacra and Simulations’ in *Baudrillard: Selected Writings*, Poster, M. ed., Polity Press, Cambridge, 1998 (pp. 166 - 184) p. 167. See also Jameson, Fredric *Postmodernism: or, The Cultural Logic of Late Capitalism*, Verso, London and New York, 1991. This challenge to the term ‘virtual’, and the distinction between the body and embodiment, will be more fully fleshed out in chapter four.

<sup>12</sup> My use of the term ‘analytical engine’ is here important since it resonates historically with the device designed by Ada Lovelace and Charles Babbage in the 1840s. The plans for this device, although it remained unbuilt, were influential in the future development of computer technology. For a fuller account of this event, and its implications for a feminist analysis of computer technology, see chapter four.

<sup>13</sup> Web 2.0 is a term used to describe web applications that facilitate user generated content and participatory information sharing. Typical examples of Web 2.0 phenomena are blogs, wikis, tag clouds, social networking and video sharing sites.

1980s were seen as mediating relationships both with other people and also, crucially, with ourselves. The incorporation of computer technologies into social life (such as in virtual reality environments, gaming scenarios, chat rooms and avatars) staged the point at which these technologies became integral to personal means of self-representation, and the way in which a thematics of disembodiment became associated with those very processes.

Building on the foundational work of Fox Keller, Haraway and Turkle, several artists and scholars in the mid-1990s returned to questioning encounters between the body, technology and society, with a notable emphasis on emergent medical technologies such as genetic engineering (via Dolly the sheep and the Vacanti mouse), and computer technologies such as Jaron Lanier's work on developing immersive virtual reality (VR) environments and online networks. During this period, the emergences of immune system discourse (precipitated by the AIDS epidemic), New Reproductive Technologies (NRTs), disability studies, queer theory and a highly fractured feminist project provided a fertile ground for foregrounding the conceptualisation of difference in technology studies. A range of both theory- and practice-based work started to look at the way in which new technologies – from biomedicine to virtual reality – seemed to be instigating a phenomenological account of the body in which absence (detachment, strangeness) was increasingly structuring experience. Arthur Kroker perhaps aptly termed this period 'the flesh eating 90s'.<sup>14</sup> This historical moment of tension between the virtual and the visceral is played out in the artistic and critical practice of this period with the use of the body in conjunction with increasingly new and sophisticated technologies, medical or otherwise: 1990 Drew Leder publishes *The Absent Body*; 1990 to 1993, Orlan conducts 9 surgery-performances called *Images, New Images* and the *Reincarnation of Saint Orlan*; 1992 to 1993 Stelarc works on his *Virtual Arm Project* using DataGloves; 1990 Gary Hill's video installation *Inasmuch As It Is Always Already Taking Place* presents a fractured subject; Laurie Anderson uses voice modulators to transform her feminine voice into a masculine one;

---

<sup>14</sup> Kroker, Arthur and Kroker, Marilouise *Hacking the Future: Stories for the Flesh-Eating 90s*, New World Perspectives, New York, 1996.

1999 N. Katherine Hayles publishes *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics*.<sup>15</sup>

In this large and unwieldy body of works, technology is at the core of the drive to reconsider key phenomenological and ontological questions. From virtual reality systems to genomics to the move from analog to digital systems of representation, the body was experienced in new ways, putting pressure on existing models of the body, self, gender identity and sexuality. Technological and social interventions on the body precipitated a new critical enquiry in the 1990s and initiated the challenge to who/what we think we are, inviting new interpretations of the body, even while occasionally re-playing old-fashioned Cartesian dualism as the body appeared to take flight from the information hub in a fit of technophilic fantasies of transcendence.

In *Leaky Bodies and Boundaries: Feminism, Postmodernism and (Bio)Ethics* (1997), Margrit Shildrick discussed the possibility for producing a moral or ethical discourse beyond the conventions of the autonomous agent, when the boundaries of neither the body nor the subject itself are secure. What emerges, she asks, when rigid notions of identity and difference no longer provide the grounds for moral discourse? This key text in postmodern feminism addresses the anxiety that postmodernism cannot yield an ethics, and argues that 'leakiness' or instability might actually be the ground for that very ethics. Feminist ethics, argues Shildrick, makes no universal claims. Central to my own work on an unstable body politics, Shildrick's work informs my interpretation of practices that challenge the conventional subject, suggesting pathways for the reconceptualisation of the subject within scientific, technological and medical discourse. Developing from the theories of Luce Irigaray, which anticipate a recovery/discovery of radical sexual difference, both my work and Shildrick's might attempt to reclaim not a homogenous category of 'woman' (or, in the context of this thesis, also the categories 'man', 'human' or 'animal') but rather a multiplicity of positions linked by the in-common experience of a particular

---

<sup>15</sup> For a discussion of many of these works, particularly in the context of a fracturing of the subject through technologies of representation, see Jones, Amelia 'Dispersed Subjects and the Demise of the "Individual": 1990s Bodies in/as Art' in *Body Art: Performing the Subject*, University of Minnesota Press, Minneapolis and London, 1998 (pp. 197-240).

body form.<sup>16</sup> As with Fox Keller, Shildrick's work has exposed the fallacious claims to gender neutrality in which an ethics of technology has – up until now – couched itself. She writes, 'Western ethics has based itself not simply on the exclusion of women as moral agents, but makes transcendent disembodiment a condition of agency.'<sup>17</sup> In this respect, my own work seeks to destabilise some of the inherent assumptions contained within medico-legal discourse, revealing the mechanisms by which certain visual cultures (in this case most notably digital and medical) rely on a detachment of the self and image in order to subject it to analysis and reform.

These problems with embodiment and subjectivity, originally perceived by Turkle, were reignited by N Katherine Hayles some 15 years later in *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics* (1999). Drawing on archival material from the Macy Conferences, held in New York in the immediate post-war period (1946-53), Hayles looked at the relationship between the gendered body and socio-cultural constructions of informational systems from the last 50 years, noting the implications for themes of transcendence in VR (virtual reality) models of a disembodied subject, and how that might be seen to replicate the liberal subject of the enlightenment. Hayles notes that Norbert Wiener's original work on feedback systems – formalised as the field of 'cybernetics', a term deriving from the Greek for 'steersman' – defined information as an entity distinct from the substrates carrying it, subsequently producing a conceptualisation of information as a kind of 'bodiless fluid' that could flow between different substrates without any loss or change. Any models trying to account for the embodiedness of the technological subject was therefore troubled by this definition, as human

---

<sup>16</sup> On the concept of multiplicity in philosophy, see Elizabeth Grosz's important study, *Volatile Bodies: Toward a Corporeal Feminism*, Indiana University press, Bloomington and Indianapolis, 1994 (esp. pp. 120-122). In this study Grosz gives an overview of Friedrich Nietzsche's hypothesis that the subject itself is a multiplicity. This hypothesis, Grosz argues, then goes on to form the basis of the work of both Michel Foucault and Gilles Deleuze, whose work on the 'machine' describes a 'non-totalised collection or assemblage of heterogeneous elements and materials. In itself, the body is not a machine; but in its active relations to other social practices, entities, and events, it forms machinic connections.' (Grosz, p. 120). The challenge these theories present to models of a unified, stable self are perhaps the starting point for this thesis.

<sup>17</sup> Shildrick, Margrit *Leaky Bodies and Boundaries: Feminism, Postmodernism and (Bio)Ethics*, Routledge, London and New York, 1997 p. 2.

identity became increasingly associated with ‘thinking machines’. In other words, extending the legacy of the Cogito, thought was conceived as more like an informational pattern than an embodied enaction.

Hayles’ interest in the social relation between the virtual and the visceral is understood fundamentally within the context of the gendered body. This is well demonstrated by the fact that Hayles chose to frame her book with a prologue recounting the paradigmatic historical study regarding informational systems: the 1950 paper ‘Computer Machinery and Intelligence’ by Alan Turing, a mathematician and computer scientist who formalised some of the early concepts of computation with his ‘Turing Machine’. It is Hayles’ prologue that subsequently forms the header to chapter four of this thesis:

You are alone in the room, except for two computer terminals flickering in the dim light. You use the terminals to communicate with two entities in another room, whom you cannot see. Relying solely on their responses to your questions, you must decide which is the man, which the woman. Or, in another version of the famous “imitation game” proposed by Turing, you use the responses to decide which is the human, which the machine.<sup>18</sup>

For Hayles, the Turing test demonstrated a complex interaction between the virtual and the visceral in informational systems: that formulations of the subject have always tried to resolve a perceived split between the enacted body in front of the computer terminal and the represented body constituted through semiotic markers in an electronic environment on the ‘other side’ of the screen. For Hayles, the implication for gender (and other markers of difference) in the realm of VR is that if you try and distinguish who might be a male subject or a female subject on the other side of the computer, you are attempting to resolve the enacted and the represented subjects into a single gender identity. That there might be a ‘wrong’ answer in the Turing test suggests that in fact we can no

---

<sup>18</sup> Hayles, N Katherine *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics*, University of Chicago Press, Chicago and London, 1999 p. xi.

longer take for granted such an easy identification of the subject and must acknowledge its inevitable split as a result of informational systems. Hayles therefore asks: can technology ever be meaningfully separated from the human subject?<sup>19</sup>

Directly engaging with the work of Haraway, in an attempt to formulate a new paradigm, Hayles argues that we are no longer cyborgs, but ‘posthuman’. The posthuman has marked similarities to the cyborg: ‘emergence replaces teleology, reflexive epistemology replaces objectivism, distributed cognition replaces autonomous will, embodiment replaces a body seen as a support system for the mind and a dynamic partnership between humans and intelligent machines replaces the liberal humanist subject’s manifest destiny to dominate and control nature.’<sup>20</sup> The posthuman also thinks of the body as a prosthesis that we all learn to manipulate, so that extending or replacing the body with other prostheses is the continuation of a process that began long before we were born.<sup>21</sup> Human *being* is therefore articulated so that it can be seamlessly integrated with other intelligent machines. However, unlike the cyborg, the posthuman uses the cybernetic feedback loop or circuit. Instead of polarities joined by the hyphen (male-female, text-marginalia, human-machine) it uses the circuit to fulfil Haraway’s ‘pleasurably tight coupling’ between these oppositional systems. While the cyborg holds these distinctions in tension, the posthuman circuit implies a more transformative union, moving closer to a model of subjectivity premised on feedback loops and mutual co-constitution. The posthuman is subsequently ‘post’ because there is no *a priori* way to

---

<sup>19</sup> This, of course, is now explicitly the case in relation to debates around transgenering and the way in which technology has affected an actual, rather than purely conceptual, gender indeterminacy.

<sup>20</sup> Ibid., p. 288.

<sup>21</sup> In Drew Leder’s important early study, *The Absent Body*, University of Chicago Press, Chicago and London, 1990, which will form the theoretical framework for much of my discussion in chapter three, he describes Martin Heidegger’s interest in the notion of a ‘tool’ in its formal and functional role as a sort of prosthesis. Heidegger writes, ‘The tool is something ready to hand (*zuhanden*), part of an equipmental structure that tends to withdraw from our explicit attention. We concern ourselves primarily with the work or product towards which we labour. The disappearance of the hand-held tool is none other than an offshoot of bodily disappearance closing over the incorporated instrument. e.g. Merleau-Ponty’s blind mans stick. My natural organs are modified and supplemented via the incorporation of such artificial extensions. This internal relation of bodily organ and tool is suggested by the Greek usage of one word, *organon*, to refer to both.’ Heidegger, Martin *Being and Time*, MacQuarrie, J. & Robinson, E. trans., Harper and Row, New York, 1962 (pp. 95-107), also quoted in Leder p. 33.

identify a self-will that can be distinguished clearly from an Other-will. This notion of a feedback loop or circuit serves as a useful frame for the models of subjectivity presented in the case studies in this thesis, and will be more fully examined in its original historical and cultural context in chapter two in relation to the emergence of video based practices in the 1970s.

The work of both Turkle and Hayles in wrestling with this tension between virtual and visceral subjectivities informs not only the research on digital bodies in chapter four but, in fact, the entire study. *Embodiment*, in opposition to the *body*, becomes a central thematic area of concern throughout. Hayles writes,

Embodiment differs from the concept of the body in that the body is always normative relative to some set of criteria. To explore how the body is constructed within renaissance medical discourse, for example, is to investigate the normative assumptions used to constitute a particular kind of social and discursive concept... Technologies turn embodiment into the body by creating a normalized construct arranged over many data points to give an idealized version of the body in question. In contrast to the body, embodiment is contextual, enmeshed with the specifics of time, place, physiology and culture, which together compose enactment.<sup>22</sup>

Embodiment is thus a form of subjectivity that allows one to inhabit multiple embodied positions as situated subjects, so as to challenge the conventions of a unified subjectivity. The term embodiment, which originates in the important thinking of scholars such as Hayles, Elisabeth Grosz and Rosi Braidotti in the 1990s, is a fertile strategy for thinking about subjectivity beyond the limits of the body without re-inscribing problematic binaries, and will frame much of my discussion. The analysis I apply to the case studies in this thesis is, however, not done with the aim of illustrating the concept of embodiment, but to demonstrate

---

<sup>22</sup> Hayles, p. 196. On the notion of embodiment, see also Grosz p. 19 and Braidotti, Rosi 'Cyberfeminism With a Difference' (1996) available online at [http://www.let.uu.nl/womens\\_studies/rosi/cyberfem.htm](http://www.let.uu.nl/womens_studies/rosi/cyberfem.htm)

the way in which this notion potentially re-frames encounters with imaging technologies in ways that might productively align the body/self with other subjectivities and sexualities.

\*\*\*

1<sup>st</sup> December 1982: On the day I was being born, some 30 years ago, Martha Rosler broadcast herself on public access TV deconstructing the implicit messages aimed at women in *Vogue* magazine (Martha Rosler, *Martha Rosler Reads from Vogue for Paper Tiger TV* (1982)). Taking artistic practice out of the studio or gallery and re-locating it within the domestic sphere (traditionally associated with the feminine), Rosler used emergent media technologies to critically reassess their role in the formation of gender stereotypes and troublesome modes of representation. Situating her practice in the very technological and cultural milieu which she aimed to critique and redefine, Rosler engaged with a strategy of self-reflexivity and repetition that is at the core of many practices which carefully tread the highwire between the technophilic and the technophobic.<sup>23</sup> This study therefore confronts the way in which artistic practice has appropriated and intervened in the imaging technologies that I have grown up with in order to challenge, critique or reframe the terms by which the body and technology come together in mutual co-constitution with gender and sexuality. Lacking any clear art historical precedent for a project that encompasses both a critical and art historical analysis for a range of imaging technologies, including those such as medical

---

<sup>23</sup> For an important example of this mode of analysis in philosophical thought, see the work of Rosi Braidotti, and her discussion of the different French and the German traditions in relation to technology. She argues that in the German school, Theodor Adorno and Max Horkheimer talk about the reduction of the body to an assembly of detachable parts – ‘a factory of spare parts’ – which denies the unity and specificity of the human being: ‘they have a negative view of powers of science and even worse one of technology.’ But in French school, biotechnology is not completely antithetical to humanity. She argues that Foucault deflates the discourse about the ideologically dangerous nature of technology in order to look at it as an extension of basic bodily functions. She writes, ‘here the French school of philosophical materialism (that of Gaston Bachelard and Georges Canguilhem) is important in stressing that a primitive anthropomorphism pervades the technical universe: all machines obviously copy and multiply the potencies and potentialities of the human body. The organic and the technological complement each other so that the nature-culture distinction is dropped in favour of the political reflection on the concrete materiality of the subject as an embodied organism or as a biocultural event.’ Braidotti, Rosi *Nomadic Subjects: Embodiment and Sexual Difference in Contemporary Feminist Theory*, Columbia University Press, New York, 1994 p. 63.



and digital imaging (which are rarely brought under the sway of the category 'art'), my project has instead been informed by the fruitful linkages between feminism and science. In my study of the intersections between the body and technology, the theoretical works discussed above have therefore helped shape and expand my field of enquiry. From these debates I have formulated an area of study based on philosophical, anthropological and cultural advances in the field of science and technology studies, rather than on traditional forms of art historical scholarship.

Significantly, some of the imaging technologies described in this study, most notably endoscopy, have received virtually no critical attention in almost any discipline, including science and technology studies. Since being used by the artist Mona Hatoum in the installation *Corps Étranger* (1994), this technology has now been opened up to both artistic and art historical analysis in a way that could potentially enter into a critical dialogue with medical discourse. As much as the sciences, and especially medical sciences, are finding a new position of prominence amongst art historians, I hope that this exchange might come to be bidirectional, and as such propose an analysis of both the visual politics and poetic vocabularies of a range of imaging technologies.

However, Hatoum, and the innovative use of endoscopy, is not the central focus of this study. Rather, situated deep within the body of the text, she instead appears as a figure from which various thematic, philosophical and technological linkages reach forward and backward, outward and inward across a number of women's art practices that both challenge the historical perception that women cannot access technology in a sophisticated way, and question and contest forms of female invisibility in the discourses of technology. In chapter one, I look at the film and photographic practices of Carolee Schneemann in which she stages erotic encounters with her various cats. In particular focusing on the work *Infinity Kisses* (1981-88), I consider how Schneemann uses technology to foreground the relationship between the female and feline body, so as to argue that earlier works, such as the important 16mm film *Fuses* (1964-67), have also had animal sexualities at their thematic core even though this has largely been neglected by art history. Crucially, Schneemann uses the film

screen in this work as a highly tactile space of encounter that sets up a resonance with the term pet(ting). By shooting and situating this work in a highly (hetero)sexualized, domestic sphere, Schneemann not only creates a radical tension with non-human sexualities, but also looks at the role of technology in generating encounters which are often marginalized.

Continuing my investigation of the domestic as a site of (re)production in new imaging and editing technologies, chapter two focuses on the video works of Lynda Benglis and Kate Craig in the 1970s at a time when home video technology (VHS) was entering the mainstream. Although I am wary of reinscribing the domestic onto women's artistic production, the theme remains notable and worthy of investigation in this chapter as there were emergent issues during this period around the accessibility of new media technologies for women artists on the grounds of cost and access to training, and the subsequent production of intimate depictions of the female body and sexuality that the technology enabled because of its portability and low cost. Moving both the realms of production and distribution into the domestic sphere meant that VHS also had an important role to play in the rapid expansion of the pornographic industry. Focusing on Craig's work *Delicate Issue* (1979), chapter two attempts to confront the historical and social mechanisms not only by which technology enabled the proliferation of pornography, but also by which pornography enabled the proliferation of technology as increasing numbers of consumers purchased VHS systems for the purpose of watching and/or making these films at home. In this, the chapter also considers the relationship between VHS and the 'home movie', and its particular ties to feminine and domestic forms of 'labour' and production with videos of childbirth, birthdays and home sex tapes (as opposed to commercialized 'pornography').

In *Delicate Issue*, Craig uses the novel autofocus feature on the video camera to generate close-up imagery of her body that, like *Fuses*, is sexually explicit in its content. Unlike *Fuses*, however, this film was shot by the artist's (male) partner, who is credited in the introductory sequence (again, like *Fuses*), but from under the direction of Craig, as she watched herself in the process of being watched, through the aid of a TV monitor, which enabled one of the most notable features

of VHS: instant playback. This brought to the fore the immediacy of one's becoming-representation. As such, the work is concerned with issues of self-imaging but uses the technology to problematise any easy identification with exactly *who* is the bearer of the gaze. In much the same way, Mona Hatoum's installation work *Corps Étranger*, shows a body that has made itself available to the gaze of (an)Other, in this case the gaze of the medical establishment as figured through the eye of the endoscope and the eye of the doctor, even while it watches itself being watched, directing the production of the images from its state of performed vulnerability.

As with Craig's video, *Corps Étranger* uses the device of the close-up by presenting the female body as an object of scrutiny and analysis. While *Delicate Issue* largely focused on the exterior surfaces of the body (cf. Schneemann's work on the tactile *skin* of the film screen) Hatoum's endoscopic investigation shifts the object of attention to the interior lumen and cavities of the body. The work of questioning the function of the close-up and its ties to pornography, begun in *Delicate Issue*, is therefore continued in *Corps Étranger* as Hatoum plays on the points of overlap between pornographic and medical visual cultures, and the fantasy of infinite penetration associated with epistemological illumination.

Importantly, by submitting an otherwise healthy body to clinical investigation, Hatoum inscribes herself into a visual regime that is, primarily, attuned to pathology. In this, *Corps Étranger* questions modes of visibility and invisibility and their relationship to pathology, asking what can the clinical eye see, and to what it is blind? This work therefore returns us to one of the central problematics of this thesis: the detachment of the self from its body/image. As I will demonstrate, Hatoum's installation is set up so as to generate a sense of confusion and misinterpretation when confronted with the image, as we simply cannot know what we are looking at; a sense of strangeness that is re-iterated in the very title of the work itself. The function of the work is therefore to make us consider the way in which a thematics of misunderstanding fundamentally overlays our own relationship with our bodies, drawing us back into the original

problem of how to use contemporary technology to successfully re-present the body/self.

It is precisely this problem that is taken up by the diverse practice of Nell Tenhaaf in chapter four, in which she finally eschews ‘the body’ in favour of ‘embodiment’ in her complex technological ‘sculpture’ *Lo-Fi* (2005-2010). Having worked with a range of film, video, medical imaging and computer technologies over the last three decades, Tenhaaf foregrounds the issue of representing the body/self in this work by bringing together a range of human and non-human subjects (in this case Artificial Life), clustered together as groups of LEDs. In their discrete ON/OFF setting, the LEDs thus reference binary code and serve as an extended metaphor on the medium itself. For the purposes of my argument, this allows for a productive encounter between the historical means by which binary has become associated with a detachment of the body from the self and a re-reading of digital culture that inscribes themes of potentiality and multiplicity. As such, the thrust of this final chapter is to re-conceive of binary as a state of superimposition in which the self cannot be so easily detached from the body, upending technophilic fantasies of transcendence without simply re-inscribing the feminine back onto the body.

While some of these themes have been addressed from within the context of other disciplines, most notably in gender studies, they are yet to be addressed in an art historical context and subjected to an analysis that considers the way in which these imaging technologies have strong roots in diverse fields, and how artistic practice might find a new vocabulary of representation for them. In this, I am thinking largely of those studies that – nonetheless very successfully – critique the way in which imaging technologies are used in mainstream cultural practice. To date, there has been extremely limited analysis of the visual politics at stake in medical and digital imaging, particularly in relation to gendered vision, and very few studies consider art as a site of a critical engagement with technological practices. Most existing studies have undertaken a broadly cultural analysis of medical imaging, and are perhaps fairly representative of the narrow literature available in that they frame the discussion within the recurrent

theme of a 'fantastic voyage' through the body.<sup>24</sup> While these touch on the relationship between gender and medical imaging, specifically by looking at the ways in which ultrasound technology is bound up in visual economies associated with a penetrating medical/male gaze, it neglects the way in which other, non-gender-specific forms of imaging technology, such as endoscopy, might also be complicit in this practice. In these studies, the definition of medical imaging also frequently gives way to medical *images*, including illustration, anatomical drawing and/or representations of illness. Furthermore, most existing studies in this field are also largely focused on the interaction between medical imaging and mainstream visual cultures (for example TV surgery, educational CD ROMS, 'images of science' type exhibitions, and the Visible Human Project). In terms of digital cultures, a focus on the mainstream rather than artistic practice is well represented by *The Cybercultures Reader*, edited by David Bell and Barbara Kennedy, which is now in its second edition (2007); and the *Electronic Mediations* series at the University of Minnesota Press edited by Mark Poster, Katherine Hayles and Samuel Weber.

By contrast, this project foregrounds the technology and submits the processes and mechanisms to an analysis that is visual and political. It will also focus on the use of medical and digital imaging technologies as a means of representing the body in critical art practice, acknowledging that the techniques and technologies of image making are themselves integral to the construction of subjectivity. Thus this project will look at practices that question and contest the epistemological claim of certain forms of vision to the site of the production of knowledge, erotics and power.

Within the context of art historical scholarship, my study is most indebted to the work of Amelia Jones, who has not only written at length on several of the artists discussed here (Schneemann, Hatoum and Benglis), but who also shares an interest in the use of moving image technologies in artistic practice as a

---

<sup>24</sup> For example see Kevles, Betyann Holtzmann *Naked to the Bone: Medical Imaging in the Twentieth Century*, Rutgers University Press, New Brunswick, 1998; van Dijck, José *The Transparent Body: A Cultural Analysis of Medical Imaging*, University of Washington Press, Seattle, 2005; and *The Visible Woman: Imaging Technologies, Gender, and Science*, Treichler, P., Cartwright, L. & Penley, C. eds., New York University Press, New York and London, 1998.

mode of self-representation, as evidenced by her recent book *Self/Image: Technology, Representation and the Contemporary Subject* (2006). Developing out of the debates originally presented in *Body Art: Performing the Subject* (1998), Jones expands the category of performance to include those artists who use imaging technologies as a means of staging the self. As I will demonstrate in chapter two, in relation to video technology, this type of encounter between performance and imaging technology has a long and fertile history. With *Self/Image*, Jones reinvigorates the discourse around self *re*-presentation, looking at digital imaging, video installation and robotics, and away from more traditional models of portraiture. Using the work of Swiss artist Pipilotti Rist as the paradigmatic example of the way in which an intersubjective encounter might be affected in such works, Amelia Jones calls for the current distinctions between what is real and represented to be dismantled, in much the same way as I hope to problematise the terms ‘real’ and ‘virtual’ here in this thesis.

Beginning with Hippolyte Bayard’s *Self Portrait as a Drowned Man* (1840), *Self/Image* traces both the desire and the fragility of images that offer up the body as a cohesive and knowable entity. In the first chapter, ‘The body and/in representation’, Jones negotiates the relationship between image and self, stating that ‘the body/self itself is representational.’<sup>25</sup> According to Jones, the image has always been strategically employed to announce the presence of an artistic subject, yet with the appearance of new technologies of representation, the assumption that a stable subject exists behind the work is disturbed. Jones aligns herself with queer subjectivities, and draws on the work of Claude Cahun to reveal that she too wishes to tear apart the modernist belief that there is a fixed and singular subject contained within the image, preferring instead to acknowledge the myriad bodies that engage in the production of these images and their meaning. Jones also demonstrates how the early video works of Benglis and Paul McCarthy may be re-thought in terms of what Jones describes as a ‘televsual flesh’, thus conceptually aligning it with my reading of film and photography as fundamentally embodied, as per the work of Schneemann in chapter one. *Self/Image* thus describes a trajectory of video installation and

---

<sup>25</sup> Jones, Amelia *Self/Image: Technology, Representation and the Contemporary Subject*, Routledge, London and New York, 2006 p. xiv.

photography that attempts to understand the photographic lexis as a screen in which the flesh of the artist may become co-mingled with the skin of the representational field.

Using the language of feminist discourses from Donna Haraway to Julia Kristeva to Mary Douglas, Jones appropriates terms like ‘leaky’ and ‘pollution’ to re-cast them with great effect towards a new model of spectatorship. By negating ocular-centric models of perception, Jones convincingly argues for a reinvestment of the body into any understanding of artistic practice, proposing that viewing a work necessarily entails an intersubjective encounter. Drawing on the work of N. Katherine Hayles, Jones claims that the body is becoming increasingly indistinguishable from the technology that represents it: ‘the body, always, is contingent on acts of representation.’<sup>26</sup>

While the cultural and political positioning of the practices and the methodological aims of *Self/Image* are conceptually consistent with this thesis, the key point of divergence is in Jones’ conceptualisation of technology, which is not foregrounded in her study. Moving beyond Jones’ thesis, I will undertake an in-depth analysis of the various technologies employed by the practices discussed – film, video, endoscopy, computer imaging – so as to demonstrate the way in which the different formats impose different material limits on works that subsequently give rise to varying forms of representation and challenges for imaging the body. Furthermore, the claim that this study makes for these different technologies also hopes to reach beyond the discipline of art history so as to be productive in other contexts. For example, as I have already suggested, it is significant that art history might be the place in which a medical imaging technology, such as endoscopy, is submitted to a critical analysis. Likewise, my understanding of Tenhaaf’s reconceptualisation of binary forms of representation in *Lo-Fi* bears on broader theorisations of computer technology in a way that art history usually does not accommodate.

---

<sup>26</sup> Jones 2006, p. 245. To this I would also add the important work of Braidotti in her book *Nomadic Subjects*, in which she proposes that there is no clear distinction between the natural (the body) and the cultural (technology), because the body mediates technology.

Although there might be formal links between this thesis and publications that try to reposition scientific practice within art history, such as the emergence of what have been termed ‘SciArt’ practices, there are notable conceptual and theoretical ways in which it is distinct.<sup>27</sup> Although these practices often use new technological advances in genetic engineering and computer technology that would seem to make sense to include in the context of this thesis, many of these studies and the theoretical output surrounding them appear to repeat deeply problematic representational polarities of techno-philia and/or -phobia. In this, particularly, I am thinking of the work of SymbioticA and the practice-based research group TC&A at the University of Western Australia and Eduardo Kac, which has dominated the practical and theoretical output in this field for the last two decades; the neuro-art history/neuro-aesthetics of John Onians; the work of Orlan and Stelarc (both of whom have worked with TC&A); and publications such as *Leonardo*, edited by artists and academics who have previously held visiting fellowships to work with TC&A.<sup>28</sup> These discursive practices, which are closely bound together, on the whole no longer seem to be generating significant inroads into concepts of science and society, even while the technologies they use are often novel.<sup>29</sup> I therefore intend that this study would distinguish itself from the purely aesthetic analysis of scientific or medical images, which uses the universalizing language of scientific authority to uphold and secure traditional enquiry into what are now highly contested concepts such as ‘beauty’. By contrast, this project will look at practices that question and

---

<sup>27</sup> For examples of this see Wilson, Stephen *Art and Science Now: How Scientific Research and Technological Innovation are Becoming Key to 21st-Century Aesthetics*, Thames and Hudson, London 2010; Reichle, Ingeborg *Art in the Age of Technoscience: Genetic Engineering, Robotics, and Artificial Life in Contemporary Art*, Springer, Wien, 2009; and Kac, Eduardo *Telepresence & Bio Art: Networking Humans, Rabbits, & Robots*, University of Michigan Press, Ann Arbor, 2005.

<sup>28</sup> See variously: <http://www.tca.uwa.edu.au/>; Catts, Oron ‘The Art of the Semi-Living’ in *Live: Art and Performance*, Heathfield, A. ed., Routledge, New York, 2004; Catts, Oron and Zurr, Ionat ‘Growing Semi-Living Sculptures: The Tissue Culture & Art Project’ in *Leonardo*, Vol. 35 No. 4, 2002 (pp. 365–370); Kac, Eduardo ‘GFP Bunny’ in *Eduardo Kac: Telepresence, Biotelematics, Transgenic Art*, Kostic, A. & Dobrila, P. T. eds., Association for Culture and Education, KIBLA Multimedia Center, Maribor, Slovenia, 2002 (pp. 100–130); Onians, John *Neuroarthistory: From Aristotle and Pliny to Baxandall and Zeki*, Yale University Press, New Haven, Conn. and London, 2007; Orlan and TC&A, *Harlequin Coat* (2010); and Stelarc and TC&A *Extra Ear ¼ Scale* (2004).

<sup>29</sup> A notable exception to this would be the art historian Frances Stracey’s article in the scientific journal *Nature*, in which she adopted a form of meta-critique so as to actually question the use of these technologies and techniques in artistic practice. See Stracey, Frances ‘Bio-art: the ethics behind the aesthetics’ in *Nature Reviews Molecular Cell Biology*, 20 May 2009, doi:10.1038/nrm2699.



contest the epistemological claim of scientific and technological forms of vision to the site of the production of knowledge, erotics and power.

Importantly, therefore, it is not only in the discussion of new medical and digital imaging where this study hopes to make a unique contribution. By critically investing in a productive tripartite encounter between the study of gender, technology and artistic practice, this thesis is able to use a contemporary methodological framework in order to revisit important early feminist practices, such as Schneemann's *Fuses*, Lynda Benglis' *Now* (1973) and Kate Craig's video works produced at the Western Front artist collective in Vancouver. Thus, for example, by engaging with the recent explosion in animal studies that has largely arisen from contemporary debates about the use of animals in scientific practice, it has perhaps been made historically and culturally possible for me to now actually begin to *see* the cat in Schneemann's early work and consider its role as a highly erotically and politically charged figure.

I would stress, however, that this thesis does not aim to generate totalising theories of technology, and instead looks at areas of tension between practice and theory as a potentially fruitful encounter. Indeed, several of the key theorists who frame this study, including Jacques Derrida and Luce Irigaray, are concerned with conceptual points of rupture and disconnection between a study and its object (cf. language, gender and touch). Therefore, while wary of the potential for my claims to fall into a sort of technological determinism, it nonetheless remains notable that this study has emerged at a particular historical moment. New advances in various imaging technologies, and the increasingly rapid integration of technology into the domestic sphere in European and North American cultures, have perhaps enabled this thesis to address some notable blind spots not only in theories of the subject and issues around gender and sexuality, but also in art history. As such, this study finds itself perhaps unable to fully reconcile the problem of 'the body', even while it takes itself to be deeply 'embodied', textually and culturally. That is to say, borrowing from the fruitful work of Braidotti, this thesis is itself a situated subject: wholly contingent on the factors of its own material and cultural production.

PETTING AND PERSONHOOD: RE-FRAMING INTERSPECIES CONTACTS IN  
CAROLEE SCHNEEMANN'S *FUSES*

*Pet(ting)*

*1890: M.E. Van Meter, a physician in Red Bluff, Colorado, requires skin to treat the severe burn of a 14 year old boy. He takes skin from the boy's father and brother and then removes skin from two young puppies of the Mexican hairless breed and applies them to the boy, achieving a 'superior result'.<sup>1</sup>*

I am intrigued by this anecdote. What sort of biological, ontological, epistemological and ethical questions would have to have been answered to enable xenotransplantation technologies (where organs from one species are grafted onto another) to be used in this way? What is it about the skinning of hairless puppies – hairless as a result of generations of artificial selective breeding – and the subsequent re-skinning of the hairless adolescent boy that might make us feel uneasy? What are the implications of the linguistic decisions that have been made, in order that the animals were referred to as ‘puppies’ rather than ‘juvenile xoloitzcuintli’, tying them to the symbolic economy of the pet and the domestic (historically constructed as subjective and feminine) rather than to science (historically constructed as objective and masculine<sup>2</sup>)? What would the piece of skin have looked like? What would it have felt like? With

---

<sup>1</sup> Lederer, Susan ‘Animal Parts/Human Bodies: Organic Transplantation in early 20<sup>th</sup> Century America’ in *The Animal/Human Boundary: Historical Perspectives*, Creager, A. & Jordan, W.C eds., University of Rochester Press, New York, 2002 (pp. 305-329) p. 313.

<sup>2</sup> For a discussion of the gendering of science and technology see Fox Keller, Evelyn *Reflections on Gender and Science*, Yale University Press, New Haven and London, 1985.

‘fingery-eyes’ we can perhaps imagine ourselves touching – and being touched by – this unfamiliar, unpleasant piece of skin.<sup>3</sup> The Mexican hairless is a very strange looking dog indeed.

Hairlessness, skin, puppies: these words point toward an uncomfortable place; a place of uneasy encounter between the human and the animal. That technology has been used to stage a physiologically and conceptually problematic relationship between different kinds of bodies gives rise to a complex renegotiation of the tacit assumptions that have structured Western thought systems for at least the last 450 years, and the category ‘human’ that it upholds. In this example of xenotransplantation, what sort of status does the ‘puppy’ – the domesticated animal, the pet – have when it is skinned and used in biomedical research? More problematic, perhaps, what sort of status does the ‘human’ have after its body no longer recognizes the animal antigens as foreign, and decides not to send enzymes to digest the skin, instead producing collagen and allowing its own capillaries to grow in to the skin of the animal, feeding it, nurturing it and growing it?

Xenotransplantation technologies, such as the historical case study described above or the common pig-to-human heart valve transplant, perhaps tend toward producing an instrumental relation between the human and the animal, in which the animal body is held in objective utility in relation to the human. As such, the technology itself compounds and reinforces the categories ‘human’ and ‘animal’, as they remain suspended in a system that holds one in the service of the other. Thus the nature of the linkages and affinities that technology generates might shift and slide, according to the material conditions of production. What, then, of the techniques and technologies of vision, and how it structures encounters between these different bodies? What role might touch still have to play in this? If, in theories of representation, the visual field has historically tended to construct the viewing subject as singular, centralized,

---

<sup>3</sup> I have borrowed this term from Donna Haraway, who in turn has borrowed from Eva Hayward’s term for the optic-haptic join of camera with marine creatures. See Hayward, Eva ‘Fingery Eyes: What I Learned from *Balanophyillia Elegans*’ in *The Encyclopedia of Human-Animal Relationships*, Bekoff, M. ed., Greenwood Publishing Group, Westport, Connecticut, 2007.

male and, certainly, human, how then might technology also be recast as a means of representing, and even producing, a dispersed subjectivity that accommodates multiple bodies?<sup>4</sup> How might film and photography no longer be associated with reasserting an ocular- and anthropocentric visual field?

For the last five decades, Carolee Schneemann's work has explored the possibility of reconfiguring technologies of representation in this way. Her challenge to regimes of objective perspectivalism that imagines looking from a distance, objectify and record are perhaps well known. She writes, 'if my paintings, photographs, films and enacted works have been judged obscene, the question arises: is this because I use the body in its actuality – without contrivance, fetishization, displacement? Is this because my works are usually self-shot, without an external, controlling eye?'<sup>5</sup> Although much of the work, and the discourse around it, are commonly associated with 'live' or 'body' art practices – which could be positioned counter to the technological – much of it is, in fact, bound up in technological and technical processes of production and reception, that traditionally does require an 'external eye'. What has been explored to a lesser extent, therefore, is the way in which Schneemann actually overturns this logic and uses film and photography to foreground a series of complex encounters between different bodies (male, female, animal, human) and between those bodies and technology. Frequently filtered through the filmstrip, as well as through secondary levels of printing, reproduction and projection, the body/image becomes twice mediated by technology in much of her work. The resulting complex visual structure of these film and photographic works then begin to trouble the category 'human' by disrupting the viewing processes that appeal to models of a unified subject at the centre of perception,

---

<sup>4</sup> For an overview of such debates see Crary, Jonathan *Techniques of the Observer*, MIT Press, Cambridge, Massachusetts, and London, England 1990; Jay, Martin 'Dialectic of Enlightenment' in *Downcast Eyes: The Denigration of Vision in Twentieth-Century French Thought*, University of California Press, Berkeley and L.A., 1993; Mulvey, Laura 'Visual Pleasure and Narrative Cinema' in *Screen* 16.3, Autumn 1975 (pp. 6-18); Doane, Mary Anne 'Film and the Masquerade: Theorising the Female Spectator', *Screen* 23.3-4, 1982 (pp. 74-88); Pollock, Griselda *Vision and Difference: Femininity, Feminism, and Histories of Art*, Routledge, London and New York, 1988.

<sup>5</sup> Schneemann, Carolee 'The Obscene Body/Politic' in *Art Journal: Censorship II Special Edition*, Vol. 50, No. 4, Winter 1991, (pp. 28-35), p.33.

dispersing the subject and aligning it figuratively and conceptually with bodies classified as ‘animal’.

Since the late 1950s Schneemann has featured her cats Kitch, Cluny and Vesper in much of her work, significantly in the context of sexual activity. Either they seem to look at Schneemann during intercourse with another partner (see *Fuses* 1967, *Plumb Line* 1971, *Kitch's Last Meal* 1978), or they kiss and lick her and actually become her partner (*Infinity Kisses* 1981–88, *Vesper's Stampede to My Holy Mouth* 1991) (figs 1.1-1.5). Critically, Schneemann invokes the sexuality of these feline bodies not in opposition to, but in parallel with her own. For example, in writing about her childhood experiences, growing up in the countryside, she has noted,

[My parents and I] would all lie in bed on Sunday mornings, they would teach me to read the comics... I remember the deep intimacy, sensuousness and delight. I built my own erotic fantasy life with various invisible animal and human lovers inhabiting my sheets, bed... The animals were sexual creatures and I identified that part of my nature with them.<sup>6</sup>

The sexual and creative relationship between Schneemann and her cats is an area awaiting fuller development. Certainly, looking at her work, personal notes and correspondence, cats seem to turn up everywhere (figs 1.6-1.9), and yet, the critical literature has, by and large, neglected the role of the cat in many of her works.<sup>7</sup> Furthermore, with the exception of the work of Rebecca Schneider, it makes no attempt to engage with the complex erotic encounters that are explicitly staged, and only makes passing reference to the cats, if at all. Thus

---

<sup>6</sup> Schneemann, Carolee quoted in Gadon, Elinor W. *The Once and Future Goddess*, Harper and Row, San Francisco, 1989 pp. 295-296.

<sup>7</sup> The following key texts in the literature on Schneemann's film works also all neglect the figure of the cat, or only make passing reference: James, David E. *Allegories of Cinema: American Film in the Sixties*, Princeton University Press, Princeton, 1989; Jones, Amelia *Body Art: Performing the Subject*, University of Minnesota Press, Minneapolis and London, 1998; Jones, Amelia *Self/Image: Technology, Representation and the Contemporary Subject*, Routledge, London and New York, 2006; Macdonald, Scott 'Carolee Schneemann's Autobiographical Trilogy' in *Film Quarterly*, Vol. 34, No. 1, Autumn 1980 pp. 27-32; Macdonald, Scott *A Critical Cinema: Interviews with Independent Filmmakers*, University of California Press, Berkeley, LA, London, 1988.

they seem to inhabit some sort of blind spot, as for example when Schneemann raises the issue of kissing her cat for the photographic installation *Infinity Kisses*, during an interview. The interviewer, Aviva Rahmani, simply ignores Schneemann's suggestion of an interspecies relationship and instead states: 'by using a cat, you're making it "non-pornography", taking the erotic issue out of heterosexual mating into eroticism for its own sake'. To which Schneemann flatly responds: 'my work seems to occupy a zone corresponding to the art world's blind spot.'<sup>8</sup> Even as late as 2002, therefore, the question of the cat cannot yet be critically addressed in an erotic context. This is perhaps especially surprising given the recent explosion of Animal Studies across a range of academic disciplines.<sup>9</sup> While this chapter hopes to address this important lacuna, it also posits that this lack of engagement is demonstrative of a broader cultural aversion to critically engaging with particular sexual phenomena.

Although it is perhaps surprising that Schneemann's cats are still somewhat of a blind-spot in readings of her work, this could be because they only *appear* (with the inflexion of both 'coming into existence' and the way something 'looks') marginal, on the sidelines, off or *ob*-scene, and as such are difficult little creatures to contend with, formally, conceptually and historically. That they generally appear only on the margins of a frame, a film or a painting, makes them obscene in the very sense of the word, tied as it is to visibility.<sup>10</sup> As Jacques Derrida might say, the cats only make a sort of furtive appearance, *a pas de loup* (as stealthy as a wolf) into the works. That is to say that they are, 'a discreet intrusion or even an unobtrusive effraction, without show, all but secret, clandestine, an entrance that does all it can to go unnoticed and especially not to

---

<sup>8</sup> Schneemann, Carolee 'On censorship: interview with Aviva Rahmani' in *Imaging Her Erotics*, MIT Press, Cambridge, Massachusetts, and London, England, 2002, (pp. 210-215), pp. 214-15.

<sup>9</sup> Notably, this has also become a fruitful field of enquiry for feminism and gender studies. See *Feminist Theory*, Vol. 12, No. 2, August 2011, *Special Issue: Nonhuman Feminisms*.

<sup>10</sup> 'Obscenity', as Peter Michelson argues, is the 'bringing onstage of what is customarily kept offstage'. (see *Speaking the Unspeakable: A Poetics of Obscenity*, State University of New York Press, Albany 1993, p.xi); or, as Linda Nead defines it, the representation of matter 'which is beyond the accepted codes of public visibility' (Nead, Lynda *The Female Nude: Art, Obscenity and Sexuality*, Routledge, London & New York, 1992, p. 90); or from the OED definition, 'Offensively or grossly indecent, lewd; (Law) (of a publication) tending to deprave and corrupt those who are likely to read, see, or hear the contents.' See <http://www.oed.com/view/Entry/129823>

be stopped, intercepted, or interrupted.’<sup>11</sup> Like the wolf, the cats seem to pose ‘thorny frontier questions’<sup>12</sup> about the perceived distinction between the human and the animal body, which has historically been structured around the twin Aristotelian models of *zoe* and *bios* (the ‘qualified life’ and the ‘bare life’).<sup>13</sup> As I hope to demonstrate in this chapter, the cats become a point of contact in Schneemann’s work between these classificatory systems, and foreground the role of technology in that process. What is both novel and provocative in Schneemann’s use of the animal body, however, is that the encounters between bodies are specifically erotic. As such, Schneemann reveals how certain bodies – particularly the feline and the female body – might operate within a symbolic economy of sexual affection, stroking and touch.<sup>14</sup> An Olympia for celluloid, perhaps.

For example, in *Personae (J.T. & 3 Kitch’s)* (1958), *Fur Wheel* (1962) (figs 1.10-1.11) and *Fur Landscape* (1963), three early works by Schneemann, there is a preoccupation with the physical contact between human and animal bodies, evoking both the tactile and the erotic, which can also be seen in her later film and photographic works.<sup>15</sup> In *Fur Landscape*, Schneemann covered the support with house paint and fur in order to produce a surface that demands a tactile encounter over and above a purely visual one: it literally invites petting. Likewise, *Personae (J.T. & 3 Kitch’s)* depicts a naked man lying on a bed, with the negative spaces around his body revealing a number of feline bodies in the paint, deeply entwined with his. Since they largely occupy only the negative

---

<sup>11</sup> Derrida, Jacques *The Beast and The Sovereign: Volume I*, Lisse, M., Mallet, M-L. & Michaud, G. eds., Bennington, G. trans., University of Chicago Press, Chicago and London, 2009 p. 2.

<sup>12</sup> *Ibid.*, p. 4; In relation to the wolf as a problematic animal character, see also Giorgio Agamben’s discussion in *Homo Sacer: Sovereign Power and Bare Life*, Heller-Roazen, D. trans., Stanford University Press, Stanford, California, 1998. Derrida is clearly in dialogue with Agamben when he writes *The Beast and The Sovereign*.

<sup>13</sup> The Aristotelian distinction between *zoe* and *bios* (see *Metaphysics, Politics*) forms the basis for Agamben’s discussion of the *homo sacer*. This distinction is challenged by Derrida in *The Beast and The Sovereign*, as he questions Agamben’s conceit that the wolf directly corresponds to *zoe* (in opposition to *bios*).

<sup>14</sup> The myriad of associations with the touch as presented by Jacques Derrida forms the basis for my thesis here. See Derrida, *On Touching – Jean-Luc Nancy*, Christine Irizarry trans., Stanford University Press, Stanford, California, 2005.

<sup>15</sup> See Stiles, Kristine ‘The Painter as an Instrument of Real Time’, in *Imaging Her Erotics* (pp. 3-17) for a discussion about Schneemann’s work in paint and how it produces a tactile experience.

spaces of the painting, the cats here literally perform a discreet, almost imperceptible intrusion.

What is interesting about these early object-based works is the way in which they set up a resonance between the terms ‘pet’ and ‘petting’ that comes to be a thread throughout much of Schneemann’s work, especially the important early film *Fuses* (1964-1967). This resonance might have been even more profoundly felt in the 1960s, with the popularization of terms such as ‘heavy petting’. In a project entitled *Naked Action Lecture* (June 27<sup>th</sup>, 1968, ICA) Schneemann dressed and undressed whilst lecturing to students on perception and spatial organisation. She writes:

At the conclusion of the slides I went on to the stage and asked for volunteers from the audience to join me in demonstrating a principle of collage; we would all undress, cover each other with paste and leap off the stage into the mound of shredded papers... after performing the collage a blackout. We left the stage for the showers upstairs. *Fuses* began.<sup>16</sup>

By preceding a screening of *Fuses* (figs 1.12-1.15) with an example of ‘body collage’, as in *Naked Action Lecture*, Schneemann invited the film to be viewed within an embodied, tactile, visual field in which the skin of the body functions as an interface both with the environment and with other bodies. In *Fuses*, this interface also incorporates the body of her pet cat, Kitch, in order to generate new embodied forms of desire, premised on touch and erotic inter-species encounter. Picking up on Amelia Jones’ wonderful description of this work as a ‘hetero-erotic flesh-poem’<sup>17</sup>, this chapter hopes not just to challenge the ‘hetero’ label that is so frequently applied to this film, but actually to nuance it and suggest that the concept of hetero could here be more usefully understood as being grounded in difference: both the difference of gender, and the difference of species.

---

<sup>16</sup> Schneemann, Carolee *More Than Meat Joy: Performance Work and Selected Writings*, McPherson, B. R. ed., Mcpherson & Co., New York, 1997, p. 180.

<sup>17</sup> Jones 2006, p.146.



Shot on 16mm, this film is a densely woven mesh of surface marks, scratches, paint and images, inviting a kind of vision that spreads out over the surface instead of penetrating into depth or narrative.<sup>18</sup> Upon this surface, this screen, the film shows Schneemann and James Tenney having sex. There is a cat, Kitch, who watches them. A soundtrack of ocean waves crashing and a cat meowing accompanies the film. As has already been well-documented elsewhere, the techniques used for filming were highly experimental: the footage was shot in slow, fast and regular motion using a variety of camera positions – hand-held, suspended from a ceiling, balanced on a table – and a range of exposure levels depending on the time of day or year at which the footage was shot. The film stock was then manipulated so that one sees multiple print generations of the same image and highly edited passages with splice marks, flares and perforations made visible. In addition to this, Schneemann repeatedly worked into the film stock by drawing, painting or animating directly onto it, hanging the footage outdoors and baking imagery on. In fact, the original stock of *Fuses* was so heavily collaged, so thick, that it could not be printed.<sup>19</sup> In this way, as with *Fur Landscape*, the materiality of the film itself becomes staged on the surface of the screen, as its limits are exposed by Schneemann's extensive exploration of the physical properties of the 16mm camera, via both production *and* destruction.<sup>20</sup>

In *Fuses*, the film screen constantly asserts its materiality, since the fantasy space of narrative is often negated as the eye roves over its enticing surface. As Schneemann has scratched and marked it, the projected image actually becomes, as Amelia Jones writes, 'a kind of skin that has been tenderly stroked

---

<sup>18</sup> Schneemann writes that 'viewers are distracted by the simultaneity of perceptual layers *Fuses* offers.' Schneemann 2002, p. 21. For a discussion of how Schneemann's early paintings also rejected illusion, see Stiles, p. 4.

<sup>19</sup> Schneemann, Carolee 'Interview With Kate Haug' in *Imaging Her Erotics*, (pp. 2-45), p. 43.

<sup>20</sup> 'The durability of 16mm (as opposed to 8mm) made it an obvious choice for the highly tactile experience of *Fuses*.' (Macdonald, 1980, p.30). The editing process itself also contributed to the grainy, textured surface. As Schneemann states in the interview with Kate Haug, 'my film is always dirty because of the way I edited, with the cats moving around and the windows wide open.' Schneemann, 2002, p. 33. What I find interesting about this quote is the way in which the cats seem to be caught within the double meaning of the word 'dirty'. We are not quite sure whether the cats are dirty, or whether they have made the film dirty, or indeed what precisely is being implied with the term 'dirty'.

or passionately punctured.’<sup>21</sup> *Fuses* has therefore been widely conceived as an important moment in film-making, in which the spectator is encouraged to re-focus on the screen as a tactile skin, drawing the eye away from an illusionistically rendered diagesis played out within the filmic lexis. As Scott Macdonald has suggested, this both activates notions of touch in the work, and proposes a model of spectatorship toward an embodied encounter with the screen-image,

In *Fuses* the camera is not a detached observer with its own set of rules. It’s a participant in the experience, functioning both as a stimulus and a receiver of stimuli. The fact that the imagery recorded by the camera was physically handled and explored by Schneemann for years makes the finished film an extension of the tactile experiences it records... *Fuses* is a natural accretion which, like the husk of a cicada or a chambered nautilus, is an index to the life processes which created it.<sup>22</sup>

*Fuses* represents an accumulation of images and ideas, collected over the years, and on to which is imprinted the traces of a quotidian domesticity. For both Macdonald and Jones, the film solicits an image that is somehow alive, as the screen-image pulsates and writhes with rippling contours, and the surface accommodates an indexical relationship to the world, premised upon touch (con-tact).<sup>23</sup> ‘Functioning both as a stimulus and a receiver of stimuli’, the film exhibits the tactile reflexivity of skin: that it may be both touching and touched.<sup>24</sup> Using the formal device of continuous variation on the surface of the

---

<sup>21</sup> Jones, 2006, p. 146.

<sup>22</sup> Macdonald, 1980, p. 28.

<sup>23</sup> For a formulation of the film screen as skin in *Fuses* see also James, 1989.

<sup>24</sup> For a discussion of the tactile reflexivity of skin see Anzieu, Didier *The Skin Ego*, Turner, C. trans., Yale University Press, New Haven and London, 1989, especially p. 61; Freud, Sigmund *Inhibitions, Symptoms and Anxiety* (1926) W.W. Norton and Co, London, 1990; Merleau-Ponty, Maurice ‘Eye and Mind’ (1960) in *The Merleau-Ponty Aesthetics Reader: Philosophy and Painting*, Smith, M. trans., Northwestern University Press, Evanston 1993; Merleau-Ponty, *The Visible and the Invisible*, Lingis, A. trans., Northwestern University Press, Evanston, 1968; and Nancy, Jean-Luc *Etre Singulier Pluriel*, Galilée, Paris 1996, the book which formed the basis for Derrida’s discussion of touch in *On Touching – Jean-Luc Nancy*, 2005. Nancy writes in *Etre Singulier Pluriel*, ‘touching is the very experience of origin as plural singularity. Self-touching, touching oneself, (self)touch one another.’ Quoted in Derrida, 2005, p. 115; for a feminist critique of some of these models of tactile reflexivity see Irigaray, Luce ‘Section IV’ in *An*

screen, *Fuses* exhibits the unstable visual, psychological or spatial referent that has characterised the philosophical notion of the haptic, in which the film screen becomes a sort of synthesis ('fusing') of both optic and tactile sensory information.<sup>25</sup> As such, the skin of the film is integral to the production of encounters between bodies on either side of it: both in the space of reception and in the space of representation. The screen is a point of physical contact, then, a point at which the flesh of the bodies in the film presses up against the screen, causing it to extend out in to our space and implicating us in the erotic encounter. As Maurice Merleau-Ponty has written, 'vision is a palpation with the look.'<sup>26</sup> Rather than reinscribe the logic of a disembodied eye, a motif through which film has traditionally been understood as both purely visual and at the perceived centre of a unifying and objectifying gaze, Schneemann instead uses the materiality of film to scramble narratives and disperse representations, and invest in the corporeality of the celluloid itself. In this, *Fuses* was very much part of a broader context in which artists at this time were asserting the corporeality of film, most notably through dance. Particularly, Trisha Brown's works *Planes* (1968) and *Homemade* (1966), both incorporated film – and the act of filmmaking – into the performances in a way that rejected any sense that the spaces of production or reception were the domain of a disembodied eye. Neither the act of looking at, or making, film could any longer be separated from the body itself.

### ***Tales and tails***

In *Fuses*, the points of contact between the fields of reception and representation are constructed as erotic by virtue of the ties of both skin and

---

*Ethics of Sexual Difference*, Burke, C. & Gill, G. C. trans., The Athlone Press, London 1993 especially pp. 186-87.

<sup>25</sup> For a discussion of the haptic see Deleuze, Gilles *Francis Bacon: The Logic of Sensation*, 1981; Deleuze, Gilles and Guattari, Felix '1440: The Smooth and the Striated' in *Capitalism and Schizophrenia: A Thousand Plateaus*, Massumi, B. trans., Continuum, London and New York, 1987 (pp. 523-551). Their work on the haptic comes from Riegl, Alois *Problems of Style: Foundations for a History of Ornament* (1893), and Riegl, *Late Roman Art Industry* (1901). For a discussion of the way in which the haptic has been used in film theory in relation to marginalized or counter-cultural practices see Marks, Laura *The Skin of the Film: Intercultural Cinema, Embodiment and the Senses*, Duke University Press, Durham and London, 2000.

<sup>26</sup> 'Vision is a palpation with the look.' Merleau-Ponty, 1968, p. 134. The reciprocity between the touched and the touching forms the basis for Merleau-Ponty's model of the field of vision, in that there is a similar reciprocity between seer and seen.

flesh to the tactile. Both the formal and the structural properties of the work – *what* it shows, as well as *how* it shows – construct *Fuses* as erotic and, crucially, both the content and the structure achieve this by activating the notion of touch. The content and the structure or formal properties of the work are thus deeply and systematically entangled. They are knitted together in to a web, in which numerous points of connection – knots and nodes – support the construction. At the centre of the web is the cat, which brings together the tactile and the visual through the notions of both petting and fur, which are each tied to sexual affection and the erotic.

During a brief passage, the filmic lexis is centred on the bodies of Schneemann and Tenney. Over the surface of the film scratches and breaks interrupt our viewing processes. The scene then switches to Kitch, nestled on someone's lap, while a hand gently caresses him from above. A streak of purple paint smears itself across the film screen and the fur melts into breaks and scratches. This time, as the breaks fade, the scene has switched again to hands, intimately touching Schneemann, probing wet, fleshy recesses. The camera zooms in to blackness and the purple smear again signals the rupture between spliced footage while simultaneously smoothing over the break, producing the illusion of one body becoming another, as the image of Kitch then re-appears on our screen. He is still being tenderly stroked, almost absentmindedly. Schneemann has become Kitch. The breaks and smears of the surface of the screen produce this equivalence, as we see both Kitch and Schneemann being touched, each body sharing an analogous position in relation to the external, disembodied hand. The erotic contact, which is being staged by the image of the hand stroking Kitch, is underwritten by the explicit sexual – and more specifically genital – contact shown in the intercut scenes.

While this passage clearly refers to the eroticism inherent in the contact between fur and skin, underscored by the analogy between Kitch and Schneemann, it might also serve as an allusion to a symbolic economy in which women's bodies are equated with animal bodies, especially feline ones. While a similar history exists between men and cats, it usually concerns *benign* male figures: for example, there is a partnership of cats and mayors seen in both *Finnegans*

*Wake* and *The Tale of Dick Whittington*. By contrast, there are numerous historical and literary female and/or feline figures that are specifically constructed as malicious. For example, there is the association of cats with lubriciousness, evil and/or the feminine in numerous fairy-, folk- and ‘wondertales.’<sup>27</sup> In these, the cat is generally seen as an object of malevolence associated with the dark, a magic creature in its own right and, crucially, female. Covering a range of historical and literary sources, this includes the *grimalkin*<sup>28</sup> and the *cait sith*<sup>29</sup> from English and Scottish folk tales; the *Cat Saint* from the Basque region (a cat-witch who would punish women who disobey her rule of no domestic work on St. Agatha’s day)<sup>30</sup>; and, in two of Grimm’s fairy tales, *The Cat and Mouse in Partnership* and *The Youth who went Forth to Learn what Fear Was* the cat features as a malignant entity.<sup>31</sup> From out of these fairy tales and folk stories, as recent developments in the literature have noted, we then see the emergence of fantasies about the witch and her familiar.<sup>32</sup>

---

<sup>27</sup> The Russian structuralist Vladimir Prop preferred to use the term ‘wondertale’, from the German ‘*wundermarchen*’, as a means to embrace both fairy tales and folk tales.

<sup>28</sup> Hadlock, Wendell S. and Stimson, Anna K. ‘Traditional Cat Names’, in *The Journal of American Folklore*, Vol. 59, No. 234, Oct. – Dec., 1946, (pp. 529-530). A grimalkin is an old or evil-looking female cat. The term stems from ‘grey’ (the colour) plus ‘malkin’, an obsolete term for a cat, derived from the hypocoristic (a pet name) form of the female name Maud. The term/name may first come from *Beware the Cat* (published 1570) by William Baldwin, who relates the story of Grimalkin’s death. According to its editors, the story, and thus the name, originates with Baldwin. It is also spelled Grimmalkin or Grimolochin. Grimalkin was the name of the cat of Nostradamus, and later the witches’ cat Gray-Malkin in *Macbeth* by William Shakespeare. In *Tom Jones*, Henry Fielding relates a story from a 17th-century collection of fables in which Grimalkin is a cat whose owner falls passionately in love with her. He prays to Venus, who changes the cat into a woman. Lying in bed, however, she spots a mouse and leaps up after it, ‘Puss, even when she’s a Madam, will be a mouser still.’ In *Wuthering Heights*, Mr. Lockwood shares a set of two benches in the back kitchen of Healthcliff’s manor with a Grimalkin described as a ‘brindled, grey cat, which crept from the ashes, and saluted me with a querulous mew.’

<sup>29</sup> See Briggs, Katherine *The Fairies in Tradition and Literature*, Routledge Classics, London and New York, 2002, pp. 85-87.

<sup>30</sup> Alford, Violet ‘The Cat Saint’, *Folklore*, Vol. 52, No. 3, Sep., 1941, pp. 161-183.

<sup>31</sup> Grimm, *Complete Fairy Tales*, Routledge Classics, London and New York, 2002. The magical power of the cat is perhaps demonstrated by the unusual practice of bricking up cats in new builds as a foundation sacrifice, particularly during the regeneration works in London following 1666. For a fascinating exploration of this phenomenon see Howard, Margaret M. ‘Dried Cats’, in *Man*, Vol. 51, Nov. 1951 (pp. 149-151).

<sup>32</sup> For a discussion of the emergence of the witch’s familiar out of existing folk lore see Sax, Boria ‘The Magic of Animals: English Witch Trials in the Perspective of Folklore’, in *Anthrozoos*, Vol. 22, issue 4, Dec., 2009 (pp. 317-332); and Wilby, Emma ‘The Witch’s Familiar and the Fairy in Early Modern England and Scotland’, *Folklore*, Vol. 111, No. 2, Oct., 2000 (pp. 283-305). In these sources the historical construction of the witch’s familiar as an elite demonological concept imposed upon popular culture ‘from above’ is challenged. According to this hypothesis, prosecutorial suggestion during witchcraft trials, witchcraft pamphlets, pulpit teachings and so on served to gradually impress the idea of the witch’s familiar into the popular imagination, where it then became a vehicle for the sensationalist and

Finally, more recently, there are the dangerous cat-women represented in the surrealist photograph *Cat and I* (Wanda Wulz, 1932), DC Comics' *Catwoman* and the film *Cat People* (Jacques Tourneur, 1942; Paul Schrader, 1982).

*Fuses*, like many of Schneemann's works, thus appears to perform in dual political arenas. On the one hand it stages an encounter that has been characterized as a challenge to Enlightenment models of vision as disembodied and so "cleansed" of the vicissitudes of desire.<sup>33</sup> But, on the other, it concerns a symbolic economy in which women are either reduced to animals (bird, pussy, beaver, cow, chick) or carved up like animals (leg-man, breast-man); the film specifically invokes this troublesome logic of modernist dualisms with its visual puns on 'stroking pussy'.<sup>34</sup> Similarly, another passage of the film shows an extended scene of cows in a snowstorm in which the film dissolves into white: an emptying out, a break, in the dense imagery. Schneemann writes that she had 'gone out into the snowstorm naked, putting on a coat. It happened to have been some old scraggly fur coat, so I was thinking about fur and animal and flesh.'<sup>35</sup>

---

paranoid fantasies of the witch and her neighbours. This concept is challenged in these articles by considering the links between the familiar and the fairy (i.e. in popular culture). For a discussion of the witch and her familiar, see Kingsbury, J.B. 'The Last Witch of England', in *Folklore*, Vol. 61, No. 3, Sep., 1950 (pp. 134-145); and Micklewright, F. H. Amphlett 'A Note on the Witch-Familiar in Seventeenth-Century England', in *Folklore*, Vol. 58, No. 2, Jun., 1947 (pp. 285-287); The English Statute of Witchcraft of 1604 made it a felony to 'consult, covenant with, entertain, employ, feed or reward any evil and wicked spirit to or for any intent or purpose.' K. Thomas, *Religion and the Decline of Magic*, Charles Scribner's Sons, New York, 1971, p. 443; Lastly, any overview would be incomplete without reference to the fantastic online resource of The University of Virginia pertaining to the Salem Witchcraft Trials: <http://etext.virginia.edu/salem/witchcraft/texts/transcripts.html>.

<sup>33</sup> Jones, 2006, p. 20. Writers like Jones and MacDonald cast *Fuses* as a provocative challenge to western scopical regimes. By precluding the narrative element in the visual field, operating outside of hetero-normative discourse and by mobilising modes of production rooted in female agency (whereby the woman is shot by-herself and for-herself) *Fuses* is famously read as defeating the vice-like grip of the camera/eye and the subsequent conflation of woman/fetish that has been so expertly described by Laura Mulvey in 'Visual Pleasure and Narrative Cinema'.

<sup>34</sup> Schneemann has written of *Fuses*, 'I have all these little sexual jokes in it – Tenney's balls resting on a chair bordered with Christmas tree balls. Then I montaged a burning bush joke – there's a close up of my bush. I loved discovering those associations. Nobody saw those for years. I'd be the only person in the audience chuckling away. Like pussy/pussy – his hand on the cat and cut to his hand stroke my pussy.' Schneemann, 2002, p. 42.

<sup>35</sup> Schneemann, 2002, p. 33. Interestingly, Schneemann has lived in New York's fur district since arriving in the city in 1962, in an apartment that used to house the old *Papadopolous* furrier sweatshop. This item of trivia is part of a web of connections between Schneemann and fur, which are worked through in several of her early pieces, including *Four Fur Cutting Boards* (1963) and *Fur Wheel* (1962). Of note is that these works were produced contemporaneously with her arrival in the area.

The film therefore seems to expose the historical relationships not only between the female and the feline but also between (women's) skin and fur and, indeed, these have historically come together in numerous sexualised narratives and contacts – ‘tales and tails.’<sup>36</sup> In this it brings together a series of linguistic (female, feline) and biological concepts (skin, fur). For example, fur has been understood as the most privileged, the most exquisite type of second skin for women to wear and, along with flesh, has traditionally acted as a signifier for the female body in and of itself. From Leopold von Sacher-Masoch's dominatrix Wanda, to Meret Oppenheim's fur-lined tea-cup, to June Sauer's fashion photographs of women in fur,<sup>37</sup> to Brigitte Bardot (sex-kitten and animal rights activist), to the Canadian phenomenon of *Les Filles du Roi*,<sup>38</sup> we encounter a plethora of points of *con-tact*; of cultural, political and historical intersections between women's skin and fur.

In her book *Fur Nation: From The Beaver to Brigitte Bardot* (2001), Chantal Nadeau traced some of these points of convergence (*touches*) between women's skin and fur, within the context of the construction of a Canadian national identity. In the history of fur pelts, skins and skinning, argues Nadeau, women are traditionally skinned and then re-dressed in fur.<sup>39</sup> Such a study is especially important for Canadian identity since the economy was founded on the fur trade

---

<sup>36</sup> Although, rather than ‘expose’ we might use the term ‘expeause’. This neologism is a compression of the words ‘peau’ and ‘expose’ as used by Derrida, 2005 in his discussion of skin and touch.

<sup>37</sup> ‘[June Sauer captures] the delicate papery texture of skin and the sensuality of fur in the frame. I understand fully the web of mediations that converge to construct women in furs: the spectacular materiality and incandescent public and ‘private’ qualities of the fur ladies. [In her photos] I can caress skin and fur all at once.’ Nadeau, Chantal *Fur Nation: From the Beaver to Brigitte Bardot*, Routledge, London and New York, 2001 p. 69.

<sup>38</sup> *Les Filles du Roi* was a French cultural phenomenon during the foundation of the new colony of Canada. These were girls who were considered unsuitable for marriage in the mother country and so were sent by royal proclamation to Canada for marriage, in other words for the procreation of the white race. Canada's economic structure was completely dependent on the fur trade and *Les Filles du Roi* played a key role in the consolidation of French dominance in the new world. As a result of the marriage, the French engages who worked in the fur trade in Canada were forced to swear allegiance to the King for the duration of their contract with the fur companies. The girls were given in exchange for the continued success of the beaver fur trade.

<sup>39</sup> Also see Emberley, Julia *Venus and Furs: The Cultural Politics of Fur*, I. B. Taurus & Co. Ltd, London, 1998. Specifically, Nadeau is concerned with women's place in both the symbolic and the material production of fur and so she positions herself in opposition to Emberley because she risks reproducing the traditional exclusion of women from material production. It is also of note that there are simultaneous histories of men and fur, in the context of sexuality, usually pertaining to the hairiness or hairlessness of their own bodies. In particular I am thinking of the ‘bears’ of gay communities.

and the fact that the national emblem, the ‘beaver’, contains an array of allusions to gendered bodies.<sup>40</sup> Importantly for Nadeau and for my study here, there is eroticism inherent in the very appearance of fur, which is brought to life with the highly charged relationship between fur and the (culturally endorsed) depilated skin of a woman. She writes, ‘when I look at fur I cannot help but see the feeling of the fur at the tips of my fingers, I cannot help but feeling the skin that is wearing the fur.’<sup>41</sup> The very *look* of fur is thus intimately connected with its tactility, as it invites a haptic encounter.

Like sight, the haptic operates in the processes of psychological orientation to the world and encounters between subjects. While the haptic does pertain to touch and tactile sensations, it actually implies an interdependency between the sensations of touch and sight, and as such is offered as a counter-point to the hegemonic dominion of visual over non-visual culture, and cultures.<sup>42</sup> Indeed, it is precisely through the complex interaction of visual *and* tactile sensations activated in *Fuses* that the symbolic economy of the pet and petting comes into play, revealing the many ways in which the haptic – as opposed to the purely visual or tactile – operates in the production of desire. By considering the pet (*n.*)/to pet (*v.*) within the context of the haptic, we might more fully understand the processes of petting and stroking as incorporating communication and human-animal con-*tacts*.

The animal body or, perhaps more accurately in this context, animal *fur*, both touches on metaphors of the female body and touches on the notion of touch itself: the tactility of fur reveals what is inherently erotic in the notion of touch. Beyond the hetero-normative model of subjectivity and eroticism that is generally seen as defining the work, I would therefore like to argue for a re-imagining of the politics of desire at play in *Fuses*. Indeed, Schneemann has

---

<sup>40</sup> Beavers have a peculiar relationship to the explicit gendered body, not only by means of its obvious associations with female genitalia, but also because male beavers have a paramesonephric duct, or uterus.

<sup>41</sup> Nadeau, p. 8.

<sup>42</sup> E.g. see Marks, whose model of ‘intercultural cinema’ (marginalised practices) is radically opposed to modernist notions of disembodied vision. For Marks, haptic vision incorporates aspects of embodiment in order to assert that vision fundamentally remains a point of contact between bodies, and that there is a bodily experience involved in the apprehension of the screen image.



stated that '*Fuses* was partly inspired by the shameless appreciation of our cat Kitch.'<sup>43</sup> It is these points of contact, or touches, between animal fur, the female body, the film screen, tactility and eroticism, that might provide a new critical space for considering Schneemann's work and, indeed, open up a whole range of practices to a material analysis of the techniques and technologies used in their making. Thus, *Fuses* demonstrates the interweaving of thematic and material concerns that also configured both *Fur Landscape* and *Personae*.

### ***Touching others***

The relationship between the tactile and the visual which, as I have shown, is activated by fur and the notion of the pet in Schneemann's *Fuses*, has been historically staged in opposition to the post-Enlightenment tendency towards the rationality of perspectival vision, which sees from a distance, understands and objectifies. Merleau-Ponty's work on the reciprocity of touch, and his formulation of that reciprocity as the ground for also understanding vision, forms the basis for Luce Irigaray's critique in *An Ethics of Sexual Difference* (1984). For Irigaray, one of the problems with Merleau-Ponty's work on touch is that it still remains primarily invested in the look. She writes, 'must my aesthesiological body be completed by vision?...[Merleau-Ponty] privileges vision, takes back a great deal of the phenomenology of the tactile, and gives it the privilege of closing up the body.'<sup>44</sup> Irigaray's conceptualisation of touch is subsequently premised not upon the points of contact between the visual and the tactile, but rather the points of rupture. The look, for Irigaray, has the tendency to 'freeze' the touch, to disturb 'the intelligence of my touching...paralyzing the flow, turning it to ice...I cannot situate the visible and the tangible in a chiasmus.'<sup>45</sup> Unlike the work of Merleau-Ponty, Alois Riegl, Gilles Deleuze and Felix Guattari, both Irigaray and Derrida suggest that rather than simply completing one another, the point at which the tactile and the visual meet is at a point of disconnection, a point of non-contact, which stages the Aristotelian

---

<sup>43</sup> Carolee Schneemann, personal email correspondence, March 4, 2009

<sup>44</sup> Irigaray, pp. 174-76. Merleau-Ponty's model here appears similar to Deleuze and Guattari's work on the haptic in which the eye seems to complete *le vécu*, or the lived experience: 'The haptic does not establish an opposition between two sense organs but rather invites the assumption that the eye itself may fulfil this non-optical function.' Deleuze and Guattari, p. 543.

<sup>45</sup> Irigaray, p. 162.

aporia of the touch: the idea that we can never quite touch touch.<sup>46</sup> The prism of touch is actually, therefore, diffracted through a range of tactile experiences that include both the positive and the negative, the caress and the blow. Derrida lists,

Skimming, grazing, pressing, pushing in, squeezing, smoothing, scratching, rubbing, stroking, palpating, groping, kneading, massaging, embracing, hugging, striking, pinching, biting, sucking, wetting, holding, letting go, licking, jerking, looking, listening, smelling, tasting, avoiding, kissing, cradling, swinging, carrying, weighing.<sup>47</sup>

This state of disconnection between the look and the touch is described by Irigaray as a ‘mucous’. A strange membrane that, she argues, Merleau-Ponty does not fully address in his work in this field. She writes,

The look cannot take up the tangible. Thus I never see that in which I touch or am touched. What is at play in the caress does not see itself. The in-between, the middle, the medium of the caress does not see itself...nor will I ever see the mucous, that most intimate interior of my flesh, neither the touch of the outside of the skin of my fingers nor the perception of the inside of these same fingers...these mucous membranes evade my mastery, just as my face does, yet differently. The joined hands perhaps represent this memory of the intimacy of the mucous.<sup>48</sup>

The mucous therefore represents a space of not-touching, even while it seems to appeal to the tactile through its metaphorical associations with stickiness, viscosity, joining, sealing and fusing. For Irigaray, it is therefore a space that is inherently associated with the relationship between the interior and the exterior as well as the self and the Other, or perhaps rather two Others. Irigaray writes,

---

<sup>46</sup> Aristotle, *On the Soul*. Aristotle’s formulation of the aporia of touch informs Derrida’s *On Touching – Jean-Luc Nancy*, in which touch is fundamentally problematic because it always entails a non-touching. Touch is diaphanous and always mediated, distanced, divided.

<sup>47</sup> Derrida, 2005, p. 70.

<sup>48</sup> See Irigaray, pp. 161-170 for a critique of Merleau-Ponty’s work on touch.

‘prior to and following any positioning of the subject, this touch binds and unbinds two others in a flesh that is still and always untouched by mastery...covering it, uncovering it again and again, like an amorous impregnation that seeks out and affirms otherness while protecting it... in that place, nothing attests to the subject.’<sup>49</sup> Schneemann notes that *Fuses* invokes a loss of self that perhaps speaks to this idea of ‘two others’, in which neither body inhabits the position of the subject in relation to the other:

[In the section of the film when everything turns white] I wanted everything to suddenly drain into this open, indecipherable whiteness – like that orgasmic space where you are out beyond wherever you are. You don’t know where you are. You don’t know if it his body or your body.<sup>50</sup>

This space of otherness, rather than simply the Other, is the film screen, a site of corporeal transfer across its boundaries. In a very brief sequence, Schneemann is just glimpsed brushing her hair. Streaks of red paint and animated circles obscure the scene. On to the surface of the film, scratches also appear, zigzagging across, formally mimicking Schneemann’s wavy hair. It is almost as if stray hairs had been lifted on to the screen itself, somehow caught by the sticky surface of the film. This stickiness is like a net, trawling both the space of representation and the embodied space of reception in order to trap traces of bodies as they press up against the film screen, destroying the conceptual distance between the viewer and the image.<sup>51</sup> In this way, the screen operates as an interface that facilitates a tactile encounter, causing the distinction between the viewing subject and the object of representation to be eroded. As bodies press themselves up against the film screen, often unrecognisable, any stable or unified sets of referents are destroyed, as orientations are never constant but are

---

<sup>49</sup> Irigaray, p. 186.

<sup>50</sup> Schneemann, 2002, p. 33.

<sup>51</sup> For Deleuze and Guattari, the close-up fulfils an integral function in haptic vision since it positions itself in opposition to perspectival rationality: ‘It seems to us that the Smooth is both the object of a close vision par excellence and the element of a haptic space... one never sees from a distance in a space of this kind, nor does one see it from a distance...’ (Deleuze and Guattari, pp. 544-46).

in continual flux. Any linkages are therefore only constituted according to dynamic tactile relationships.

In her November 1979 interview with Scott Macdonald, Schneemann discussed the working methods involved in making *Fuses*. What is striking is the resistance to describing herself, the filmmaker, as an unequivocal I/eye. For Schneemann, the process of making *Fuses* involved a deeply collaborative relationship not only with the other participants in the film (the cats and the men, always ‘we’<sup>52</sup>) but also with the film stock and the technology used to produce it. Seeping through the filmic lexis, out of reel- and into real-space, the film implicates both the spectator and Schneemann in an encounter with other bodies (human and animal) and with technology. Continually touched, handled and re-worked by Schneemann, the film stock bears an indexical relation to the processes of production and editing it has undergone, which she has described as a sort of bodily praxis.<sup>53</sup> She writes, ‘once I had made the identification of aperture and exposure, I had to develop a sense of the camera and me as a meshed system’,<sup>54</sup> and again ‘I had to make cameras and light meters and tripods all part of my body.’<sup>55</sup> In this way, Schneemann appears to defeat a traditional, instrumental, ontology of the film camera, relinquishing the position of the authorial I, and instead allow the organic and the inorganic to interact and take over in the process of production.<sup>56</sup> As Schneemann edited hundreds of feet of the film stock manually, in a conflation of sight and touch, she has described how her body became entwined with it, moving back and forth, back and forth reworking the film. In this way, editing becomes a non-linear practice that breaks down the authorial ‘I’ in favour of a more nuanced reciprocal mode of production: ‘I go into a trance. How else can you edit it? It’s a “musical trance”,

---

<sup>52</sup> ‘The sounds that Kitch made were a web all around me. She liked to work with resonant, hollow spaces where, we realised after a while, she could bounce sound.’ (Macdonald, 1988, p. 147). Also see Schneemann, 2002, p. 26 for a discussion of the equality of bodies in the filming process.

<sup>53</sup> Macdonald, 1980, p. 28.

<sup>54</sup> Macdonald, 1988, p. 138.

<sup>55</sup> *Ibid.*, p. 139.

<sup>56</sup> In terms of an instrumental ontology I am thinking of the Heideggerian model of *gestell*. For a rejoinder see Heidegger, Martin ‘The Question Concerning Technology’ in *Basic Writings: Martin Heidegger*, Krell, D. F. ed., Harper Collins, San Francisco, 1994 (pp. 283-318).

and I'm reeling film back and forth. In some cellular way I feel that *I'm* being reeled back and forth. In that sense it's more like dance.<sup>57</sup>

This interest in how the body generates rhythm and movement in filmmaking further situates Schneemann's work amongst the practices of dancers such as Trisha Brown or Yvonne Rainer, as discussed earlier.<sup>58</sup> Like Schneemann, Irigaray also considered the way in which movement might be intimately bound up with touch in the processes of phenomenological experience. Movement was a central area of concern in her critique of Merleau-Ponty's constant privileging of vision in tactile encounters: 'It happens that movement is a more adequate way of building myself an aesthesiological body. And that, moving through the world, across the universe, or dancing, I construct more of a dwelling for myself than through vision.'<sup>59</sup> The embodiedness of Schneemann in the process of making the film is linked to the embodied field of reception – the spectator – through the device of the screen, a porous membrane. As such, the screen in *Fuses* becomes the point of contact, through which different bodies might come so close to one another as to almost touch, so that there is a merging between three distinct fields: the space of the artist, the screen and the space of the viewer.<sup>60</sup>

A deeply entangled conflation of bodies therefore becomes established in *Fuses*, whereby eyes, lenses, bodies and screens come to stand in for one another. However, *Fuses* is not only concerned with the visual field of the spectator or the artist, but also notably that of the cat, Kitch. As Schneemann has written, 'Kitch watches with complete unrestrained interest. The cat becomes the filmic eye, a metapresence inviting the viewers.'<sup>61</sup> The camera cuts from Tenney and

---

<sup>57</sup> Macdonald, 1988, p. 145.

<sup>58</sup> For various discussions on the relationship between Schneemann's work and dance, see Haller, Robert 'Amy Greenfield and Carolee Schneemann: An Introduction' and 'Through the Body: A dialogue between Amy Greenfield and Carolee Schneemann' both in *Field of Vision*, No. 4, Fall 1978 (pp. 2-4 and pp. 5-8).

<sup>59</sup> Irigaray, p. 175.

<sup>60</sup> For a discussion of how this is activated in Schneemann's early paintings see Stiles, p. 4.

<sup>61</sup> Schneemann, 2002, p. 42. 'We are perceived through the eyes of our cat. By visualising the cats point of view I was able to present our coupled images in the contexts of the rectangles and the seasons surrounding us.' Schneemann, 2002, p. 45. This position is echoed by Kristine Stiles who suggests that the cat is 'a visual intercessor, marking the contingency between the inner and

Schneemann making love, to Kitch watching (suggesting that he, like us, is watching the lovers). Kitch watches Schneemann and Tenney making love; sometimes he is her lover. Schneemann watches Tenney; we watch Schneemann. As the gazes shift, so too might our narcissistic identification with any one of the subject positions. We are Schneemann; we desire Schneemann. We are watching Kitch; we are Kitch, watching Schneemann. As such, Kitch becomes the point of contact between the screen and the bodies involved in the production and apprehension of the screen-image. In *Fuses*, the audience seems to be positioned within the role of cat: the cat's gaze and ours frequently intersect and align. In fact, the cat appears to provide the only stable viewing position: our eye, the filmic eye and the cat's eye at times seem to converge and resolve the field of representation.

Furthermore, looking to the work of Derrida, the very gaze of the animal might be seen to trouble the taxonomic split between human and animal bodies as one comes to stand for the other. In 'The Animal that Therefore I Am (More to Follow)' (2002) Derrida considers the gaze of his pet cat as a way of imagining how to philosophically invest the animal body with agency, without assuming a position of authority from which to do so.<sup>62</sup> Positioned against Descartes, Kant, Heidegger, Lacan and Levinas – whose work on animals treats them as a theorem, as something *seen and not seeing* – Derrida suggests that the human experience of feeling shame when we are caught naked in the gaze of an animal does not necessarily reveal that they are autonomous subjects, but rather that the subjectivity of all species of (human)animal are intertwined in the process of identity formation:

When I say “Je suis,”... I move from “the ends of man,” that is the confines of man, to “the crossing of borders” between man

---

outer eyes and where the boundaries of vision relate to the thinking, feeling body that is and is seeing itself be.’ Stiles, p. 10.

<sup>62</sup> On the question of agency in nonhuman animals see Haraway, Donna *Primate Visions: Gender, Race, and Nature in the World of Modern Science*, Routledge, New York and London, 1989, and Barbara Smuts *Sex and Friendship in Baboons*, Aldine Publishing Co., New York, 1985. Both of these works draw our attention to the ways in which denials of animal agency rest on arguments that falsely define humans as free autonomous actors, and actually preclude the subjectivity required for agency.

and animal. Crossing borders or the ends of man I come or surrender to the animal-to the animal in itself, to the animal in me and the animal at unease with itself, to the man about which Nietzsche said (I no longer remember where) something to the effect that it was an as yet undetermined animal, an animal lacking in itself.<sup>63</sup>

In this important text, Derrida has described the way in which the animal gaze starts to reflect that of the human back on to itself (a 'reflected stare, the mirror of a shame ashamed of itself'<sup>64</sup>) in order to problematise the relationship between self and Other. However, Derrida's model is markedly different to the traditional one in which the animal is understood as providing the viewpoint of an absolute Other under which the human-self comes to establish him/her-self in a negative, and highly anthropocentric, process of identity formation.<sup>65</sup> Instead, in a move away from this form of anthropocentrism that only confers subjectivity upon the animal body, perhaps we might take Derrida to be arguing for neither animals nor humans to be subjects in their own right.

In the gaze of the cat, Derrida does not simply find a subjectivity that is like, or unlike, his own, reflected back. Instead, what is reflected back is an idea of the 'human' and of the 'animal', an idea that is perhaps founded on ephemeral terms. As Derrida has written, the cat reflects back 'the border crossing from which man dares to announce himself to himself, thereby calling himself by the name that he believes he gives himself.'<sup>66</sup> What Derrida is suggesting here, and which I take to be the subject position of both the cats and the humans in *Fuses* is, I believe, a model of subjectivity more akin to Irigaray's understanding of *others* rather than the Other. Instead of a theory of difference (*two* others) it would be a multiplicity of others, as all the bodies are drawn into a confrontation and conflation with the (non)human-animal other. Crucially, as with Derrida bumping into his cat while naked, this multiplicity is underwritten

---

<sup>63</sup> Derrida, Jacques 'The Animal that Therefore I Am (More to Follow)', Wills, D. trans., *Critical Inquiry*, Vol.28, No.2, Winter 2002, (pp. 369-418), p. 372.

<sup>64</sup> *Ibid.*, p. 373.

<sup>65</sup> *Ibid.*, p. 380.

<sup>66</sup> *Ibid.*, p. 381.

by an encounter that is sexualised, if not erotic. In *Fuses*, the way in which Kitch watches the scenes of sexual activity might parallel our own desire to watch. But it might also point toward an unease with the proximity of the animal body in the arena of a private (and more specifically domestic) sexuality. Kitch's eye is therefore both literally and metaphorically a cat's eye – something that both sees and makes visible. It represents both our desire to see, like the cat, and makes evident an unease about that very animal sexuality.

The cat has now entered *a pas de loup*, stealthy as a wolf, into the viewing structures of the film. We have ignored the cat, up until now, because we literally have not seen Kitch: a blind spot in a film that largely rejects retinal forms of vision. The cat's eye and our eye overlay, Kitch's point of view is our point of contact between bodies. Yet the eye – the point of contact – necessarily does not see itself (as Irigaray has written, 'thus I never see that in which I touch or am touched. What is at play in the caress does not see itself. The in-between, the middle, the medium of the caress does not see itself...'<sup>67</sup>).

Continuing the work begun by Merleau-Ponty into the relationship between the tactile and the visual, Derrida asks, 'can eyes manage to touch, to press together like lips? If two gazes look into each other's eyes, can one then say that they are touching? Are they coming into contact, the one with the other?'<sup>68</sup>

The erotic encounter presented by *Fuses* therefore stages the points of tension between the tactile and the visual, as described in Irigaray and Derrida's theories of touch. *Fuses* is thus both a joining or fusing, but also a rupture, a starting point of something new (a lit fuse, a blown fuse). It is a point of contact between bodies, which is simultaneously a point of non-contact, an inability to touch. As Derrida asks, 'what is contact if it always intervenes between x and x?'<sup>69</sup> For Derrida and Irigaray, touch is always simultaneously 'letting go' and 'avoiding'. It is a non-touching, a cannot touch, a must-not touch, *noli me tangere*. It is always divided, distanced and transplanted; mediated by technical prosthetics like the pen, the computer keyboard or the film screen, always

---

<sup>67</sup> Irigaray, p. 161.

<sup>68</sup> Derrida, 2005, p. 2.

<sup>69</sup> Ibid., p. 2.



staging its own disconnection. In *Fuses*, this limit point, the point of con-tact (and non-contact), is the cat.<sup>70</sup> While much of the literature on this work posits *Fuses* as an embodied skin that facilitates erotic encounter, which I would not seek to overturn, I would argue in addition that it is precisely the point of rupture, structured around the aporia of the touch, which also foregrounds the problematic tension between the figure of the female and the animal body in *Fuses*.

The idea of petting therefore underwrites both the formal and the conceptual properties of *Fuses*. The tactile encounter, or the petting, of both the film surface and the animal, implicates us in an encounter that destabilizes the traditional dichotomies of the seeing/seen and subject/object, and stages the mutual histories of the female and the feline and the troubled logic of taxonomic classification through the aporia of the touch. As with the case of xenotransplantation cited earlier in this chapter, both the human and the animal body are brought together in Schneemann's work through technology and, crucially, this encounter is inherently a *tactile* one, based on the real or imagined stroking or petting of fur. It is precisely because these cats are Schneemann's pets (that is, an animal that is touched, that is petted) that they come to represent the point at which the notion of the human and the animal rub up against one another. This is because the pet is the category both by which animals are anthropomorphised ('part of the family') and humans are animalised ('petted, cared for, etc.'). Indeed, following the foundational studies of Mary Midgley in the field of human-animal relationships, I take the notion of the pet as the paradigmatic central axis for many other cross-species encounters.<sup>71</sup>

---

<sup>70</sup> Derrida also constructs the notion of touch as a limit concept, to be crossed, and not crossed, touched and not touched: 'like the pointy tip of an antennae, a scout at the forefront, an acute place, still very close to a point and upon a limit...for Nancy it is always a matter of touching what is well nigh at the limit not to be touched – namely, the limit itself, and the point's extreme, pointed tip.' Derrida, 2005, p. 42; 'how to touch upon the untouchable? We can only touch on a surface, which is to say the skin or thin peel of a limit (to touch the limit)' Derrida, 2005, p. 6.

<sup>71</sup> For an interesting discussion of this idea see Midgley, *Mary Animals and Why They Matter A Journey Around the Species Barrier*, University of Georgia Press, 1983 and Midgley, *Mary Beast and Man: The Roots of Human Nature*, Cornell University Press, 1978.

### *Frame breaks*

Originating in the 1450s, the *cade lamb* was the archetypal pet of English and Scottish traditions that, by definition, had been raised by hand in the home. The notion of the pet to which I refer in this study is thus both a historically and culturally specific phenomenon, tied to hand-rearing and agricultural communities. While varying degrees of domestication of animals have been perceived across numerous traditions, I am here concerned with an obsessive type of pet-keeping that emerges from the construction of the domestic sphere, premised on (Western) Christian traditions of simultaneous kinship with, and dominion over, animals.<sup>72</sup> In this tradition, the pet is perceived as human-like enough to be welcomed into the home, yet constantly maintains a relation to the historical construction of the animal-Other.<sup>73</sup>

These opposing models of ways to interact with animals come into conflict through the figure of the pet since, within this context of kinship, the idea of a beloved family pet turning on us is especially troubling and sinister: we might expect bites and scratches from a wild animal, but not a tame one. The sociologists Arnold Arluke and Clinton Sanders designate such incidents as ‘frame breaks’. That is, moments in which the pet might behave in a way which reminds us that they are, in fact, animals and not members of the family. It is during these moments of psychological rupture that the pet is theoretically revealed as only really a representation of ourselves, constructed through narcissistic over-identification with, or against, the animal body. Since the incorporation of the *cade lamb* into the household, the family pet has, historically, not only been widely anthropomorphized<sup>74</sup> but has also become a

---

<sup>72</sup> For a discussion on ideas of kinship in relation to women, see Mitchell, Juliet ‘Patriarchy, kinship and women as exchange objects’ in *Psychoanalysis and Feminism: A Radical Reassessment of Freudian Psychoanalysis*, Penguin, London, 2000 (pp. 370-376).

<sup>73</sup> The following text gives an interesting and insightful appraisal of the production of domestic and docile bodies (both animal and human) in post-industrial societies, Kreisel, Deanna K. ‘Wolf Children and Automata: Bestiality and Boredom at Home and Abroad’ in *Representations* No. 96, Autumn 2006 (pp. 21-47). On the way in which animal rights discourses feed into this sort of pastoral relationship with animals which is related to right-to-life arguments, see Haraway, Donna *When Species Meet*, University of Minnesota Press, Minneapolis, 2008.

<sup>74</sup> See Beck, Alan & Katcher, Aaron *Between Pets and People: The Importance of Animal Companionship*, Purdue University Press 1996; Horn, Jack C. and Meer, Jeff ‘The Pleasure of

sort of narcissistic totem or lens through which we might actually come to regard ourselves.<sup>75</sup> The idea of the ‘frame break’ thus clearly resonates with imaging technologies, and as such is useful for thinking about *Fuses* as a site where conflicting attitudes about the animal might come together.

For these reasons, the pet has variously been described as both ‘uncanny’ and ‘taboo’. For example, under the first denotation of *Heimlich* – homelike, familiar, intimate, friendly – in the *Sanders’ Dictionary of the German Language* (Freud’s source dictionary) the meaning is as follows: ‘of animals: tame, companionable to man. As opposed to wild e.g. “animals which are neither wild nor Heimlich” etc.’<sup>76</sup> Built into the very definition of the uncanny is therefore the primary – yet repressed – transgression of the boundary between animal and human. Furthermore, according to the early work of the anthropologist Edmund Leach, the pet is also a border creature, straddling a peculiar ontology, which should be theorised as improper and taboo. In his paper ‘Animal Categories and Verbal Abuse’ (1964) Leach proposed a sequence of animal categories that discriminated areas of social space in terms of their distance from the human. The sequence ran as follows: self, pet, livestock, game, and wild animal. A central theme of Leach’s paper was taboo, which he defined as ‘that which serves to separate the self from the world’.<sup>77</sup> Under this rubric, the pet comes to function as an anomalous creature because, according to Leach, the binary distinction human/animal is mediated by the

---

Their Company: PT Survey Report on Pets’ in *Psychology Today*, Vol. 18, No. 8, August 1984 (pp. 52-59); White, Betty *Pet Love: How Pets Take Care of Us*, Pinnacle Books, 1983; Shell, Marc ‘The Family Pet’ in *Representations*, No. 15, Summer 1986 (pp. 121-153).

<sup>75</sup> Shell, p. 124. For a discussion of the pet as a narcissistic object see also Heiman, Marcel ‘The Relationship Between Man and Dog’ in *Psychoanalytic Quarterly*, Vol. 25, 1956; ‘We polish an animal mirror to look for ourselves.’ (Haraway, Donna *Simians, Cyborgs and Women*, Routledge, New York, 1991 p. 21); ‘those individuated oedipal animals with their own petty history...who invite us to regress, and draw us into a narcissistic contemplation...’ (Deleuze & Guattari, p. 265). This view is also echoed by John Berger in ‘Why Look at Animals’ in *About Looking*, Pantheon Books, New York 1980 (pp. 3-28), who writes, ‘the practice of keeping animals regardless of their usefulness, the keeping, exactly, of pets...is a modern innovation, and, on the social scale on which it exists today, is unique. It is part of that universal but personal withdrawal into the private small family unit...which is such a disgusting feature of consumer societies.’ Pets are ‘creatures of their owner’s way of life’ and Berger says of ‘the way the average owner regards his pet’ that: ‘the pet *completes* him, offering responses to aspects of his character which would otherwise remain unconfirmed.’ Also quoted in Steve Baker, *The Postmodern Animal*, Reaction Books, London, 2000, p. 167.

<sup>76</sup> Kreisel, p. 26.

<sup>77</sup> Quoted in Baker, pp. 166-67.

creation of ambiguous (and therefore taboo) intermediary categories. The pet, for Leach, was precisely one such category, which he designated with the compound term ‘man-animal’.<sup>78</sup>

Importantly for my work is the sense in which the notion of the pet is able to bring together several threads. It is the point at which the tactile, the erotic and the animal all come together, and thus might also be the site from which these categories are seriously questioned. In ‘The obscene body/politic’ (1991), Schneemann asks precisely these questions of the pet by claiming her photographic work *Infinity Kisses* (1981-1988) ‘raises the issue of appropriate eroticism and interspecies communication’.<sup>79</sup>

*Infinity Kisses* is a large installation that features dozens of standard 4”x6” photographs of Schneemann kissing Cluny, the cat that followed Kitch after his death at a staggering 19 years of age. For five years, Schneemann positioned a camera next to her bed and took pictures of the moment when she was woken in the morning by Cluny.<sup>80</sup> In these photographs, Schneemann is depicted kissing Cluny. But it is not a kiss with tight, puckered lips. Instead, the kiss is explicit: a French kiss with open mouths and probing tongues. The top half of the installation is characterised by bleached out skin and blue tones, and sharper definition. The bottom half appears more blurry, more *sticky* even, as the chromatic range warms. These images seem to evade the mastery of our logical eye: we cannot visually resolve them into a narrative, but a flash of white or a swelling of pink indicates to whom the body belongs. Aside from the top two rows, each image has a reverse double that has been positioned immediately above it, producing snaking s-shapes of light, or the white of Cluny’s fur running down the installation. These lines lead us from one image to the next, never allowing us to read any one of the photographs in isolation, but always in dialogue with its double. Also included toward the top right- and left-hand corners of the installation, and as a group separated to the right, are prints of

---

<sup>78</sup> Schneemann writes that ‘during his life Cluny was obsessed with bringing me gifts of feathers. This cat communicated devotion, a providence – a transcendent shift emblematic of his movement between animal and human realms.’ Schneemann, 2002, p. 274.

<sup>79</sup> Schneemann, 1991 p.35.

<sup>80</sup> For a description of the making of *Infinity Kisses* see Schneemann, Carolee ‘Notes’ in *Imaging Her Erotics*, p. 264.

Egyptian hieroglyphs and a frieze representing a fragment of the story ‘The Breath of Life’. The hieroglyphs describe a ritual in which a young child is given a lion cub to raise. According to Schneemann, if they can grow up together exchanging mouth-to-mouth, nose-to-nose contact, then that child will become a visionary for its culture.<sup>81</sup>

Beyond what we might call ‘puppy-love’ – that is, non-sexual and therefore innocent and unthreatening affection<sup>82</sup> – Schneemann’s erotic investment in her cat in this work has been perceived as unnatural and troubling: it is explicit; obscene.<sup>83</sup> Of note, perhaps is that these are precisely the terms deployed in relation to *Fuses*, for example in the 1989 Moscow censorship debate. Although in *Fuses* Kitch really does appear ‘obscene’ in the sense that the term ties it to visibility (that which is off-stage) it was not cited as the cause of the obscenity. By contrast, in *Infinity Kisses*, Cluny has been situated in a sexual context in plain sight. The fact that the term obscene has been used in relation to this work is not just an effect produced by the content, but also by the pictorial conventions of repetition, doubling and close-up. These formal devices confront us with an unending sequence of troublesome images – of oral contact that mobilises notions of contamination and taboo – even while it also distances us from fully accessing the work with its appeal to a schizophrenic roaming of the eye across the large surface. However, the repetition must also serve as a reminder of the everyday nature of this activity, both for Schneemann and Cluny, and it ought to be understood in terms that are perhaps quotidian and banal. The overall sense, then, is that we can never quite grasp the work (both in

---

<sup>81</sup> Description by Schneemann from the panel discussion ‘Women and art: empowering narratives’, November 14, 1995, held as part of the conference *Beyond Beijing: Acting on Commitments to the World's Women (A World Bank Program on Gender)*, November 6-17 1995. Transcript No. BB-04 accessible online at: <http://tinyurl.com/mrmg9f>.

<sup>82</sup> For a discussion of the term ‘puppy love’ see Shell, p.124.

<sup>83</sup> In the non-academic literature and press reviews Schneemann’s work has largely been surrounded by histories of censorship and repression. For example see the discussion between Schneemann and Hans Ulrich Olbrist in ‘Carolee Schneemann: when vision moves freely’ in *Spiked Magazine*, 2007 (pp. 40-49) especially p. 42; In 2009 *The Brooklyn Rail* noted that Schneemann’s work with her cats has been described as ‘narcissistic, sex-ploitative, exhibitionistic...the actions are Dionysian displays of herself, and sexually reckless candor’; In a review from the *New York Times*, dated March 26, 2009, Schneemann’s work is described as ‘a problem. Too personal, too visceral, too something’; *Infinity Kisses* is also described as causing a ‘furore’ in Serra, M. M. & Ramey, Kathryn ‘Eye/Body: The Cinematic Paintings of Carolee Schneemann’ in *Women’s Experimental Cinema: Critical Frameworks*, Blaetz, R. ed., Duke University Press, 2007 (pp. 103-127).

the sense of ‘getting it’ and ‘touching it’). *Infinity Kisses* evades traditional viewing structures just as it troubles easy identifications with the body of the artist as a result of the claim she lays to a ‘deviant’ or ‘unnatural’ sexuality.

It is of note that the term ‘bestiality’ has been rejected throughout this discussion, in favour of ‘petting’ and ‘sexual contact’. This has been done both in order to observe the physical, material relationship that is activated by touch (*con-tact*), and to acknowledge the problematic logic that underwrites certain terminology. From the outset of his posthumously published series of lectures collected in *The Beast and The Sovereign* (2009), Derrida staged the problem with the terminology through the tension between *la bête* (feminine) and *le souverain* (masculine). La and le: ‘the beast’, writes Derrida, ‘is not exactly the animal.’<sup>84</sup> Yet it is certainly through the notion of the ‘beast’ that we have come to understand how the category ‘animal’ has been historically differentiated from the human. The beast is both site and cipher for the cultural and historical functioning of the animal outside of models of the (masculine) subject.

More than any other practice – apart, perhaps, from incest – bestiality tends to invoke the use of terms such as ‘unnatural’, ‘obscene’ and ‘taboo’, whilst simultaneously failing to unravel and explore all the historical and political contingencies that these terms might entail and rely upon for their meaning. While the term ‘pet’ has become a rich site for critical excavation in the study of human-animal relationships, the term ‘bestiality’ is still frequently occluded. Surprisingly, or not, there is a distinct lack of critical considerations of bestiality not just across art historical research, but also anthropological, political, historical and other critical studies. The term, however, is encountered in both sexology and law, two disciplines whose mutual history is long and intricate. Leading figures in the fields of the study of human sexuality – such as Hani Miletski, Vern Bullough and Alfred Kinsey – have argued that, to a degree, such reluctance to discuss the practice of human-animal sexual contacts is borne from a confusion within the existing literature regarding the plethora of available terms: ‘sodomy’, ‘zoorasty’, ‘zoosexuality’, as well as ‘bestiality’ and

---

<sup>84</sup> Derrida, 2009, p. 1.

‘zoophilia’ are often used.<sup>85</sup> In ‘Bestiality and zoophilia: an exploratory study’ (2000) Hani Miletski argues that a study of the literature suggests that the different ways in which authors perceive sexual relations with animals has driven multiple and unstable interpretations of the practice: ‘definitions of various behaviours and attitudes are often conflicting, leaving the reader confused.’<sup>86</sup> Such confusion, as I shall demonstrate, is premised upon the unstable and indistinct foundation of the language found in theological and legal tracts pertaining to certain sexual contacts.

Schneemann herself has openly refuted the terms ‘bestiality’ and ‘obscenity’, particularly in relation to responses regarding the use of cat imagery. Her rejection of these terms, however, is less aligned with the confusion of terminology perceived in the field of sexology, and more as a result of the historical construction of these terms as both pejorative, and female. What these terms constitute, for Schneemann, is ‘erotic dislocation and cultural deception’.<sup>87</sup> Schneemann’s rejection of such terms is underscored by commonsense or dictionary definitions of these words. *Webster’s Ninth Collegiate Dictionary* defines bestiality as ‘sexual relations between a human being and a lower animal.’ Such a definition explicitly cultivates a hierarchy of species being, producing the term within a framework that conceives of animals as intrinsically inferior to humans. This idea is similarly re-staged in the *Oxford English Dictionary*, but also with highly ambiguous references to a sexual act as well as to those characteristics that we conceive of as animalistic, or beastly, in man:

1. The nature or qualities of a beast; want of intelligence, irrationality, stupidity, brutality.
2. Indulgence in the instincts of a beast; brutal lust; a disgusting vice, a beastly practice.

---

<sup>85</sup> Alfred Kinsey attempted to bypass the plethora of available terms by opting for the neutral phrase ‘animal contacts’. See Bullough, Vern *Human Sexuality: An Encyclopaedia*, Garland Publishing Inc., New York and London, 1994 pp. 60-65.

<sup>86</sup> Miletski, Hani ‘Bestiality and Zoophilia: an Exploratory Study’ in *Scandinavian Journal of Sexology*, Vol. 3, No. 4, 2000, (pp 149-150), p.1.

<sup>87</sup> Carolee Schneemann, 2002, p. 215.

### 3. Unnatural connexion with a beast.<sup>88</sup>

By defining bestiality as that which is animalistic in man, rather than simply as sexual contacts between a human and an animal, the *OED* entry seems to move back and forth between the construction of the human and the animal, producing a point of slippage at which one might begin to collapse in to the other. The *OED* definition therefore reveals the etymological ties of the term to the historical construction of the animal body as inferior to that of the human body, and the conflation of certain human bodies with that of the animal.<sup>89</sup>

Both definitions throw up numerous difficulties and exhibit naturalising fallacies regarding the use of language and the cultural economy that we inhabit; sanctioning and expounding socially instituted hierarchies of bodies. While *Webster's* defines its term with reference to perceived relative values of different species (human: high, animal: low), the *OED* entry shirks away from describing the act, reinforcing the notion of bestiality as taboo, unnatural and therefore unspeakable. Nowhere does it explicitly state that these practices are tied to eroticism, sexuality, desire and/or its relationship to a complex and unstable legal framework (although this is surprising given that the UK has some of the most comprehensive and detailed legislation concerning what constitutes 'bestiality'<sup>90</sup>). Instead, it expounds a cultural tradition that perceives animals as the objects of knowledge, and humans as the subjects of knowledge.<sup>91</sup> The result

---

<sup>88</sup> 'bestiality' definition in *The Oxford English Dictionary* 2<sup>nd</sup> Edition 1989 Oxford University Press.

OED Online URL: <http://dictionary.oed.com/cgi/entry/50021006>

<sup>89</sup> In the history of Philosophy, both the opposing models of Human Exceptionalism (HE) and continuity across species have had strong supporters. Those who espouse HE believe that humans are unique in having language and sophisticated thought, and that there is a large gulf between these human capacities and whatever thought or language systems other animals might have. Core examples of HE which have informed the western philosophical tradition are Nicolas Malebranche, *Oeuvres Completes de Malebranche* (1837); Rene Descartes, *Philosophical Writings Vol. III: The Correspondence*, trans., John Cottingham, Cambridge University Press, Cambridge, 1997; Descartes, *The Treatise on Man*; Gottfried Leibniz, *Theodicy: Essays on the Goodness of God, The Liberty of Man and the Origin of Evil* (1710.)

<sup>90</sup> See chapter 42, *Sexual Offences Act 2003*, Office of Public Sector Information, Section 69. Stable URL: [http://www.opsi.gov.uk/acts/acts2003/ukpga\\_20030042\\_en\\_1](http://www.opsi.gov.uk/acts/acts2003/ukpga_20030042_en_1)

<sup>91</sup> Delaney, David 'Making Nature/Marking Humans: Law as a Site of (Cultural) Production' in *Annals of the Association of American Geographers*, Vol. 91, No. 3, September 2001, (pp. 487-503), p. 494



is that the animal is thus positioned as synonymous with irrationality and stupidity and, conversely, the human with intelligence and rationality.

In Derrida's later work on the animal (or, more precisely, the beast) he describes a zone of interaction, 'curiosity', in which the beast and the madman are conceptually brought together. Curiosity, he argues, formalizes the field of analogy between the development of zoological gardens and insane asylums in the Nineteenth Century. He notes that *cura* – meaning both domestic and hospital-based treatment – gives us the term curiosity, which necessarily entails a hunger for knowledge as well as an impulse to treat or cure. These institutions become, he argues:

Curiosities for the eager, compulsive curiosity of, lets say, those who are outside and approach them only to within a certain distance to observe or inspect them in a sovereign manner from outside after having locked them up... What makes the zoological gardens comparable with psychiatric hospitals, in the 19<sup>th</sup> century is the enclosure that is common to them, the new territorial limits...it's certainly the concept of care, concern, solicitude, *cura*, that we are talking about here, and the question of knowing whether it is possible to surround with care, as we say, without surrounding with reappropriating limits. Inventing limits, installing limits, that's the art we are speaking of here. And it is an art of both caring and locking up.<sup>92</sup>

What we arrive at, therefore, is a term, 'the beast', 'la bête', meaning both imbeciles and animals, which incorporates different bodies within its domain. Bodies which may be biologically human, but which come under the sway of the category animal. As such, these terms function specifically as limit concepts for Derrida, thresholds which we desire to both transgress and secure, to touch

---

<sup>92</sup> Derrida's work in this field is based on H.F. Ellenberger's 1960 article 'The Zoological Garden and the Mental Asylum'. For Derrida, the 'art' of liberating by locking up is exemplified by the Tierpark Hagenbeck zoo in Hamburg, designed by Carl Hagenbeck and the Swiss architect Urs Eggenschwyler. Founded in 1863, it is of note for being the first zoo to use open enclosures. It did not have railings (visible limits) but rather deep ditches or moats, which gave the appearance of freedom of movement. Derrida, 2009, pp. 296-99.

and not to touch.<sup>93</sup> By rejecting the term ‘bestiality’, or using it only to acknowledge its historical significance in designating certain bodies as animal, we might instead prefer to utilize the phrase ‘human-animal sexual contacts’ (con-*tact*, with tact, with touch).

As mentioned above, the evolution of these terms is intricately bound up in complex legal and linguistic structures. It is these histories that have helped to perpetuate the pejorative resonance of certain terms, which are hard to shake off. As with most cultural groups, those communities whose moral order adheres to the Abrahamic religions – and specifically, for our purposes, the Judeo-Christian traditions – describe clear and distinct prohibitions against sexual activity with animals. The most frequently cited are to be found in Leviticus:

You shall not lie with a man as with a woman: that is an abomination. You shall not have sexual intercourse with any beast to make yourself unclean with it, nor shall a woman submit herself to intercourse with a beast: that is a violation of nature. You shall not make yourself unclean in any of these ways, in these ways the heathen made themselves unclean. [Lev. 18:22-24]<sup>94</sup>

Most communities have a framework of ‘natural’ categories pertaining to human experience. Examples of such categories may include: living and dead; mortal and divine; air, sea and land; and male and female. What is peculiar to texts such as Leviticus, and thus to Judeo-Christianity, is that these natural categories also

---

<sup>93</sup> Derrida also sees touch as a limit concept, to be crossed, and not crossed, touched and not touched: ‘Like the pointy tip of an antennae, a scout at the forefront, an acute place, still very close to a point and upon a limit...for Nancy it is always a matter of touching what is well nigh at the limit not to be touched – namely, the limit itself, and the point’s extreme, pointed tip.’ Derrida, 2005 p.42.

<sup>94</sup> See further important citations for ‘bestiality’ in the Hebrew Bible which can be found in the following laws: ‘Whoever lies with a Beast shall be put to death’ [Exodus 22:19]; ‘Do not have carnal relations with any beast and defile yourself thereby; and let no woman lend herself to a beast to mate with it; it is perversion.’ [Leviticus 18:23]; ‘If a man has carnal relations with a beast, he shall be put to death; and you shall kill the beast.’ [Leviticus 20:15]; ‘If a woman approaches any beast to mate with it, you shall kill the woman and the beast; they shall be put to death – their bloodguilt is upon them.’ [Leviticus 20:16]; ‘Accursed is one who lies with any animal. And the entire people shall say “amen.”’ [Deuteronomy 27:21]; ‘These are they that are to be stoned: he that has a connection with a beast, and the woman that suffers connection with a beast.’ [Sanhedrin 7:4].

operate as moral and subsequently legal categories: Leviticus puts ‘unclean’ contact into the same bracket as breaches of the moral code.<sup>95</sup> This conflation of naturalising discourse with the law is demonstrated by the fact that these prohibitions are reflected in much contemporary Western legislation. By looking at extracts from judicial proceedings against cases of human-animal sexual contacts, we can see the persistence of certain moral categories throughout those Western epistemological systems informed by Judeo-Christianity:

Murray v State 143 NE 2d 290 [1957]: ‘...the abominable and detestable crime against nature...’

Young v State 141 NE 309 [1924] 310: ‘...the corruption of morals, the disgrace of human nature by unnatural satisfaction, of which reason and decency forbids a more detailed description...’

Connell v State 19 NE 2d 267 [1939] 267: ‘...sodomy is a crime the meaning of which is too well known...its nature is too disgusting to be further defined...’<sup>96</sup>

The terms of the charges above are constructed in precisely the language of a natural/unnatural dichotomy, offering a compelling critical filter with which to consider human-animal sexual contacts within a legal framework. While these are notably historical examples, the US statutes continue to remain largely vague and inconsistent. The word ‘nature’ or ‘natural’ provides the legal system with an obfuscating term that constructs a moral framework founded on unstable and indistinct definitions. While it is of pivotal importance in the construction of legislation, ‘nature’ actually rests on indistinct, highly mutable

---

<sup>95</sup> Douglas, Mary *Leviticus as Literature*, Oxford University Press, Oxford, 2001, p.149; Christie Davies ‘Sexual Taboos and Social Boundaries’ in *The American Journal of Sociology*, Vol. 87, No. 5, March 1982 (pp. 1032-1063), p. 1035.

<sup>96</sup> All reproduced in Delaney, p. 494.

terminology.<sup>97</sup> As David Delaney argues in ‘Making nature/marking humans’ (2001),

In the context of bestiality, ‘nature’ does not signify the cow (State v Poole 122 p.2d415 [1942]), the dog (State v Tarrant 80 NE 2d 509 [1948]) the chicken (Murray v State 143 NE 2d 290 [1957]) or the eel (U.S. v Guglielmi 819 F.2d 451 [1988]) that is participating in the event. Rather, ‘nature’ signifies the moral order through which some sexual practices are designated as natural and others as unnatural.<sup>98</sup>

The consequence is that the scope of what the statutes therefore prohibit is unclear and has led to the successful prosecution of cases of heterosexual oral sex and gay and lesbian sex, largely because there is an undifferentiated category of ‘crimes against nature’.<sup>99</sup> This naturalizing fallacy is underwritten in

---

<sup>97</sup> Critically, these highly contingent notions of nature are formed precisely in relation to the concept of a human. Writing from within the context of law studies, David Delaney argues that it is precisely the point at which one draws the distinction between nature and human that physical acts of penetration are justified, and bodies or spaces are allowed to be opened up for investigation. Delaney, p. 490.

<sup>98</sup> Delaney, p. 494.

<sup>99</sup> Michel Foucault notes that hermaphrodites were seen as ‘contrary to nature’ and were therefore designated ‘criminal’. Michel Foucault, *The Will To Knowledge: The History of Sexuality Volume I*, trans., Robert Hurley, Penguin Books, 1998, p. 38. Currently, the term crime against nature is still used in the statutes of the following American states:

- Idaho (I.C. § 18-6605)

<http://www.legislature.idaho.gov/idstat/Title18/T18CH66SECT18-6605.htm>

- Louisiana (R.S. 14:89)

<http://www.legis.state.la.us/lss/lss.asp?doc=78695>

- Massachusetts (MGL Ch. 272, § 34, struck down by Mass. court in 1977)

<http://www.mass.gov/legis/laws/mgl/272-34.htm>

- Michigan (MCL § 750.158)

[http://www.legislature.mi.gov/\(S\(d4pwp355gctjeavb3jbj21\)\)/mileg.aspx?page=GetObject&objectname=mcl-750-158](http://www.legislature.mi.gov/(S(d4pwp355gctjeavb3jbj21))/mileg.aspx?page=GetObject&objectname=mcl-750-158)

- Mississippi (Miss. Code § 97-29-59)

- North Carolina (G.S. § 14-177)

[http://www.ncga.state.nc.us/EnactedLegislation/Statutes/HTML/BySection/Chapter\\_14/GS\\_14-177.html](http://www.ncga.state.nc.us/EnactedLegislation/Statutes/HTML/BySection/Chapter_14/GS_14-177.html)

- Oklahoma (Okla. Stat. § 21-886, struck down as to straights by Okla. court in 1986)

- Virginia (Va. Code § 18.2-361)

<http://leg1.state.va.us/cgi-bin/legp504.exe?000+cod+18.2-361>

For example, a man found to have committed a ‘zoosexual rape’ of a sheep in Michigan 2006 was not charged with animal cruelty, but with ‘crimes against nature’. It is notable that a first offence of animal cruelty, which includes any ‘unnecessary neglect, torture, or pain’, carries only up to a 93 day sentence (MI 750.50 section 2(f) and section 4), whereas a zoosexual act prosecuted as a crime against nature is capable of a 20 year sentence.

Leviticus, whereby homosexuality and bestiality become conflated under the single term ‘sodomy’.<sup>100</sup> Thus, Schneemann’s morning kisses with Cluny operate within this epistemological framework as ‘unnatural’ in that they trouble nature and the natural categories that provide the foundations for our moral understanding of sexuality.<sup>101</sup>

In *The Will to Knowledge: The History of Sexuality Vol. 1* (1978) Michel Foucault importantly addressed this naturalization/normalization of certain practices and the silence associated with histories of sexuality. For Foucault, what he characterized as a ‘triple edict of taboo, non-existence and silence’ is inseparably bound up with, and mutually reinforcing to, a strategy of self-conscious discussion about certain sexual practices.<sup>102</sup> In other words, the emergence of a historical silence about sex is contemporaneous with a discursive explosion about it, but predominantly from within sites of power, so as to regulate it and further bring it under control. This is what Foucault has called the ‘repressive hypothesis’: silence and censure around sex is always accompanied by discourse in those institutions/disciplines that might be politically or economically invested in the study of certain sexualities.<sup>103</sup> This is not, he argues, in order to produce a general theory of sexuality, but rather to quantify, classify and ultimately legislate against them. This may be in the interests of cleansing and purging society, either on religious grounds (Foucault

---

<sup>100</sup> For a discussion of sodomy, chiefly in the context of a masochistic sexuality and tied to self-debasement, see Bersani, Leo *Homos*. Harvard University Press, Cambridge 1995; and Bersani, ‘Is the rectum a grave?’ in *AIDS: Cultural Analysis, Cultural Activism*, Crimp, D. ed., MIT Press, Cambridge, 1988 pp. 197–222.

<sup>101</sup> For a discussion of the terms ‘sodomy’ and ‘unnatural’ see Foucault, ‘The perverse implantation’ in *The Will to Knowledge* pp. 36-50.

<sup>102</sup> Foucault, p5. While Foucault’s formulation of identity as an effect, and his exploration of the relation between power and the production of sexually differentiated bodies has been informative for feminist theory (particularly Butler, Judith *Gender Trouble: Feminism and the Subversion of Identity*, Routledge, New York 1990; Butler, *Bodies that Matter: On the Discursive Limits of “Sex”*, Routledge, New York 1993; Bordo, Susan ‘Anorexia Nervosa: psychopathology as the crystallization of culture’ in *Feminism and Foucault: Reflections on Resistance*, ed., I. Diamond & L. Quinby, Northeastern University Press, Boston 1988; Grosz, Elizabeth *Volatile Bodies: Toward a Corporeal Feminism*, Indiana University Press, Bloomington 1994) it has also been challenged for its lack of attention to gender issues and its production of a docile body which is unable to access discourse/power (see Fraser, Nancy *Unruly Practices: Power, Discourse and Gender in Contemporary Social Theory*, Polity Press, Cambridge 1989; Grimshaw, Jean ‘Practices of Freedom’ in *Up Against Foucault*, Ramazanoglu, C. ed., Routledge, London and New York 1993; and Hartsock, Nancy ‘Foucault on Power: a Theory for Women?’ in *Feminism/Postmodernism*, Nicholson, L. ed., Routledge, London and New York 1990, all for an exploration of Foucault in feminist discourse).

<sup>103</sup> For a discussion of the ‘repressive hypothesis’ see Foucault, pp. 10-12 and pp. 17-35.

cites the evolution of the catholic pastoral and the sacrament of penance after the Council of Trent in the sixteenth century) or on political or economic grounds (the incitement to talk about sex in the eighteenth century was tied to conjugal integrity in the service of capitalist modes of production).

This seems to remain the position of the literature on human-animal sexual contacts.<sup>104</sup> Any discussion of sexualities is tied specifically to the production of discourse within functional domains (the political, the economic, the legal).<sup>105</sup> The silence, or reluctance to name, thus subsequently becomes less the object of interest than the different ways of not saying things, and who is and who is not authorized to speak and allowed access to discourse.<sup>106</sup> Therefore, we might ask to what ends does the field of law maintain insecure definitions of bestiality, and what is at stake in the continued investment in the logic of naturalizing discourse? The problems that Miletski perceived with the field – of unstable and inconsistent notions of acceptable human-animal interactions – are thus mobilised in Schneemann’s work as she calls into question the mechanisms by which certain modes of behaviour are normalised, and subsequently the historical trajectory by which bodies become marked as animal (as a result of particular ‘beastly’ behaviours).

### *Unclean bodies*

Building on Mary Douglas’ *Purity and Danger: An Analysis of Concepts of Pollution and Taboo* (1966), several scholars have argued that the force of the Leviticus taboos, and subsequently the legal code founded upon them, lies less in their content than in their structure, and that the prohibitions against human-animal sexual contacts are indicative of a desire to maintain natural categories. What is important is whether like and unlike are kept apart.<sup>107</sup> The critical

---

<sup>104</sup> Foucault himself makes only passing reference to bestiality, instead using the word ‘sodomy’ regularly, leading to some ambiguity as to whether he is referring only to homosexual sexual activity or to all practices that traditionally come under that term, including human-animal sexual contacts.

<sup>105</sup> Foucault, p. 25.

<sup>106</sup> Foucault, p. 27.

<sup>107</sup> For a discussion of the structure of Hebraic laws see Davies, p. 1034; and Douglas, Mary *Purity and Danger: An Analysis of Concepts of Pollution and Taboo*, Penguin, London 1970, pp. 54-72; Douglas *Implicit Meanings: Essays in Anthropology*, Routledge, London 1975, pp.

promise of Schneemann's bestial practices in *Infinity Kisses*, therefore, is the potential for rupturing natural categories, troubling borders and producing contamination across species boundaries and, crucially, that technology has a catalysing role in that rupturing process in its insistent repetition. In the following sections from Leviticus, as Douglas has noted, notions of contamination and pollution are activated by the repeated appeals to separation and distinction:

I am the lord your god: I have made a clear distinction between clean beasts and unclean beasts and between unclean and clean birds. You shall not make yourselves vile through beast or bird or anything that creeps on the ground for I have made a clear separation between them and you declaring them unclean. You shall be holy to me because I the lord am holy. I have made a clear separation between you and the heathen that you may belong to me. [Lev. 20:24-27]

You shall keep my statutes. You shall not let your cattle breed with a different kind; you shall not sow your field with two kinds of seed; nor shall there come upon you a garment of cloth made of two kinds of stuff. [Lev 19:19]

And you shall not lie with any beast and defile yourself with it, neither shall any woman give herself to a beast to lie with it: it is perversion. [Lev. 18:23]

Critically, she notes that the word 'perversion' is a significant mistranslation of the rare Hebrew word *tebhel*, which originally has as its meaning 'mixing' or 'confusing'. The association between these terms leads Douglas to read the structure of the laws as serving an analogous function to their content: like and unlike must be kept apart. The central project of *Purity and Danger* is therefore to ask: 'why should bodily margins be thought to be specially invested with

---

207-9 and pp. 306-10; and Porter, J. R. *The Cambridge Bible Commentary On The New English Bible – Leviticus*, Cambridge University Press, Cambridge, 1976, pp. 82-83.

power and danger?’<sup>108</sup> Certainly, there is something to do with the oral contact and the mixing of different saliva in *Infinity Kisses* that is particularly troubling. When we view the work, we may feel revulsion at the sight of Schneemann’s tongue probing inside the cat’s mouth and vice versa. In the interview ‘On Censorship’ with Rahmani, cited earlier, Schneemann herself notes that it is precisely because in many of the photographs you can see tongues touching (and tasting) people found the work ‘obscene’.<sup>109</sup> ‘Some of the reactions of people would be that it is okay to kiss your cat, but tongue-to-tongue exchange is really beyond the pale.’<sup>110</sup> As with Douglas, Schneemann relies not just on the literal content but also on the structure of her works – the doubling, the repetition and the close up – to paradoxically become ‘obscene’. The oral contact seems distasteful: hands and paws touching is acceptable, tongues touching is not.

Perhaps what is perceived as obscene is the exchange of bodily fluids (a wetness) that is associated with the notions of contamination understood by Douglas, and later Julia Kristeva, in her work on the abject. The transgression of the oral boundary by the animal seems to produce an anxiety around the historical association of the animal/Other with dirt and uncleanness. The challenge that Schneemann poses is both against the symbolic order as well as against societal notions of hygiene. For Douglas, the intersection of both these concepts is in the category of *dirt*:

If we can abstract pathogenicity and hygiene from our notion of dirt, we are left with the old definition of dirt as matter out of place. This is a very suggestive approach. It implies two conditions: a set of ordered relations and a contravention of that order. Dirt then, is never a unique, isolated event. Where there is dirt there is a system. Dirt is the by-product of a systematic ordering and classification of matter.<sup>111</sup>

---

<sup>108</sup> Douglas, 1970, p. 149.

<sup>109</sup> Schneemann, 2002, p. 214.

<sup>110</sup> Schneemann, 1995; In an article from the *New York Times*, dated February 3, 2002, Amy Newman describes *Infinity Kisses* as both ‘taboo-teasing’ and ‘oddly endearing’ suggesting an ambivalence about the oral contact. This ambivalence, as I shall demonstrate, underscores the human-animal relationships produced in many of her works.

<sup>111</sup> Douglas, 1970, p. 45.



The distinction between self and Other, for Douglas, is founded on the category of dirt: what is dirty shows us what is out of place, what is Other, what is not-self. The human body, or self, or *I*, is perceived as ‘clean’ and as a ‘subject’ in contrast to the animal body, or Other, being perceived as an ‘object’ and ‘unclean’. *Infinity Kisses* plays on this historical and cultural association of the animal body with dirt, being unhygienic and, following from Leviticus, unclean. It is liminal matter, or ‘marginal stuff’<sup>112</sup>, which is able to activate our understanding of the body’s margins as fragile and, in the case of *Infinity Kisses*, it is the oral exchange of bodily fluids that is troublesome because bodily waste is culturally perceived as dirty.<sup>113</sup>

Drawing on Douglas’ work, Julia Kristeva writes in *Powers of Horror: An Essay on Abjection* (1982) that ‘filth is not a quality in itself, but applies only to what relates to a boundary, and more particularly, represents the object jettisoned out of that boundary, its other side, a margin.’<sup>114</sup> The category dirt, therefore, is a relative value, whose construction points to a particular system or order. In the context of our discussion, what is dirty is what is improper in the realm of human-animal contacts: dirt draws attention to the designation of particular bodies as human and others as animal, according to whether they engage in clean/natural practices or dirty/unnatural ones. Liminal matter, or dirt, therefore precipitates a troubling of subjecthood in the work of Kristeva as it functions both as the abject and/or that which is abjected. Neither subject nor object, the abject troubles an easy identification between the self and subjectivity. Through the abject, or rather through the process of abjection, the Other is fundamentally always incorporated into the structures of identity

---

<sup>112</sup> ‘All margins are dangerous. If they are pulled this way or that the shape of fundamental experience is altered. We should expect the orifices of the body to symbolise its especially vulnerable points. Matter issuing from them is marginal stuff of the most obvious kind. Spittle, blood, milk, urine, faeces or tears by simply issuing forth have traversed the boundary of the body. So also have bodily parings, skin, nail, hair clippings and sweat. The mistake is to treat bodily margins in isolation from all other margins.’ *Ibid.*, p. 150.

<sup>113</sup> The anal and the faecal are objects which have historically been seen both as dirty – that which is not-self – and as caught up in the processes of self-identification – the way we treat these objects tells tales on who we really are. Dominique Laporte’s *History of Shit*, MIT press, Cambridge, 2000, is particularly relevant here for a discussion of the ‘faecal’. See also Hocquenghem, *Guy Homosexual Desire*, Duke University Press, Durham, 1993, for a discussion of the ‘anal’.

<sup>114</sup> Kristeva, Julia in *Powers of Horror*, Columbia University Press, New York, 1982 p. 69.

formation (the self) as the abject is paradoxically both threatening with its ability to challenge our well-regulated boundaries, and self-affirming as it enables us to construct a notion of what we are based on what we are not.<sup>115</sup> While the abject is that which I must expel in order to become an I, it never exists fully as an Other in relation to the self or subject, but instead persists in maintaining an uneasy, circular, relation:

These body fluids, this defilement, this shit are what life withstands, hardly and with my condition as a living being. My body extricates itself, as being alive, from that border. Such wastes drop so that I might live, until, from loss to loss, nothing remains in me and my entire body falls *beyond the limit – cadere, cadaver*.<sup>116</sup> [my emphasis]

The work of both Kristeva and Douglas is thus deeply invested in the formulation of bodily margins and uses concepts of dirt, contamination and expulsion to suggest a fragility which provokes anxiety related to the destabilisation of cultural binaries ‘beyond the limit’: self/other, interior/exterior. Kristeva’s notion of the abject, as staged by the relation to both the self and the Other, provides a compelling theoretical framework to work through the ideas associated with the animal and dirt and to highlight points of contact between the two.

Published in 1966, *Purity and Danger* actually preceded Schneemann’s *Infinity Kisses* by some 15 years, although it is exactly historically contemporaneous with *Fuses*. Perhaps we can say, then, that this work marks the advent of a particular historical moment in the formulation of taboo, a moment which also ties in Leach’s 1964 paper on the way the pet, or the ‘man-animal’, was seen as taboo. Specifically, taboo was understood both by Schneemann and Douglas in the context of a body politics, tied to themes of contamination, pollution and transgression of the body.<sup>117</sup>

---

<sup>115</sup> See ‘Approaching abjection’ in *Ibid.*, pp. 1-31.

<sup>116</sup> *Ibid.*, p. 3.

<sup>117</sup> I am thinking here in opposition to earlier debates on ‘taboo’: for example Sigmund Freud’s

The historical formulation of taboo in the context of bodily boundaries, and how it relates to societal ones, was unique at this time and provided the foundations for Kristeva's important essay on abjection.<sup>118</sup> Douglas argued that bodily margins are perceived as dangerous and powerful because they operate symbolically, with an analogous function to boundaries in society at large: 'the body is a model which can stand for any bounded system. Its boundaries can represent any boundaries which are threatened or precarious.'<sup>119</sup> When the body's boundaries are under threat and subject to penetration by, or expulsion of, whatever might present a challenge to the self/Other dichotomy, we perceive a parallel disintegration in the categorical distinctions that have come to define our society. Transgressions of the bodily boundary are analogous to transgressions of the boundary of the self, showing that 'any structure of ideas is vulnerable at the margins'.<sup>120</sup> Schneemann's *Infinity Kisses* thus performs the fragility of the distinction between self and Other, thereby producing a model of the body as unstable and mutable, by employing oral contamination as a conceptual strategy that threatens the boundaries of the self. The notion of the margin, of the liminal, of the boundary and of the edge has continued to foster momentum throughout critical theory's recent history: Douglas' emphasis on the symbolic importance of the boundary is keenly at play in notions of in-betweenness and of instability, and is a thread that runs throughout this thesis in relation to the body and subjectivity.

---

*Totem and Taboo* (1913), was about forbidden behaviours and the sanctification of certain objects; the numerous anthropological/colonial investigations of taboo, particularly in Polynesian cultures. Toy, Crawford H. 'Taboo and Morality', *Journal of the American Oriental Society*, Vol. 20, 1899 (pp. 151-156) covers a range of historical formulations of taboo; and the plethora of available literature on formulations of incest as taboo in the western tradition, for example see Bagley, Christopher 'Incest Behaviour and Incest Taboo' in *Social Problems*, Vol. 16, No. 4, Spring, 1969 (pp. 505-519) for an overview. This text covers theory on the incest taboo, but interestingly does not mention the work of Mary Douglas.

<sup>118</sup> For a discussion of how bodily boundaries relate to societal ones in the work of Kristeva see 'From filth to defilement' in *Powers of Horror* (pp. 56-89), especially pp. 66-70. Kristeva recognises that it is this correspondence between bodily and societal boundaries that is what is interesting in the work of Douglas, but argues that a correspondence isn't enough, because it does not answer questions about cause and effect: 'a social (symbolic) system corresponds to a specific structuration of the speaking subject in the symbolic order...[but] is the social determined by the subjective, or is it the other way around?' Kristeva, p. 67.

<sup>119</sup> Douglas, 1970, p. 142.

<sup>120</sup> *Ibid.*, p. 150.

In Schneemann's work, the animal body thus self-reflexively enacts itself as having been historically perceived as both dirty and abject, tacitly raising these associations and assumptions whenever we view a work such as *Infinity Kisses*. The use of oral contact mobilises notions of pollution and contamination in order to reveal the mechanisms by which the animal body has been culturally perceived as Other to that of the human, but also as abject (neither subject nor object). *Infinity Kisses* consequently presents a challenge to this system ('...where there is dirt there is a system...') by precipitating a breakdown in distinctions between the human and the animal. In other words, the animal body functions as abject since it is not fully Other to the human body, and instead is held in co-suspension with it: what the human body *is* relies on what the animal body *is not*. Arguing from Douglas' work on Leviticus and Kristeva's work on the abject, I contend that what is troubling (or abject) about Schneemann's *Infinity Kisses* is that, by virtue of being *dirty*, it proposes a challenge to the system of taxonomic classification, whereby easy distinctions between bodies are not able to be made: it presses upon a boundary. This boundary is also challenged by the way in which repetition in this work plays in to the domesticity or sheer banality of this erotic encounter. Rather than something out of the ordinary, the quotidian nature of these events forces us to question the roles that we place on animal *and* human others (hetero-sexual).

The work of both Christie Davies and David Delaney provide compelling critical interpretations of human-animal sexual contacts in this regard. Specifically, they argue that erotic contact does trouble species identity, since they provoke an anxiety related to blurring the line between human and animal, and with it the perceived distinctiveness of humans. Both Davies and Delaney draw on the conflation of homosexuality and bestiality in Leviticus in order to contend that the differences between these two practices become less important than what they might have in common. They argue that according to ideological constructions of the natural, male sexual behaviour is understood as orientated exclusively to female humans. The act of intercourse with an animal therefore produces an encounter in which the animal performs in the wrong role i.e. as a

human of one or other gender.<sup>121</sup> Such a troubling of species identifications is further compounded by the knowledge that humans might act in a way that is perceived to be animal:

The gist of it is that animals engage in mindless lust; we are supposed to practice something on an altogether higher plane. But we cannot pretend we are doing something very different from what animals do when we are doing it with an animal: the whole edifice then collapses.<sup>122</sup>

Behavioural characteristics, in addition to biological ones, are therefore seen to produce bodies within particular ontological categories and support taxonomic classification: the historical identification of the animal body with the monstrous, with irrationality and with lust is widely acknowledged.<sup>123</sup> The human body that engages in such practices is therefore subsequently deemed animal (by virtue of being dirty), in spite of its biological species. In her 'bestly', or 'dirty' behaviour, Schneemann therefore performs her body as 'animal' in its desires and drives. Scenes of her giving or receiving oral sex in *Fuses* is aligned with her French-kissing her cat in *Infinity Kisses* in terms of these drives. By explicitly staging the body as erotic – and crucially in her work this is often understood as being culturally inappropriate eroticism i.e. too much, superfluous, feminine, aberrant, unclean – Schneemann therefore tends to play in to stereotypes of deviant sexuality in order to challenge and undo our complicity with them and ask where the boundary between human-self and animal-Other might lie, if indeed there is one. She performs her body as marked by her own sexuality and desires (she has desires and they are base) thus constructing her body as deviant in opposition to the historical fetishization of woman *as* desire in a heterosexual paradigm (she *is* his desire). In this, the artist self-identifies her own body as animal in its deviance or Otherness.

---

<sup>121</sup> See Delaney, p. 494; and Davies, p. 1036.

<sup>122</sup> Morris, Peter 'Blurred Boundaries' in *Inquiry*, No. 40, 1997, (pp. 259-290), p. 272.

<sup>123</sup> For an overview of this discourse, see Mullin, Molly H. 'Mirrors and Windows: Socio-Cultural Studies of Human-Animal Relationships' in *Annual Review of Anthropology*, Vol. 28, 1998 (pp. 201-224).

*Infinity Kisses* thus reveals a moment in which unstable cultural and judicial classifications of appropriate human-animal contacts come to the fore and the photographs trouble an easy identification either with or against the body of the artist. There is a leaky distinction, or a porosity, in these works that provoke an anxiety about the challenge to historical constructions of the person/human/subject/self/I.<sup>124</sup> Schneemann both becomes-animal and anthropomorphises the cats in her works, so that technologies of representation operate as a catalyst for this contamination, this leaky distinction between different bodies, which come into contact precisely through formal, historical and cultural breaks and ruptures. Schneemann's work uses the notions of touch, of petting, and of the pet to begin to stage complex, difficult encounters that ask serious questions of these ontological and sexual categories.<sup>125</sup> In particular, these works pose a challenge to naturalizing conventions that have upheld and perpetuated these categories through social, religious and legal practices.

*Infinity Kisses* therefore stages a sort of thematic and material continuity with her earlier projects, such as *Fuses*, in which the notion of con-tact with the feline body foregrounds the construction of sexuality and subjectivity through both the structure and the content of the work. Schneemann's projects here confront new sexualities and subjectivities that operate not just within heterosexual discourse (as argued by Amelia Jones, Scott MacDonald, David E. James and Johannes Birringer in their discussion of the work) or queer discourse (Jonathon Katz) but also that pertaining to the non-human, through its investment in the materiality of film, the processes of production and the animal body. As with *Fuses*, this project uses technology to construct an everyday, domestic encounter between two bodies (it is filmed inside a 'home', a real, embodied space, tied to the banal and the quotidian). Through its ties to the quotidian, Schneemann opposes the terms 'bestiality', 'obscenity' and

---

<sup>124</sup> 'Much of what we call cultural studies situates itself squarely, if only implicitly, on what looks...more and more like a fundamental repression that underlies most ethical and political discourse: repressing the question of nonhuman subjectivity, taking it for granted that the subject is always already human.' Wolfe, Cary *Animal Rites: American Culture, The Discourse of Species and Posthumanist Theory*, University of Chicago Press, Chicago and London, 2003, p. 1.

<sup>125</sup> Touch has a central function, for Derrida, in the operation of the self: 'Our world self touches itself; it flexes, inflects, and reflects itself; it auto affects and hetero affects itself in this way; it folds itself, onto itself and yielding to itself.' Derrida, 2005, p. 53.

‘perversion’, and does not claim transgression. Instead, the quotidian becomes her transgression.<sup>126</sup> The domestic is emphasized in *Infinity Kisses* not just through the act of repetition but also through the photographic format: the standard 6x4” prints convey to us a sense of the ‘Kodak moment’, the record of everyday events taken spontaneously, sent off to the chemist for processing and then diligently hand sorted as we select our favourites and discard those that are out of focus, overexposed or unflattering. This type of photograph is handled in a way that digital and professional prints simply are not.

By explicitly activating the notion of touch – and its associations with both stroking and striking – Schneemann inscribes the liberatory rhetoric of crossings and multiplicity into the work, while simultaneously staging an unease. As Rebecca Schneider argues – one of the only scholars to discuss Schneemann’s use of bestiality – the work ‘tangles the explicitly marked body in representation with the historical trajectory of socially instituted hierarchies of humanity.’<sup>127</sup> If, historically, animals have been seen, not seeing, and, politically, have been objects of knowledge while humans are subjects of knowledge,<sup>128</sup> what are the implications for models of subjectivity premised precisely on this unsteady border between subject and object, particularly in light of emergent technologies of production and reproduction? Thus, in the context of this thesis, Schneemann’s film and photographic work is here re-positioned as an early intervention into the discourses of the body and technology by assuming neither that the organic can be readily opposed to the technological, nor that ‘the body’ only ever refers to a human subject.

---

<sup>126</sup> Schneider, Rebecca *The Explicit Body in Performance*, Routledge, London and New York, 1997, p. 49.

<sup>127</sup> *Ibid.*, p. 49.

<sup>128</sup> Delaney, p. 494.

*Now?*

*1996: 10 patients with phantom limbs take part in a study to test the effects of visual input on phantom sensations, using a 'mirror box' to visually resurrect the phantom. A mirror is placed vertically on a table so that the mirror reflection of the patient's remaining hand is 'superimposed' on the felt position of the phantom. Over half the patients felt movement in the phantom when viewing the reflected image of the hand, and many were cured of the negative sensations associated with phantom limbs such as pain or paralysis. The experimenters report that, 'there must be a great deal of back and forth interaction between vision and touch, so that the strictly modular, hierarchical model of the brain that is currently in vogue needs to be replaced with a more dynamic, interactive model, in which "re-entrant" signaling plays the main role.'*<sup>1</sup>

Perhaps this report primarily concludes that there is a synaesthetic connection between sight and sensation, echoing the fingery-eyes that are activated in Carolee Schneemann's film work *Fuses* (1964-67). Or perhaps it implies that the adult human brain is surprisingly plastic: new pathways that bridge the two cerebral hemispheres can emerge in less than three weeks as the brain is re-trained to experience the phantom limb differently. But maybe it also infers that

---

<sup>1</sup> Ramachandran, V. S. & Rogers-Ramachandran, D. 'Synaesthesia in Phantom Limbs Induced with Mirrors' in *Proceedings: Biological Sciences*, Vol. 263, No. 1369, Apr. 22 1996 (pp. 377-386).



technologies of vision can re-align the body and its self/image, unpicking the psychological and physiological differences by tricking the brain into noticing only the similarities. In other words, how does the body respond to its own live self/image and what is the role of difference and sameness in constituting that response?

In the space of the mirror box, the body is collapsed onto its own image as feedback systems are established between limb, reflection and brain. In other words, the ‘re-entrant signaling’ suggested by Ramachandran and Rogers-Ramachandran. The problem of the relationship between body/self and image/self, according to the results of this experiment, would seem to be at once perceptual *and* physiological. But this occludes the philosophical, the psychological and the poetic considerations of how one orientates oneself in relation to the image, and the way in which the image mediates one’s relationship with a body, a zone of transformation through which the body passes in the processes of identity construction.

Perhaps the mirror, as a technology for looking at the body, seems particularly resonant in the context of identity construction since it sets up a live system in which information is perpetually shuffled back and forth between body and image. Like the mirror, the video camera also presents a self/image that is live, since it has the capacity for instant playback when it is connected to a television monitor. In other words, since it does not require the processes of developing and printing that film does, video can show a recorded image live alongside the source of that same image.<sup>2</sup> The development of the Portapak video camera in 1968 thus perhaps opened up a critical space in the history of the moving image, in which technology could now provoke a challenge to the epistemological emphasis on sight and the ‘live event’, playing into this rhetoric even while conceptually undermining it.

---

<sup>2</sup> See Kaizen, William ‘Live on Tape: Video, Liveness and the Immediate’ in *Art and the Moving Image: a Critical Reader*, Leighton, T. ed., Tate Publishing, London, 2008 (pp. 258-272). See also Carroll, Noel ‘The Specificity of Media in the Arts’ in *Film and Theory*, Stam & Miller eds., Blackwell, Malden M.A. and Oxford England, 2000 (pp. 39-53) especially p. 43.

The emergent use of video in artistic practice during the late 1960s and 1970s restaged the relationship between live acts and the recorded image, as video streams were integrated into performances and opened up for critical reflection the differences between the live body and its 'live' image. Video seemed neither to be used simply as a documentary device for recording an event, nor as a purely object-based practice, for example as per Schneemann's use of the 16mm camera in a work such as *Fuses*.<sup>3</sup> Instead, video seemed to sit somewhere in-between the object and performance, integrating the early history of video practice into histories of the 'live event'.

In her article 'Performance, video and the rhetoric of presence' (2000), Anne Wagner situates the emergence of video art in the context of contemporary performance practice. Looking at Acconci's *Following Piece* (1969) and Laurie Anderson's *Object/Objection/Objectivity* (1973), Wagner considers the way in which performance practices from the late 1960s into the 1970s dealt with the nature of the exchange of vision between artist and audience. The performances, she argues, acknowledged that 'vision itself is a faculty to be tracked and erased, documented and suppressed, stymied and deferred.'<sup>4</sup> Such works were preoccupied with reflecting a gaze back onto the audience, but a gaze that was often associated with violence and aggression.

The problems of vision that Wagner identified in the performances of this time subsequently come to be played out in contemporary video practice as artists used the live playback capabilities of the technology to interrupt systems of looking between audience and performer. Optical technologies such as the mirror and/or the video camera were used in performance of the 1970s in order

---

<sup>3</sup> Although I will be primarily looking at video works that deal with the representation of the body, often intersecting with performance techniques, there were of course many practices that used tape to produce the art video as an object in its own right. Here, the tape would be manipulated using image synthesizers and the principle of feedback between camera and monitor to produce abstract imagery. The most noted examples of this type of object-based practice are the works by Nam June Paik, Woody and Steina Vasulka, or Peter Donebauer. For a discussion of these works see Meigh-Andrews, Chris *A History of Video Art: The Development of Form and Function*, Berg, Oxford and New York, 2006, especially chapter 7 'Beyond the Lens: Abstract Video Imagery and Image Processing' (pp. 111-148). See also the 1973 WGBH Boston Public Television Program *Video: The New Wave*, available to watch online at <http://www.youtube.com/watch?v=vLgVGYmOg5o>.

<sup>4</sup> Wagner, Anne 'Performance, Video and the Rhetoric of Presence' in *October*, Vol. 91, Winter 2000 (pp. 59-80) p. 63.

to ‘foreground an audience’s understanding that *it* is what is being seen.’<sup>5</sup> This was often achieved by reflecting the gaze of the audience back onto itself. Artists including Joan Jonas and Dan Graham used mirrors *and* video in their performance practice in order to question the ways in which the visual exchange between the performer and the audience might be mediated through various types of screen. This questioning of the relationship of gazes between the audience and the performer fitted into a genealogy of art practices that extended from Minimalism into video art. While Benjamin Buchloh had previously claimed that Minimalist objects, like video, had opened up the phenomenological space of spectatorship, Wagner draws on the formal similarity between the use of mirrors in 1970s performance and works such as Robert Morris’ *Untitled (Mirror Cubes)* (1965) to link these practices and demonstrate that video art was not separate from performance but an intrinsic part of it.<sup>6</sup> In both instances, optical devices were used ‘to perform an endless volley of reflections – or crossfire of gazes.’<sup>7</sup>

This cross-fire of gazes, which we have already seen played out between male, female and animal bodies in the work of Schneemann, is strikingly revisited some 6 years later in Lynda Benglis’ work *Enclosure* (1973) (figs. 2.1 and 2.2). A portable video camera (held by Benglis) roams a studio, moving between filming a man stroking a cat and two TV monitors. One of the monitors displays close-ups of the man and the cat, the other a hockey game being played ‘live’ on TV. While the space remains domestic, it is no longer sexualized. There is none of the stickiness of the 16mm film screen, and the cat no longer draws us in to a complex negotiation of animal subjectivity and sexuality: it obstinately remains a cat. The man occasionally watches the hockey game. The female body in the scene is out of sight, as the eye of the camera is now clearly her eye – the artist’s eye – roaming the room. The jerky movements reference the emergent visual tradition of home video, and the static interference upturns the logic of the marks and scratches on the surface of the 16mm film in *Fuses*. In *Enclosure*,

---

<sup>5</sup> Ibid., p. 70.

<sup>6</sup> Buchloh, Benjamin ‘From Gadget Video to Agit Video: Some Notes on Four Recent Video Works’ in *Art Journal*, special issue *Video: The Reflexive Medium* Vol. 45, No. 3, Autumn 1985 (pp. 217-227).

<sup>7</sup> Wagner, p. 73.

the screens appear flat, banal. The monitors inside the studio room make us aware of the implied third monitor: the one on which the viewer is watching Benglis' video.

A moiré interference pattern occasionally flashes across these monitors as Benglis' camera re-records them. This type of disruption to the image is caused when a grid overlays another grid, or two waves meet, but are ever so slightly imperfectly aligned, causing a diffraction pattern which spreads out across the screen in waves, a feature instantly recognizable to anyone who has ever tried to take a photograph of a television or computer screen. In the case of a video of a video, it is the grid of the aperture grill of a CRT screen failing to align exactly with the image of another screen that causes this interference. As light waves from the two grids crossover and interfere with one another, the points at which they meet produce what is known as a 'beat', and generate a new wave pattern that interrupts and displaces the modernist grid: the moiré (figs. 2.3 and 2.4).

It is these new rippling electronic surfaces that displace the material tactility of the 16mm film screen, now drained of all bodily suggestion. The gazes that fired between human and animal subjects now fire between camera and monitor, caught in a perpetual loop. The subjects are merely caught within the 'endless volley of reflections' as the camera and the screens produce a seemingly closed (*en-closed*) system that, by implication, is meant to also include Benglis and, subsequently, us. The space created here is like the *enclosure* of the mirror box, since not only are the bodies in the space caught under layer upon layer of *re*-presentation, but the gaze which looks inside the box (the audience), apparently *as if* from the outside, is also incorporated into the system: trapped in the enclosure between camera and monitor.

Since 1976, this enclosed space of the video loop, which volleys the subject back and forth between camera and monitor, has been theorized as a narcissistic space of projection. In her foundational article 'Video: the aesthetics of narcissism', published that year, Rosalind Krauss attempted to identify the defining characteristics of video: producing a totalizing theory of the new medium, which has been at the heart of most subsequent art historical analysis.

The characteristics that she discovered – of being ‘live’, and of allowing the performer to watch him/herself *as if in a mirror* – was perceived by Krauss as being fundamentally *psychological* rather than *physical* in nature, since the medium itself is structured around a narcissistic doubling of the self, in which the self is either that of the body of the artist (as in the case of works on tape) or the body of the spectator (as with video installations).<sup>8</sup>

By defining the medium of video as psychological Krauss, perhaps unwittingly, played into a discourse that considered communications technology (or the flow of information) as fundamentally disembodied. Likening the medium of video to the ‘mediums’ of parapsychology, she argued that the human body becomes both a sender and receiver of communications that arise from an invisible source. In so doing, her model of information or data transfer inserted the emergent discourse around video into a genealogy of thought that considered the flow of information (which historically includes human thought processes) as removed from the material substrate through which they flow. This is a genealogy that extends from Cartesian dualism, through enlightenment idealism, and into contemporary techno-fantasies of artificial intelligence, which will be developed further in the final chapter.

However, through the analogy of the spiritual medium, Krauss identified the key feature that, as we have seen, distinguishes video from other moving image technologies such as film: that the presentation of the image may be simultaneous to the event, or coextensive with the live body of the artist. Not needing to undergo chemical or mechanical processing before display, the videotape allows for instant playback, enabling a simultaneous doubling of the body of the performer or split between self and image. For Krauss, the artists used the playback function of the home video camera in order to perform *with* or *to* their self/image, producing a narcissistic doubling back of the subject upon itself. She writes:

---

<sup>8</sup> Krauss, Rosalind ‘Video: the Aesthetics of Narcissism’ in *October*, Vol. 1, Spring 1976 (pp. 50-64).

The body is therefore centered between two machines that are the opening and closing of a parenthesis. The first of these is the camera; the second is the monitor, which re-projects the performer's image with the immediacy of a mirror.<sup>9</sup>

While the notion of a subject caught within a system of representation is crucial, Krauss' understanding that the process of transformation that the image of the subject has undergone as 'mirror-like' is highly problematic. In the first instance, her model appears to be based on Nancy Holt's description of experiencing feedback interference with speech patterns in the work *Boomerang* (1974) (figs 2.5 and 2.6), in which she says she feels like she is caught in a 'mirror reflection...so that I am surrounded by me and my mind surrounds me...there is no escape.' Krauss likens this prison-like situation to being caught between two mirrors, from which there is no escape spatially or temporally. Caught between two mirrors the subject, she argues, experiences a collapse of both time and space: 'this is the prison of the collapsed present.'<sup>10</sup> The subject is disconnected from its own past, the distinctions between subject and object have flattened into one and the physical and conceptual spaces between the two have been squeezed out: 'the medium of video art is the psychological condition of the self split and doubled by the mirror reflection of synchronous feedback.'<sup>11</sup>

However, the mirror analogy also begins to unravel when we consider the relationship between video and performance, or the 'live event', noting that, while related, they are not synonymous. As William Kaizen suggests, 'there is a paradox in the references to video as immediate: why would a system for recording be described as if it were unmediated?'<sup>12</sup> The notion of the 'live event' had been particularly resonant during this period due to emergent contemporary theories concerning 'live television', television recorded 'as live', and the 'live studio audience'. Thus artists were keen to destabilize the relationship between TV and the 'live event' on the grounds that this perceived equivalence fostered an epistemological basis for television's claim to truth and

---

<sup>9</sup> Ibid., p. 52.

<sup>10</sup> Ibid., p. 53.

<sup>11</sup> Ibid., p. 55.

<sup>12</sup> Kaizen, p. 261.

immediacy. Many artists used public access TV to stream their performances 'live' into the domestic sphere, not to bolster the rhetoric but in order to challenge it. Of note in this field is the work of Richard Serra, Nancy Holt and Martha Rosler.

Through its well-established relationship to television, the observer has been trained to read video images 'as live' rather than as images recorded in the past. However, the notion of what constitutes the 'live' image is markedly scrambled in relation to home video and broadcast technology. William Kaizen, David Antin and Philip Auslander have all described the illusion of immediacy that is associated with tape, generating confusion between real time and recorded time. As Antin noted in 1975, 'the live production on videotape, though delayed in reaching the home by a few hours or days, was generally accepted as actual live television by the average viewer.'<sup>13</sup> This was perhaps easy to achieve since tape was associated with news broadcasts that covered world events, generating a perceptual link between instant playback and the real. News broadcasts enabled all sorts of production on tape to be perceived as live, since they would integrate items that needed to be live with those that didn't, items where the broadcast could be delayed across different time zones and throughout the broadcast day.<sup>14</sup> As such, the medium of tape becomes associated with the notion of live, almost regardless of content, to such a degree that other forms of artistic practice began to be considered in comparison to videotape's capacity for not only re-playing but also actually producing truth and immediacy. For example, Auslander has suggested that the concept of live, as used to describe performance practice, was only developed after, *and in relation to*, the advent of tape recording.<sup>15</sup> The idea of live was thus paradoxically only a result of the emergence of mediated imagery. Rather than playing into the connection that Krauss makes between the video camera and the mirror on the grounds of live re-presentation, I would argue that the fact that artists like Dan Graham or Joan Jonas use *both* devices in their projects suggests that there is not a similarity but

---

<sup>13</sup> Antin, David 'Video: the Distinctive Feature of the Medium' in *Video Art*, Schneider, I. & Korot, B. eds., Harcourt Brace Jovanovich, New York, 1976 (pp. 174-183) p. 174.

<sup>14</sup> Kaizen, p. 263.

<sup>15</sup> See Auslander, Phillip *Liveness: Performance in a Mediatized Culture*, Routledge, New York, 1999, pp. 50-54.

rather a crucial distinction in the specificity of the images produced by each.<sup>16</sup> These works ask what is the difference between seeing through a mirror and through a video monitor?

Wagner's reading of both *Boomerang* and Lynda Benglis' work *Now* (1973) (fig 2.7) is particularly interesting in this context since it picks out the way in which those works – and other early video art practices – used technology to highlight the moments of failure in the visual exchange between audience and performer. Unlike film, but similar to performance, the threat of failure or breakdown is always present with video. Wagner poses the question whether 'confidence in the directness of vision can survive translation and reproduction by technological media,'<sup>17</sup> and for her the early video art projects were trying to work through the problematic notion of the 'real' in technologically mediated experience. This, of course, is the cornerstone of TV's claim to truth: because it is live, it is therefore real. As Wagner writes, 'truth and immediacy have been on special offer since the 1950s.'<sup>18</sup> While Wagner has argued that performance and video came together to open up this question to exploration rather than naturalization, I believe that the use of technology in these projects ultimately reveal the inherent failure of *any* reading of vision as direct.

Working from within the terms already set out in video theory, such as the live playback capabilities of the technology, I will demonstrate that there has been a fundamental mis-reading of information and systems theory. The feedback loop established in early video art practices is not comprised solely of the spatially and temporally flat surface of the subject reflected between two mirrors in infinite regress, as Krauss argued, but actually describes an embodied engagement with, or integration into, technological systems of representation,

---

<sup>16</sup> For a discussion of this see O'Dell, Kathy 'Performance, Video and Trouble in the Home' in *Illuminating Video: an Essential Guide to Video Art*, Hall, D. & Fifer, S. J. eds., Aperture, San Francisco, 1992 (pp. 135-151). Joan Jonas has explicitly written, 'I chose as my first technological tool the mirror, a device that transmits light.' See Jonas, Joan 'Transmission' in *Women Art and Technology*, Malloy, J. ed., MIT Press, Cambridge Mass. and London England, 2003 (pp. 114-133) p. 117.

<sup>17</sup> Wagner, p. 74.

<sup>18</sup> Wagner, p. 76.



rather than a disembodied flow of information, visual or otherwise.<sup>19</sup> As such, the idea that the early history of video art is inseparable from the live event is crucial in reinserting the corporeal into technology theory.

### ***Reflection/reflexivity***

In *Enclosure*, there is a repetition of the subject through layers of *re-*presentation, as the images of the cat and the man appear both on the screens in the studio and on *our* screen as we watch the work. Likewise in Benglis' work *Now*, the self/image is repeated across several representational levels. Here, Benglis becomes the subject of the video camera's gaze: her image multiplied as she stands between a monitor showing her pre-recorded image and a camera filming her, so that the resultant video shows her 'live' self/image interacting with her recorded one. Each Benglis tries to French kiss the other, in what could be interpreted as a literal staging of Krauss' model of narcissism through the autoerotic act, reminding us of the French kiss between Schneemann and Cluny, and creating an encounter that asks us to begin to consider the 'apparent' act versus the 'actual' one in the context of bodily contacts.

First we are shown one recorded Benglis behind the 'real' one, then two, then three. With each layer, the moiré pattern gets stronger, making it increasingly difficult to see the images. The film then ends as it began, with the familiar static interference left playing on the screen, signaling that we have been watching a video all along: the apparently 'live' Benglis was itself only ever a recording, thus collapsing the distinction between the body of Benglis the performer and the screen selves behind her. By performing with her own self/image, Benglis suggests the possibility of using the instant playback capability of video to replicate the live subject in infinite regress as multiple Benglis' perform to one another in the *mise en abyme*. However, by using the image of static interference to imply that we have been watching a video, the sense of infinite regress does not simply extend outwards to a vanishing point,

---

<sup>19</sup> Antin, an early researcher on video art, suggests that this relation is also fundamentally social. He writes, 'The most basic characteristic of the medium is the social relation between sending and receiving.' See Antin, p. 175.

but rather suggests that the repetition continues ‘behind’ us too: there is a level in front of the one we watch, which perhaps includes us.

In both *Now* and *Enclosure*, Benglis uses the motif of a subject apparently outside the system – whether it is in the role of a camera person, the spectator or a director – in order to challenge traditional models of systems that suggest infinite regress, such as the *mise en abyme*. As well as tacitly acknowledging our own position as the spectator, in *Now* the different images of Benglis are also seen talking to a third person, off camera, barking orders to ‘*start recording!*’ and asking whether ‘*is it now?*’ As such, the work suggests that the potential for the infinite repetition of the video image is not confined merely to those subjects represented within the filmic lexis but extends out into the space of the observer. Like a whirlpool, vision doesn’t simply spiral inwards but outwards also. In *Now*, the vanishing point does not occur simply in front of our field of vision, but also behind it, focusing in to the eye/I of the spectator. This is perhaps alluded to since the images of Benglis on the screen(s) in front of us increase in size as they move further away through the layers of video, in a move that is counter-intuitive to the decrease in size expected from distant objects within the structure of linear perspective.

Benglis’ work both references and questions the structure of *mise en abyme*, both formally through the device of a potentially infinite volleying of the subject between self and image, and also metaphorically by providing a meta-discourse on the structural capability of video to do this: in that the formal register of the system draws attention to the very structure of that system. André Gide first described the phenomenon of *mise en abyme* in a diary entry dated 1893:

In a work of art I rather like to find transposed, on the scale of the characters, the very subject of that work. Nothing throws a clearer light upon it or more surely establishes the proportions of the whole. Thus, in certain paintings of Memling or Quentin Metzys a small convex and dark mirror reflects the interior of the room in which the scene of the painting is taking place.

Likewise, in Velazquez's painting of *Las Meninas* (but somewhat differently). Finally, in literature, in the play scene in *Hamlet*, and elsewhere in many other plays. In *Wilhelm Meister*, the scenes of the puppets or the celebration at the castle. In *The Fall of the House of Usher* the story that is read to Roderick, etc. None of these examples is altogether exact. What would be much more so, and would explain much better what I strove for in my *Cahiers*, in my *Narcisse*, and in the *Tentative*, is a comparison with the device of heraldry that consists in setting in the escutcheon a smaller one 'en abyme', at the heart-point.<sup>20</sup>

While the full term *mise en abyme* was first used by C. E. Magny in 1950, it is Gide's journal entry that forms the foundation for most critical explorations of *mise en abyme* in literature studies.<sup>21</sup> For Gide, *mise en abyme* is a function of reflexivity based on a model taken from British heraldry, in which an inescutcheon is mounted on an escutcheon so that a miniature replica of itself sits in the middle of a convex shield. In Gide's work, three types of reflexivity have been identified as constituting *mise en abyme*: the single duplication, which functions like a mirror in that the whole is reproduced *once* in the form of an embedded part (the play within a play in *Hamlet*); the infinite duplication, where the embedded part itself embeds a part ad infinitum (often referred to in the literature as the 'Morton Salt Box' effect); and the paradoxical duplication, where the embedded part could also embed the whole in what constitutes a logical difficulty (an example given by Moshe Ron is that of *Paludes*, which plays on a deliberate confusion between author and narrator, work completed and work in progress).<sup>22</sup> For Gide, *mise en abyme* is thus 'any enclave

---

<sup>20</sup> Gide, André *Journals 1889-1949*, Penguin, Harmondsworth, 1967, pp. 30-31.

<sup>21</sup> C E Magny's term is largely rejected because the definition was not fully worked through and there was some confusion between single and infinite reflections. For a discussion of the historical uses of the term see Carrard, Philippe 'From Reflexivity to Reading: the Criticism of Lucien Dällenbach' in *Poetics Today*, special issue *Representation In Modern Fiction*, Vol. 5, No. 4, 1984 (pp. 839-856) especially p. 842. See also Hutcheon, Linda *Narcissistic Narrative: the Metafictional Paradox*, Methuen and Co. Ltd, London, 1990, especially chapter three 'Thematising Narrative Artifice: Parody, Allegory and the *Mise en Abyme*' (pp. 48-56).

<sup>22</sup> See Ron, Moshe 'The Restricted Abyss: Nine Problems in the Theory of *Mise en Abyme*' in *Poetics Today*, Vol. 8, No. 2, 1987 (pp. 417-438).

entertaining a relation of similarity with the work which contains it.<sup>23</sup>

In this respect, Benglis' video works *Now* and *Enclosure* potentially function as *mise en abyme* on several counts: first, following from Krauss' theory that the video monitor is 'mirror-like', the work could reference the formal register of single duplication; second, the images imply a repetition ad infinitum; third, the work itself stages an ambiguity about which body/image, if at all, constitutes the 'real' Benglis, since all are presented as if 'live', and questions the relationship between Benglis and her recorded image. Perhaps the critical distinctions that have been determined in *mise en abyme* theories could be usefully deployed here to tease apart Krauss' analogy that the video screen functions simply as a mirror. Likewise, Benglis' video practice can also be seen to challenge prevailing assumptions in *mise en abyme* theory.

The implication for this is that Krauss' model of the evacuated flatness of the subject caught between two mirrors could be displaced in the theories of both video and *mise en abyme*. Following from Gide, several scholars of *mise en abyme* theory, including Lucien Dällenbach who wrote the key text contemporaneously with Krauss' article, tend to assert the interchangeability of the *mise en abyme* and mirrors.<sup>24</sup> By looking at the work *Now*, however, I would contend that while *mise en abyme* has a formal relation to the reflexive properties of mirrors, the type of transformation that the subject appears to undergo is complex and dynamic, and not a simple single duplication, such as the play within a play in *Hamlet* (which, as Moshe Ron notes, cannot be a true *mise en abyme* anyway because *The Murder Of Gonzago* does not contain essential components such as a figure like Hamlet himself)<sup>25</sup>. A shifting dialogue is thus set up between body and image: a dialogue that is perhaps present in all examples of recorded imagery. Posing the question of which

---

<sup>23</sup> Dällenbach quoted in Ron, p. 421.

<sup>24</sup> Dällenbach writes, '*Mise en abyme* is any internal mirror reflecting the narrative [recit] as a whole by simple, repeated or specious [*specieuse*] duplication.' See Dällenbach 'Reflexivity and Reading' in *New Literary History*, special issue *On Narrative and Narratives: II*, Tomarken, A. trans., Vol. 11, No. 3, Spring 1980 (pp. 435-449). For a critique of Dällenbach's position see Ron, and see Bal, Mieke '*Mise en Abyme* et Iconicité' in *Literature*, Vol. 29, 1978 (pp. 116-123).

<sup>25</sup> Ron, p. 421.

'now' is the real now, all of the images of Benglis in *Now* are presented as if live, as if the live subject inhabited several representational layers at once. By making each self/image autonomous, and performing actions that formally reference one another while remaining unique, the work implies that each one has its own subjectivity but simultaneously undermines that very implication. Since each Benglis is actually not identical, only apparently so, the association of the notion of the live image with instantaneous replication is broken. Indeed, the various Benglis' often disagree with one another: '*I said start recording...no, I said start recording!*' The self/image in *Now* therefore cannot be read as a simple reflection of the subject, since the self is effectively split from its own image by showing several apparently independent Benglis'. The audience of *Now* is thus asked to unpick the layered temporalities of the film in order to consider which image of Benglis might constitute the live subject, the source of the image. Yet, since we are aware that in fact all the Benglis' are ultimately recorded images that have undergone various levels of duplication, there is a sense in which the live subject always fails to materialize within moving image technologies. As such, *Now* is both demonstrative of the uneasy notion of the live image, and implicated in re-affirming and exposing the means by which technologically mediated imagery has generated such a tension.

Watching all these images, presented as if live, the spectator gets drawn into a system held in a sort of stasis: there is no present, only a series of recordings which exist in a past, present or future only relative to one another. The only moment when the presentness of the spectator is explicitly invoked – and by presentness I refer not only to the *presence* of the spectator but also the time which is perceived *as present* by that spectator – is the moment when the static interference covers the screen, reinforcing the material presence of the screen as a barrier. This has the paradoxical effect of apparently *separating* us from the system, but only so as to acknowledge our complicity with it. The diegetic boundary is reasserted by the static interference causing the film no longer to be viewed from within but rather from 'without', the space of the spectator. In an article on electronic presence, Vivian Sobchak has written that a key feature of electronic time is the ability to select, replay, and overcome the 'irreversible

stream of objective time [in favour of] a recursive temporal network.’<sup>26</sup> This is precisely the kind of network that Benglis has produced as *Now* speaks to those relativistic structures of time found in video. Furthermore, the questions that she poses, concerning the relationship between the temporality of the ‘live’ image and the lived body, are staged in the context of video time.

Sobchak has argued that the experience of watching video is not only qualitatively different to watching film, not least in its non-linear viewing structures, but also that that difference is tied to the ways in which the different media interact with capital. Electronic imagery, for Sobchak, is like the simulacral precisely because it plays on notions of the real, through its perceived connection with live re-presentation. She writes, ‘the electronic semiotically constitutes a system of simulation – a system that constitutes copies lacking an original origin.’<sup>27</sup> As such, Benglis is only ever an image, rather than a thing in itself, and the issue of *presence* (both in the sense of ‘being there’ and ‘being in the present’) takes on a central critical role. Perhaps the static interference that ends the tape isn’t just a diegetic break to make us realize that we have been watching a tape all along, signaling that now we may re-enter the real, but rather confuses what might actually constitute the real, in much the same way that Jean Baudrillard has suggested that the explicit fakeness of a site like Disneyland is there to trick you into thinking that, by contrast, the world is real.<sup>28</sup> As such, the break of the static interference seems only to highlight the very incorporation of the spectator into such a system and, by analogy, that the notion of ‘live(d)’ time itself is an artificial construction.

---

<sup>26</sup> Sobchack, Vivian ‘The Scene of the Screen: Envisioning Cinematic and Electronic “Presence”’ in Stam & Miller eds., (pp. 67-84) p. 79.

<sup>27</sup> Ibid., p. 79.

<sup>28</sup> See Baudrillard, Jean *Simulacra and Simulation*, Glaser, S. trans., University of Michigan Press, Ann Arbor, 1994. This has also been noted by Antin, who writes, ‘In principle, TV seemed to combine the photographic reproduction capacities of the camera, the motion capabilities of film and the instantaneous transmission properties of the telephone. But just as the photographic reproduction capacity of the camera is essentially equivocal and mainly significant as mythology, so is the fabled instantaneity of TV essentially a rumour that combines with photographic duplicity to produce a quasi recording medium, the main feature of which is unlikeness in relation to any notion of reality...The industry wishes or feels obligated, to maintain the illusion of immediacy, which it defines rather precisely as “the feeling that what one sees on the TV screen is living and actual reality, at that very moment taking place.” The perfection of video tape made possible the careful manipulation and selective presentation of desirable ‘errors’ and ‘minor crises’ as marks of spontaneity.’ (Antin, p. 176-177).

Since the most prevalent model of *mise en abyme* involves an infinite replication of identical images in which the live subject is no longer discernible, a work such as Benglis' *Now* places pressure on the theory, moving it away from being so rigidly likened to standing between two mirrors. By working with apparently live images that are non-identical, and in so doing thus calling attention to the problems of the structure of video being associated with the notion of *liveness*, the work operates more within the realm of the third stage of *mise en abyme* in which the part references the whole in a gesture that simultaneously consolidates and obliterates the very structure of the work.

While the work certainly references reflection and repetition – often mistakenly equated in Dällenbach's work<sup>29</sup> – it does so only in order to subvert mimesis and representation. Benglis' *Now* does perhaps seem to resonate more with repetition rather than reflection, echoing the heraldic figure of an escutcheon placed *en abyme*, in which we experience repetition on different scales, but this is not the same as reflection. Ultimately, *Now* fulfils the criteria of *mise en abyme* not because of repetition or reflection but in that 'its essential property consists of bringing out the intelligibility or the formal structure of the work.'<sup>30</sup> As such, the *mise en abyme* demonstrated by *Now* closely describes the very challenge to representation that Dällenbach perceived in Gide's theory<sup>31</sup>:

Moreover, *mises en abyme* such as Magritte's 'picture within a picture', which turns *trompe l'oeil* against itself, denounce pictorial illusion and betray the 'ideology of the window' which has dominated Western painting since the Renaissance.

Although presenting itself as a representation of a representation this *mise en* as second-degree mimesis, still subverts mimesis,

---

<sup>29</sup> Dällenbach has written, 'As an organ of the work turning upon itself, *mise en abyme* appears as a modality of reflection.' For a critique of this see Ron, p. 418.

<sup>30</sup> Dällenbach *Le Rit Speculaire*, Seuil, Paris, 1977, p. 16.

<sup>31</sup> Although it should be noted that Dällenbach made some changes to Gide's original theory. He writes, 'Whereas Gide understands by the term the repetition within a work of "the subject of the work" "on the level of the characters", [(Gide p. 41)] my own use of the expression covers any sign having as its referent a pertinent continuous aspect of the narrative (fiction, text or narrative code, enunciation) which it represents on the diagetic level. The degree of analogy between sign and referent can give rise to various types of reduplication.' (Dällenbach, 1980 p. 436).

revealing it for what it is. [As S. Gablick writes] ‘The “painting-within-a-painting” theme is a stunning contraposition to the Renaissance concept of painting as a ‘window on reality.’<sup>32</sup>

For Dällenbach, the critical function of *mise en abyme* is the use of the devices of repetition and reflection within a work not in and of themselves but in order to comment on the structure of that work, establishing a meta- or higher level discussion from within the work itself, thus ‘ensnaring representation in its own trap...undermining [the reader’s] referential illusion.’<sup>33</sup> In relation to Benglis’ work, one of the crucial features of this theory is the role of the spectator, without whom the *mise en abyme* simply could not be completed, since, for Dällenbach ‘there is always an implied reader as a reading role is inscribed in the text.’<sup>34</sup> Indeed, as I have earlier noted, Benglis’ works *Now* and *Enclosure* draw attention to that subject (the observer), apparently located outside the system.

By working closely with the theory of *mise en abyme*, I argue that we might better understand the structures of viewing video, particularly in relation to the observer. The technology does not in fact, contrary to Krauss’ argument, produce a closed system, but facilitates the production of an open one that encompasses multiple subjects, including the observer. While Krauss argued that Vito Acconci’s *Centers* (1971) (fig 2.8) caused the artist to collapse into a solipsistic closed circuit, several scholars have noted that the artist is not only pointing at himself but also at the viewer. Anne Wagner writes:

Krauss’ analogy of the parenthesis means that the body ought to be held in qualified suspension: it is bracketed just as is a linguistic phrase or sign...My argument rests, by contrast, on the suggestion that these parentheses only apparently enforce a closure: the technology of the monitor opens outward as well as

---

<sup>32</sup> Dällenbach, 1980, p. 442-3.

<sup>33</sup> Ibid., p. 443.

<sup>34</sup> Ibid., p. 436.



in. Not only does it register a process of surveillance, it itself asks for monitoring.<sup>35</sup>

Likewise, David Joselit states:

What is striking about Krauss' reading of Acconci's work *Centers* – which has conditioned an entire generations understanding of video – is its occlusion of the obvious fact that in pointing at his reflected image on the playback monitor, Acconci simultaneously points out at the viewer of the tape.<sup>36</sup>

The social aspect of the video 'mirror' was also emphasized in the editorial policy of the influential early publication *Radical Software*, whose model of a media ecology informs much of Joselit's important work on video.<sup>37</sup> If video works incorporate an observer into a system, then the type of narcissism that is played out in video art is thus, somewhat paradoxically, more of a social act, in which the observer is drawn in as an object and as an Other in relation to the subjectivity of the artist. To some extent, the narcissism of video is thus directed outward into the social realm, and is often founded on a distribution and proliferation of the artist's self-image into that realm, rather than merely a reflection of that image back onto oneself through the device of the spectator/other. In contrast to Krauss, Joselit writes that 'the video monitor situates psychological narcissism squarely within technologies of mechanical reproduction which proliferate rather than focus images of the performer.'<sup>38</sup> Perhaps the narcissism of video, for Joselit, exists in its potential for open-ended process (the possibility of infinite repetition and dissemination) while for

---

<sup>35</sup> Wagner p. 68

<sup>36</sup> Joselit, David 'Tale of the Tape: *Radical Software*' in Leighton, T. ed., (pp. 220-227) p. 225.

<sup>37</sup> *Radical Software* was published between 1970-1974 by the Raindance Corporation, a video collective headed up by the artist Frank Gillette. See [www.radicalsoftware.org](http://www.radicalsoftware.org). In Joselit's 2008 article, the critique of Krauss is specifically filtered through an historical investigation of the publication *Radical Software*, the notion of media ecology – in which the social and psychic life is deeply intertwined with information technologies – and the democratization of TV. As a political gesture concerned with the democratization of the media and information flows, there has been an amnesia in the literature that Joselit is attempting to reclaim by critically investing in this small but influential publication.

<sup>38</sup> Joselit 'Art as Information: Systems, Site, Media' in *American Art Since 1945*, Thames and Hudson, London, 2003 (pp. 129-159) p. 156.

Krauss it is based in the closed system (which perpetually reflects the performer/viewer back onto his or her self).

In literary theory, the creative potential of the *mise en abyme* lies in the way in which the self-referential structure creates gaps or breaks (*leerstellen*) which open up as productive spaces for this reader.<sup>39</sup> These gaps, for Dällenbach at least, produce an interdeterminacy that offers space for critical reflection, and rejects fixed readings otherwise prescribed by traditional texts. As the images of Benglis first try to kiss each other, then disagree with each other, and the image increasingly breaks down with each screen overlay as the moiré pattern produces too much interference to see what is happening, the work produces such gaps, in which both reading and misreading might equally take place.

While, following from Benglis' work, I concur with Dällenbach that the gaps function as 'stimuli' to creative interpretation, I would also be wary of the suggestion that the gaps subsequently 'aid readability...seal directly or indirectly the text's vanishing points...condense the text...render the text more intelligible...'<sup>40</sup> Instead, the formal properties of the *mise en abyme* are being employed here in order to open up the possibilities of interpretation and challenge them, rather than close them down. While, as Dällenbach notes, *mise en abyme* serves the purpose of integrating the spectator in order to weave the narrative to real life more closely, *Now* actually seems to prevent the body from being successfully re-integrated into its representation, instead making it fundamentally aware of its split from it through critical reflection.

This split between the self and the image informs other important readings of video based practice. Joselit's work on video is deeply concerned with Krauss' oppositional notions of reflexivity (the critical analysis of the aesthetic and historical relation between an author and his or her medium) and reflection (the one-to-one mirroring as performed by video).<sup>41</sup> In particular, for Joselit, the

---

<sup>39</sup> For a discussion of the role of *leerstellen* see Dällenbach 1980, pp. 436-441.

<sup>40</sup> *Ibid.*, p. 440.

<sup>41</sup> See Joselit, 2008, 2003.

analogy of the video-monitor-as-mirror fails to consider the complexities of the relationship between self and image in video works. He writes:

Not only is the one-to-one relationship between body and image shattered, but the ‘mirror’ reflects back not an ‘inner self’ but the kind of motley collection of exaggerated stereotypes... Rather than evoking a narcissistic collapse of the self into its reflection, the mirroring video art performs tends to heighten the difference between a person and their mechanical reproductions.<sup>42</sup>

The subject that the video monitor plays back is fundamentally different from the reflection of the subject in the surface of a mirror. This difference is perhaps alluded to in Benglis’ tape since the images are not exact replications of one another: there are slight shifts in the register of scale, speech and action. The tape uses similarity – the apparent infinite repetition of the image of Benglis – in order to set up an awareness of difference. While compelling in its reading of the temporal and spatial experience of being caught in the video loop, I would argue that Krauss thus does not go far enough in her theory of the observer caught within the system, and cannot account for the way in which themes of repetition and reflection actually establish video in the context of a theory of difference through subject relations. The subject surely becomes *integrated* into the system and as such is fundamentally altered by the processes of representation and reflection. The image of the subject, and thus the subject itself, has undergone a shift through the merging of its subjectivity with the technological apparatus and the subsequent re-presentation of the live body on screen. While systems of gazes might be established between subjects within film and, in rare cases, across the film screen (as per Schneemann), the emergence of video allowed for a real-time exchange of gazes both between audience and performer and also between the performer and him- or herself: the performer might watch their own image live on a video monitor. As such, in using video as part of performance-based practice, the live body and the ‘live’

---

<sup>42</sup> Joselit, 2003, p. 157.

image operate simultaneously but distinctly from one another in the system. I think the relationship between the live subject caught in such a system, the resultant ‘live’ image, the external viewer and the technology is potentially more complicated than a simple collapse of the distinction between subject (real body) and object (image body).

Although the theory of *mise en abyme* was developed contemporaneously to Krauss’ text in the 1970s, it has only more recently been linked to contemporary video practices. Joselit implicitly deploys the concept of *mise en abyme* in his discussion of the early video work *Wipe Cycle* (1969-84) (fig 2.9) by Frank Gillette, in which a grid of monitors displays both the live images of audience members, two video tapes and a live television programme. The installation was rigged in a highly complex way: in four cycles, images wandered from one monitor to another delayed by eight or sixteen seconds, while counter-clockwise a grey light impulse wiped out all of the images every two seconds.

Joselit argues that the viewer of this work is caught in a system of representation based on infinite regress, since the work is described as the ‘image overloading (something like a play within a play within a play) to escape the automatic “information” experience of commercial television...’<sup>43</sup> While the sense of an image overload alludes to the perceptual scrambling that occurs when looking at the *mise en abyme*, a work such as *Now* perhaps plays with the model more closely since it formally references the structure of infinite duplication whilst simultaneously problematising repetition and difference. Moving image technology appears to have here pried apart the body and the image and distributed them across a network of representation.

### ***Feedback***

Historically, this rhetoric of networks and systems was at the core of the wider cultural milieu into which video emerged. Joselit has noted that two key

---

<sup>43</sup> Frank Gillette quoted in Joselit, 2003, p. 154. The notion of infinite regress is, in fact, at the heart of much of Joselit’s work. See Joselit *Infinite Regress: Marcel Duchamp 1910-1941*, MIT press, Cambridge, Mass., 2001.

exhibitions held in NYC in 1970 – *Information and Software* – were contemporaneous to the development of emergent computer and video technologies and TV.<sup>44</sup> Hans Haacke’s interactive installation work *MoMA Poll* (1970) (fig 2.10) is in fact used by Joselit as the paradigmatic work in this context, not only to demonstrate the way in which art practices of the 1970s were trying to draw the viewer *in* to a quantifiable (and, he argues, potentially commodifiable) data stream, that is to say, making them *part of the system* and rejecting a contemplative model based on aesthetic distance, but also to highlight the failure of such art practices to grasp the implications for describing their work as ‘systems’. For Joselit, to describe a work like *MoMA Poll* as a ‘system’ was inadequate because the word suggested a closed circuit of integrated actions whereas, as we have already seen with video based practice, what was actually occurring was more like an ‘open-ended process’ that encompassed numerous subject positions.<sup>45</sup> As such, although he never explicitly states this, video might be read in Joselit’s terms as an open ended process rather than a closed system. For Joselit, video enables the self/image to proliferate, spiraling outwards from the subject through infinite repetition rather than a focusing-in on it.

Although Joselit does not specifically refer to information theory for his critique of Haacke’s misappropriation of the term ‘system’ from computer science (itself passed on from Jack Burnham), his reading of such works as open processes rather than closed systems suggests a nuanced understanding of system theories, which is often mistakenly characterized as simply a flow of information between agents within a closed structure. N. Katherine Hayles’ groundbreaking study of information theory in *How We Became Posthuman* (1999) seems particularly useful in developing these ideas, especially in the context of the role of the observer. Hayles’ key contribution in analyzing the historical emergence of information and cybernetic theory was to question the way in which the flow of information was perceived as somehow autonomous from the thing through which it flowed (a material substrate), from the instruments of interpretation, and subsequently thus also from meaning itself. Within the context of the Macy

---

<sup>44</sup> Joselit, 2003, pp. 129-159.

<sup>45</sup> *Ibid.*, p. 132.

Conferences (1946-1953), which aimed to look at the role of technology in society following the devastation of World War II, Claude Shannon and Norbert Wiener developed a theory of information, based on a principle of essentially having YES/NO choices out of a range of possible options. This model ultimately defined information as individual units that had the same value regardless of the context in which it was embedded. In the context of the questions raised at the Macy Conferences, this model was appropriate. However, ‘when taken out of context’, argues Hayles, ‘the definition allowed information to be conceptualized as if it were an entity that can flow unchanged between different material substrates, as when [theorists] have envisioned the information contained in a brain being downloaded into a computer.’<sup>46</sup> Such ideas are instantly familiar to us through numerous representations in popular culture, and Hayles’ important work was to turn these theories around so that they pointed back to the body, in this case the body of an observer.<sup>47</sup>

In this Hayles followed the work of Donald MacKay who tried to reintegrate information theory with meaning: structural information. Structural information contains semantic content as in the example of a piece of information like ‘it’s raining’. In this, Hayles suggests that not only does such a statement contain information about the world, it is also a representation of interactive phenomena that points back to the observer: the person who sees that it is raining. This person is essentially the ‘measuring instrument’ that contextualizes and gives meaning to the statement. Not only does such a theory integrate an observer into a system but actually extends this into a sort of open-ended process, by considering how the information and/or any changes in the semantic content might then be measured by other observers. In response to the question of how one might measure such changes, Hayles states:

An observer looks at the mind of the person who received the message, which is to say that changes are made in the observer’s

---

<sup>46</sup> Hayles, N Katherine *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics*, University of Chicago Press, Chicago and London, 1999, p. 54. For how such theories of information were developed, see section ‘The Meaning(lessness) of Information’ pp. 51-57.

<sup>47</sup> The most popular examples cited include William Gibson’s novel *Neuromancer* (1984) or Ridley Scott’s film *Blade Runner* (1982).

mind, which in turn can also be observed and measured by someone else. The progression tends towards the infinite regress characteristic of reflexivity. Arguing for a strong correlation between the nature of a representation and its effect, MacKay's model recognized the mutual constitution of form and content, message and receiver...subjectivity, far from being a morass to be avoided, is precisely what enables information and meaning to be connected.<sup>48</sup>

Hayles' important reconceptualisation of information as dependent upon a subject, and indeed an infinite regress of subjects, in order to give meaning to representation clearly echoes my own reading of *mise en abyme* theory as incorporating a viewing subject. This way of understanding processes and systems as fundamentally entangled with an observer has been increasingly working alongside more traditional notions within science and technology more generally. As such, as well as a shift in information theory, away from conceptualizing information as discrete, autonomous packets, there is also an increasing shift from Newtonian to Quantum mechanics, in which the interference of an observer with any given system might be taken into account.<sup>49</sup> In this, scientific observations result not necessarily from any

---

<sup>48</sup> Hayles, p. 56.

<sup>49</sup> For example, quantum mechanics has demonstrated, through the Double-Slit experiment, how the wave-like and particle-like properties of light and other quantum particles are inseparable and, furthermore, that the properties they exhibit fundamentally change under observation, incorporating an observer into a system. In this experiment a point light source, one photon wide, shines through a plate with two parallel slits onto a screen behind them. The beam essentially splits, with some photons passing through one slit and some through another. The two emergent beams, since they derived from the same source, are described as being 'coherent' in that they are in phase with one another. The wave nature of light causes the waves passing through the two slits to interfere, causing a pattern of bright and dark bands on the screen on which the beams are essentially observed. This result both confirms and contradicts the light-as-wave theory: if light did not behave like a wave then there would be no interference pattern, but if light were a wave then it would not arrive in discrete quantities or packets, and would be spread over more space the farther the screen was placed from the plate with the slits in it. Crucially, variations on this experiment have placed detectors in either or both of the slits to determine which slit any single given photon might pass through, but the use of a detector seems to result in the disappearance of the interference pattern (i.e. suggesting that light is not a wave). In order to observe the photon involves a physical interaction between photon and detector that fundamentally changes what is detected. For an overview of the mechanics of this phenomena see Greene, Brian *The Elegant Universe: Superstrings, Hidden Dimensions, and the Quest for the Ultimate Theory*, W. W. Norton, New York, 1999, pp.97–109. What is particularly interesting about the double slit experiment, in the context of video, is that the interference pattern produced by the parallel light beams is the same kind as a moiré

inherent property of the object or particle under observation, but from the practice of *observation itself*: the relational interpretation of quantum mechanics states that measuring quantum data disturbs that data.<sup>50</sup>

By deploying a sustained discussion of *mise en abyme* theory in relation to video practice, quantum and cybernetic theory, we can not only tease apart the problematic mirror analogy that exists across them, but also reignite a discussion of video in which the role of the observer is integral to the system. This is of particular importance in relation to the emergence of ‘home video’ (VHS) since, for the first time, moving image technology enabled a participatory mode of spectatorship.<sup>51</sup> This is achieved on two counts: first, VHS can be participatory in the sense of ‘playback’, in that the viewer has control over the play, pause, rewind and fast-forward functions, destabilizing the linear time of film<sup>52</sup>; second, in Joselit’s sense of ‘feedback’, the viewer can readily produce, re-produce and distribute images through public access TV and the copying and exchanging of tapes for viewing on a home VCR. With the double inflexion of both ‘meaningful response’ and ‘electronic noise’, Joselit argues that feedback produces a space of critical reflection for considering the blind spots and breakdowns of moving image technology, undermining the one-way flow of information that traditionally characterizes spectatorship. With feedback, you have a free-flowing, or bi-directional flow of information that has the potential to overcome psychic and social blockages. For Joselit, feedback

---

interference pattern, giving video the distinctive spread of waving lines: both are beams that radiate out and interfere with one another at beats. The convergence of information theory and quantum mechanics in the context of video is thus highly serendipitous in setting up a model of vision in which an embodied observer is not only an intrinsic part of the system but actually engages with the object of perception at a level which has physical consequences on both.

<sup>50</sup> Quantum mechanics thus requires a relational or recursive interpretation of data, perhaps much in the same way that video sets up recursive temporalities and relations. On the relational interpretation of quantum mechanics see Fisk, Thomas ‘Relational Interpretation of the Wave Function and a Possible Way Around Bell’s Theorem’ in *International Journal of Theoretical Physics*, Vol. 45, 2006 (pp. 1205-1219).

<sup>51</sup> I am here referring to VHS since it became the most commonly used format of electronic tape, although it should be noted that several formats initially emerged, including Betamax on which *Delicate Issue* was filmed. For a discussion of the way in which VHS became the market leading format see Cusumano, Michael A. ‘Strategic Maneuvering and Mass-Market Dynamics: the Triumph of VHS over Beta’ in *The Business History Review*, special issue *High-Technology Industries*, Vol. 66, No. 1, 1992 (pp. 51-94).

<sup>52</sup> For a discussion of this see Tashiro, Charles ‘Home Video and Film: the Case of *Who Framed Roger Rabbit*’ in *Journal of Film and Video*, Vol. 48, No. 1/2, Spring-Summer 1996 (pp. 58-66) especially p. 64.



was a meaningful form of communication between two (or more) subjects that was also a democratic gesture, rejecting the one-way flows of information in the mass media.<sup>53</sup> While Joselit has considered the notion of feedback in relation to artistic practice, this chapter is also concerned both with the way in which the concept has been deployed in wider visual cultures and how those cultures themselves influenced artistic practice. Specifically, by focusing merely on artistic practice, Joselit's important work was perhaps unable to take into account the way in which gender and sexuality has shaped and been shaped by the technology. As well as artistic practice, there is a whole culture of amateur production, including home videos of weddings, birthday parties, and video pornography, in which VHS was used to reintegrate previously invisible subjects into visual economies from within the domestic sphere.<sup>54</sup>

### *Video is Vengeance of the Vagina*

At the Western Front in Vancouver during the 1970s, a number of artists were pre-occupied with the emergence of new technologies such as video and satellite communications and the connected discourse of networks and systems, particularly in the context of how they transformed spatial and social organizations.<sup>55</sup> While not every artist there used technology directly, much of

---

<sup>53</sup> Joselit's notion of feedback was originally a reference to an eponymous section in *Radical Software* in which 'blurbs from various video groups and individuals were crudely pasted together on a skewed grid.' See Joselit, 2008, p. 222.

<sup>54</sup> Prior to the emergence of VHS there was a culture of amateur filmmaking and home movies shot on film. On this see Edmonds, Guy 'Amateur Widescreen; or, Some Forgotten Skirmishes in the Battle of the Gauges' in *Film History*, special issue *Nontheatrical Film*, Vol. 19, No. 4, 2007 (pp. 401-4130); Erens, Patricia 'The Galler Home Movies: a Case Study' in *Journal of Film and Video*, special issue *Home Movies and Amateur Filmmaking*, Vol. 38, No. 3/4, Summer-Fall 1986 (pp. 15-240); Camper, Fred 'Some Notes on the Home Movie' in *Journal of Film and Video*, special issue *Home Movies and Amateur Filmmaking*, Vol. 38, No. 3/4, Summer-Fall 1986 (pp. 9-14).

<sup>55</sup> The focus on Canada and its relationship to video is particularly pertinent since in the late 1960s and early 1970s there was an explosion of new media initiatives, and funding was made available for artists working in this field. For example: in 1968 the Canadian radio-television commission began instituting community access cable programming, signaling, for many artists, the possibility of a more inclusive distribution of information and cultural expression; 1961-71 The *Festival of Contemporary Arts* ran annually at UBC, with a special emphasis on new media practices; 1967 *Intermedia* was founded, a Vancouver new media artist collective; 1968-70 *Intermedia* collaborated with the *Vancouver Art Gallery* on a series of week long festivals, exploring the relationship between media and performance art; 1973 *Matrix*, an international video exchange conference/festival ran at the *Vancouver Art Gallery*, the condition of admission to the conference was a donation of a favourite video; *Matrix* then became the foundation for the *Video In* library, which ran video making workshops, mostly led by women; 1970 *Report of*

the work being produced was imbued with the (techno)logic of the network and a sense of inter-connectivity. As a whole, the practices coming out of the Western Front have been described as having a 'network consciousness'.<sup>56</sup> Kate Craig's videotape *Delicate Issue* (1979) (figs 2.11-2.13), which was produced there, perhaps started to open up some of these questions during the period when the technology began to enter the mainstream domestic sphere.<sup>57</sup> Using an extreme close-up lens, this video shows a roaming view of Craig's naked body, as shot by her husband, Hank Bull, while directed by Craig from a monitor. The title is an allusion to the fine papery quality of the skin shot in close-up: *delica-tissue*. Both *intimate* in its depiction of the female body and *domestic* in its use from within the marital household, *Delicate Issue* questions the ways in which technology produces and distributes the gendered body across highly specific social and political spaces. Such an intimate depiction is both physically and conceptually possible only in the light of home video's ties to the domestic sphere of the amateur. Within the space of the amateur new practices arose that both shaped and were shaped by video technology. The amateur video can be seen as domestic on two counts: the first being that it is produced and distributed from within non-professional sites such as the home, historically tied almost exclusively to the feminine; and the second being that the structure of the system itself alludes to domesticity through the production of an apparently enclosed space like the mirror box. By characterizing the sphere of amateur production as domestic rather than professional in this way, we might consider *Delicate Issue* as beginning to unpick the ties not only between social space and gender, but also gender and technology.

---

*the Royal Commission on the Status of Women in Canada* published, included guidelines for pay equity, day care, abortion rights and equal opportunity; 1973 the *Status of Women Action Coordinating Council of British Columbia* sponsored the *Women Alive Group* in the production of a TV series broadcast on Cable Ten; 1974 *Women in Focus* was founded, a production centre that created weekly programmes on feminist issues at Cable Ten; 1980 *Amelia Productions* was founded to produce videos about women in the workplace.

<sup>56</sup> Arnold, Grant 'Kate Craig: Skin' in *Kate Craig: Skin*, Ex. Cat., Vancouver Art Gallery, 1998 (pp. 1-16) pp. 2-3.

<sup>57</sup> In 1980 1% of U.S. households had VCRs, by the end of the decade 70% did. This was a rate of introduction that exceeds any other consumer communication appliance (including phones, record player and TV). Notably the price also changed from \$1000 to \$200. Many scholars suggest that most early purchasers of VCRs were significantly motivated to purchase the device to see porn at home. For example see Kleinhans, Chuck 'The Change from Film to Video Pornography: Implications for Analysis' in *Pornography*, Peter Lehman ed., (pp. 154-167) p. 157.

Craig's work seems to sit apart from the more prominent modes of video practice that have already been well explored in the literature: the work of Lynda Benglis, Vito Acconci, Joan Jonas, Dan Graham, and Martha Rosler, who concerned themselves with the problem of 'live' representation and the mirror analogy, and the troublesome political relationship between video and TV; or the work of Woody and Steina Vasulka, Nam June Paik and Peter Donebauer who investigated the technical limits of the medium, making abstract video art from feedback signals between camera and monitor and playing with image synthesizers. By contrast, *Delicate Issue* does not appear to formally reference such established video practices, and instead works with a visual register that has more in common with the emergent vocabularies of home movies, performance and body art. As such, *Delicate Issue* might be well situated amongst other practices that used video technology from within the home (the site of labour and production), in order to foreground women's experience in this new emerging visual economy. Such videos emerged alongside feminist consciousness raising groups in the 1970s, and continued into the 1980s. For example, Carole Itter's *Happy Birthday* (1972), which depicts a home movie type tape of her pregnant body; Catherine Elwes' *There is a Myth* (1984) (fig 2.14), which shows images of her baby suckling and biting at her breast; Jayne Parker's *Almost Out* (1985) (fig 2.15) in which the artist records her conversations with her mother; Michelle Citron's *Daughter Rite* (1978) (fig 2.16); and Karen Ingham's *The Cutting Edge* (1987), showing the artist engaged in various processes of depilation.

What we see in such a body of work is a play with the emergent language of home video in artistic practice. By home video I am referring to tapes made by family members of one another, examples of which might commonly include the special family event (such as a child's birthday or wedding), the portrait of a family member of the group (an auntie on her visit, or a child playing with their pet) and the travel movie (with or without family members).<sup>58</sup> The home movie would also undoubtedly encompass the home sex tape, made by people in some sort of non-commercial relationship, possibly for their own personal use,

---

<sup>58</sup> These are some of the possible themes for structuring a national home movie archive, as proposed by Camper, pp. 9-14.

although this 'genre' is notably absent from much of the literature. In their focus on familial and/or sexual relationships, home videos are notably a domestic practice. Both the recording and viewing capabilities of tape offer a domestic convenience – camcorders, video rental – that perpetuates its ties to the register of the quotidian and the familial.<sup>59</sup>

Video, and the forms of representation it gives rise to, are thus highly gendered. Almost all studies of home video from around this time note that it is the fathers who do the filming.<sup>60</sup> In return, the women in home movies seem to strike the poses of classic Hollywood, appearing passive and seductive, so that they are actually transformed into the ideal models of femininity through the technological act of looking.<sup>61</sup> Michelle Citron's *Daughter Rite* and Marjorie Keller's *Daughters of Chaos* are two works that look at the way in which home video is highly gendered, by using clips of home movies of themselves as children, shot by their fathers, in order to highlight the way in which the technologies that capture and record family events are themselves functions of a patriarchal logic of control and order in which family members play their designated roles.<sup>62</sup>

Craig's tape references this type of practice, since it is her husband holding the camera, but, like Citron or Keller, she also uses the technology to undo itself. While Citron and Keller both used editing to re-frame the images as a question concerning the relationship between father and daughter as staged through

---

<sup>59</sup> This is in contrast to film which, as Tashiro notes, is shaped both to and by the social, rather than the domestic. This is especially the case when film is viewed in a cinema. See Tashiro, pp. 58-66.

<sup>60</sup> See Camper; Erens; Turim, Maureen 'Childhood Memories and Household Events in the Feminist Avant-Garde' in *Journal of Film and Video*, special issue *Home Movies and Amateur Filmmaking*, Vol. 38, No. 3/4, Summer-Fall 1986 (pp. 86-92); Nicholson, Heather Norris 'Seeing How It Was?: Childhood Geographies and Memories in Home Movies' in *Area*, Vol. 33, No. 2, Jun. 2001 (pp. 128-140).

<sup>61</sup> For a discussion of this in relation to a specific set of family home movies see Erens, pp. 22-23.

<sup>62</sup> For a discussion of the work by Citron and the presence of patriarchy as exerted through the gaze of the home camcorder see Williams, Linda and Rich, B. Ruby 'The Right of Re-Vision: Michelle Citron's *Daughter Rite*' in *Film Quarterly*, Vol. 35, No. 1, Autumn 1981 (pp. 17-22). For a discussion of works by female artists that have been influenced by or include home movie clips see also Turim. Male artists who either used home movie clips (although not necessarily video) or were influenced by the aesthetic language of them include Stan Brakhage and Jonas Mekas.

moving image technology, Craig watches herself on a video monitor so as to direct Bull: watching herself in the process of being watched. This establishes an interesting link with Schneemann's *Fuses*, and other practices from around the same time such as Robert Smithson's *Swamp* from 1971, in which he directed a 'blind' Nancy Holt around the swamps of the Passaic N.J., in terms of the way in which the male partners are credited in title sequences and the different roles ascribed to each (camera-man, actor, director). In this, Craig also uses the live playback capabilities of the handheld camera, as discussed previously in relation to Benglis' *Now*. This was also a crucial aspect of the family home video, as one could watch back what had just been recorded in order to continually re-stage one's appearance. Unlike film, in which the viewing of the home movie might be more of an event, taking place inside a darkened room, the home video could be viewed in a lit room and, crucially, is seen 'as part of, rather than separate from, its surround.'<sup>63</sup>

The home sex tape is perhaps a particularly useful example to think about in this respect. Not only does it record an event, which can be viewed multiple times at a later date, the act of filming itself is bound up in the construction of an erotic scenario as people simultaneously watch themselves on tape whilst having sex. Several scholars have noted that with the emergence of video, the home movie itself therefore becomes a part of, and occasionally even displaces, the event being recorded. As Patricia Erens has argued, while everything else in the home movie is ostensibly 'real' (there are no props, make-up or actors) there is in fact usually a great deal of performing for the camera so that, she writes, 'an awareness of the filming process is ever present.'<sup>64</sup> Certainly, as we will see, it is precisely this awareness of the filming process itself that filters through Craig's tape. This 'liveness' is also what differentiates it from Schneemann's work, in which the instant images of the artist and Tenney having sex are removed from the scene for processing, developing and editing at a later date: the recording device is present, but the representation is not.

---

<sup>63</sup> Camper, p. 13.

<sup>64</sup> Erens, p. 20. Camper also writes, 'the movie itself, rather than the event depicted, is the real event.' Camper, p. 12.

Although Craig was a professional artist, co-founding The Western Front in Vancouver in 1973, *Delicate Issue* seems to use the visual languages of amateur production in a way that recalls the historical relationship between marginalized female practices of image making and video. As Christine Tamblyn has eloquently written,

Video seems ideally suited to serve as a vehicle for the heterogeneous discursive practices of contemporary women artists. Its capacity for accommodating hybrid expressive modes facilitates the feminist project of constructing alternatives to the dominant dichotomous patriarchal world-view. Modernist-inspired attempts to identify intrinsic properties of the video medium failed not only because of the medium's fluidity but also because technological advances are continuously altering its physical apparatus. By taking advantage of video's potential to function as a palimpsest for the inscription of multiple messages, feminist video artists have forged a new hybrid of the genres of social documentary and portraiture.<sup>65</sup>

Arguably more than any other moving image technology, video has historically been tied to feminist art practice on several counts: as a new medium video was seen to be unburdened with a critical history and pre-defined discourse<sup>66</sup>; because of its unusually close relationship to TV, it allowed artists to draw on the resonances of a technology that was premised upon the broadcast of *public* information into the *private* sphere of the home, and the role of that technology in the construction of the subject<sup>67</sup>; finally, it was cheap and easy to use,

---

<sup>65</sup> Tamblyn, Christine 'Significant Others: Social Documentary as Personal Portraiture in Women's Video of the 1980s' in *Illuminating Video: An Essential Guide to Video Art*, Hall, D. & Fifer, S. J. eds., Aperture, San Francisco, 1992 (pp. 405-417) p.417. The participatory capabilities of video have been used as part of a feminist project of looking in a range of disciplines, for example see Kindon, Sara 'Participatory Video in Geographic Research: a Feminist Practice of Looking?' in *Area*, Vol. 35, No. 2, 2003 (pp. 142-153).

<sup>66</sup> For a discussion of this see David A. Ross quoted in Meigh-Andrews, p. 8. See also Roy, Marina 'Corporeal Returns: Feminism and Phenomenology in Vancouver Video and Performance 1968-83' in *Canadian Art*, Summer 2001 (pp. 58-65) p. 61.

<sup>67</sup> See Tamblyn, p. 406, 417. See also Martha Gever quoted in Meigh-Andrews, p. 241.

precisely what initially drew the artists of the Western Front to it.<sup>68</sup> Certainly, Craig's tape seems to use the low-tech production values associated with amateur works, such as long unedited takes, minimal camera angles or movements, and a reliance on sync sound and autofocus, that Tamblyn has suggested characterized the feminist video art movement.<sup>69</sup> Indeed, the apparent lack of technical dexterity required to complete *Delicate Issue* was commented on in a review of her 1998 retrospective *Skin* at Vancouver Art Gallery.<sup>70</sup> In that it exhibits technically low production values, the tape again aligns itself with the home video, in which one of the distinguishing features most commonly remarked upon in the literature is the inclusion of mistakes.<sup>71</sup> In the tape, the white balance has not been set, causing a greenish tinge to permeate much of the film as the camera attempts to adjust to the tungsten of light bulbs (the tape having been made indoors under artificial light), images move in and out of focus giving the screen a milky opaque appearance, and the camerawork is frequently jerky, rattling the images around in the frame.

Of course, to suggest that feminist art practice relied on low-tech values clearly runs the risk of reinscribing long standing beliefs about women's ability to engage with technology in a sophisticated manner. While this is an argument that is no doubt effectively countered by a work of visual and technical complexity such as Benglis' *Now*, or indeed almost any of Steina Vasulka's videos, but perhaps especially *Progeny* (1981), the use of the technology throughout the 1970s did lend itself to practices that were fundamentally

---

<sup>68</sup> Arnold, p. 3. For a contemporary document listing the cost of VHS tape and a VCR machine see Pepper, Larry 'Mediatmosphere: Home Videocassette Recorders: the Ever-Changing State of the Art' in *American Libraries*, Vol. 10, No. 10, Nov. 1979 (pp. 622-624). Note also that low costs were considered to be at the heart of video's appeal for women artists. In her discussion of why women artists were so heavily restricted by issues such as cost, Martha Gever has written, 'The collective economic status of women in the USA has barely improved in this period (70s-80s) in spite of increased participation by women in the waged and salaried work force.' Gever, Martha 'The Feminism Factor: Video and its Relation to Feminism' in Hall, D. & Fifer, S. J. eds., (pp. 226-241).

<sup>69</sup> Tamblyn, p. 406.

<sup>70</sup> Robin Laurence has written, 'Craig is not hugely interesting as a video artist. She has not been particularly innovative in her use of the medium, nor particularly skilled technically. Until she finally came into her own with *Mary Lou* in 1989...Craig's early videos reveal a rather shaky grasp of the possibilities of the then-young medium, and a crude understanding of its challenge to and engagement with visual and narrative traditions.' Laurence, Robin 'Skin deep video' in *Border Crossings*, May 1998 (pp. 57-59) p. 58.

<sup>71</sup> Erens, p. 17; Camper, p. 11.

deskilled. This was a widely accepted phenomenon, as a journalist reported in 1985, ‘the first generation to grow up watching television could make television themselves. You didn’t need a studio any longer, just a Portapak and something to aim it at.’<sup>72</sup> Therefore, to expand on Tamblyn’s work, I would specify that the turn in feminist practice towards using moving image technologies that required little technical skill was perhaps borne more from economic and social considerations rather than biological essentialist ones, so as not to run the risk of further denying women access to the realm of material production.

What is weaving through all of this is a connection between video and the domestic sphere, both in the way in which video produces enclosed systems of psychic reflection, as I have discussed in relation to Lynda Benglis’ work, as well as shifting the modes of production and distribution into the home. All that was needed was a camera, a monitor and two VCRs and you essentially had a home editing suite. Indeed, much feminist performance video was produced in an intimate setting such as the home, as in the work of Kate Craig or Lynda Benglis, or in the artist’s studio, as in the work of Joan Jonas. Again, while reiterating the links between video and the home runs the risk of further tying women to domestic forms of labour, the portability of the camera certainly allowed individuals to become image-makers who otherwise would not have had access to the technology and skills to do so, and we must acknowledge the historical importance of this innovation. Shigeo Kubota’s *Video Poem* (1968-76) is an interesting document relating to the ways in which issues of cost and portability were central to feminist practices of image making during that period:

I travel alone with my Portapak on my back, as Vietnamese  
women do with their babies  
I like video because it is heavy.  
Portapak and I traveled over Europe, Navajo land, and Japan  
without male accompany [sic]  
Portapak tears down my shoulder, backbone and waist.

---

<sup>72</sup> Johnson, Eve ‘Artvid’, *The Sun*, March 9, 1985.



I feel like a soviet woman, working on the Siberian railway. I  
made a videotape called 'Europe on half an inch a day' instead  
of a popular travel book 'Europe on five dollars a day' ...  
Behind the video life  
Man thinks 'I think therefore I am'  
I, a woman, feel 'I bleed therefore I am'  
Recently I bled in half-inch...3M or SONY...ten thousand feet  
every month. Man shoots me every night...I can't resist.  
I shoot him back at broad daylight with vidicon or tivicon  
flaming in overexposure.  
Video is Vengeance of the Vagina  
Video is Victory of the Vagina  
Video is Venereal disease of intellectuals  
Video is Vacant apartment  
Viva Video...<sup>73</sup>

Like Kubota's poem, *Delicate Issue* seems to explore some of the relationships between video, the gendering of vision and/or the spaces of image production, and the ways in which technology has been implicated in that gendering. Craig's videotape used the vocabulary of amateur production to reference the history of women's image-making practices and perform their relationship to emergent technologies. *Delicate Issue* foregrounds the role of video technology in the construction of gendered subjects by presenting the body at the limits of representation and at the limits of its technical capacity.

The tape shows an extremely detailed view of the body at an almost microscopic level, described by one reviewer as an 'excruciatingly close up examination of Craig's entire naked body – all the pores, blemishes and details of her skin are magnified.'<sup>74</sup> The framing is so tight that the body never resolves itself into a coherent self/image but rather is presented as an undulating surface of skin and hairs punctuated with isolated, but recognizable, features: an eye, a

---

<sup>73</sup> Shigeko Kubota quoted in Schneider, I. & Corot, B. eds. Of note is that Kubota was married to Nam June Paik, famously held up as a pioneer of video art practice, and discussed widely in literature that makes negligible reference to the gendering of the technology.

<sup>74</sup> Thom, Ian 'A Study of Surface' in *Blackflash*, Summer 1998, Vol. 16, No. 1 (pp. 22-25).

nipple, the clitoris. All of which seem notably wet and fleshy in the midst of the vast expanses of skin. This view, clearly, is too close for comfort.<sup>75</sup> Craig herself has said ‘I’m not surprised that people are compelled by it, what surprises me is that people are so afraid of it’, both in terms of the radical presentation of the naked body and also in the use of a medium like video as an artistic practice.<sup>76</sup>

In this close up view, there is a sense in which the camera defeats its own logic: it produces an image that wants to show so much, and in such great detail, that it only ever obscures vision by becoming exponentially myopic, providing an unrecognizable account of the body and its experiences. The tape dramatizes the way in which the video camera seems to come up against the skin like a barrier, and yet is frustrated in its quest for exposure. As the voiceover to the images asks:

How close can the camera be?  
How close do I want to be?  
How close do you want to be?  
How real do you want me to be?  
How much do you want?  
How much do I want from you?<sup>77</sup>

Many texts note this paradoxical phenomenon in Craig’s work, asking whether intimacy might actually ‘blur or obliterate the object of the gaze’<sup>78</sup>, and questioning the appropriate distance for looking in the production of desire. While Craig herself has suggested that perhaps the work is less about the mechanics of voyeurism and the trespass of a desiring gaze, and more about the dynamics occurring between body, camera, monitor and viewer, there is a very real sense in which the technology can only be foregrounded precisely because

---

<sup>75</sup> Arnold, p. 11.

<sup>76</sup> Craig quoted in Laurence ‘Getting under Kate Craig’s skin’ in *Front*, special issue *Kate Craig Memorial Issue*, Vol. XIII, No. 5, Nov./Dec. 2002.

<sup>77</sup> Kate Craig (1979, Betacam video, 12mins, colour, sound).

<sup>78</sup> Gingras, Nicole *Shifts and Transfers: on Some Tendencies in Canadian Video*, ex. pamphlet, Galerie d’Art d’Ottawa, 2003. See also Arnold, p. 11.

of the limits that it puts on the gaze.<sup>79</sup> As curator Nicole Gingras has concisely noted, echoing my earlier discussion of Schneemann's *Fuses*, 'skin imposes limits on the gaze, just as it invites the gaze to brush against it; it serves as a screen and it is also a screen. It therefore sets a limit.'<sup>80</sup> What is different in Craig's work, however, is that whereas the film stock in *Fuses* turned itself into a highly tactile point of encounter, ultimately merging with the skins of Schneemann and Tenney and the fur of Kitch, the screen in *Delicate Issue* does not appear to facilitate a haptic mode of encounter. The screen certainly references the skin of Craig's body, but only in so far as skin might act a limit or a barrier. Neither the screen/skin nor the image/skin are tactile in the way developed in *Fuses*, and instead reflect the gaze of the observer rather than drawing them into an erotic complicity. This is largely because VHS simply did not allow for the manipulation of the image or the surface of the work that film did. Essentially all that was available was cutting, splicing, looping and some visual effects such as solarisation. As such, the screen/skin in *Delicate Issue* functions much like the static interference that spreads across the screen in Benglis' *Now*: both works consciously and provocatively play on the tension between drawing the observer in to a system of images and positioning them outside or separating them from it. The question of *presence* is always at stake.

What is perhaps interesting about configuring the screen as a limit point whose surface runs both physically and conceptually parallel with the limit point of skin, is the way in which, as a barrier, these screens paradoxically then drive a sort of desiring gaze. They operate in a frustrated visual economy, as there is a palpable sense in which the camera wants to show more but is unable to do so. As Lynda Nead observed in her important 1992 study of the female nude in the context of obscenity and sexuality:

In many ways, pornography can be seen to reenact continually the boundary dividing visibility and invisibility. In each repeated attempt to 'show' the truth of female sexuality, pornography inevitably reinstates the impossibility of this project. In its

---

<sup>79</sup> Laurence, 2002.

<sup>80</sup> Gingras 'The Movement of Things' in *Kate Craig: Skin*, Ex. Cat. (pp. 17-29).

endless quest for clarity, objectivity and disclosure, it endlessly reinvokes that alternative, anxious sense of the female body as dark, mysterious and formless. As it seeks to render the female body knowable and possessable, so it calls up the frightening possibility that it is beyond knowledge or absolute possession.<sup>81</sup>

At one point, in a remarkable passage of *Delicate Issue*, the video camera actually looks like it has penetrated Craig's vagina, as we see her cervix on the screen. The images are clearly internal: pink, wet, soft, open, almost surfaceless in contrast to the never-ending surface of the skin. The imagined proximity of the genitals to a video camera in this passage seems aggressive, underwriting the suggestion that the politics of looking are often violent and traumatic. The camera has penetrated the body in its quest for the ultimate 'close up'.

In the following chapter, I look at Mona Hatoum's installation *Corps Étranger* (1994), a work that looks like a striking return to Craig's questioning of technologies of vision, but in the context of medical imaging. This later work almost seems to yield to that logic of wanting to see ever deeper below the surfaces of the body, as Hatoum sends an endoscope through the interior gastrointestinal tracts and reproductive passages of her body. These two works were exhibited next to each other at the exhibition *Close Up: Proximity and Defamiliarisation in Art, Film and Photography*, which ran at the Fruitmarket Gallery, Edinburgh between October 2008 and January 2009. Notably, this exhibition also featured Carolee Schneemann's photographic work *Portrait Partials* (1970) in which isolated features of the body – eyes, nose, nipple, anus – are arranged on a grid.<sup>82</sup> What is useful in staging a brief encounter between these works is that it exposes the way in which the development of technological vision has historically been driven by a desire to probe below surfaces, to dissect and view everything in microscopic detail. In this, *Delicate Issue* has much in common, not only with *Corps Étranger*, but also other video

---

<sup>81</sup> Nead, Lynda *The Female Nude: Art, Obscenity and Sexuality*, Routledge London and New York, 1992 p. 99.

<sup>82</sup> Other connections between these two artists include a period in 1988 when Craig and Hatoum work together, and Craig's retrospective *Skin* exhibition at the Vancouver Art Gallery in 1998 exhibited the works *So Much I Want to Say* (1983) and *Measures of Distance* (1987) by Hatoum.

works such as Martha Rosler's *Vital Statistics of a Citizen, Simply Obtained* (1977) (fig 2.17), Lisa Steele's *Birthday Suit: Scars and Defects* (1974) (fig 2.18), Elizabeth Chitty's *Telling Tales* (1979) and Marianne Heske's *Phrenological Self-Portrait* (1976) (fig 2.19) in which the female body is staged simultaneously as an object of scrutiny and an object of desire.

This type of 'close-up' looking circulates in practices that are medical, artistic and also pornographic. Although I will return to the mechanics of the inter-relationships between these three fields more fully in the following chapter, it is worth bringing in this thread now in order to situate my discussion of technology and explicit representation within a conceptual framework of vision that has many offshoots. Linda Williams' foundational study of pornography, *Hard Core* (1991), forcefully laid claim to this intertwining of different technologies of vision in her model of the 'optimisation of visibility'. This distinguishes hard- and softcore pornography in that hardcore, for Williams, uses a variety of strategies including pose, camera position and lighting to ensure maximum visibility of the female genitals, in order to account for and make up for the anatomical invisibility of the female orgasm.<sup>83</sup> As such, pornography thus references numerous visual economies, most notably medical, which seek to chart the terrain of the mysterious female body. As Williams has written, linking pornography to medical imaging technologies, 'what is at issue [with pornography] is not the appearance of the first hard-core films, but instead an earlier moment when scientists first subjected the body's own movement to the mechanical eye of a camera that saw better than the human eye.'<sup>84</sup>

The question of how technology produces desire is, of course, central to *Delicate Issue*. Craig's use of video to generate explicit imagery is crucial in that it references a variety of material practices, notably gynaecological imagery, pornography and home movies (and pornographic home movies), which have themselves been radically altered by the emergence of video technology. In his article 'Pornography, videotape and the internet' (2000), Jonathan Coopersmith

---

<sup>83</sup> Nead, p. 98.

<sup>84</sup> Williams, Linda *Hard Core: Power, Pleasure and the "Frenzy of the Visible"*, Pandora, London, 1991, p. 37.

argues that not only did the emergence of home video affect pornography in terms of its content, modes of production and distribution but that, in a cycle of mutual co-constitution, pornography itself actually aided the widespread diffusion and subsequent development of the technology. As people were prepared to invest in the equipment at an initial stage of its development, when prices were still high, predominantly for the purpose of producing and watching pornography from within the home, more funds were thus made available for research and development, enabling prices to come down and make the technology more affordable to all.<sup>85</sup> The evidence that Coopersmith gives for the mutual expansion of porn and video is, paradoxically, the relative shrinking of pornography's market share of VHS sales. In the late 1970s porn tapes represented over half of all VHS sales but by the mid 1980s it had fallen to between 10-25%, and 13% in 1995. 'This was not', argues Coopersmith, 'because porn demand had dropped but because the VHS market had grown.'<sup>86</sup> The large number of porn sales made during its early history drove the expansion of the VHS market.

There were practical reasons which aided this mutual expansion: VCRs encouraged the growth in porn audiences because it increased privacy in both production and consumption; people could make their own porn (either for themselves or for distribution) as it didn't require external developers for the film, eliminating the distinction between producer and consumer; videotape was also faster and easier to edit and reproduce; finally, as we have already seen, it was cheap and easy to use.<sup>87</sup> Crucially, as with feminist art practice, the new parameters of cost and skill in image making allowed an amateur market to flourish in which, by 1991, DIY or amateur porn represented 30% of the entire industry. By looking to the technical histories with which early video is

---

<sup>85</sup> Coopersmith, Jonathan 'Pornography, Videotape and the Internet' in *IEEE Technology and Society Magazine*, Spring 2000 (pp. 27-34) p. 28.

<sup>86</sup> *Ibid.*, p. 29.

<sup>87</sup> In the 1990s a budgeting rule of thumb assumed two video features could be made for about \$15,000 and that involved a two-day shoot. (Kleinhans, p. 156). The production costs associated with amateur video were also considerably less, producing a price difference that was passed onto the consumer. In the early 1990s, the average price of an amateur pornographic videotape was around \$15 compared to a \$25 film. (Coopersmith p. 30). Because video was cheap, it was also frequently seen as inferior, resulting in pornographic movies tending to specify if they had been shot 'on film' so as to lend credibility to the production, such as the work of Andrew Blake. See also Kleinhans, p. 155.

associated we see an interesting overlap in what might initially appear as conflicting positions: the amateur pornographer and the feminist artist, both turning to the medium because it offered some control over the means of production in which one could work directly with their own self/image so that actors became directors.

One of the reasons why video pornography was so popular was that, as with artistic practice, the new medium allowed for new forms of representation. The concept of the amateur – someone who does it for ‘love’ – brought with it allusions to willing self-participation, self-production by participants free from pimps and studios, and the ‘accessible’ girl next door paradigm. These, of course, all represent new, often veiled, forms of oppression in visual culture and, since the arena of production and distribution moved out of the mainstream, video also enabled illegal pornographic practices (such as bestiality and paedophilia). Niche tastes were well suited to the emergent field of amateur pornography.<sup>88</sup> Video thus simultaneously generated new forms of representation and new forms of oppression. Craig’s tape, of course, is set in precisely this kind of domestic space of production, and it is a man turning the camera to the naked body of a woman, but Craig directs the video.

Chuck Kleinhans’ work on the shift from film to video pornography is useful in describing the ways in which the modes of production and reception are bound up with the capabilities of the medium itself.<sup>89</sup> The lower budgets and thus shorter shoot times associated with video resulted in fewer rehearsals for the

---

<sup>88</sup> Subsequently, by 1987, there were only about 250 cinemas showing film pornography. In 1987 the x-rated rental market was at 100,000,000 (this was the same number of rentals as admissions to porn cinemas four years earlier). See Kleinhans p. 157.

<sup>89</sup> Previous work has noted the way in which different media give rise to different forms of pornographic representation. A noted example is Nead’s discussion of photography and pornography. She writes, ‘If pornography is popularly held to represent sex devoid of human feeling, then equally it is seen to be produced by means that are mechanical and dehumanized. We might expect, therefore, that the difficult or borderline cases will be those that blur the distinguishing characteristics of art and pornography, those that confuse the media, locations and audiences associated with these cultural categories. A memorandum from 1970 to the Obscene Publications Squad lists a number of instances where there might be some difficulty in categorizing material, including “displays in recognized galleries and books expensively published”... In its legal and criminal classification, pornography tends to be defined in terms of being mass-produced, cheap and new. This understanding could only be formulated against a conception of art as unique, valuable (priceless) and marked with the aura of age.’ (Nead, pp. 94-95).

actors and shorter scripts to memorise. That the camera could be hand-held and record sync sound also led to the advent of gonzo porn, presented in documentary style, in which a male star/director tapes episodes with amateur female talent.<sup>90</sup> The centre of the pornographic industry moved from NYC to LA, and in particular the San Fernando Valley, which was an area where pornography could not legally be shot out of doors, leading to an increase in the use of interior locations, underwriting the already established links between video, pornography and the domestic sphere.<sup>91</sup>

While Kleinhans has noted that such technical, legal or financial constraints made the narrative aesthetic of the porn film move ‘backwards’ towards early stag films, premised on fractured episodic series rather than feature-length narrative, he does not consider the ways in which the capabilities of the technology itself impacted on the production of sexual tastes. For example, the increased popularity of amateur films, originally a result of financial considerations, can arguably be seen to have actively produced the sexual tastes of a generation brought up on this style of pornography. Similarly, he has argued that the rise in pornographic home video was concurrent with ‘a new wave in sexual image censorship, changes in sexual practices and ideologies due to the AIDS crisis and increased public visibility of previously stigmatized sexuality such as BDSM.’<sup>92</sup> However, he considers them to be mutually *occurring* events rather than perhaps mutually *constitutive*. An examination of the forms of explicit representation at this time is absolutely fundamental, however, since, with the shift in the 1970s in films being regulated by a Production Code to a ratings system, there was a marked increase in the number of mainstream films being produced containing images of sexual violence.<sup>93</sup>

---

<sup>90</sup> Producer stars such as Ed Powers, John ‘Buttman’ Stagliano and Ben Dover have recognizable serial product lines in this field.

<sup>91</sup> The pornographic industry moved to LA following the Traci Lords affair, in which a porn actress, Lords, was exposed as being underage, causing thousands of tapes to be recalled, re-shot, or destroyed on the grounds of trafficking in child pornography.

<sup>92</sup> Kleinhans, p. 154.

<sup>93</sup> See Projansky, Sarah ‘The Elusive/Ubiquitous Representation of Rape: a Historical Survey of Rape in U.S. Film, 1903-1972’ in *Cinema Journal*, Vol. 41, No. 1, Autumn, 2001 (pp. 63-90).



What is surprising, therefore, is the lack of critical response from artists within this context. There is a strange silence concerning the mutual histories of home VHS and amateur pornography in artistic practice from this time. While artists, such as Joan Jonas, did play with gender stereotyping in highly nuanced accounts of the construction of the female body using different representational technologies, very few question the role of the technology in the production of a *sexualized* subjectivity. What is important in Craig's work is that *Delicate Issue* references this logic of technological vision, using the camera to produce an analytic study of her body, while simultaneously overturning that logic by obscuring vision, and thus challenging an identificatory or desiring gaze. It would perhaps be counterintuitive to situate Craig's work within a reading of pornography, a genre whose dominant critical reception has focused on the problems of the representation of women in perpetuating uneven gender power relations.<sup>94</sup> Indeed, 'sexual representation' is not necessarily synonymous with 'pornography'. However, Craig uses sexual representation not to produce a pornographic tape, nor even a particularly erotic one, but she does use the language of pornographic vision – the gaze that wants to show as much as possible – and the video technology that has been complicit in producing and perpetuating this language in the mainstream, in her challenge to the practices of looking at women.

In *Delicate Issue*, as we have seen, representation actually seems to stop itself short, as the practice of showing the body as closely as possible simply obscures it. This challenge to vision is perhaps most explicitly mounted in the voiceover, which poses questions to the viewer about the construction of ideal modes of looking. But, as Grant Arnold has noted, 'the camera goes on looking without regard to the viewer's response', thus shutting down any dialogue between image and observer, and establishing 'an uneasy oscillation between a sense of control and powerlessness in the relationship between image, desire and technology.'<sup>95</sup> Both the voiceover and the image seem to address the viewer, but there is a lapse both between them and also between the image and the observer. The voice does not listen and, with the image, perspective is rejected in favour

---

<sup>94</sup> On this, see especially the work of Andrea Dworkin and Catherine MacKinnon.

<sup>95</sup> Arnold, p. 11.

of an extreme accumulation of detail that fragments and dismantles the subject. In some ways, the voiceover is like a framing, or rather a re-framing of the image, inserting it into a context that makes the act of looking political, analytical and critical. As a frame, the voiceover perhaps functions much like a *passé partout*, or *matte*, which frames an image within a frame. This device was of interest to Craig, as she uses it in her later work *Mary Lou* (1989), and is also particularly important in the context of video art since it resonates with the notion of *mise en abyme*. *Delicate Issue* knowingly displaces vision by simultaneously engaging with and then rejecting the observer.

The tape is therefore an interesting articulation of the way in which technology is complicit in producing certain modes of looking in which desire and sexuality is foregrounded, but also the way in which technology itself might mount a challenge to problematic tropes of representation, by offering alternative forms, forcing the observer into committing to a political act of looking and troubling the identification of the body of the observer with the image through a mediated type of looking. Rather than reinstating the link between the close up and sexualized imagery, therefore, *Delicate Issue* seems to use the rhetoric of the close up in order to actually de-eroticize the image. Arnold's comment that the work is simply 'too close for comfort' is absolutely at the root of this de-eroticization.<sup>96</sup> Likewise, a contemporary reviewer seems to find repulsion and claustrophobia in the work:

*Delicate Issue's* close reading of Craig's body seems to leave a trail of scopophilia behind it, like a snail's glistening track of slime. Craig is present through her skin, moles, pores, nipples, eyelids, underarm hair, fingertips, pubic hair, labia, clitoris and vagina, shot in extreme and often distorting close up... Bull is present through the camera lens – a relentless eyeball – and his heavy breathing on the soundtrack. The laboured breathing does not sound like sexual arousal, it sounds like much-magnified

---

<sup>96</sup> Ibid., p. 11.

inhalations and exhalations of someone on a life support machine.<sup>97</sup>

Although the issue of gender and sexuality has been almost entirely neglected in the literature on video, the medium clearly offered a new vocabulary of representation. Indeed, in a rare discussion of how video technology itself is tied to feminist practices, and specifically in relation to *Delicate Issue*, the artist Nell Tenhaaf, whom I discuss in the last chapter of this thesis, argues that video actually opens up a space for the feminine in electronic media practices, contesting female invisibility in the discourses of technology.

Using Luce Irigaray's theory of the speculum alongside particle physics, Tenhaaf demonstrates the way in which video technology might provide a new tool for looking at women.<sup>98</sup> In a CRT monitor (now obsolete as a result of the emergence of LCD screens) electron beams hit a concave surface coated with phosphor. A description of the technological processes sound like an insemination metaphor: the negatively charged beam starts in an electron gun at the back of the tube and is accelerated down a long neck toward the concave tube face by a large positive voltage. The phosphor glows and produces light: the images that we see on the screen. As we have already discussed in relation to both *mise en abyme* and cybernetic theories of feedback incorporating an observer, particle physics seems to demonstrate that the wave-like and particle-like behaviour of light are direct results of our interaction with it, even as an apparently detached observer. Tenhaaf therefore argues that looking at light in display patterns is thus a confirmation of spectator subjecthood. 'But', she writes, 'in one of the paradoxes of quantum mechanics, it is a subjecthood confirmed by computation from probability waves that describe only a tendency to a pattern. Unfixed subjectivity is the embracing condition of our late

---

<sup>97</sup> Laurence, 1998 p. 58.

<sup>98</sup> For an important discussion of the relationship between feminism and quantum physics more generally, see Barad, Karen *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*, Duke University Press, Durham and London, 2007, especially chapter 5 'Getting Real: Technoscientific Practices and the Materialisation of Reality' (pp. 189-222).

twentieth century technologised world.’<sup>99</sup> The subjecthood that the spectator may confer upon him- or herself through observation is thus always emergent and unfixed, echoing perhaps Irigaray’s plural model of feminine autoerotic (but not narcissistic) sexuality, produced by the constant touching of the labia, as discussed in my previous chapter on Schneemann. As such, Tenhaaf suggests that video is a rejection of the ‘fixed, framed systematicity’ that characterizes masculine models of technologies, traditionally associated with militaristic or instrumental applications, as described variously by Donna Haraway and Martin Heidegger.<sup>100</sup> For Tenhaaf, it is precisely the shift towards electronic forms of representation that allows artists to operate outside of a critical framework dominated by theories of uneven power relations:

The TV monitor can be read as other than a bachelor machine because it isn’t a mechanical model but an electronic one. Rather than a set of moving parts that go round and round perpetually, it is an instantaneous and ephemeral event, a burst of electrons like a Promethean lightning bolt from within the monitor. The double-sided mirror of the monitor screen focuses light on one side and on the other emits light as it reflects an image. Superseding the mirror effect (the constitution of the spectator as a desiring subject, or the cinematic experience) and the look (the male gaze situating the subject within the dominance of the phallic), even before representation itself (establishing the symbolic order of the phallus), the monitor produces an effect of pure light. The bias of technological progress persuades us to think of video display as post-cinematic, but it might also be seen to correspond to a much

---

<sup>99</sup> Tenhaaf, Nell ‘Of Monitors and Men and Other Unsolved Feminist Mysteries: Video Technology and the Feminine’ in *Critical Issues in Electronic Media*, Penney, S. ed., State University of New York Press, NYC, 1995 (pp. 219-234) p. 227.

<sup>100</sup> See Haraway, Donna ‘A cyborg manifesto: science, technology, and socialist-feminism in the late twentieth century’ in *Simians, Cyborgs and Women: The Reinvention of Nature*, Routledge, London and New York, 1991 (pp. 149-181); and Heidegger, Martin ‘The Question Concerning Technology’ in *Basic Writings: Martin Heidegger*, Krell, D. F. ed., Harper Collins, San Francisco, 1994 (pp. 283-318).

more primary, generative event: coming into light out of darkness.<sup>101</sup>

While I am wary of the enlightenment rhetoric at the end of the passage here, and its ties to platonic theories of vision and knowledge and the metaphor of the cave, the suggestion that the actual way in which the technology works might challenge traditional models of spectatorship is interesting and productive. Tenhaaf here both continues Krauss' mirror analogy by using Irigaray's speculum and describing the video monitor as a double-sided mirror – although arguably she looks to Irigaray's concave speculum mirror in opposition to the flat mirror of Lacanian subjectivity, to which I shall return in my discussion of Hatoum – but also begins to subvert it by suggesting that the video monitor actually exceeds the analogy in its construction of the spectator as only ever being a desiring subject, and as *the* only desiring subject in any given system, a model which has historically refused the sexuality of the body/image itself.<sup>102</sup> While film requires a screen, and a subject, to be projected *onto*, the video image emerges from behind the screen. Perhaps as a double-sided mirror, the video screen offers room for a two-way reflection that might free the (traditionally) female body/image from its status as a reflection to be looked upon.

Perhaps the intermingling of technology and the forms of representation that it gives rise to is where video might establish its foothold as a critical tool in feminist art practice. Using not just the language of video pornography, but the language of the amateur and the language of home movies (both erotic and domestic or quotidian), *Delicate Issue* positions itself as a historical focal point in new types of image making and/or looking. Video's unique early position as a technology that allowed for simultaneously performing with or to one's self/image, as in both *Delicate Issue* and Benglis' *Now*, enabled it to integrate

---

<sup>101</sup> Tenhaaf, p. 226.

<sup>102</sup> The relationship between the video monitor, the mirror and strategies for looking at women, which Tenhaaf reads through Irigaray, might also be developed with reference to the mirror of gynaecological self-examination. The mirror was a key tool in consciousness raising groups of the 1970s, and referred to in Joan Jonas' performance work *Mirror Check* (1970), which is also then seen in the opening sequence to the video performance piece *Organic Honey's Vertical Roll* (1973-1979).

the body of the artist or the observer into a visual system. This system was highly self-referential, offering the means for its own critical analysis, re-framing technological vision as a political practice of highly mediated relationships between bodies and between bodies and their images.

By looking to other video practices, such as the emergence of home movies (whether erotic or not), we might also potentially re-evaluate the terms in which certain types of explicit representation are understood, without overturning the invaluable work done by numerous scholars in challenging the deeply problematic representations of women in pornography, which have widespread social, political and legal implications. In so doing, following the work of Laura Kipnis, I hope to make a case not *for* pornography, but toward a serious consideration of its critical potential:

It seems quite impossible to think of pornography as a form of culture or as a mode of politics. There's zero discussion of pornography as an expressive medium in the positive sense – the only expressing its presumed to do is of misogyny or social decay... Porn can be both a legitimate form of culture and a fictional, fantastical even allegorical realm; it neither reflects the real world nor is it some hypnotizing call to action. The world of pornography is mythological and hyperbolic, peopled by characters. It doesn't and never will exist, but it does – and this is part of its politics – insist on a sanctioned space for fantasy.<sup>103</sup>

Kipnis suggests that the critical promise of pornography lies in its ability to perform as a counter to dominant models of sexualities and bodies. This claim is both a serious challenge to innumerable feminist practices that actively reject pornography, on the grounds that it is *precisely* the site at which dominant models of sexuality are formed, but is also a potentially liberatory prospect. Like *Fuses*, *Delicate Issue* uses the visual languages of explicitly (in these cases hetero-) sexualised representation set within an intimate, quotidian conceptual

---

<sup>103</sup> Kipnis, Laura 'How to Look at Pornography' in Lehman, P. ed., (pp. 118-132) p. 119.

space. But *Delicate Issue* also deploys explicit representation to address the complicity of video technology in constructing those sexualities, and constantly questions its own logic: it foregrounds the fact that histories of sexuality have both determined, and been determined by, technological practices of image-making. The work references some of the technical and visual economies of pornography, and particularly the language of the home movie, in the way it establishes a desired and desiring subject, even while it undoes any ready identificatory processes and questions the very act of looking itself. Perhaps a work such as *Delicate Issue* could be conceived as the type of practice that Kipnis calls for: a work that is critical and knowing in its use of the visual histories it employs and yet simultaneously draws on those histories in the production of a tape that is delicate and intimate, both performing and questioning the role of technology in the construction of sexualities and subjectivities.

*The part-body and body parts*

*1952: A psychology experiment reports that 'out of ten persons, all in perfect health, only one on the average recognizes his hands out of a small series of photos of which they were told that it would contain a likeness... Our own hand, foot, face, etc., may become curiously strange to us, when we begin to regard the parts of our body attentively, begin to "study" them. Whereas our body is unalienably ours, we do not "recognize" it, when we come to face it in some way or other.'*<sup>1</sup>

After being extruded through the system of photographic representation, the body has here become 'strange'. Perhaps it is because the body part has become a part-object, as the sort of *close* observation that is enabled by photography has caused that part to become detached from the whole: the hand in question now takes on a life of its own.<sup>2</sup> As with other technologies or techniques which represent the body, photography is deeply concerned with *focus*. That is to say, it is a practice that involves making decisions about the cutting and cropping of the body as part of its conversion into image. It is a practice in which the excision or omission of some parts is as critical a decision as the inclusion of others. The process of *re*-presentation that the body has undergone thus causes

---

<sup>1</sup> Wolff, quoted in Van Den Berg, J. H. 'The Human Body and the Significance of Human Movement: A Phenomenological Study' in *Philosophy and Phenomenological Research*, Vol. 13, No. 2, Dec., 1952 (pp. 159-183) p. 169.

<sup>2</sup> For a discussion of part objects, see Melanie Klein's work on object relations in 'The Origins of Transference' in *The Selected Melanie Klein*, Mitchell, J. ed., Penguin, London, 1991 (pp. 201-210) esp. pp. 202-210.



the part-object to become a free-floating signifier, disconnected from the proprioceptive sense of ‘being in’ a body that traditionally underwrites phenomenological experience. In such instances, the affect of technology is the production of a relationship between body and image that is based upon strangeness or alienation.

While painting, drawing and printmaking are also capable of such ellipsis, photography draws on its capabilities for verisimilitude, and its associations with an indexical likeness to the object that it represents, in order to actually foreground strangeness, but paradoxically through its very similarity. Just as Early Modern anatomical studies and treatises were, at least in part, driven by a quest for this verisimilitude, and archeiopoietia (i.e. not made by the human hand), such as the Turin Shroud or the Veil of Veronica, supposedly have an indexical relationship to the object, so too does the photograph here present a case for foregrounding a splitting or difference between self and image that is ultimately founded on *likeness*, or might even itself be seen as a producer of archeiopoietia. Yet, perhaps there is something about the camera itself – the technological eye – that does something novel to the representation of the body in terms of this splitting. In the first instance, there is a rather unusual link between the photographic image and the part-body, exemplified by the fact that the French word *opérateur* has the double meaning of both ‘surgeon’ and ‘camera person’. The link that this word introduces between these two professions is not only about the process of cutting and cropping described above, but also the way in which the eye of the surgeon necessarily performs a type of looking that operates below the surface of things, a way of getting inside the body/self that can be carried over into the photographic image.

While technology and the category of the part-body already intersect and align in several areas of overlapping cultural, political and visual concern, which have been widely explored<sup>3</sup>, one area which remains largely omitted in the context of

---

<sup>3</sup> Some examples of how the fragmented body is aligned with cultural and visual theory include discussions of the notion of the appended body, particularly in relation to post-colonial theory (see Gonzalez, Jennifer ‘The Appended Subject: Race and Identity as Digital Assemblage’ in *Race in Cyberspace*, Kolko, B., Nakamura, L. & Rodman, G. eds., Routledge, New York, 2000); prosthetics (see *The Prosthetic Impulse: From a Posthuman Present to a Biocultural*

a visual analysis is the creation of the part-body by the clinical gaze. While Carolee Schneemann and Kate Craig, for example, engaged imaging technologies in the process of constructing bodily sexuality and subjectivity, the clinical image has historically tended to treat technology as separate from the subject. As I will demonstrate in this chapter, the clinical image tends to isolate the part or organ of concern from the body, in order to subject it to observation, tests and treatment.<sup>4</sup> In this it perhaps is part of a history of image-making that includes *ex votos*, representations of body parts caught up in processes of fetishizing, objectifying and curing. However, I do not want to argue that technology will always necessarily make the body strange. It is not because of technology that the body becomes unfamiliar or alien, but that technology reveals a pre-existing uneasy relation between body and image, demonstrating that the body-image might be always already foreign or Other to us. This ‘demonstration’, with its etymological ties to *monstrare*, suggests that it might be a monstrous sort of showing, difficult to encounter and to reconcile because of what it reflects back to us.<sup>5</sup>

Nowhere is this sense of alienation potentially more pronounced than in the technologies of the clinic. Within the clinic, the part-body is isolated under observation (which might include any combination of visual and non-visual tests, imaging and analysis), enabling it to be coded according to categories of normal/abnormal and then, if disease is found, referred to as something foreign to us, as something ‘not self’.<sup>6</sup> What I hope to demonstrate in this chapter is the

---

*Future*, Smith, M. & Morra, J. eds., MIT Press, Cambridge, Mass., 2006) and the body in pieces (see Nochlin, Linda *The Body In Pieces: The Fragment as a Metaphor for Modernity*, Thames and Hudson, London 1994).

<sup>4</sup> My use of this phrasing, however, is not to adhere to the concept that the body and soul exist in an eternal union and which necessitates the preservation of a unique body that stands at the centre of ideas of identity. By contrast, this chapter intends to demonstrate that the body is already fragmented and diaphanous.

<sup>5</sup> The root of the word *monster* has been well documented and the origins of the term are found in the Latin *monstrare* (to show or reveal) and *monere* (to warn). Thus the monster describes an exclusively visual category founded on display and de/monstration. This emphasis on visibility ties the monster to the scopic regimes and empiricism of Western thought, whose epistemological structure claims that to *see* is to *know*. See Huet, Marie-Helene *Monstrous Imagination*, Harvard University Press, Cambridge, Massachusetts and London, England, 1993, p. 6; and see also “monster” definition in *The Oxford English Dictionary*, 2<sup>nd</sup> Edition 1989, Oxford University Press (OED Online, URL: <http://dictionary.oed.com/cgi/entry/00315137>).

<sup>6</sup> For an interesting discussion of the way in which the immune system serves as a metaphor for boundaries of self and other see Haraway, Donna ‘Biopolitics of Postmodern Bodies: Determinations of Self in Immune System Discourse’ in *Knowledge, Power, Practice: The*

way in which clinical imaging technologies might thus be aligned with other forms of representation, most notably pornographic, in which the body is made strange through its almost exclusive focus on parts. If technology is able to produce a relation of strangeness between image and body (effectively re-enacting an experience of splitting not dissimilar to Cartesian dualism) with regards the parts of the body that are visible to us and which we see everyday, what then is the nature of this strangeness with regards the (invisible) internal spaces, or with pathology and disease, both of which are already unfamiliar and alien to us?

The performance and installation work of Mona Hatoum has often involved the transformation of familiar objects into something strange and threatening. For example *Webbed I* (2002) turns the supporting struts of a hospital bed into a spiders web, *Daybed* (2008) is a human-sized cheese grater, and *Incommunicado* (1993) a crib-cum-hospital trolley (figs 3.1-3.3). In several cases, Hatoum has also used technology in order to effect such a transformation (see *Corps Étranger* (1994) which will be discussed below; *Homebound* (2000), *Sous Tension* (1999), and *Electrified I & II* (2002 and 2010) in which domestic spaces and objects have an electric current running through them; and *Testimony* (1995-2002), *Deep Throat* (1996), *Don't Smile, You're on Camera!* (1980), and *Look No Body!* (1981) which use medical imaging technologies to magnify body parts, switch genders and make the body unrecognisable) (figs 3.4-3.12). While much has been made of the re-presentation of domestic objects as threatening and dangerous,<sup>7</sup> very little work has been done on the role that technology plays in this transformation, and the way in which this aspect of Hatoum's work – perhaps unknowingly – plays on historical and cultural anxieties surrounding science and new technologies.<sup>8</sup> In this chapter I will

---

*Anthropology of Medicine and Everyday Life*, Lindenbaum, S. & Lock, M. eds., University of California Press, Berkeley, L.A., and London, 1993 (pp.364-410).

<sup>7</sup> See Bell, Kirsty *Mona Hatoum: Unhomely*, Holzwarth Publications, Berlin, 2008; Tamar Garb, 'Hairlines' in *Women Artists at the Millennium*, Armstrong, C. & de Zegher, C. eds., October Books, MIT Press, Cambridge, Mass., and London, England, 2006; Steward Heon, Laura, Antoni, Janine & Glencross, Jo *Mona Hatoum: Domestic Disturbance*, Ex. Cat., MASS MoCA, North Adams, Massachusetts, 2001.

<sup>8</sup> For example, in both *Homebound* (2000) and *Sous Tension* (1999) Hatoum uses assemblages of household furniture wired up with an audibly active electric current, playing with the aspect of danger often perceived in technology by cautionary tales such as Mary Shelley's

demonstrate how Hatoum's work considers the interior representation of the female body within three different visual cultures (pornographic, artistic and medical) and the way in which technology is used to put pressure on the boundaries between them, revealing the mechanisms by which these institutions are mutually implicated in the construction of a masculine scopic drive.

Hatoum's work with medical imaging and medical images might be read as an implicit investigation of the role of technologies of representation in the processes of making the body seem at odds with itself. For example in *Don't Smile, You're on Camera!* (fig 3.13)<sup>9</sup> Hatoum trained a live video camera on an audience, panned up and down the rows, and occasionally stopped to focus on one person. As the camera scanned the chosen individual, the recorded image was played on a video monitor. Simultaneously, two assistants at the back of the gallery would scan the same part of their own body, in gradual stages of undress, and then mix all the images with X-rays so that the resultant film showed the body being peeled away layer by layer by the video camera: first the clothes, then the skin then the flesh. Likewise, in *Look No Body!*<sup>10</sup>, the same procedure was used but the gender of the person being scanned would also be altered by replaying images of a torso of the opposite sex on the public facing video monitor. Of note is that both of these works manipulate the association of the video camera with the notion of 'liveness', as discussed in the previous chapter, in order to be effective. In many of her works, Hatoum uses technologies of representation and effectively turns them back on themselves to reveal the mechanisms by which they underwrite the logic of making the body strange.

Importantly, Hatoum's work also acknowledges that there are sites at which the visual registers of the clinical and the pornographic gaze might, in fact, overlap. In the works *Testimony* and *Corps Étranger*, Hatoum uses medical imaging technologies to present extreme close-ups of both male and female genitalia,

---

Frankenstein. For a discussion of the reaction to new technologies in popular culture see Rutzky, R. L. *High Techne: Art and Technology from the Machine Aesthetic to the Posthuman*, University of Minnesota Press, Minneapolis and London, 1999.

<sup>9</sup> First performed at the event 'Five Days at Battersea' at the BAC, London, 26<sup>th</sup> March 1980.

<sup>10</sup> Performed at *The Basement Gallery*, Newcastle upon Tyne, 1981.

focusing in detail on specific body parts and then de- and re-attaching them in order to scramble or disrupt what the audience expects to see. Working, as I see it, as a sort of companion piece to Craig's work in the previous chapter, *Corps Étranger* (1994) uses endoscopy to continue the project of investigating the points of connection and rupture between artistic and pornographic representation, while simultaneously also drawing medical imaging in to the analysis. In so doing, *Corps Étranger* expands my earlier discussions of the way in which the female body and technology come together in explicit forms of representation. While Craig's tape and Schneemann's film pointed toward the mutual co-constitution of pornography and technology and the gendering of technological forms of vision, Hatoum looks at the way in which newer imaging technologies are also giving rise to potential new forms of representation, as well as offering an implicit critique of the clinical gaze.

A continuation of some of the ideas found in earlier works such as *Look No Body!* and *Don't Smile, You're on Camera!*, *Corps Étranger* shows a one-take endoscopic investigation on the interior spaces of Hatoum's body, as accessed via mouth, vagina and anus.<sup>11</sup> The recorded images are projected onto a circular screen on the floor of a cylindrical installation environment lined with black cloth. A heavy, rhythmical soundtrack of breathing and a heart beating, taped during the procedure, is played inside the enclosure. As we enter the installation, we are encouraged to step directly on to the circular screen on the floor, watching the projection at our feet so that the distance at which we apprehend the images is equivalent to one's height.<sup>12</sup> The images on the screen move from eyes to nose to the inside of the throat, vaginal canal and anus, presenting a continuous, looping view of the interior spaces of the body of the artist, formally aligning this work with Craig's tape *Delicate Issue* (1979).

Where these two works differ, however, is that the endoscope, unlike the video camera, can fulfil that sense of wanting to see deeper below the surface of the body, which generated such a tension in Craig's work. The endoscope gives in

---

<sup>11</sup> In interviews Hatoum has stated that *Corps Étranger* is a fulfilment of earlier projects. See [http://www.bbc.co.uk/radio3/johntusainterview/hatoum\\_transcript.shtml](http://www.bbc.co.uk/radio3/johntusainterview/hatoum_transcript.shtml)

<sup>12</sup> Interestingly, each time I have visited the work, I have never seen anyone challenge this by bending over or kneeling down to touch the screen or have a closer look.

to our desire, but perhaps ultimately shows us something that we do not really want to see. Each time the endoscope comes across an orifice, it penetrates as far as it can go before it recedes and continues on its seemingly blind journey, as if feeling its way around the spaces of the body.

The image of the intestine pulsates below us, opening and closing, sucking us in, into the bile, that awful yellow fluid with semi-digested bits of food floating around in it. The tunnel vision and the stomach-churning images are both reminiscent and representative of a drain or sewer; the entire body becomes a bowel and we drain out of ourselves down through the floor onto which the film is projected. Hairs become nasal, become aural become pubic. We do not know what we are looking at. The recognizable *surfaces* of the body give way to unrecognizable *depths*, to voids that are within us yet are wholly strange and alien to us. Just as we are on the threshold of identifying a mouth, a vagina or an anus, the images become something else altogether again. As we enter the mouth, for example, the almost imperceptible transformation from external squamous cells to the mucous membranes of columnar cells confuses the boundary between inside and outside. Furthermore, immediately just inside the lips already looks like the deeper internal parts of the body. It is at these boundary sites, or orifices – dangerous and privileged borders that, as discussed in chapter one, have historically been tied to theories of alterity<sup>13</sup> – that the images *almost* resolve themselves into a recognizable body part, before becoming once again a network of uncharted tunnels.

Formally, *Corps Étranger* seems to reference historical models in which the body has been imag(in)ed as a sort of navigable terrain in scientific and/or sci-fi representation.<sup>14</sup> Typical examples from wider visual cultures include Arthur

---

<sup>13</sup> Key texts in relation to this debate are Douglas, Mary *Purity and Danger: An Analysis of Concepts of Pollution and Taboo*, Penguin, London 1970; Kristeva, Julia 'From Filth to Defilement' in *Powers of Horror*, Columbia University Press, New York, 1982 (pp. 56-89); and Miller, William Ian *The Anatomy of Disgust*, Harvard University Press, 1997 especially the chapter 'Orifices and Bodily Wastes' (pp. 89-108).

<sup>14</sup> Indeed, this is how the work was frequently received in the cultural press: 'vous embarquiez pour un voyage visuel par l'un des orifices que l'anatomie ménage, filant à travers les cavités internes du corps.' (Leboevici, Elisabeth 'Mona Hatoum, Intérieur Nuit' in *Libération*, 2<sup>nd</sup> July 1994 (p. 111); '*Corps Étranger* proposant au visiteur une véritable immersion dans les profondeurs internes.' (Brignone, Patricia 'Mona Hatoum' in *Art Press*, October 1994 (p. 113);

Lidov's fantastical illustrations for *LIFE* magazine, including *Down a Long Canal* and *Digestive Journey* (3 November 1962), which depicts the body as a sort of mountainscape through which river-like digestive passages furrow their way (fig 3.14); the film *Fantastic Voyage* (1966) and later remake *Inner Space* (1987) in which miniaturised 'spacecraft' enter and travel around the body; and Alexander Tsiara's interactive CD-ROM *Body voyage: a three dimensional tour of a real human body* (1997), itself based on the *Visible Human Project* (1989 to present) which presents a three dimensional fly-through of CT scans of both a male and a female subject (fig 3.15). Such depictions of the body, while a radical challenge to more traditional representations such as static anatomical drawing, nonetheless also provided the cultural basis for the perpetuation of enlightenment tropes of exploration in relation to the 'wild' landscape of the body, that is foregrounded through references to space and deep sea 'adventure'.<sup>15</sup>

Historically, this sort of imagery developed out of emergent scientific imaging technologies (particularly electron microscopy in the 1930s and scanning tunneling microscopy in the 1980s), which altered the way that the body is perceived in non-scientific contexts.<sup>16</sup> The infinitesimally minute detail that these technologies produced destabilized notions of scale and space and fundamentally transformed our relationship to the body.<sup>17</sup> Kim Sawchuck, who has written widely on the representation of gender and/in science, has suggested that these developments in imaging technology have thus produced a visual

---

'A pool of light at the viewers feet draws us into an exhilarating journey through illuminated caverns. These are reminiscent of Jules Verne's *Journey to the Centre of the Earth*...or rather, the film of the book.' (Abrioux, Yves 'Mona Hatoum at the Pompidou: Two Responses' responses' in *Untitled*, September 1994 (p. 116)); 'on the screen we are taken on a visual journey around Hatoum's body.' (Grant, Simon 'Mona Hatoum at the Pompidou: Two Responses').

<sup>15</sup> For further discussion of representations of the body as a 'wild' landscape, particularly in relation to popular visual cultures, see Beaulieu, Anne 'The Brain at the End of the Rainbow: the Promises of Brain Scans in the Research Field and in the Media' in *Wild Science: Reading Feminism, Medicine and the Media*, Marchessault, J. & Sawchuk, K. eds., Routledge, London and New York, 2000 (pp. 39-54) and Sobchak, Vivian *Screening Space: The American Science Fiction Film*, Ungar, New York, 1987, especially p. 101.

<sup>16</sup> For an excellent overview of the history of microscopy and the impact it had on medicine, with a particular emphasis on the development of scanning tunnelling microscopy, see the introduction to Manson-Smith, Sacha *Investigation into Scanning Tunnelling Luminescence Microscopy* unpublished PhD thesis, University of Strathclyde, 2000.

<sup>17</sup> See Stewart, Susan *On Longing: Narratives of the Miniature, the Gigantic, the Souvenir, the Collection*, Duke University Press, Durham, North Carolina, 1993, especially p. 54.

economy in which the body is understood as a terrain or geography to be explored. This, she argues produces a fantasy of ‘biotourism’ in which one can travel through the ‘inner space’ of the body.<sup>18</sup> What Sawchuck’s model of biotourism speaks to is a sense in which new imaging technologies have encouraged a way of *reading* the body – in both science and popular culture – as a navigable, quantifiable subject of analysis and colonization that is comprised of legible parts and systems. While I do not want to generalize and say that this is the case for all forms of scientific imaging, it seems to be largely true in the case of medical imaging and images. While I will return to the question of legibility later in the analysis, of immediate importance is the way in which the narrow visual field of these imaging technologies (which alters our sense of scale so dramatically) focuses on specific parts or systems in a way that perhaps feed into clinical interpretations of the body as a sort of assemblage. This idea was certainly being widely theorized in the medical literature around the time that Hatoum made *Corps Étranger*. For example, in ‘The body of the future’ (1992) Eric J. Cassell, a Clinical Professor in Public Health at Cornell University Medical College, proposed that:

Twentieth century medicine is characterized by a trend which Pedro Lain-Entralgo has called ‘molecularisation’. In this view all processes of normal or abnormal physiology are described in molecular terms. Proteins are proteins, genes are genes etc, no matter where you find them (plant or animal). They are best studied in isolation, causing a tendency to see these systems as closed: systems in which everything necessary for their completion exists within the system itself. If the system is enzymatic, genetic, neural (impulse transmitting) or muscular (contractile), it must be abstracted from the organ in which it operates and the organism in which the organ is found.<sup>19</sup>

---

<sup>18</sup> Sawchuk, Kim ‘Biotourism, Fantastic Voyage, and Sublime Inner Space’ in Marchessault & Sawchuk eds., (pp. 9-23) p.10.

<sup>19</sup> Cassell, Eric J. ‘The Body of the Future’ in *The Body in Medical Thought and Practice*, Leder, D. ed., Kluwer Academic Publishers, Dordrecht, Boston and London, 1992 (pp. 233-249), pp. 235-237.



For Cassell, the clinical gaze is premised on a continual re-focusing to allow for greater detail, reducing the visual field so that organs, parts and systems of the body become categorised according to smaller and smaller units.<sup>20</sup> This (techno)logic of fracturing the body into discrete parts so that it might be better observed, is at the core of many clinical technologies. By ‘clinical technologies’ I am referring both to the mechanical, electronic or digital devices that are used as well as the languages and discourse of clinical method (c.f. definitions of technology as both a device and a system of representation). This includes: the division of the field into specialty training (gynecology, dermatology, neurology); the classification and treatment of diseases; and, of course, medical imaging technology itself. Taking a textbook as a case study, *Diagnostic Imaging* by Peter Armstrong et al (fifth ed., 2004), we can see just how this logic continues to be put into practice. With the exception of ultrasound, we are told, all other nuclear imaging technologies have fixed projections or fields of inquiry<sup>21</sup>, meaning that the way that they work is by focusing a steady gaze on one part of the body at a time and, preferably, that such images will be made using standardized projections or viewpoints. After an overview of the basic principle of each imaging technology, the book itself is then divided according to body part, so that each chapter is focused on a different (and well differentiated) organ, part or system (chest, cardiovascular system, gastrointestinal tract).

From looking at this literature, what is unclear however, and what could be further questioned beyond this thesis, is to what degree the technology defines the very parts or systems that it hopes to represent. That a particular type of imaging is good at representing a particular system might have actually produced that system, thus causing the body to become divided accorded to the way in which the technology appears to work, in a model of technological

---

<sup>20</sup> It is of note that current scientific practice appears to continue this trend beyond the cellular level toward ‘molecularisation’, since particle physicists are now involved in medical research. An excellent example is the work of the Institute of Nanoscience for Medicine, part of the James Martin 21<sup>st</sup> Century School at the University of Oxford, in which nanotechnologies are being applied to medical practices in the fields of imaging (scanning probe techniques in biology), pharmaceuticals (nanostructure-based drug delivery), and DNA structure and cell mechanics investigations. For more information see <http://nanomed.bioch.ox.ac.uk/>

<sup>21</sup> Armstrong, P. et. al. *Diagnostic Imaging*, 5<sup>th</sup> Edition, Blackwell, Malden Mass., and Oxford, England, 2004, p. 8.

determinism. However, whether or not all the various taxonomies of organs, parts or systems have a historical lineage beyond the application of technology to them, it is notable that the division of the body into parts remains an integral process in the clinical practices of observing, naming and treating pathology.

By stratifying the body into a sort of navigable terrain (and I would argue that both scientific and non-scientific visual cultures feed into the continuing production of this form of representation) the system or part under analysis is not only made less complex in its modeling – by removing interactions between them – but also makes any transgression or failure easier to identify and contain. *Corps Étranger* is perhaps notable for its radical rejection of this logic, instead choosing to use the endoscope so as to produce a continuous, looping view of the body that not only problematises any sense in which the body might be made of disconnected parts (they are very much, and seamlessly, connected to one another), but also that the body might be made less complex through this sort of visual modeling. The body is not presented schematically, but rather as a difficult, messy *thing* in which one might have trouble identifying inside from outside, let alone specific organs and systems.

### ***Penetrating gazes***

Following from the work of Michel Foucault, Rosi Braidotti is one of the few scholars who have questioned the politics of this visual logic of the part-body, particularly in relation to women. What distinguishes her valuable work further from that of someone like Cassell, for example, is that she makes the link between medicine and pornography, and considers the points at which these two visual economies might overlap, as well as the implications for that in the representation of women. Again, around the same time that *Corps Étranger* was first being shown, Braidotti made the case in ‘Body images and the pornography of representation’ (1994) that medicine always strived for forms of representation that would standardize and quantify the body. For her, there was a sort of an analogy between the mathematisation of the body perceived by writers like Foucault – a sort of exposure of the subject to numerical or statistical analysis – and the realm of pornographic representation. She thus

describes the standardization of the body in clinical practice as ‘medical pornography’, in which pornography is defined as ‘a system of representation that reinforces the commercial logic of the market economy. The whole body becomes a visual surface of changeable parts, offered as exchange objects.’<sup>22</sup> In other words medicine, like pornography, seeks to standardize the body in order that it can be rendered into an economy, able to be prostheticised along lines that make flesh (re)productive within the terms of a biopolitical order.<sup>23</sup> Referencing her Deleuzian background, she calls this a system that produces ‘organs without bodies’<sup>24</sup>, or ‘de/re/tachable parts’<sup>25</sup> that can circulate across bodily, cultural and national borders. Importantly, both pornography and the clinical gaze work in this way by *visually* isolating body parts so that they might be inserted into regimes of looking, such as analysis or scopophilia. In other words, the part body becomes an object of (scopic) consumption and circulation which, for Braidotti, has far reaching implications, including the sale or regeneration of organs and other body parts<sup>26</sup>, as well as the somewhat inaccurate perception that because we can see at the atomic level that

---

<sup>22</sup> Braidotti, Rosi *Nomadic Subjects: Embodiment and Sexual Difference in Contemporary Feminist Theory*, Columbia University Press, New York, 1994, p. 68. More generally see the chapter ‘Body Images and the Pornography of Representation’ (pp. 57-73).

<sup>23</sup> See also J. G. Ballard, who writes, ‘bizarre experiments are now a common place of scientific research, moving ever closer to that junction where science and pornography will eventually meet and fuse. Conceivably, the day will come when science is itself the greatest producer of pornography. The weird perversions of human behaviour triggered by psychologists testing the effects of pain, isolation, anger etc. will play the same role that the bare breasts of Polynesian islanders performed in the 1940s wildlife documentary films.’ (Ballard, J. G. *The Atrocity Exhibition*, with illustrations by Pheobe Gloeckner, Re/Search publications, San Francisco, 1990 p.68).

<sup>24</sup> In opposition to the Deleuzian ‘Bodies without Organs’ see Braidotti, Rosi ‘Organs without bodies’ in Braidotti, 1994 (pp. 41–56).

<sup>25</sup> Braidotti, p. 47. Medical imaging thus becomes a disciplinary technology which resonates with Elisabeth Grosz’ model of ‘etching’ in which, she argues, ‘the body is an intricate yet pliable instrument, capable of being trained, tuned to better, more efficient performance, a fine machinery of parts to be segmented, regulated, put to work, reordered and replaced where necessary.’ See Grosz, Elisabeth *Volatile Bodies: Toward a Corporeal Feminism*, Indiana University Press, Bloomington and Indianapolis, 1994, p. 151. For her discussion of etching more generally, see the chapter ‘The Body as Inscriptive Surface’ (pp. 138-159).

<sup>26</sup> An interesting visual example of this type of concept that body parts might be easily transferable or regenerating are illustrations by J. P. Vacanti (who developed the Vacanti Mouse at MIT in 1995, images of which circulated internationally) which featured as cover images for key popular culture magazines such as ‘The Replaceable Body’ (*Life Magazine*, 1989), in which the body was represented as being comprised of functional replacements and ‘Can I Replace My Body’ (*Time Magazine*, 1999), in which the parts that were previously replaceable, are subsequently depicted as regenerable.

biomedical interventions on the body like IVF are straightforward and well understood.<sup>27</sup>

The link that Braidotti makes between pornographic and clinical images formally resonates with the representation of the body in *Corps Étranger*, both in terms of Hatoum's decision *not* to divide up the body into parts, and subsequently produce a piece of 'medical pornography', but also because the work actually depicts extreme close-ups of female genitalia. In fact, it is more than an extreme close-up, it is the ultimate close-up: the view that actually goes beneath the surface, deeper in, to show what the camera usually cannot see. By showing both the vulva (external anatomy) as well as the vagina and the cervix (internal anatomy) *Corps Étranger* references the visual practices of both pornography and gynaecology, in presenting us with a body that has been subjected to a penetrating gaze.

The image of the vagina is a particularly interesting case study since, as Terri Kapsalis has demonstrated in the book *Public Privates: Performing Gynecology from Both Ends of the Speculum* (1997), the isolated female genitalia (a.k.a. the 'beaver-shot', which ties back in to the links between the female and the animal body explored in chapter one) is an image that re-occurs across medical, artistic and pornographic imagery. Furthermore, at times, it is almost impossible to categorize within any one of these fields. Importantly, as Kapsalis argues, male genitalia are rarely exposed to the sort of extreme close-up and scrutiny that women's genitals are, whether in pornography, art or medicine.<sup>28</sup> While Kapsalis focuses on material from contemporary pornography and live performance art (for example by engaging in a close analysis of the work of Annie Sprinkle), I believe that there are also relevant links to be made to

---

<sup>27</sup> The work of the Critical Art Ensemble (henceforth CAE) is perhaps an interesting intervention into such representations, particularly the mobile platform *The Society for Reproductive Anachronisms* (1999-2000), which was intended to respond to the issues raised by the larger project *Flesh Machine* (1997-98), through a series of lectures, information distribution, DNA extraction and genetic testing. As the CAE state 'The greatest colonial initiative, perhaps ever, is underway – the full scale body invasion at the molecular level.' (Critical Art Ensemble, 'Body Invasion' in *Art Journal*, Vol. 59, No. 3, Autumn 2000 p. 48).

<sup>28</sup> Kapsalis, Terri 'Apparent Females and Female Appearances: On the Status of Genitals in Medical Textbook Illustration' in *Public Privates: Performing Gynaecology from Both Ends of the Speculum*, Duke University Press, Durham and London, 1997 (pp. 81-112).

historical artistic practices which center on the realistic depiction of female genitalia in extreme close-up, including Gustave Courbet's *L'Origine du Monde* (1886) and Marcel Duchamp's *Étant Donnés: 1° La Chute d'Eau / 2° Le Gaz d'Éclairage* (1946-66). Of particular interest in the context of our discussion is that the latter also makes explicit the link between the (visual) penetration of the female body and the enlightenment theories of sight and light that provided the foundations of science and medicine.<sup>29</sup> This is notably achieved through the second subtitle *2° Le Gaz d'Éclairage*. What these links begin to show us is that there is something about the way in which both pornography and the clinic *sees* that is the same; that it is premised on the same drive, perhaps, or gives rise to the same type of image.

Certainly, theories of pornography from this period have picked up on this link between science and pornography and their mutual desire for knowledge, in which the secret depths of the mysterious female body must be probed or opened up. This argument has perhaps been most notably made by Linda Williams in *Hard Core* (1990), her early history of pornography. For Williams, both types of representation were founded on an economy of maximum visibility, which she positions in relation to Michel Foucault's distinction between the science of sexuality, *scientia sexualis*, and older forms of *ars erotica*. Pornography, Williams argues, thus evolves not out of ancient traditions of erotic art, but the nineteenth-century 'frenzy of the visible' in which surveillance mechanisms started to see in place of the naked eye: a technologic in which the eye of the camera offered new 'truths' about the body. She writes, 'in contrast to both mainstream fictional narrative and soft core indirection, hard core tries not to play peek-a-boo with either its male or female bodies. It obsessively seeks knowledge, through a voyeuristic record of confessional, involuntary paroxysm, of the "thing" itself.'<sup>30</sup> For Williams, and this point perhaps goes to the heart of the entire thesis, the intersection between pleasure and power – as perceived by Foucault – is crucially conceived in terms

---

<sup>29</sup> For a discussion of the notion of female bodies being probed by the medical gaze in the 18<sup>th</sup> and 19<sup>th</sup> centuries see Jordanova, Ludmilla 'Nature Unveiling Before Science' in *Sexual Visions: Images of Gender in Science and Medicine Between the Eighteenth and Twentieth Centuries*, University of Wisconsin Press, Madison, Wis., 1993 (pp. 87-110).

<sup>30</sup> Williams, Linda *Hard Core: Power, Pleasure and the 'Frenzy of the Visible'*, Pandora press, London, 1990 p. 49.

of technology. Referring to the example of Eadward Muybridge's work on the analytic study of the human body in motion, Williams argues that the power exerted over bodies *in* technology is rendered pleasurable *through* technology.<sup>31</sup> Which is maybe another way of saying that power itself is pleasurable if you are the one wielding it, and technology is one way in which that can be done.

Although Williams identified that both pornography and medicine perform a sort of probing or penetrating of the body, this drive is somewhat complicated in the case of pornography. Although desire is here produced through vision, importantly, it is through a type of vision that actually rests on the edge between concealing *and* revealing, so that there is always a (frustrated) desire to see.<sup>32</sup> In this, pornography ultimately reinstates the failure of any project adequately to represent female sexualities, invoking the historical formulation of the female body as dark and mysterious against the quest for disclosure brought about by over-lit close-ups of genitals.<sup>33</sup> It seems as though *Corps Étranger* provocatively plays into the logic of hyper-visibility through a strategy of explicit self-representation, in which nothing is hidden and everything is shown, even while what is shown remains largely unrecognisable. By going below the surface of the body, into its innermost spaces such as the digestive, respiratory or reproductive passages, the endoscopic camera tries to show everything about the body, and yet these passages very quickly become indistinguishable from one another. The folding, looping canals and caverns suggest not a well-differentiated body architecture but an amorphous system that is at odds with traditional schematic representations.

---

<sup>31</sup> Ibid., p. 39.

<sup>32</sup> See the chapter 'Prehistory: the "Frenzy of the Visible"' in Williams (pp. 34-57). Williams' arguments here are informed by the work of Christian Metz in *The Imaginary Signifier: Psychoanalysis and the Cinema*, Williams, A. et al. trans., Indiana University Press, Bloomington, 1977 and Baudry, Louis 'The Apparatus: Metapsychological Approaches to the Impression of Realism in the Cinema' in *Narrative, Apparatus, Ideology: A Film Theory Reader*, Rosen, P. ed., Columbia University Press, New York, 1986. Of note in the pornography debate about showing/hiding is that female sexual pleasure, unlike male, is not apparent or visible. See Williams, p. 49; Giles, Dennis 'Pornographic Space: The Other Place' in *The 1977 Film Studies Annual: Part 2*, Redgrave, Pleasantville, New York 1977 (pp. 52-65); and Lardeau, Yanne 'Le Sexe Froid (du Porno au Delà)' in *Cahiers du Cinéma*, 289, 1978.

<sup>33</sup> See Nead, Lynda *The Female Nude: Art, Obscenity and Sexuality*, Routledge London and New York, 1992 p. 99.

One of the areas in which *Corps Étranger* resonates with the problematic history of representing the explicit female body, and the continual tension between exposing and concealing it, is the link between the work and the practice of self-imaging in gynaecological contexts. While Craig's video demonstrated that pornography and the home sex tape were actually two fundamentally different categories of representation, Hatoum's work does not emphasise the differences between the categories of gynaecology and pornography, but rather draws out the similarities. This is achieved not only through the visual content of the works but also the means of their projection. The downward pull of Hatoum's installation and projection seems to invite us to let ourselves be taken over by an objectifying gaze premised on power and distance.

As has been well documented, in the U.S. during the late 1960s and early 1970s a series of women's health collectives and alternative art practices were established, presenting a challenge to historical methods of looking *at* and/or *into* women, that had been driven by a supposed need to *see* the otherwise invisible female (reproductive) organs.<sup>34</sup> These collectives had an emphasis on vaginal and breast self-examination, and self-abortion practice, enabling women to familiarize themselves with their most 'taboo' parts, in order that they might become de-objectified.<sup>35</sup> Looking or, more specifically, self-examination, took on a fundamental role for these groups in the destabilization of power structures, which entailed a form of embodied knowledge production that largely opposed the model of knowledge as mediated through representation.

---

<sup>34</sup> For a discussion of the notion of making women's bodies visible, see O'Bryan, C. Jill *Carnal Art: Orlan's Refacing*, University of Minnesota Press, Minneapolis and London, 2005 p. 98. The making visible of the female body which was finally achieved by James Marion Sims' 'discovery' of the speculum – and upon which gynecology is founded as a distinct specialty (Kapsalis, p. 7) – is part of the historical practice of attempting to demystify the relationship between the womb and human creation. Up until the eighteenth century the invisibility of the womb, and the female capacity to harbor 'internal organs' had provided grounds for considering women as suspicious (O'Bryan, p. 175).

<sup>35</sup> For a discussion of the vagina in representation as taboo, particularly in the context of medical imaging, see Braidotti, p. 67 and Murphy, Michelle 'Immodest Witnessing: the Epistemology of Vaginal Self-Examination in the U.S. Feminist Self-Help Movement' in *Feminist Studies*, Vol. 30, No. 1, Spring 2004 (pp. 115-147).

Furthermore, during this period, there was a close involvement of many artists with these collectives, as they were often recruited to produce drawings or photographs of female anatomy for the purposes of sex education, gynecological training and self-examination. This led to a blurring of the boundaries between art and medicine, which perhaps prefigures later practices such as Hatoum's. Notable historical examples include Tee Corinne's *Cunt Coloring Book* (1975); Annie Sprinkle's pornographic photographs making their way into medical textbooks; Ida Applebroog's *Monalisa* vagina drawings (1969),<sup>36</sup> which demonstrated the fact that women necessarily always see their own vagina as an image reflected in a mirror, i.e. always mediated, a representation, which could, potentially, be confounded, undermined or reinforced by touch (as a counter to vision); and the illustrations that Suzann Gage – a registered OB/GYN nurse – produced for *A New View of a Woman's Body* (1981) (figs 3.16-3.20) which, very much like The Boston Women's Health Collective's publication *Our Bodies, Ourselves* (1969), included semi-transparent renderings of the body that simultaneously showed external and internal features of the body.<sup>37</sup> Although these last examples are not forms of artistic production, they are formally and conceptually linked to some of the other practices in that they reject a standard, diagrammatic view of the body. Instead, these projects all sought to represent the female body not only as highly individualized, and placed historically and culturally through reference to dress

---

<sup>36</sup> For a discussion of Applebroog's drawings in relation to vaginal self-examination practices of the 1970s see Bryan-Wilson, Julia 'Our Bodies, our Houses, our Ruptures, Ourselves', in *Ida Applebroog: Monalisa*, Exh.Cat., Hauser and Wirth, New York, 2010 (pp. 13-39).

<sup>37</sup> While the work of comparing these alternative systems of (gynaecological) anatomical representation to established medical textbooks like *Danforth's* has already been done by Terri Kapsalis (see Kapsalis pp. 81-112), suffice it to say that key differences between these systems are distinguishable: the former shows only healthy genitalia, moving away from the predominant focus on pathology, so that recognition of what counts as 'healthy' might also come to have epistemological or medical value; it also discusses the clitoris, thus expanding the remit of the female reproductive anatomy and women's health discourse into sexuality. *Danforth's*, by comparison makes no discussion of female sexuality and desire, even while urology textbooks have a whole chapter on the physiology of erection and pathophysiology of impotence. *A New View of a Woman's Body*, by contrast, maintains that both men and women have physiological responses to sexual arousal; books like *A New View...* also consistently invoke self-touch and, like touch, reflexively perform a relationship to its own system of representation by discussing at lengths the various choices made for framing, lighting and so on; and finally, *A New View...* is divided up into areas of practice ('self-examination', 'birth control') as well as by function ('the clitoris: a feminist perspective', 'menstrual extraction') and in so doing, it challenges the majority of medical text books which divide the body up by part.



and style, but also as an active participant in the practice of looking that gave rise to the representation.

However, these examples are notable not just for what they achieved politically and medically, but also visually, since they made the internal and external genitalia *visible* outside of a professional medical context. If self-examination and self-representation were historically repressed modes of working with female sexuality it is because, in traditional gynaecological practice, forms of self-imaging (-examination, -inspection, -representation, -looking) were denied or screened out by the ‘drape sheet’, used to cover the lower half of a woman’s body during internal or external gynaecological examination. During the 1970s, the drape sheet was theorized as a literal and metaphorical device that operated to ‘hide the vagina *from herself*’, and ensure the patients modesty when confronted by (almost invariably) male gynaecologists. Again resonating with this sense of the body becoming comprised of *parts*, Kapsalis expands, ‘[The woman] is a pelvis disassociated from a person... the person is reconstructed as an object.’<sup>38</sup>

The detachment of the sexual and reproductive organs from the subject was thus seen to have a visual component in that it was achieved through practices of (in)visibility, in which certain individuals (i.e., the doctor) had access to the gynaecological view, while others (i.e., the patient) simply didn’t. The drape sheet thus played a crucial role in several histories of imaging or seeing women (gynecology, pornography, art) because of its role in the separation of female genitalia from the body.<sup>39</sup> It was not, in fact, until the second half of the twentieth century, that self-spectatorship became a part of the gynaecological practice.<sup>40</sup> Interestingly, this also coincided with the introduction of themes of

---

<sup>38</sup> Kapsalis, p. 11. For discussion of the reduction of the vagina to an object, as achieved through the dramaturgical device of the pelvic exam, see Henslin, James & Biggs, Mae ‘Dramaturgical Desexualisation: the Sociology of Vaginal Examination’ in *Studies of the Sociology of Sex*, Henslin, J. ed., Appleton-Century-Crofts, New York, 1971 (pp. 243-72).

<sup>39</sup> For a critique of the concept of the invisibility of the vagina, or its role as an ‘anesthetised organ’, (notably as compared to the clitoris) in models of sexuality deriving from psychoanalysis, see Mitchell, Juliet ‘The Clitoris and the Vagina’ in *Psychoanalysis and Feminism: A Radical Reassessment of Freudian Psychoanalysis*, Penguin, London 2000 (pp. 105-108).

<sup>40</sup> Kapsalis, p. 166.

self-spectatorship in the fields of pornography and art, as women started producing images of themselves in the ‘live’ or ‘body’ art practices of the 1960s.<sup>41</sup> Perhaps one of the most familiar examples of bringing the questions of self-spectatorship into the artistic realm is Schneemann’s *Interior Scroll* (1975), in which the artist drew a long, narrow scroll from her vagina while reading aloud from it (fig 3.21). The scroll recounted a conversation with a ‘structuralist film-maker’, in which the artist sets bodily processes, traditionally associated with ‘woman’, against ‘male’ notions of order and rationality, questioning the gendered relations of power that underscore the practices of both looking at and making images.

There is a sense here in which ideas around visibility and invisibility also feed into a discussion of the public and the private. After all, female ‘privates’ seem to enter the ‘public’ spectacle predominantly in the forms of art, pornography and medicine, leaving us with a complex interplay of screening (off) and showing (off). Furthermore, Kapsalis has noted the etymological ties of the words *pubes* to ‘public’ and *pudere* to ‘shame’, emphasizing both the public presence of the penis in contrast to the vagina, and the conceptual problem of making ‘public’ something that is ‘private’ and of which one ought to be ashamed.<sup>42</sup> The notion of the public versus the private is thus highly pertinent here, in the literal reference to concepts of inside and outside, and the feminization of the domestic/private/interior sphere. This is played on in Hatoum’s work *Jardin Public* (1993) (fig 3.22), in which a genital triangle is sewn, in pubic hair, onto a cast iron garden chair (recognizable as one from the Luxembourg Gardens in Paris), referring back to the fine line between concealing and revealing that is so crucial to pornography.<sup>43</sup>

---

<sup>41</sup> Perhaps of interest in the context of this discussion of the drape sheet, is that Courbet’s *L’Origine du Monde*, already referred to in the context of this work, was kept behind a curtain when it was in the private collection of Jacques Lacan.

<sup>42</sup> Kapsalis, p. 5.

<sup>43</sup> As Lynda Nead argues, ‘pornography exists on the margins of visibility. It circulates in terms of being both explicit and illicit; it is characterized both by a relentless display of sexual difference and the sexualized female body, and by its existence within the covert, hidden and disguised spaces of public and private culture.’ (Nead, p. 97). Furthermore, the report of the Williams Committee on obscenity found that ‘Pornography crosses the line between the private and the public since it makes available in the form, for instance, of a photograph, some sexual act of a private kind and makes it available for a voyeuristic interest: since it is itself a public thing, a picture book or a film show, it represents already the projection into public of the

What is so important about *Corps Étranger* is that it draws on these important political histories of looking at women, and considers the points of connection – and disconnection – between art, pornography and medicine. While all three visual cultures share the common tension between public and private, *Corps Étranger* actually demonstrates the way in which representation in one field often appears to transgress the limits of representation in others. Hatoum's work not only references the formal qualities of pornographic and gynaecological imagery, but also refers to that very particular and peculiar history of imaging women that has been simultaneously an excess of vision and a complete lack of it. The stakes are high in Hatoum's representation of the interior spaces of the body, therefore, since it straddles and problematises representation across all three fields.

Although the image of the vagina appears in art, pornography and medicine, gynecological images, for example, actually potentially negate pornographic readings by simply showing too much: an excess of representation which obliterates pornography's more particular emphasis on showing *just enough*. Despite the possibility for slippage between the three fields, because of the use of the 'beaver-shot', Hatoum largely exceeds pornographic readings by turning the body inside out so thoroughly as to perform it as *emetic* rather than *erotic*, destroying the tension between concealing and revealing. *Corps Étranger* thus perhaps not only prompts us to think critically about the different (or similar) ways in which women's bodies have been represented by various institutions, but also to re-think the use of technology in self-imaging as a potential site of resistance to these systems. As Ella Shohat argues in 'Lasers for Ladies' (1992) 'feminist critique cannot afford to surrender the interior body to the curtailed authority of the medical office.'<sup>44</sup>

---

private world – private, that is to say, to its participants – of sexual activity.' (Report of the Williams Committee paragraph 7.6. For a discussion of the report in relation to themes of public/private see Brown, Beverly 'Private Faces in Public Places' in *Ideology and Consciousness*, No. 7 (pp. 3-16)).

<sup>44</sup> Shohat, Ella 'Lasers for ladies: endo discourse and the inscription of science' in *The Visible Woman: Imaging Technologies, Gender and Science*, Cartwright, L. & Treichler, P. eds., New York University Press, New York and London, 1998 (pp. 240-272) p. 240.

The work *Deep Throat*, made two years after *Corps Étranger* in 1996, and which likewise shows an endoscope going inside the mouth of a woman, perhaps overtly enacts these differences between clinical and pornographic representation. *Deep Throat*, of course, is also the name of the 1972 pornographic film starring Linda Lovelace (as ‘herself’). In the film, the heroine is deeply unsatisfied by her sex life and so seeks the advice of a doctor who informs her that she has an unusual condition in which her clitoris is situated at the back of her throat. This discovery is made during a clinical investigation in which a telescope directly replaces a speculum. Fortunately, there is a very simple remedy to the problem that the doctor and other men thus proceed to demonstrate...<sup>45</sup> Using medical imaging technologies *against* the visual logic of hard-core pornography, this work parodically and excessively represents the promised fantasy of infinite penetration. In *Corps Étranger*, as with *Deep Throat*, the use of technology is therefore fundamental in the disruption of traditional systems of representation, and the destabilization of core principles of medical epistemology. As such, it is the technology itself (in this case endoscopy) that must now comprise the core of my reading of this work.

### ***The endoscope***

Endoscopy is the parent name given to a range of (usually) non-surgical interventions, which allow the interior spaces of the body to be recorded on camera by accessing them through, in this case natural, orifices.<sup>46</sup> The term is derived from the Greek ‘endon’ (meaning ‘within’) and ‘scopein’ (meaning not just ‘to look at’ but also, crucially, ‘to examine’). While there are many different endoscopes available for a variety of applications, they all have common features: there is a control head with valves for air insufflations and suction, a flexible shaft carrying the light guide and one or more service channels, and a maneuverable bending section at the tip. An ‘umbilical’ or universal cord connects the endoscope to the light source and processor, air

---

<sup>45</sup> For a discussion of this film in relation to ‘seminal’ tropes of visual pornography such as ‘the money shot’ and how it plays on the problems of visually representing male and female pleasure, see the chapter ‘Fetishism and Hard Core: Marx, Freud and “the Money Shot”’, in Williams (pp. 93-119).

<sup>46</sup> Although it should be noted that endoscopy can be used in conjunction with artificial orifices, as in the case of arthroscopy, and therefore does occasionally come under the remit of surgery.

supply and suction (figs 3.23-3.25). The image is captured with a CCD (charge coupled device) chip, transmitted electronically, and displayed on a video monitor. In addition to being a technique for ‘seeing into’<sup>47</sup> the internal spaces of the body, endoscopy is also a therapeutic tool, carrying such features as a biopsy port, to enable abnormal sections to be cut and cauterized as and when they are seen.<sup>48</sup> It is both diagnostic and therapeutic.

Although Hatoum maintains that the procedure ‘didn’t hurt at all’, as a result of receiving ‘a drug that seemed to dull the pain,’<sup>49</sup> undergoing endoscopic investigations carries with it difficult or unpleasant preparation: an upper gastrointestinal endoscopy (also called esophagogastroduodenoscopy, or EGD) should ‘only be performed after the patient has fasted for 6 hours or more to ensure an empty stomach... in conscious patients, a topical anesthetic is applied to the pharynx to numb the gag reflex’; in lower gastrointestinal endoscopy ‘tap water or commercial enemas usually are sufficient preparation for either rigid or flexible sigmoidoscopy...’; in colonoscopy ‘1-2 days of clear liquid diet followed by a strong cathartic and perhaps enemas. Alternatively, a balanced electrolyte lavage can be used. Typically about 1 gallon of the solution must be consumed either PO [by mouth] or through a nasogastric tube over about 2 hours. The lavage solution is consumed about 6-12 hours before the procedure. One drawback is the difficulty some patients have in consuming a gallon of fluid that tastes like seawater over a short period.’<sup>50</sup> All this is generally referred to as ‘adequate bowel preparation’.

The different types of endoscopy also carry risks, which are both general and specific. These range from ‘perforation of the oesophagus or stomach,

---

<sup>47</sup> I qualify this term so as to distinguish it from diagnostic imaging, which covers radiology-based imaging technologies such as X-ray, MRI, ultrasound and CT scanning. These do not actually see the body, but are numeric (or sonic) representations of the body, which are then turned in to a visual pattern for diagnostic purposes.

<sup>48</sup> For an overview of the core functions of the practice of endoscopy, see Cotton, Peter B. & Williams, Christopher *Practical Gastrointestinal Endoscopy: The Fundamentals*, 6<sup>th</sup> edition, Wiley-Blackwell, Chichester, 2008.

<sup>49</sup> ‘Mona Hatoum: Interview with Janine Antoni’ in *Bomb Magazine*, No. 63, Spring 1998. Available online at <http://www.whitecube.com/artists/hatoum/texts/98/>.

<sup>50</sup> Eastwood, Gregory L. & Avunduk, Canan *Manual of Gastroenterology: Diagnosis and Therapy*, 2<sup>nd</sup> edition, Little, Brown & Co, Boston, New York Toronto and London, 1994, p. 16-22.

generation of new hemorrhage, pulmonary aspiration and serious cardiac arrhythmia, to medication reactions, vasovagal reactions and cardiac failure or hypotension, related to over- or underhydration of a susceptible patient during bowel preparation. Mortality ranges from 1/3000 to 1/16000.<sup>51</sup> In spite of the not insignificant risks associated with any medical procedure, and the unpleasant preparation of the body necessary prior to undergoing endoscopy, Hatoum's refusal to show pain, or discuss it as part of the work sets the project aside from much body- or endurance-based art of the 1960s or 70s, which has been read as a performance of gender.<sup>52</sup>

By contrast, Hatoum's (lack of) discourse around pain would align the project more closely with the work of Orlan who, around the same time that Hatoum was producing *Corps Étranger*, was undergoing the nine surgery-performances entitled *Images*, *New Images* and the *Reincarnation of Saint Orlan* (1990-1993). These surgery-performances were recorded and broadcast at institutions around the world, including the Centre Georges Pompidou, which had commissioned *Corps Étranger* for a major exhibition of Hatoum's work that year.<sup>53</sup> In so doing, such works represent a novel historical period in which there is a displacement of these technologies away from a clinical setting, traditionally associated with pain and illness, instead inserting these practices into an artistic realm, from which they might exercise some degree of critical autonomy and reflection on the construction of one's own body/image.<sup>54</sup>

---

<sup>51</sup> For an overview of risks/complications of all different endoscopies, see Eastwood & Avunduk p. 16-22.

<sup>52</sup> See the discussion by Hal Foster and Amelia Jones on body art, and the differences between male and female artists. For Foster, male artists 'assume an infantile position to mock the paternal law' as they enact 'oedipal naughtiness... wallowing in shit with the secret faith that the most defiled might reverse into the most sacred.' (Foster, Hal 'The Artifice of Abjection' in *The Return of the Real: The Avant-Garde at the End of the Century*, MIT Press, Cambridge, Mass., and London, 1996 p. 153). See also Jones, Amelia 'Dis/Playing the Phallus' in *Art History*, vol. 17, no. 4, 1994 (pp. 546-584) p. 546.

<sup>53</sup> For a discussion of this aspect of Orlan's work see Auslander, Philip *From Acting to Performance: Essays in Modernism and Postmodernism*, Routledge, London and New York, 1997, especially the chapter 'The Surgical Self: Body Alteration and Identity' (pp. 126-140).

<sup>54</sup> While this is not to suggest that art does ever truly have critical autonomy from the social or political sphere (for a discussion of this in relation to recent art practice see Martin, Stewart 'Critique of Relational Aesthetics' in *Third Text*, Vol. 21, No. 4, 2007 (pp. 368-86)) I am optimistic that it might at the least be in a position to mount some sort of a challenge to it.

As such, *Corps Étranger* perhaps encounters endoscopy as a technological intervention on the body (a means of rendering it visible in the service of diagnosis and, therefore, a ‘technology’ in the sense of producing a language about the body) rather than a purely medical one, thus permitting it to operate in distinct representational realms. Indeed, endoscopy is not inherently a medical practice even while it is certainly a technological one. This is perhaps well evidenced by the fact that, as the gastroenterologist C.C. Booth writes, ‘technology, even more than science, has been responsible for major developments in the practice of gastroenterology.’<sup>55</sup> Before the development of fiberoptic endoscopes in the 1960s, the only devices for seeing in to the body were rigid tubes called electrosopes, as designed by Bruening in the 1900s, which were difficult to pass into the stomach. In 1932, Schindler introduced a semi-flexible gastroscope, in which half of the instrument could be flexed as it was being put inside the body, but which had to be straightened once inside to accommodate the 50 or so lenses spaced along the shaft. Such an instrument necessitated a compliant patient (especially given that general anesthesia could not be used as the swallowing reflex needed to be in place) and light levels were so low that the duodenum could not be seen as miniature incandescent light bulbs were used for a light source. As the developer of the contemporary flexible fiberoptic endoscope Basil Hirschowitz writes, ‘gastroscopy with the Schindler instrument required good training, a good assistant and a patient with a compliant anatomy approaching that of a sword swallower.’<sup>56</sup> With the discovery and development of fiberoptics, therefore, a new endoscope could be developed that was not only flexible but also provided a separate bundle of glass fibers for illumination using light transmitted from an external high-intensity source. This high intensity source is what makes photography of all

---

<sup>55</sup> Booth, C. C. ‘What has Technology Done to Gastroenterology?’ in *The History of Gastroenterology: Essays on its Development and Accomplishments*, Chen, T. S. & Chen, P. S. eds., The Parthenon Publishing Group, New York and London, 1995 (pp. 107-113), p. 107.

<sup>56</sup> Hirschowitz, Basil I. ‘The Development and Application of Fiberoptic Endoscopy’ in *The History of Gastroenterology* (pp. 99-105) p. 99. Although it should be noted that contraindications for Upper gastrointestinal endoscopy (also called esophagogastroduodenoscopy – EGD) still include the fact that it ‘should not be performed if the patient is in shock, is combative, or is unwilling to cooperate.’ (Eastwood and Avunduk, p. 16). This is reminiscent of Kapsalis’ argument, who states that ‘in most cases the ideal patient is one who is compliant, passive and accepting...this is perhaps epitomized in some of the ‘model’ patients chosen by contemporary medical educators to teach students pelvic exams – cadavers, plastic dolls and anaesthetized women, prostitutes. (Kapsalis, p. 6).

kinds possible and permits endoscopy to be documented, as in *Corps Étranger*. The first fiberoptic endoscope, the ACMI 4990 Hirschowitz Gastroduodenal Fiberscope, was made commercially available in 1960, and continues to form the basic design of all endoscopes in use today.<sup>57</sup> The final technological development of note in this potted history of endoscopy is perhaps the transition from side-viewing to end-viewing instruments with the introduction of the Fiberoptic Flexible Oesophagoscope in 1963.<sup>58</sup> This innovation meant that the interior spaces could be better visualized:

The tubular lumen of organs such as the esophagus, duodenum, intestine, colon, bronchi, bile ducts and ureters could be inspected, and for guided intubation of tubular organs under direct vision. A washing device kept the end clean. The end view allowed the second advantage to be fully developed: an open channel allowing aspiration as well as the precise siting under direct visual control of many accessories of endoscopes... Endoscopy is, or should be, an extension of the physical examination, being to the eye what the stethoscope is to the ear. Beyond the immediate or primary visual diagnosis lie the interrelated applications of endoscopy to diagnosis, surveillance and therapy, and to education, photography, documentation and research.<sup>59</sup>

Aside from the clinical advantages described above, the development of the end-viewing endoscope also played in to contemporary epistemological values concerning sight and knowledge. As we can see, Hirschowitz perceived a direct analogy between what was seen by the end-viewing endoscope and the eye of the doctor using the technology (a technology of vision). This development is clearly understood as clinically beneficial. The endoscope is thus perceived as an extension of the eye of the doctor and current training in the field seems to

---

<sup>57</sup> For a fuller historical overview of the development of the fiberoptic endoscope see Hirschowitz, pp. 99-105.

<sup>58</sup> As announced in the *Lancet*, August 1963.

<sup>59</sup> Hirschowitz, pp. 103-105.



extend the analogy so that the technology is characterized as prosthesis of the body of the doctor:

At first, it is important to replace the twisted position of endoscope at passing the pyloric ring... The endoscope should then be advanced into the duodenal second portion carefully while confirming the lumen... A radial scan scope with forward oblique view consequently changes from the push condition to stretch condition, when the scanning begins, and therefore, the observation actually starts from deeper part of the duodenum... By looking one can see when to add an up-angle a little, to leave the position of the endoscope unchanged, furthermore to rotate the endoscope counter-clockwise. The endoscope will then become stretched, but the operator does not have to pull it up consciously... The transitive part from the pancreatic head to the body is demonstrated, as it seems to go away from the endoscope when you pull the endoscope more.<sup>60</sup>

As ‘an extension of the physical examination’, endoscopy actually entails a high degree of technical skill, of knowing how to introduce, pull back, twist and manipulate. It is not enough for the individual performing the examination to be able to interpret the images; they must also be highly skilled in the very production of those images. Thus, endoscopy becomes an embodied practice, in which knowledge about the body is produced through the process of *using* the technology, rather than simply through what the images subsequently show.

While shaped by the needs of clinical practice, it is the technological developments in endoscopy that determine the resultant forms of representation. What, it is worth considering, would be the difference had Hatoum used a side-viewing endoscope?<sup>61</sup> While we would perhaps have a better sense of the pink,

---

<sup>60</sup> Extract from Hirooka, Yoshiki et. al., ‘Standardization of Endoscopic Ultrasonography Procedures for the Pancreas Using Radial and Convex Methods’ in *Digestive Endoscopy*, Vol. 14, 2002 (pp. 34-39), pp. 34-35.

<sup>61</sup> It should be noted that side-viewing endoscopes are still used, particularly in cases where forward-viewing ones cannot adequately visualize behind mucosal folds or bends in the bowel.

undulating organ walls, we would not perceive so clearly the relationship between the cylindrical technology and the tubular lumen; between the eye of the spectator – be it doctor, gallery visitor or patient (since endoscopy allows for self-examination) – and the black hole in front of us; and between the tunnel vision of the images and the narrow field of enquiry (the ‘narrow gaze’) of the clinical eye. Thus, in *Corps Étranger* we recognize a series of highly complex relationships between the results of technological development and several different bodies: the individual undergoing the procedure, the one performing it, and those who might be watching it. The nature of the images thus opens up such relationships to critical reflection.

The seeming equivalence between the eye of the doctor and the eye of the endoscope is, however, highly mediated. Endoscopes are adapted to video monitoring systems and, as a result, the endoscopist conducts the examination by viewing the video screen rather than looking directly through the fibreoptic system of the endoscope. This allows not only for the recording and replaying of images, but also enables a number of people other than the primary endoscopist to witness the investigation, including the patient, if desired, thus allowing for a degree of self-observation usually not viable during a clinical procedure. Hatoum was thus able to watch and direct the film, in a process of self-monitoring, much like Kate Craig in *Delicate Issue*.

As such, the endoscope actually produces several levels of disconnection between the body under observation and the viewing subject. Highly mediated through computer screens and fibreoptics, endoscopy in fact does not represent such a simple one-to-one relation between the body and its representation, as it might at first appear. Unlike diagnostic- or nuclear-imaging, which is the field that covers technologies that are ways of *visualizing* rather than *seeing* the body (since radiology-based images are numeric data sets that have been converted

---

See Frimberger, E. S. et. al., ‘Colonoscopy and Polypectomy with a Side-Viewing Endoscope’, in *Endoscopy*, Vol. 39, No. 5, 2007 (pp. 462-465). Of further note is that when using a side-viewing endoscope for endoscopic retrograde cholangiopancreatography (ERCP), a procedure to visualize the bile ducts and pancreatic duct on fluoroscopy, an X-ray technologist is also an integrated part of the exam, since the endoscope cannot see inside the duct system. As such, an ERCP is performed by placing a camera down to the bile duct system, before injecting contrast in the duct, and taking X-rays.

into visual representations rather than a photograph of the actual *thing*), endoscopy is a branch of medical imaging that purports to show the interior spaces of the body. As such, it is considered to bear the same relationship to the object as photography, and thus seems to escape much of the critical analysis focused on practices such as fMRI.<sup>62</sup> Such studies, by focusing on the problematic relationship between the object and the image in diagnostic imaging, often neglect the problematic relationship between the thing and the image in non-radiology based imaging such as endoscopy.

In projects such as *Don't Smile, You're on Camera* and *Look No Body!*, which used technology to apparently undress the bodies of her audience or switch their genders, Hatoum appears to have set up just such an equivalence between two vastly different systems of representation: X-rays and photography. By using them interchangeably to purportedly represent one individual, and playing on the rhetoric of the video camera as 'live', both are intended as depictions of the actual body and not as numeric data about that body converted into visual representation. And yet, Hatoum actively and consciously rejects any claim to a faithful representation of the body (*hoc est enim corpus meum*) by scrambling the appearance of the subject on the video monitor, for example by switching the subject's gender. The epistemological status of the X-ray image is therefore ultimately challenged since we are made to realize that they do not belong to that body at all: the image referent has been destabilized. By using such technologies together, in order to make the body seem *étranger*, these earlier projects began to probe the way in which technology effects an uneasy relation between body and image that is more fully explored in *Corps Étranger*.

### ***Strange bodies***

The very title of the work, *Corps Étranger*, refers to a slippage in the understanding of what it means for something to be 'strange', alluding to a body

---

<sup>62</sup> See Joyce, Kelly 'Appealing Images: MRI and the Production of Authoritative Knowledge' in *Social Studies of Science*, Vol. 35, No. 3, June 2005 (pp. 437-462) especially p. 440; Joyce, Kelly *Magnetic Appeal: MRI and the Myth of Transparency*, Cornell University Press, Ithaca and London, 2008 especially p. 51; and Prasad, Amrit 'Making Images/Making Bodies: Visibilising and Disciplining through MRI' in *Science, Technology and Human Values*, Vol. 30, No. 2, Spring 2005 (pp. 291-316) especially p. 296.

that is simultaneously ‘foreign’ (which could also be an ‘object’ in the sense of a ‘foreign body’). This corpus refers to a number of objects (technological and organic) and is always about both familiarity and unfamiliarity simultaneously. As Ursula Panhaus-Buhler writes:

Once the camera-eye – itself a *corps étranger* – has entered the body, another *corps étranger* – the spectator – becomes an uneasy witness, caught on the narrow rim of a deepening crevice as though the floor itself had been shifted to the upper edge, and drawn into the circular projection of images of a body that, even as a *corps étranger*, is a physically tangible reflection of our own lives.<sup>63</sup>

It is precisely that layering of different objects and bodies that might stand in for the ‘foreign body’, which is echoed in Hatoum’s own writings:

I called it *Corps Étranger* because the camera is in a sense this alien device introduced from the outside. Also it is about how we are closest to our own body, and yet it is a foreign territory which could, for instance, be consumed with disease long before we become aware of it. The ‘foreign body’ also refers literally to the body of a foreigner.<sup>64</sup>

Furthermore, when viewing the work, the overwhelming sense is of displacement. What are we looking at? Is that really inside my body also? The visual representation of the body as strange and unsettling in *Corps Étranger* underwrites phenomenological accounts of the body as distant from us, and the conceptual distance between body and image as highly mediated by various technologies of image capture and replay. There are few – if any – visual trajectories into which such a representation of the body might fall. A body so

---

<sup>63</sup> Panhaus-Buhler, Ursula ‘Mona Hatoum: Being Involved’ available on the White Cube website: <http://www.whitecube.com/artists/hatoum/texts/99/>.

<sup>64</sup> ‘Mona Hatoum: interview with Janine Antoni’. I would note however, that when she refers to ‘the body of a foreigner’ perhaps Hatoum doesn’t necessarily mean herself, as earlier in this interview she strongly rejects the endless interest in her cultural or racial identity and the homogenization of terms such as Lebanese, Palestinian and Arabic.

pink, fleshy, open and wet is beyond the remit of ordinary visual experience of the body as very few individuals have experience of viewing the internal spaces of the body. As the outer layers of signification (the face, the hair, the skin) are largely rejected in favour of deeper recesses, *Corps Étranger* presents a body at the limits of representation, at a point where the artistic might collapse in to the scientific, and vice-versa.

In the installation, as if encased in a dark womb/room<sup>65</sup>, we are surrounded by the rushing noise of a heartbeat. At our feet we see the pulsation of the tubular lumen, the pinkness of the flesh, the sloshing of the bile. That the installation environment resembles the white-plastic casing of fMRI or CT machines perhaps implies that it is our body being scanned.<sup>66</sup> Both the images on the screen and the format of the projection thus invite associations with the body and an embodied encounter with the work.<sup>67</sup> Yet, at the heart of *Corps Étranger* is actually a displacement between the body and the image in which, by virtue of laying claim to the body so openly, the failure of the work to sufficiently represent it is laid bare. That the body seems to elude representation is here magnified by the visual appeals to it, emphasizing the troublesome gap between experience of our own bodies and the images we apprehend in the installation, underlining the estrangement we feel when we look at them. In *Corps Étranger*, there is not a simple reflection or doubling of the body of the spectator in the body on the screen, but instead a complex and shifting dialogue between one and the other is set up. As the circles and cycles give way to one another – the tube, the screen, the eye, the lumen – there is an interplay between bodies.

---

<sup>65</sup> From May 2009 through February 2011 the work was on display at the *Centre Georges Pompidou* as part of the exhibition 'Elles@CentrePompidou: Artistes Femmes dans les Collections du Musée National d'Art Moderne'. It is installed in a section entitled 'A room of one's own/Cellules d'habitation' drawing on the historical associations of the feminine with the domestic and the notions of domesticity or interiority associated with the womb.

<sup>66</sup> The tube of the installation environment also mimics the cylindrical structure of the bodily paths traveled by the endoscope. See Lajer-Burcharth, Ewa 'Real Bodies: Video in the 1990s' in *Art History* Vol. 20, No. 2, June 1997 (pp. 185-213) p. 200.

<sup>67</sup> For a discussion of the embodied encounter set up in this work through touch see Ross, Christine 'To Touch the Other: a Story of Corpo-Electronic Surfaces' in *The Feminism and Visual Culture Reader*, Jones, A, ed., Routledge, London and New York, 2003 (pp. 514-19). However, in opposition to Ross, it seems to me almost as if we are not meant to touch the work, since there is a narrow ledge that runs around the edge of the projection that actually forces the spectator up against the wall, rather than encourage them to stand on the screen.

Hatoum's body is simply not a reflection of ours; it is a reflection of the absence of our bodies that we paradoxically (don't) experience.

It is precisely this disconnected relationship between the body and its representation that is at the heart of Jean-Luc Nancy's text *Corpus* (1992). This disconnection has its origins in Christianity, for Nancy, with the *hoc est enim corpus meum*. The Eucharist, said over bread and wine to invoke the body of Christ (either literally or symbolically) produces a primary splitting between the body and the attempt to represent it. From the Eucharist, he writes, subsequently comes numerous variants of this phrase: 'ego sum, the nude in painting, the Social Contract, engravings by Vesalius or Leonardo...*Hoc est enim corpus meum* can generate the whole corpus of a general encyclopedia of western sciences, arts and ideas.'<sup>68</sup>

Following from Nancy, therefore, I contend that scientific – and especially medical – images become a part of this trajectory since the very mode of representation seems to engender a splitting between body and image. *Corps Étranger* insists on the presence of the body by appealing to the certitude granted by the sight and light of western medical epistemology. Yet it is precisely in this mode of representing the body – using the technologies of the clinical eye – that the body becomes more elusive, due to the levels of technological mediation that it has undergone. It is a body, but as seen through fibreoptics, a computer screen, a projector, a gallery installation, and several pairs of human eyes. The body, therefore, always eludes its own representation since *hoc est enim corpus meum*, is countered by an anxiety of absence, a *this* that is insisted upon so incessantly that it necessarily entails its own disappearance:

But we certainly feel some formidable anxiety: 'here it is' is in fact not so sure; we have to seek assurance for it. That *the thing itself* would be there isn't certain. *Here*, where we are, amounts to nothing more, perhaps, than a reflection, or floating

---

<sup>68</sup> Nancy, Jean-Luc *Corpus*, Rand, R. A. trans., Fordham University Press, New York, 2008 p. 5.

shadows... Sensory certitude, as soon as it is touched, turns into chaos, a storm where all senses run wild... Body is certitude shattered and blown to bits. Nothings more proper, nothings more foreign to our old world... The anxiety, the desire to see, touch and eat the body of God, to *be* that body and *be nothing but that*, forms the principle of western (un)reason. That's why the body, bodily, *never happens, least of all when it's named and convoked*. For us, the body is always sacrificed: Eucharist.<sup>69</sup>

Far from the corporeal materiality at the heart of phenomenological accounts of embodiment, *Corps Étranger* demonstrates that the experience of our bodies is ultimately structured around estrangement and absence. Nancy, writing during a period of convalescence after receiving a heart transplant, argued that the body/self should be conceived in terms of otherness since it is always a stranger or intruder upon itself (*l'intrus*<sup>70</sup>).<sup>71</sup> The body is always Other, always strange, always foreign (*étranges corps étrangers*<sup>72</sup>). In fact, 'the body', he writes, 'might serve as a name for the Stranger.'<sup>73</sup> As such, the title *Corps Étranger* invokes a kind of textual looping as the strangeness of the body becomes folded back onto itself: the term '*corpus*' might not need '*étranger*' if the two already share semiotic content.

*Corps Étrangers, étranges corps étrangers*, these words establish the interplay between self/other and inside/outside that structures the scientific – and more

---

<sup>69</sup> Nancy, p. 5.

<sup>70</sup> See Nancy's essay 'L'Intrus' in *Corpus* (pp. 161-170), in which Nancy's discussion of his transplanted heart reveals that the relationship between stranger/self is always premised on notions of sickness/health and inside/outside.

<sup>71</sup> He writes, 'I'll never know my body, never know myself as a body *right there* where corpus ego is an unqualified certainty. By contrast, I'll always know others as bodies. *An other is a body* because only *a body is an other*. It has this nose, that skin colour, this texture, that size, this fold, tightness. It weighs this weight. It smells that way. Why is this body thus, and not otherwise? *Because it is other* – and alterity consists in being-*thus*, in being the thus and thus and thus of *this* body, exposed all the way into its extremities. The inexhaustible corpus of a body's features.' (Nancy, p. 31).

<sup>72</sup> 'Étranges corps étrangers' is the title of a section of *Corpus*, which is translated as 'strange foreign bodies.' See Nancy, p. 7.

<sup>73</sup> Nancy, p. 8.

specifically medical – gaze which is played out in the work.<sup>74</sup> Indeed, the term ‘strange’ has a notable (or strange) relationship to the extraneous, external, exterior. The *Oxford English Dictionary* explicates the term ‘extraneous’ with reference to the ‘strange’, tying them at their etymological origins:

[f. L. *extrne-us* external (f. *extr* outside) + -OUS. (Cf. *strange*, ad. OF. *estrange*:L. *extrneus*.)]

1. a. Of external origin; introduced or added from without; foreign to the object in which it is contained, or to which it is attached.

b. Of an action, etc.: Proceeding from without.

c. nonce-use. Brought from abroad, ‘exotic’.

2. a. External to, not comprised in or forming part of, the object under consideration.

b. Of a person: Not belonging to a specified community, country, or family.

c. Foreign in nature, having nothing in common. Obs. rare.<sup>75</sup>

‘*Foreign to the object in which it is contained*’, the strange thus plays the role of something both self and not self: incorporated but under threat of expulsion, excision, surgical removal. The interior spaces, organs and fluids of the body are ‘strange’, part of me yet alien to me. Simultaneously part of us and foreign to us (both *within* and *without*), the interior body is *extraneous* in this dialectical sense of the strange. This looping is undoubtedly figured in *Corps Étranger* by the deliberate confusion over whose body is intended to be perceived as strange, since the strangeness of Hatoum’s body/image is reflected back onto that of the spectator, as we are made to realize that such a strange space exists within us also. Especially when we stand over the image as if the camera were actually inside of us too. Nancy writes, ‘my self becomes my intruder... The intruder is

---

<sup>74</sup> Of note is that *Corps Étranger* was commissioned by the *Centre Georges Pompidou*, which itself is a building that has been turned ‘inside out’ as the working parts of the building (pipes, ducts etc) are external.

<sup>75</sup> Entry for ‘Extraneous’ in *The Oxford English Dictionary*, 2<sup>nd</sup> Edition 1989, Oxford University Press (OED Online: <http://dictionary.oed.com/cgi/entry/50081045>)



nothing but myself and man himself.<sup>76</sup> The title *Corps Étranger* thus refers to the layering of strange foreign bodies in the work, in which several objects might be perceived as the stranger: the spectator, Hatoum, the endoscope, and the clinical gaze. That the body is strange, for Nancy, is by virtue of it being diaphanous, neither inside nor outside, a corpus which defies interpretation, touch, reading:

Bodies aren't some kind of fullness or filled space (space is filled everywhere): they are *open* space, implying, in some sense, a space more properly spacious than spatial, what could also be called a place. Bodies are places of existence, and nothing exists without a place, a there, a here, a here is, for a this. The body-place isn't full or empty, since it doesn't have an outside or an inside, any more than it has parts, a totality, functions, or finality. Its acephalic and aphallic in every sense, as it were. Yet it is a skin, variously folded, refolded, unfolded, multiplied, invaginated, exogastrulated, orificed, evasive, invaded, stretched, relaxed, excited, distressed, tied, untied.<sup>77</sup>

While Nancy characterizes one's relationship with one's body as an 'intruder' – with the association of penetration that might fit all too neatly with models of the endoscope as an appendage of a phallic clinical gaze<sup>78</sup> – perhaps *Corps Étranger* in fact shows that such a relationship is based on a more nuanced system of bodies looking and being looked at, in which the strange is simultaneously both internal *and* extraneous. The body is perhaps not simply re-integrated into its representation in *Corps Étranger* but rather made fundamentally aware of the split between the two. The use of endoscopy in *Corps Étranger* thus serves to demonstrate the mechanisms by which technologies of seeing the body become internalized so that the eye of the viewer becomes co-extensive with the eye of the doctor, the endoscope, and the artist producing the film, thus reflecting that gaze back onto oneself.

---

<sup>76</sup> Nancy, pp. 168-170.

<sup>77</sup> Nancy, p. 31.

<sup>78</sup> See Creissels, Ann 'Foreign Bodies: the Spectator's Metamorphoses' in *Cahiers du Musée National d'Art Moderne*, No. 80, 2002 (pp. 41-55).

This split between the body and its self/image is indicative of a wider sense in which the body is *always* underwritten by absence. In his important early work, *The Absent Body* (1990), Drew Leder argues that core phenomenological experiences are, in fact, absences of experience. Examples he cites include: the invisibility of the eye within its own visual field<sup>79</sup>; the diaphanous embodiment of language; the inaccessibility of the visceral organs; the embryonic body prior to birth; the autonomous rhythms of breathing and circulation; the body of sleep; and the corpse. Following from my work on Schneemann in relation to Jacques Derrida and Nancy in chapter one, I would also add touching to this list, as touch always simultaneously entails a *not touching*. Despite these fundamental experiences of absence, theories are generally absent in the core literature on phenomenology. For example, Leder has noted that Merleau-Ponty, one of the most influential writers on embodiment and phenomenology, has entirely neglected to deal with these examples of ‘corporeal disappearance’ in a way that inscribes his work into the histories of Cartesian dualism, where an emphasis on the ‘higher’ regions of the body forgets that it is ‘fleshed out with bone and guts’.<sup>80</sup> Since it structures so much of our ontology, the lack of engagement with the phenomenology of absence has arguably left our understanding of the body/self somewhat incomplete, and enabled phenomenological theory to perpetuate longstanding (but problematic) philosophical questions about personal identity. Rather, it might be more productive to recognise a phenomenology that is suspended between presence and absence: asserting embodiment even while our experience of it is fleeting or diaphanous.<sup>81</sup>

---

<sup>79</sup> As also touched upon by Jacques Derrida in *On Touching – Jean-Luc Nancy*, Irizarry, C. trans., Stanford University Press, Stanford, California, 2005, p. 2. For a discussion of this idea see chapter one.

<sup>80</sup> Leder, Drew *The Absent Body*, University of Chicago Press, Chicago and London, 1990 p. 36. For further discussion of the link with Cartesian dualism see also p. 3.

<sup>81</sup> It is perhaps worth noting Leder’s point that ‘in his discussion of lived embodiment, Merleau-Ponty makes use of the term *corps propre* (ones own body) in *Phenomenology of Perception*, which might suggest a privileging of the first person point of view. However, as Merleau-Ponty emphasizes, especially in his later work, it is intrinsic to lived embodiment to be both subject and an object available to an external gaze.’ (Leder, p. 6). For a further discussion of these ideas see Merleau-Ponty, *Phenomenology of Perception*, Smith, C. trans., Routledge and Kegan Paul, London and Henley, 1962 (pp. 346-65); and Merleau-Ponty *The Visible and the Invisible*, Lefort, C. ed., Lingis, A. trans., Northwestern University Press, Evanston Illinois, 1968 (pp. 130-55).

Although Leder is concerned with theories of absence in non-visual categories of experience, such as death or language, he acknowledges that it is the act of seeing that primarily forms the basis for this absence, as interior spaces of the body recede from (visual) perception. Thus, while both models are clearly concerned with vision, Nancy's argument is concerned with representation and Leder's is concerned with looking.<sup>82</sup> Therefore, the use of endoscopy in *Corps Étranger* is crucial, since the exposure of the internal spaces of the body reinforces the bewildering sense of their disappearance from everyday experience. Hatoum's work suggests that both visibility and invisibility pose a problem: the inability to see the internal organs in a quotidian context makes them strange, but they paradoxically also become strange the moment they are made visible.

At the beginning of this chapter, I recounted the experiment concerning a study group's (in)ability to recognize photographs of their own hands, and posed the question about how further complicated this might be if we considered parts of our anatomy not normally visible to us. In the case of our internal organs, the absence that we experience in relation to the parts of our body is, in fact, so total – as a result of spatial ambiguity and the spatio-temporal discontinuity brought about by a lack of nerve endings – that we do not even *feel* it. We do not notice the emptiness, which would then make the absence some kind of thing or presence. Instead, the very absence that we *don't* experience cements the logic of its own disappearance from critical inquiry and reflection. As Leder writes, 'the absence of the liver parenchyma is so total that few would ever realize or remark upon it.'<sup>83</sup>

What is particularly important for me in looking at the work of Leder in relation to Hatoum, however, is his model of *dys*-appearance, which foregrounds my discussion of the overlapping discourses of visibility and pathology. In Leder's

---

<sup>82</sup> For a discussion of Nancy's ideas in relation to Leder's, see Shildrick, Margrit 'Contesting Normative Embodiment: Some Reflections on the Psycho-Social Significance of Heart-Transplant Surgery' in *Perspectives: International Postgraduate Journal of Philosophy*, Vol. 1 *Inaugural Issue: Body and Embodiment*, 2008 (pp. 12-22) especially pp. 19-20.

<sup>83</sup> Leder, p. 43.

concept of dys-appearance, there is a complex relationship between the healthy and the invisible and the unhealthy and the visible. The disappearance of the body, which characterizes ordinary or 'healthy' functioning (in which there is an absence of vision/awareness), occasionally gives way to what he calls *dys*-appearance. That is, the appearance or an awareness of the interior organs or spaces of our body only when something is wrong. They become visible to us when they are in a *dys* state, from the Greek meaning 'bad', 'ill' or 'hard'. This neologism both differs from the Latin *dis*appearance (meaning 'away', 'apart', 'asunder') while simultaneously acknowledging it. It is both homonym and antonym. What *dys*-appearance proposes is that we are only made aware of our daily experiences of absence by virtue of something being in a dysfunctional state. This state can occur through disease (pathology of the organs) as well as at other times of corporeal limit such as hunger, thirst or tiredness: 'it is precisely because the normal and healthy body largely disappears that direct experience of the body is skewed towards times of dysfunction.'<sup>84</sup> What is crucial in this formulation is that the malfunctioning or diseased body part or organ not only begins to function independently as a 'part', outside of its customary function in relation to the 'whole' (cf. the discussion of the part-body at the beginning of this chapter), but it also makes its presence known by becoming manifest or *visible*.<sup>85</sup> This relationship between pathology and visibility takes us back to our discussion of the (in)visibility of the vagina, situating it as a social construction within this notion of *dys*-appearance.

This question of visibility and illness also resonates with the work of Nancy, who has written, 'Up to this point, it was strange by virtue of not being even perceptible. From now on it fails, and this strangeness binds me to myself. 'I am, because I am ill.'<sup>86</sup> The body is thus perpetually caught in a cycle of being strange: either it is strange because it recedes from our experience (it is foreign to us) or it is strange because it has become visible to us by transforming itself into a threat to our health. It is notable that Hatoum's work was being developed

---

<sup>84</sup> Leder, p. 86.

<sup>85</sup> See also Grosz, who writes that 'in the case of illness or pain, the effected zones of the body become enlarged and magnified in the body image...illness engorges specific regions of the body image.' (Grosz, p. 76).

<sup>86</sup> Nancy, p. 163.

around the same time that both Leder and Nancy were publishing these texts, since it points toward a particular theorization of the body – and an anxiety – in which medicine and pathology (as technologies of vision) were having a profound effect on ontology. Hatoum’s work certainly plays on the perpetual bind perceived by these writers, in which the body is always strange, by demonstrating that the body is strange both when it is in *and* out of sight. *Corps Étranger* expands and problematises Leder and Nancy’s formulation that the visibility/experience of the interior of the body is founded on pathology (i.e. we only see it when it is abnormal) by giving visibility to an otherwise healthy body.

So, what of Hatoum’s direct exposure of the viscera of her healthy body? Usually, there are no periods when the interior spaces of the body are shown outside of pathology or crisis. As such, the very appearance of the internal viscera signifies abnormality.<sup>87</sup> Something is wrong so it must be seen, but also that something is seen signifies that something must be wrong. In most visual cultures – artistic, medical or otherwise – the internal organs are unlikely to be exposed except at times of extreme threat to the body. *Corps Étranger* thus draws on these associations so as to consider how this attention to, or focus on, the abnormal – ‘that which implies or threatens the death of the person’ – characterizes Western clinical medicine as a whole, and medical imaging in particular. Indeed, the work takes on particular significance in the context of the positioning of the female body in relation to this system of medical epistemology, since the only time at which a healthy body is brought into the clinician’s purview is when the body has become *culturally* coded as deviant, as opposed to *biologically* pathological. Such states refer almost totally to women since menstruation, pregnancy, menopause and childbirth are all considered pathological states<sup>88</sup> (or perhaps ‘hysterical’ is a more apt term, given the relationship of these conditions to the uterus).

---

<sup>87</sup> Leder, p. 44.

<sup>88</sup> See Wertz, Richard W. & Wertz, Dorothy C. *Lying In: A History of Childbirth in America*, Schocken Books, New York, 1979; and Young, Iris Marion ‘Pregnant Embodiment: Subjectivity And alienation’ in *The Journal of Medicine and Philosophy*, Vol. 9, No. 1, 1984 (pp. 45-62).

Foucault's foundational work *The Birth of the Clinic: An Archaeology of Medical Perception* (1963), which continues to be at the core of critical studies of various medical institutions such as imaging, training, and surgery, first demonstrated the link between Western anatomy practice and pathology:

Pathological anatomy was given the curious privilege of bringing to knowledge, at its final stage, the first principles of its positivity... The day it was admitted that lesions explained symptoms, and that the clinic was founded on pathological anatomy, it became necessary to invoke a transfigured history, in which the opening up of corpses, at least in the name of scientific requirements, preceded a finally positive observation of patients; the need to know the dead must already have existed when the concern to understand the living appeared.<sup>89</sup>

This key passage describes three important developments in western clinical medicine: that causes of death might give us knowledge about disease; that the attainment of this knowledge is bound up with a scopic drive characterized by the enlightenment belief that to see is to know<sup>90</sup>; and that the whole purpose of such an opening up is to look for something deviant from the normal, so that disease, illness and sickness have subsequently become tied to abnormal physiology or pathology.<sup>91</sup> For Foucault, vision has thus historically become the most privileged way of representing the body (both healthy and diseased), which is well demonstrated by the fact that diagnostic imaging technologies such as MRI or ultrasound operate by transforming numeric data sets into a visual representation in order better to read and interpret them.

---

<sup>89</sup> Foucault, Michel *Birth of the Clinic: An Archaeology of Medical Perception*, Sheridan, A. M. trans., Routledge, London and New York, 2003 pp. 152-154.

<sup>90</sup> For a fascinating example of the way in which such rhetoric continues to be employed in relation to endoscopy see Riegler, F. M. 'Light, Echnaton and modern medical science' in *European Surgery*, Vol. 41, No. 6, 2009 (pp. 247-48).

<sup>91</sup> Well cited examples of the repercussions of this is the way in which mental health problems and 'abnormal' sexualities were/are brought under the domain of pathology, since it was/is believed that there must be an organic reason for the problem. For an excellent discussion of this in relation to the definition of terms like 'disease', 'sickness' and 'health' see Boorse, Christopher 'Health as a theoretical concept' in *Philosophy of Science*, Vol. 44, No. 4, 1977 (pp. 542-573).

While numerous scholars have focused on the seminal shift in Western anatomy from the live to the dead body<sup>92</sup>, relatively few have considered Foucault's link between pathology and illness and the implications for representations of healthy bodies in a medical context. The focus of the medical gaze is always on the sick rather than the healthy, even when representations of the normal might have epistemological value, especially in disciplines like gynecology where the range of what counts as normal is incredibly broad. For example, in *Public Privates*, Kapsalis has discussed representations of the female reproductive system in a key medical textbook – *Danforth's Obstetrics and Gynecology* – noting that in the entire volume there is not a single representation of a 'healthy' or 'normal' cervix or genitalia. She writes, 'If only abnormal or pathological anatomy is shown, it must be assumed that practitioners and students understand the wide range of healthy and normal anatomy that exists.'<sup>93</sup> As with Leder's model of dys-appearance, the clinical gaze is thus premised on the assumption that visibility is necessarily entwined with pathology. What this results in is a gaze that is blind to the healthy, and sees only the deviant. As Foucault writes, 'the clinical gaze was not bound by the narrow grid of structure (form, arrangement, number, size) but that could and should grasp colours, variations, tiny anomalies, always receptive to the deviant.'<sup>94</sup>

In *Corps Étranger*, in contrast to the traditional medical model, the gaze of the *oeil clinique*<sup>95</sup> has here been trained not on a sick body but on a healthy one. I am not suggesting, however, that Hatoum's work ought to be read in a clinical context, as if it were simply positioning itself as an example of healthy anatomy in the midst of a sea of images of diseased bodies. But rather that, by using medical equipment within an artistic context, it begins to question the visibility of certain types of bodies in certain representational contexts. By removing the conventional, instrumental function, the technology also renders both itself and

---

<sup>92</sup> For example see Leder, Drew 'A Tale of Two Bodies: the Cartesian Corpse and the Lived Body' in Leder ed., (pp. 17-35); Catherine Waldby, 'The Visible Human Project: Data into Flesh, Flesh into Data' in Marchessault and Sawhuck ed., (pp. 24-38); Braidotti pp. 57-73; Prasad, pp. 291-316.

<sup>93</sup> Kapsalis, p. 85.

<sup>94</sup> Foucault, 2003, p. 109.

<sup>95</sup> This is how the endoscope is described in the Centre Georges Pompidou's 'Direction de la communication' for the 1994 Hatoum retrospective. Pompidou archive DP1997 W102/8.

the body visible for non-diagnostic purposes. It makes us re-frame the question of the 'pathological' female body in gynecology, the 'healthy' female body in pornography (noting, however, that at times these different states would not be obvious because of the clinic's habitual rejection of representations of healthy anatomy), and the 'sick' body in Body Art or extreme performance practices. Here I am using the term 'sick' with the inflexion of deviance rather than simply disease, a label frequently applied to artists whose practice is founded on endurance-based performance, bodily modification or subversive practices. In these cases, bodies become deemed pathological by virtue of the fact that they choose to display bodily experiences outside the range considered normal for the (artistic) context.

The logic of the medical gaze which Hatoum's endoscope here troubles is therefore an epistemology which decrees that the visible and the intelligible are interconnected: that to see is to know, since to see a body part or organ meant that it could be marked healthy, diseased or normal, but also that one has to know in order to be able to see. That the internal viscera are usually only exposed at times of extreme violence or pathology, means that the images in *Corps Étranger* become devoid of their usual signification. In this way, there is a sense in which the continual, looping activity of the endoscope as it travels throughout every possible orifice of the body, is a failure of a certain type of vision. The clinical gaze is frustrated in its search for pathology and its mode of 'seeing' is laid bare.

When the work was exhibited at the Tate in the show *Rites of Passage: Art for the End of the Century* (1995), a gastroenterologist reviewed it for the *BMJ*. Even though Hatoum's body was ostensibly 'normal' at the time of the procedure, by virtue of the use of endoscopy it warranted a review in medical literature, and became pathologised and incorporated into this rubric. The gastroenterologist chose not to consider the way in which medical technologies might have been used in new representational contexts, but instead approached the images as if they were awaiting a diagnosis. Reading the gastroenterologist's description, we encounter the frustration of the clinical gaze



when confronted with healthy anatomy, as if attempting to make up for the lack of pathology perceived by the endoscope:

Two *woman-size slots* [my emphasis] allow the visitor to enter and stand against the black, cloth lined, inside wall around the perimeter of the floor, which is a screen for a continuous video, of the artist's alimentary tract. Upper gastrointestinal endoscopy began with filled teeth, then a normal tongue, uvula, oesophagus, stomach, and duodenum. The pylorus was deformed, both on entry and withdrawal, suggesting previous juxtapyloric inflammation. Colonoscopy gave extended views of the perineal hair and anus with normal rectum and colon in a well-prepared bowel. Heart sounds were much amplified, but blurred: I thought I heard a pansystolic murmur.<sup>96</sup>

The only way in which the gastroenterologist was able to approach the work was in the context of pathology: the images signified to him only normality or abnormality.<sup>97</sup> That the endoscope is equipped with tools to cut and cauterize abnormal sections of the gastrointestinal tract suggests that it is both designed and used with the expectation of encountering pathology: it is both diagnostic and therapeutic. Indeed, the endoscope has a rather full complement of accessories to perform various functions: aspiration, biopsy, brush cytology, cannulation (ERCP, Manometry), catheterisation (feeding, nasobiliary drainage), cauterisation (snare polypectomy, sphincterectomy, coagulation, tumour fulguration), dilation, gastronomy, guide wires, heater probe, coagulation, laser (coagulation, tumour fulguration), needle (variceal sclerosis, injection of alcohol/hemostasis, injection of dye), scissors/suture cutting.<sup>98</sup>

Hatoum's use of the endoscope in *Corps Étranger* thus doubly undermines the original function of the technology, putting it to new and novel uses. Hatoum's

---

<sup>96</sup> Baron, Jeremy Hugh 'Passing Fair' in *BMJ*, Vol. 311, August 1995 p. 517.

<sup>97</sup> The emphasis on the filled teeth is particularly interesting since it is both legible to a wider audience and is also one of those peculiar conditions which results from pathology but is not classified as disease or sickness. See Boorse, p. 566.

<sup>98</sup> Hirschowitz, p. 104.

body is not diseased, and the interior spaces exhibit no pathology; there is nothing for the endoscope to ‘see’ and nothing for it to treat. Thus, Hatoum here abstracts the body from the pathological, challenging the operation of medical imaging in a system of representation based on the deviant. By removing pathology from the work, *Corps Étranger* forces us to consider several key questions concerning how these types of images might then ‘operate’ (with the inflexion of functioning *and* surgical intervention) outside of their usual representational context? Without pathology, as the clinical gaze would have us believe, are the images even visible or legible, and what is the nature of the relationship between the visible and the legible within medical epistemology?

### ***Textual bodies***

Medical representations (whether they be scans, photographs, or diagrams) are often supplemented with accompanying text or captions, producing an intricate relationship between word and image. In her study of gynecological textbooks, Kapsalis considers the way in which text and image are often used alongside one another in clinical practice. Many of the images, she notes, have a complex relationship to what they show. For example, pathology is frequently not visible to the naked eye, and as such the captions are necessary in order to act as a sort of ‘fix or anchor’.<sup>99</sup> Clinical representations of the body thus rely on a complex interplay of text, photography and schematic renderings in order to provide a more complete ‘picture’ since any one of these ways of representing the raw data alone seems to have limited epistemological value and, indeed, medical textbooks often now use a combination of all three, superimposed on one another.<sup>100</sup>

Furthermore, the way that such images are used transforms them into textual representations. For Foucault, the focus on the pathological in the eighteenth century brought about an epistemic shift: to call a part or an organ diseased or healthy gave the body a syntax, a grammar which could be used to talk about it.

---

<sup>99</sup> Kapsalis, p. 86.

<sup>100</sup> For an example of this practice see Baggish & Karram, *Atlas of Pelvic Anatomy and Gynaecological Surgery*, 2<sup>nd</sup> edition, Saunders, 2006.

The introduction of pathology was thus a technology of representation that was inherently linked to the formation of the body as a legible system, in which parts signify and diseases are constructed.<sup>101</sup> Disease subsequently becomes a system of semiotics, and the body a hermeneutics, decipherable only to the clinical gaze. Under the rubric of pathology, the body thus becomes a text, legible because it is healthy or abnormal and only in those terms. As Leder argues, ‘the physician is a hermeneut, reading the text of the surface body for what it has to say about corporeal depths.’<sup>102</sup> Through the discourse of normal/abnormal – the language of pathology – the body makes itself visible and appears to the scrutinizing gaze of various systems: medical, desiring and otherwise.

What is arguably peculiar about the clinical gaze is that it generally divides up a body that has *already* been converted into non-corporeal matter. Prior to observation by the clinical gaze, the subject will already have become part of a system that tends to understand the body as separate from representation. This is because the body will be figured as a statistical model, a subject of analysis, that has been re-constituted in facts and figures, and comprised of charts, graphs and tables.<sup>103</sup> In ‘Drawing Things Together’ (1990), Bruno Latour has argued that this movement from living object to visual text about the object characterizes the entire scientific enterprise, and that the purpose of science is to transform natural objects into ‘standardized trace representations’ such as graphs, tables,

---

<sup>101</sup> Foucault, 2003, p. xxi and p. 111. For an extended discussion of the notion of the clinical gaze, see the chapters ‘Signs and Cases’ (pp. 107-130) and ‘Seeing and Knowing’ (pp. 131-151).

<sup>102</sup> Leder, 1990, p. 51. For a discussion of medicine as a hermeneutic enterprise, see Daniel, Stephen L. ‘The Patient as Text: a Model of Clinical Hermeneutics’ in *Theoretical Medicine*, Vol. 7, No. 2, 1986 (pp. 195-210); Leder, Drew ‘Clinical Interpretation: the Hermeneutics of Medicine’ in *Theoretical Medicine* Vol. 11, No. 1, 1990 (pp. 9-24); and Braidotti, p. 62. On disease as a language, see also Turner, Bryan S. *The Body and Society*, Basil Blackwell, New York, 1984. Paula Treichler has identified what she calls ‘Turner’s Postulates’: 1) disease is a language 2) the body is a representation and 3) medicine is a political practice. Treichler, Paula ‘Aids, Homophobia and Biomedical Discourse: an Epidemic of Signification’ in *October*, 43, 1987 (pp. 31-70).

<sup>103</sup> What Foucault refers to as ‘biopolitics.’ For Foucault, what we take to mean the ‘clinical gaze’ is not necessarily simply synonymous with ‘vision’, but is actually a gaze that incorporates all manner of charts, graphs and other visual ordering mechanisms. The ‘gaze’ rather becomes a metaphor for the practice of ordering as it transforms bodies into legible devices (see Foucault, Michel *The Will To Knowledge: The History of Sexuality Volume I*, Hurley, R. trans., Penguin Books, 1998)

formulae and atlases.<sup>104</sup> For Latour, as with Foucault<sup>105</sup>, the function of the scientific gaze is therefore not the natural object but the *visual text* produced about it, which does the crucial work of acting as a standardized, cooperative surrogate for the object/person under consideration.<sup>106</sup>

The traditional goal of medical imaging is to transform the body into a representation without depth as schematic, textual and photographic renderings of the body are all brought together in one layer, brought to the surface in order that the body might be converted into the legible units healthy/not-healthy. The discovery that disease was linked to organic structures, and the subsequent reliance on sight to perceive sickness, precipitated a system in which the body became flattened out into a binary system of representation: YES/NO for exhibiting pathology. Of note in gastroenterology, perhaps, is that when patients present with symptoms but nothing abnormal is seen on endoscopy, the patient is labeled as having ‘functional disease’, an idiopathic diagnosis, like Irritable Bowel Syndrome, in which *nothing is seen* to explain their symptoms, but the symptoms are *still acknowledged as real*. As Foucault writes:

Disease is perceived fundamentally in a space of projection without depth, of coincidence without development. There is only one plane and one moment. The form in which truth is originally shown is the surface in which relief is both manifested and abolished – the portrait: ‘he who writes the history of diseases must... observe attentively the clear and natural phenomena of diseases, however uninteresting they may seem. In this he must imitate the painters who when they paint a portrait are careful to mark the smallest signs and natural things that are to be found on the face of the person they are painting.’

---

<sup>104</sup> The widespread use of anatomical atlases transforms the body in to a text, by reducing it to a standard. Anatomical atlases remain the dominant models by which anatomy is taught and include schematic, photographic, or digital representations. What counts as an anatomical atlas covers a huge range of objects from Vesalius’ *De humani corporis fabrica libri septem* (1543) to diagnostic dolls, to the *Visible Human Project* (1989 to present).

<sup>105</sup> It should be noted with interest, however, that Latour never references Foucault.

<sup>106</sup> See Latour, Bruno ‘Drawing things together’ in *Representation in Scientific Practice*, eds., Lynch and Woolgar, MIT Press, Cambridge, Mass., and London, England 1990.

The first structure provided by classificatory medicine is the flat surface of perceptual simultaneity. Table and picture.<sup>107</sup>

The clinical gaze thus perceives everything it needs to in a single instant, as there is no gradual unfolding of the subject/sickness.<sup>108</sup> For Braidotti also, the transformation of the body into a text is linked to its transformation, through clinical representation, into ‘pure surface’. Bodily over-representation without embodiment, she argues, results in a physical reduction to ‘exteriority without depth, a moveable theatre of the self.’<sup>109</sup> Furthermore, in Braidotti’s work – which, following from Foucault, is concerned with the transformation of the body into a textual representation that both relies on and perpetuates scopic epistemology – there is a sense in which these images, although superficial, actually begin to *exceed* the bodies they purport to represent in a ‘triumph of images’. Bodies caught in this system of representation become superseded by their images in clinical practice, to the point at which they do not matter so much as the visual text produced about them or, as Braidotti would put it, ‘representation has the priority over that which is represented’.<sup>110</sup> The clinical gaze thus transforms them into ‘objects of scopic consumption’ by making them more intelligible than the flesh and blood to which they refer. While qualitatively different in its focus on clinical representations that encompass non-figurative material (charts, graphs and statistics), this perhaps reiterates the split between the body and the image perceived by Nancy in *Corpus*. By exceeding the body, clinical representations thus reinforce the estrangement between self and image that is touched on in *Corps Étranger*.

The key transformation of the body that happens with traditional medical imaging is therefore the move from inside to outside, or from depth to surface. The private, interior spaces become entangled in the logic of the exterior, social

---

<sup>107</sup> Foucault, 2003, p. 5. The quote that Foucault uses is from Sydenham, quoted by Boissier, F. de Sauvages, *Nosologie Methodique*, Lyons 1772, Vol. 1.

<sup>108</sup> Alternatively, while Latour and Foucault view clinical images as a reduction or flattening out of representation others, such as Michael Lynch, believe that they are, in fact, multi-layered, complex images which provide a sort of excess of meaning and interpretation: ‘relative to the photograph, the diagram is an eidetic image and not merely a simplified image.’ (Quoted in Kapsalis, p. 97.)

<sup>109</sup> Braidotti, p. 50.

<sup>110</sup> Braidotti, p. 49-50.

body as the practices of coding and classification that have been historically inscribed on the surface body now come to occupy the interior spaces by marking them as normal or abnormal.<sup>111</sup> The way in which the scientific gaze flattens out the body, to produce a representation without depth, is part of the drive to rationality that characterizes the masculine element of scopic practices more broadly.<sup>112</sup> What this emphasizes is the notion that the opposition of knower and known, subject and object, is the same qualitative distinction as mind and body (*res extensa* and *res cogitans*). The masculine element of this consists precisely in the detachment, the perception of a clear and distinct determination of boundaries between self and world.<sup>113</sup> The central problematic of *Corps Étranger* is thus concerned with the interconnections between vision, gender and scientific epistemology.

Both in its formal appearance as a visual analysis (or text) about the female body, and its conceptual thematics of interiority, we are perhaps brought back to Craig's *Delicate Issue*. This link might be further developed through Luce Irigaray's work on techniques and technologies of looking, in particular her work on the speculum mirror. This is an important technology (both in the sense of a device and a visual language) to revisit in relation to *Corps Étranger* since, as we have already established, it not only proposes new modes of vision but also has been linked to the production of electronic images on a monitor, as per the theoretical work of Nell Tenhaaf that we saw in the previous chapter on video. Furthermore, Irigaray's work is useful in considering the historical role of the notion of flatness, surface and depth in feminist theory.

For Irigaray, the speculum is a scientific instrument that extends the capabilities of man's analytic eye in order to penetrate the woman's body – 'to see with

---

<sup>111</sup> For a discussion of the historical role of the notion of depth in relation to the body see Jordanova, pp. 56-57.

<sup>112</sup> It is perhaps also of note that this flattening out of representation occurs not just in clinical and pornographic imagery but also in Laura Mulvey's account of Hollywood cinema, since the heroine of the film is located outside of the narrative, converted into an icon and thus becomes without depth. See Mulvey, Laura 'Visual Pleasure and Narrative Cinema', *Screen*, 16.3 Autumn 1975 (pp. 6-18).

<sup>113</sup> See Fox Keller, Evelyn & Grontowski, Carol 'The Mind's Eye' in *Discovering Reality*, Harding, S. & Hintikka, M. eds., Reidel, Dordrecht, 1983; Lloyd, Genevieve *The Man of Reason*, Methuen, London, 1986; and Bordo, Susan 'The Cartesian Masculinisation of Thought' in *Signs*, vol. 11, No. 3, 1986 (pp. 439-456).

speculative intent' – but only so as to confirm the truth of his own sexual identity.<sup>114</sup> However, it might also function as a curved surface (resonating with the concave surface of the endoscopic image in *Corps Étranger*) to oppose the flat surface of Lacan's mirror and, as such, can be an object that is re-appropriated for a new type of looking (at women):

Even if the place of origin, the original dwelling, even if not only the woman but the mother can be unveiled to his sight, what will he make of the exploration of this mine? Except usurp even more the right to look at everything, at the whole thing, thus reinforcing the erosion of his desire in the very place where he firmly believes he is working to reduce an illusion... To return to the gaze, it will be able to explore all the inner cavities. Although, in the case of the most secret, it will need the help of ancillary light and mirror. Of appropriate sun and mirrors. The instrumental and technical exploitation of sun and mirror will have shown the gaze, proved to it, that those mines contained no gold.<sup>115</sup>

The flatness of the Lacanian mirror, whose function is to reflect the (male) subject is, for Irigaray, tied also to the flat surface of science, in which objective truth is thought to be reflected. But, she argues, any object under consideration is always mediated: we never look directly at it. Since Plato, we have avoided looking directly at things, 'for fear of burning up the membrane at the back of the eye.'<sup>116</sup> Vision has thus always entailed the platonic deferral to *forms*, a mediated, or deferred vision which only obscures and makes more blurry.<sup>117</sup>

---

<sup>114</sup> In this it is a historical artifact for looking at women: the surface of the spoon that James Marion Simms bent the handle of so he could peer more closely into the vaginas of the slave women he experimented on, and the clinical instrument which dilates the vagina, allowing the doctor to peer in, only to see his own eye reflected in the *os*. The eye of the (male) doctor is, for Irigaray, the penis. She writes, 'yes, man's eye – understood as substitute for the penis – will be able to prospect woman's sexual parts, seek there new sources of profit...' (Irigaray, *Luce Speculum of the Other Woman*, Gill, G. C. trans., Cornell University Press, Ithaca, New York, 1985 p. 145).

<sup>115</sup> *Ibid.*, p. 145-6.

<sup>116</sup> *Ibid.*, p. 147.

<sup>117</sup> 'Find an economy of light in all its dazzling brilliance, without risk of combustion and death, marks humanity's first steps into philosophy... But the consuming contact of light will also be

The wall of Plato's cave was a screen that both concealed the truth *and* projected a new truth. Techniques and technologies of looking purport to show the actual thing, while simultaneously disguising their own highly mediated relationship to it. As we have already seen in the writing of Nell Tenhaaf on Craig's work, Irigaray's model of the speculum mirror might be usefully read alongside these works as a new moment in moving image technology, in which electronic screens present a challenge to historical models for looking at women. In *Corps Étranger*, the endoscope appears to be throwing the light of reason onto those hidden spaces of the body, but in fact only make the body appear more strange, more alien, more unknowable. Like the speculum, the endoscope here only reveals the impossibility or failure of bodily representation.

As the endoscope roams continuously between unknown external and internal structures, penetrating literal and conceptual boundaries, Hatoum overtly subverts traditional clinical representations by playing on notions of surface and depth as she presents herself as a subject that is comprised of both external and internal features, and as a subject that is with depth (i.e. spatial) but also strangely *hollow* (spacious). The depths of Hatoum's body appear to be almost limitless, since there is always a gaping black hole in front of the camera, receding to unfathomable depths. Hatoum thus presents the body as a network of tunnels that invite exploration, so as to open up her body to the logic of scientific exploration.

The choice of an end-viewing endoscope is perhaps here crucial, since it enhances the sense of tunnel vision produced by the tubular lumen, so that our

---

avoided by attention to *forms* alone. Vision protects itself from the risk of blindness by using daylight for the exact perception of 'beings' and for the calculation of the relations and correlations 'beings' have with their ideal inscription in the *psyche*. Direct vision means looking directly ahead, of course, but it also means doing so through an optical apparatus that stands between man and light and prevents light from *touching* him at all... Reason – which will also be called natural light – is the result of systems of mirrors that ensure a steady illumination, admittedly, but one without *heat* or brilliance. The everlasting correctness of things seen clearly, perceived rightly, has banished not only the darkness of night but also the fires of noon. The *episteme* begins its surveying, measuring and calculating on the basis of *shadows* projected by/upon surfaces, screens, and supports... The impact, the contact, of light is – at least implicitly – considered to be too close to the sense and to matter to constitute the main source of profit for the intelligible. Light is too corruptible, too shifting and inconstant to form the basis of the relationship to the self and to the All.' (Irigaray, p. 147-148).



gaze is always trained directly ahead in pursuit of an unseen terminus (to return to Irigaray: *Direct vision means looking directly ahead, of course, but it also means doing so through an optical apparatus that stands between man and light and prevents light from touching him at all*). We appear to hurtle feet first through the images down vertiginous, winding tunnels on a sort of rollercoaster ride through underground caverns and catacombs.<sup>118</sup> The work scrambles ideas of scale, size and depth both through the use of an endoscopic camera with a magnification function, which distorts the surface features of skin and hair, and by showing interior spaces which bear no apparent relation to the actual scale of the individual being examined. At times, the openings are narrow and tight and at other times cavernous and cathedral-like, as if we could stand inside them.<sup>119</sup> As such, *Corps Étranger* seems to simulate the rhetoric of the fantastic journey, enacting the historical role of the passive female body as the recipient of a penetrating gaze, while simultaneously employing the logic of abstraction to undo this problematic representational history. This idea of the opening or the orifice is of philosophical importance for our discussion here, since, as Nancy has suggested, the notion of the void or hole is at the core of numerous epistemic practices, in that social and scientific enquiry has been founded on the language of penetration, tied peculiarly to female anatomy. The language he uses clearly resonates with the anxiety found in the work of Duchamp or Courbet:

It's no surprise that our thoughts, ideas and images are  
swallowed up in holes, instead of lingering within reach of their  
sides: caverns, crying mouths, hearts pierced through, inter feces

---

<sup>118</sup> For a discussion of the gendering of the rollercoaster see Lanza, Joseph 'Female Rollercoaster (and Other Virtual Vortices)' in *Performing Arts Journal*, Vol. 14, No. 2, May 1992 (pp. 51-63).

<sup>119</sup> Hatoum herself refers to this aspect of the work as a threatening void or abyss: 'You enter a cylinder and you stand on the perimeter of the circular video image projected onto the floor. You feel like you are at the edge of an abyss that threatens to engulf you. It activates all sorts of fears and anxieties about the devouring womb, the vagina dentate, the castrating complex.' ('Mona Hatoum: interview with Janine Antoni). This is then echoed in a review of the work by Simon Grant, who writes, '*Corps Étranger* is a celebration of female sexuality which is both sensual and repellent... The eye travels down tubes held up like a gothic church interior, pulled down the passage as if spiralling in to an organic abyss before suddenly pulling back up.' (Abrioux, Yves and Grant, Simon 'Mona Hatoum at the Pompidou: two responses' in *Untitled*, September 1994 (p. 116)).

et urinam, skulls with staring eye holes, castrating vaginas, not openings, but evacuations, enucleations, collapses.<sup>120</sup>

No matter how deep the endoscope goes in the pursuit of illuminating the mysterious black hole in front of us, the hidden depths of the body are as hollow and empty as the superficial clinical representations of it: *The instrumental and technical exploitation of sun and mirror will have shown the gaze, proved to it, that those mines contained no gold.*<sup>121</sup>

By playing on the transformation of the body into a visual text, which occurs in clinical representation, *Corps Étranger* positions itself on a boundary, operating somewhere between medical and artistic imagery, surface and depth, and interior and exterior. As the endoscopic eye moves from inside to outside and back again, there is a flow between skin and flesh (exterior and interior) which makes the body appear as if it is being perpetually orificed and folded back in on itself. Thus the images of the body resist the flattening out of textual representation that typifies medical imaging since there is a continual play (conceptually, visually and linguistically) between surface and depth. *Corps Étranger* appears to subscribe to technologies and cartographies of the (female)<sup>122</sup> body, but only in order to undo its role in knowledge production, as the work uses the tension between interior and exterior in order to destabilize the traditional privileging of sight in the conversion of hidden depths to legible

---

<sup>120</sup> Nancy, p. 75. This also puts me in mind of Victor Hugo's exploration of sewers in *Les Misérables*:

'The history of mankind is reflected in the history of cloacae. The sewer ... is the resting place of all failure and all effort. To political economy it is a detritus, and to social philosophy, a residue. ... Every foulness of civilization, fallen into disuse, sinks into that ditch of truth wherein ends the huge social downslide, to be swallowed, but to spread ... No false appearance, no whitewashing, is possible.... It is more than fraternity, it is close intimacy.... A sewer is a cynic. It tells all.' (Hugo, Victor *Les Misérables*, Denny, N. trans., Penguin Books, London, 1976 p. 1065).

<sup>121</sup> As Desa Philippi writes in the exhibition catalogue, 'il n'y à voir.' (Philippi, Desa 'Some Body' in *Mona Hatoum*, Exh.Cat., Editions du Centre Pompidou, 1994 (pp. 24-35)).

<sup>122</sup> To this I would also add the histories of charting non-white bodies/societies. Even while Hatoum is keen to distance herself from racial discourse, there are key historical moments of overlap between seeing into women's bodies and seeing into non-white bodies. Of particular relevance to this discussion would be James Marion Simms' gynaecological experiments on slave women in his backyard hospital, and the exhibition of Saartje Baartman and her genitals after her death. For a discussion of the way in which race and gender intersect in the context of the clinical gaze see the chapter, 'Mastering the Female Pelvis: Race and the Tools of Reproduction' in Kapsalis (pp. 31-60).

surfaces. *Corps Étranger* thus presents a new view of a woman's body as the internal spaces, which usually lie outside the domain of pornographic and artistic imagery, are turned inside out, causing a crisis between the boundaries of medical, artistic and pornographic representation.

## THE SOMATIC MATRIX: EMBODIMENT VERSUS 'THE BODY'

### *Coded bodies*

*1950: You are alone in the room, except for two computer terminals flickering in the dim light. You use the terminals to communicate with two entities in another room, whom you cannot see. Relying solely on their responses to your questions, you must decide which is the man, which the woman. Or, in another version, you use the responses to decide which is the human, which the machine. One of the entities wants to help you guess correctly. His/her/its best strategy may be to answer your questions truthfully. The other entity wants to mislead you. He/she/it will try to reproduce through the words that appear on your terminal the characteristics of the other entity. Your job is to pose questions that can distinguish verbal performance from embodied reality. If you cannot tell the intelligent machine from the intelligent human, your failure proves that machines can think... If you distinguish correctly which is the man and which the woman, you in effect reunite the enacted and the represented bodies into a single gender identity. The very existence of the test, however, implies that you may also make the wrong choice. Thus the test functions to create the possibility of a disjunction between the enacted and the represented bodies, regardless which choice you make. What the test "proves" is that the overlay between the enacted and the represented bodies is no longer a natural inevitability but a contingent production, mediated by a technology that has*

*become so entwined with the production of identity that it can no longer meaningfully be separated from the human subject.*<sup>1</sup>

N Katherine Hayles' above description of Alan Turing's important paper, 'Computing machinery and intelligence' (1950), highlights the tension between self and image that has been running throughout this thesis. I hope to disrupt the claim that technology is frequently perceived as being the cause of some conceptual or perceptual splitting between the enacted and the represented body (to use Hayles' terms), by pointing toward the way in which it is not technology as such, but rather the social and discursive practices that crystallise around it that tend to perpetuate the troublesome relationship between the body and technology. As Hayles has demonstrated, it is not in fact the technology but the test that produces this uneasy relationship. As we have already seen in relation to the work of Mona Hatoum, the idea of a split between the body and its representation, which comes out of theories of computer technology at this time, has impacted on retrospective discussions of other types of technologically mediated representation. Nowhere has this particular problem of representation been more evident, both in academic literature and popular culture, than in the use of digital technologies in image making practices. Turing's experiment specifically focused on digital computers because all digital computers were seen to be alike in their workings: if the experiment worked for one, it would work for all.

In discussions related to a number of computer technologies, such as programming, virtual reality and the Internet, the idea of code and, specifically, binary has been a central focus of critical attention as the common feature to all. This concept of the zero sum game as an all-or-nothing plane of representation, corresponding to electrical pulses, seemed to precipitate a crisis in theories of human-machine interactions around the mid-1990s, in which there was a supposedly disembodied interaction with an abstract plane of representation comprised of code.

---

<sup>1</sup> Hayles, N. Katherine *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics*, University of Chicago Press, Chicago and London, 1999, p. xi.

For those theorists working from within predominantly visual disciplines such as Art History, Visual Culture or New Media studies, the interaction between computers and still or moving image technologies, such as film, video or photography, led to a widespread acceptance that representation operated in a realm in which the image was becoming increasingly malleable. As a series of 1s and 0s, binary was a form of representation that made it all too easy for the new information-image to be cut, pasted, transformed, and generated from nothing.<sup>2</sup> Kevin Robins, one of the key figures thinking through such problems, characterized this as a destabilizing of the relationship between the real and not real.<sup>3</sup> Divorced from any basis in a material reality, digital technologies described a system of representation in which experience was disembodied from social relations and thus became a reified thing in itself. Furthermore, the subsequent theoretical split between a material body/self and a virtual image/self was conceived as similar in type to the splitting of the self as presented in psychosis.<sup>4</sup>

But, as with Turing's test, such claims were applied to all digital technologies, without fully working through the specificity of the different processes that occur. Indeed, to support his model, Robins made reference to a number of technologies, from virtual reality to digital photography to remote weapons systems, in order to establish an equivalence that also characterizes the primary anxiety associated with binary: that, as a code, there is a potential equivalence with other systems that rely on code, making everything infinitely replicable and

---

<sup>2</sup> A common example of this type of discourse, which draws heavily on the work of Jean Baudrillard, is as follows: 'The moment foreseen by Jorge Luis Borges, in which ambitious cartographers have produced a map with such detail and accuracy that it would completely cover the very territory it depicts, has become normalized in everyday life...images produced not with photography – light – but digitally, with 0s and 1s. In a strange double vision, the hypothetical surveilled citizen could step outside her home and then view her screenal self, moments later on her personal computer. In the hyperreal, simulation and lived experience are inseparable.' See Sommer, Lucia 'In/Visible Body: Notes on Biotechnologies' Vision' in *Domain Errors! Cyberfeminist Practices*, Wilding, F., Fernandez, M. & Wright, M. M. eds., Autonomedia, New York 2002 (pp. 123-133) p.123; see also Johnson, Steven *Interface Culture: How New Technology Transforms the Way We Create and Communicate*, HarperCollins, San Francisco, 1997, in which he claims that the computer is not a representational system but a symbolic one that traffics in signs and symbols.

<sup>3</sup> Robins, Kevin 'The Virtual Unconscious in Postphotography' in *Electronic Culture: Technology and Visual Representation*, Timothy Druckrey ed., Aperture, New York, 1996 (pp. 154-163) p. 155.

<sup>4</sup> *Ibid.*, pp. 162-163.

transformable and vulnerable to practices of dislocation, destroying the situatedness of subjectivity so important to the work of feminist theorists such as Rosi Braidotti or Elizabeth Grosz. The perceived equivalences between binary code and genetic code has aggravated the critical discourse to a point where the human subject itself is now also seen to be in crisis. Reduced to code, the subject appears to exist within a flat plane of representation that transforms bodies into bodies of knowledge: as wholly knowable, readable, and transformable. As Donna Haraway has written:

In the technical-mythic systems of molecular biology, code rules embodied structure and function, never the reverse. Genesis is a serious joke, when the body is theorized as a coded text whose secrets yield only to the proper reading conventions, and when the laboratory seems best characterized as a vast assemblage of technological and organic inscription devices. The central dogma was about a master control system for information flow in the codes that determine meaning in the great technological communications systems that organisms progressively have become since WWII. The body is an artificial intelligence system, and the relation of copy and original is reversed and then exploded.<sup>5</sup>

This turn towards theorizing the subject as a code – which is evident both in technophilic fantasies of transcendence and parallel technophobic fears of the demise of classical humanism – is fundamentally about the desires and anxieties associated with access to knowledge about the body/self. As we have already seen in relation to Mona Hatoum’s use of medical imaging in *Corps Étranger*,

---

<sup>5</sup> Haraway, Donna ‘Biopolitics of Postmodern Bodies: Determinations of Self in Immune System Discourse’ in *Knowledge, Power, Practice: The Anthropology of Medicine and Everyday Life*, Lindenbaum, S. & Lock, M. eds., University of California Press, Berkeley, LA and London, 1993 (pp. 364-410) p. 367. See also Waldby, Catherine ‘The Visible Human Project: Data into Flesh, Flesh into Data’ in *Wild Science: Reading Feminism, Medicine and the Media*, Marchessault, J. & Sawchuk, K. eds., Routledge, London and New York, 2000 (pp. 24-38) p. 32; Thacker, Eugene ‘Open Source DNA and Bioinformatics Bodies’ in *Signs of Life: Bioart and Beyond*, Eduardo Kac ed., MIT Press, Cambridge Mass., 2006 (pp. 31-42); and Avise, John *The Hope, Hype and Reality of Genetic Engineering*, Oxford University Press, Oxford and New York, 2004 especially pp. 181-182.

such rhetoric echoes the modes by which medicine also traditionally stratifies organs and systems in order to identify and contain any transgression (pathology), turning the body into a surface or text, i.e. making it readable.<sup>6</sup> In contemporary art practices that utilize the techniques of genetic engineering, such as Eduardo Kac's *The Eighth Day* (2001), the equivalence between codes (language, genetics, binary) is often assumed and reinforced.<sup>7</sup> The question of codification then, for Haraway, is a question of searching for a common language in which different systems – technological, organic or textual – might be capable of integration with one another, and therefore no longer be ontologically opposed.<sup>8</sup> As such, codification becomes primarily a technique for cutting across difference and instrumentalising, through homogenization, systems of representation. While this model can account in sophisticated ways for the mechanisms by which bodies and artifacts become integrated into the structures of capital, by making everything de- and re-tachable, as Rosi Braidotti would say, the way in which the discourse has been structured around the problem of reducing the subject to a code, has proved itself to be self-limiting.

### *Scaleless scale*

---

<sup>6</sup> Here, following from the chapter on Mona Hatoum, I would again refer back to Rosi Braidotti who argues that medicine has always strived for forms of representation that standardize and quantify the body. See Braidotti, Rosi 'Body Images and the Pornography of Representation' in *Knowing the Difference, Feminist Perspectives in Epistemology*, Lennon & Whitford eds., Routledge, London and New York, 1994. Furthermore, the idea of 'code' has also enabled the proliferation of confused bodily metaphors in relation to computers and vice-versa. Haraway writes, 'The invective, invading information fragments that parasitise their host code in favour of their own replication and their own program commands are more than metaphorically like biological viruses. And, like the body's unwelcome invaders, the software viruses are discussed in terms of pathology as communications terrorism, requiring therapy in the form of strategic security measures. There is a kind of epidemiology of virus infections of artificial intelligence systems, and neither the large corporate and military systems nor the personal computers have good immune defences. Both are extremely vulnerable to terrorism and rapid proliferation of the foreign code that multiplies silently and subverts normal functions. Immunity programmes to kill the viruses, like Data Physicians sold by Digital Despatch, are being marketed. More than half the buyers of Data Physician in 1985 were military. Every time I start up, my Macintosh shows the icon for its vaccine programme: a hypodermic needle.' Haraway, p. 404.

<sup>7</sup> Eduardo Kac has written that biological processes are now 'writerly and programmable'. See *The Eighth Day: The Transgenic Art of Eduardo Kac*, Britton, S. & Collins, D. eds., Institute for Studies in the Arts, Arizona State University, Tempe, 2003 p. 9. For a critique of the way in which these practices are often misrepresentative of the actual techniques and processes of biotechnology, see Stracey, Frances 'Bio-art: the ethics behind the aesthetics' in *Nature Reviews Molecular Cell Biology*, 20 May 2009, doi:10.1038/nrm2699.

<sup>8</sup> Haraway, p. 378.



Sean Cubitt, who published one of the first sustained discussions of the intersection of computer technologies with broader visual cultures in his book *Digital Aesthetics* (1998), has described the tendency towards the metaphors of flattening out the subject into textual representation that occurs with computer technologies. For Cubitt this does not occur purely as a result of the use of binary in the production and distribution of virtual spaces, materials and/or social relations, but also in programming languages more broadly, and in the reliance upon ASCII text to represent oneself in MUDs (Multi-User Dungeons or Domains):

Textual representation does not allow the self to evaporate or dissolve into a textual world, but promotes modes of interaction and socialization which are conformable to the text. As textualised, the ego is not constrained to any identity other than that which persists despite the vagaries of the actual words in which it is embodied. Dematerialized and recoded as a set of coordinates on the trace of its passage, the self is reduced to the function of a shifter, the linguistic category of words indicating a context which is never the same twice, words like 'here' 'now' 'I' 'you'. The competitive edge of the MUD keeps the shifter I central, hiding its relational dependence under a hierarchy in which all the other shifters are defined by their relation to Number One – I don't depend on you, you depend on me!<sup>9</sup>

Although self-representations such as avatars and blog identities are becoming increasingly visual in MMORPG's (Massively Multiplayer Online Role Playing Games) rather than the purely textual MUDs, the idea that the body/self might

---

<sup>9</sup> Cubitt, Sean *Digital Aesthetics*, Sage Publications, London and New Delhi, 1998 p. 17. Cubitt also sets up an interesting relationship between computers and text in his analogy that using a computer is a similar experience to the bourgeois model of a 'good read' in that it is a lone, solitary pursuit. Cubit describes both the use of computers and reading as both absorbing and disembodiment since it requires immersion into another, private world, with a subsequent loss of self-hood through identification with characters and narrative (ego-ideals, displaced and heroicised versions of the self). Cubit specifically likens the experience of using a computer to reading a book in opposition to common claims that the computer is like a television. He writes, 'because its most familiar interface is a light-emitting monitor, there is a tendency to think of the computer as an extension of the televisual. But metaphors of files, pages, folders refer us constantly to the culture of literacy in the anglo-saxon tradition.' Cubit, p. 7.

be transformed into a fantasized self/image premised on masquerade through code seems to persist, and suggests that computer technologies have produced alternative spaces, objects and/or relations that operate simply as text, that is to say, as flat, legible and reproducible. For Cubitt, this idea rests primarily on the way in which modes of vision operate in relation to computer technologies, whether in online interactions or virtual reality environments. He writes, ‘the disembodied eye, textual arbiter of difference and distance, is always recognizable because it is alone, the objective of all rays but the resting place of none... focused around a tight and single nub of control: self as focal point, dimensionless centre of all dimension.’<sup>10</sup> He has particularly lucidly identified that the combination of the familiar mouse/screen/keyboard hardware with the WIMP (window-icon-pointer-menu) interface of MAC OS and Windows is in fact a highly ‘culturally specific and an interculturally normative visual vocabulary.’<sup>11</sup> Likewise, Steven Johnson has argued that the action of pointing and clicking on something gave the illusion of direct manipulation of an object, or an intimacy with it, that could rhetorically align itself with some sense of ‘getting ones hands dirty’ and doing ‘work’.<sup>12 13</sup>

The points at which the subject can be located in GUIs might therefore be found variously and simultaneously at the written word ‘I’, at the blinking cursor/insertion point at the end of every last character typed and at the I-bar or arrow pointer tool.<sup>14</sup> This visual vocabulary is premised upon a point of view that replays the tropes of traditional visual vocabularies in which the lone user is positioned at the perspectival centre of a space that opens out before them which they directly control. As such, most computer applications, especially

---

<sup>10</sup> Ibid., p. 32.

<sup>11</sup> Ibid., 2.

<sup>12</sup> Johnson, p. 21. Although writing from a profoundly technophilic position, Howard Rheingold’s *Tools for Thought: The History and Future of Mind-Expanding Technology*, MIT Press, Cambridge Mass., 2000 is a key text in this field which discusses the consequences of such developments.

<sup>13</sup> Although we take the format of this hardware for granted, it might well have been developed otherwise. Indeed, the idea of direct manipulation that originally emerged in relation to GUIs (Graphic User Interface) has been pursued to the point where interface hardware might now be done away with altogether. For example, the *XBOX Kinect* is a popular example of a console that relies on remote sensors so that there is no interface hardware and the user only has to move around in order to functionally engage with the software. Robins has also discussed the technophilic dream of eliminating the interface altogether, producing a total symbiosis between technology and user. See Robins, p. 160.

<sup>14</sup> Cubit, p. 88.

games, utilize either one of two modes of vision: the orthogonal (“god”) view or the subjective view (as seen in first player shoot-‘em-ups).<sup>15</sup>

From the mid-1990s onward, there have been several artworks that have attempted to re-think the possibilities of computer vision, or modes of inhabiting virtual spaces, which do not rely on the visual trope of a lone subject at the perspectival centre of virtual space. Of particular note is work by Simon Penney or Catherine Richards, Agnes Hegedüs’ *Handsight* (1993) which used a hand-held “eyeball” interface, or Char Davies’ *Ephémère* (1999) in which a user navigated a VR environment through their breathing rhythms. These works have attempted to overturn the logic of computer vision as promulgated by gaming technology and traditional VR environments by looking to haptic technologies, new modes of encounter and sensorial exploration to disturb the split between self and image that is perceived in the dichotomy of the real and the virtual. In a way, they might be conceived of as attempting to bring something of the formal register of works such as Carolee Schneemann’s *Fuses* (1964-1968) or Kate Craig’s *Delicate Issue* (1979) into the field of computer-based practice, in that they use modes of encounter between audience, artist and art work that are not premised on perspectival vision or mimesis.

Such modes of looking have perhaps emerged in relation to the perceived spatial qualities of the field of vision in which they operate, a field described variously as: cyberspace; dataspace; virtual reality; hyperspace; the bitmapped screen of pixels; the World Wide Web; the Internet.<sup>16</sup> This emphasis on the

---

<sup>15</sup> For further discussion on the interface see also Virilio, Paul *Open Sky*, Rose, J. trans., Verso, London and New York, 1997, especially pp. 11-16, in which he describes the way in which current popular interface technology gives one the sensation of being highly mobile within a virtual space while actually being highly restrictive in that it limits the user to a few manual gestures only. Robins has also described the way in which interfaces construct the sense of a window onto a space, which we have direct, unlimited access to. See Robins, ‘Against Virtual Community: for a Politics of Distance’ in *The Cybercultures Reader Second Edition* Bell, D. & Kennedy, B. eds., Routledge, London and New York, 2007 (pp. 227-235) especially p. 228.

<sup>16</sup> Note that these terms appear to be used interchangeably in both popular and critical literature, rendering them largely meaningless. In and of themselves, they represent highly culturally and historically idealized constructions. The term ‘cyberspace’ was coined by William Gibson in his novel *Neuromancer* (1984) and has been used widely since then to refer to various ‘spaces’ from the Internet to DOS systems to programming. Michael Benedikt has noted the multiple, diaphanous and shifting definitions of the term, both metaphoric and actual, in order to conclude that ‘cyberspace as just described does not exist.’ Part of its appeal, therefore, is in its ‘mythologic’. That is to say, that it is partly a magical or fantastical realm. See Benedikt, Michael

spatial qualities of cyberspace is historically important in relation to the history of art and modes of looking, since this is precisely what was at the heart of much minimalist and post-minimalist work on understanding perception and its relation to space and time. Scott Bukatman has already established this link, looking at the new models of spatiotemporality that began in artistic practice in the 1960s with Donald Judd, Sol LeWitt and, especially, Robert Smithson in his discussion of ‘spaceless space’, ‘timeless time’ and ‘scaleless scale’ in the important ‘Entropy and new monuments’ essay (1966). These works confronted the challenge of plotting the coordinates of the subject in relation to monuments to the dissipation of energy (entropy), which rejected mimesis and fixed models of time and space. Key works include Sol LeWitt’s work on plotting, such as his series of plotted diagrams, *The Location of Six Geometric Figures* (1975) and Bruce Nauman’s *Dance or Exercise on the Perimeter of a Square (Square Dance)* (1967-68) (figs 4.1-4.2).<sup>17</sup>

That the computer is perceived as generating monocular modes of vision is largely seen as a result of its construction in binary: the plane of representation is often understood as a set of coordinates against which the movements of the self can always be plotted. But, as renditions of code, the spatiotemporal structures of these fields are characterized as valueless, directionless, simultaneously a macro- and a microcosm: a space that turns in upon itself as it leads to just more of the same.<sup>18</sup> The self can be plotted, but in a meaningless information-space.<sup>19</sup> Although this plane simulates or *mimics forms of representation*, such as the photograph, it is merely a rendition of computer

---

‘Cyberspace: First Steps’, in Bell & Kennedy eds., (pp. 19-33) p. 20-22. On the fantastical or magical connotations of cyberspace, see the work of R. L. Rutzky on fetishism, gods and tribal affinities in cyberculture. See Rutzky, R. L. ‘Technological Fetishism and the Techno-Cultural Unconscious’ in *High Techne: Art and Technology from the Machine Aesthetic to the Posthuman*, University of Minnesota Press, Minneapolis, 1999 (pp. 129-65).

<sup>17</sup> On cyberspace as a spatiotemporal construct see Bukatman, Scott ‘Cyberspace’ in Bell & Kennedy eds., (pp. 80-105). See also Bukatman *Terminal Identity: The Virtual Subject in Postmodern Science Fiction*, Duke University Press, Durham, North Carolina, 1993, especially the chapter ‘Terminal Space’ (pp. 101-182); and Tomas, David ‘The Technophilic Body: On Technicity in William Gibson’s Cyberculture’ in Bell & Kennedy eds. (pp. 175-189). For a discussion of models of spatiotemporality in this period see Smithson, Robert ‘Entropy and New Monuments’ in *Robert Smithson: The Collected Writings*, Flam, J. ed., University of California Press, London 1996 (pp. 10-23).

<sup>18</sup> Bukatman 2007, p. 84.

<sup>19</sup> Cubitt writes, ‘The VDU is a grid, every pixel identifiable as a numerical address, and its status likewise encoded. This grid derives its onscreen presentations from modernist design practice, which itself can be traced back to Descartes invention of a neutral space defined only by coordinates rather than contents, and to Mercator’s redefinition of the map as a blank field of longitude and latitude into which the marks of coordinate space can be drawn.’ Cubitt, p. 89.

code in culturally specified, familiar, readable forms. For many theorists, these forms thus implicitly relate back both to enlightenment models of vision in which the subject is at the perceived centre of a perspectively rendered matrix, and to a form of Cartesian mapping in which digits provide co-ordinates for plotting the self/image. As Cubitt has noted, such visualities are determinedly instrumental.<sup>20</sup>

But, perhaps such characterizations are fundamentally misrepresentative. The rhetoric around digital images has been largely dominated by theories of spatiotemporality that were developed in relation to a different historical period and technological milieu: that of Frederic Jameson and Jean Baudrillard and what is commonly described as a postmodern hyperspace. From the moment that computer technologies presented a field of vision that was conceived spatially – cyberspace, hyperspace, virtual space – critiques of late-capitalism and its operations within visual cultures seem to have largely over-determined the discourse around the technology. Terms from Baudrillard's important essay 'Simulacra and Simulations' (1981) are deeply embedded in the discussions around computer and digital technology and continue to shape it: the real, hyperreal, simulacral, simulation, matrices, memory banks, command models, reproduction, replication, signs, systems. These terms actually prefigured the advent of digital technologies half a decade before they appeared in the mainstream mass market as digital video recorders. Baudrillard perhaps anticipated the problem of a plane of representation that was premised on equivalence, since the problem with everything being a system of signs is that they 'lend themselves to all systems of equivalence, all binary oppositions and all combinatory algebra' in the production of a 'perfect descriptive machine.'<sup>21</sup> Baudrillard thus argued that the terms 'real' and 'virtual' were no longer relevant because one has collapsed completely onto another, like Borges' cartographers, who charted an area with so much detail that the distinction

---

<sup>20</sup> Ibid., p. 34.

<sup>21</sup> See Baudrillard, Jean 'Simulacra and Simulations' in *Baudrillard: Selected Writings*, Poster, M. ed., Polity Press, Cambridge, 1998 (pp. 166 - 184) p. 167. See also Jameson, Fredric *Postmodernism: or, The Cultural Logic of Late Capitalism*, Verso, London and New York, 1991.

between map and territory was obliterated in the hyperreal.<sup>22</sup> The question is, then, how might we reconceptualise digital technology outside of these terms, given the new problems posed by ever evolving systems that interact with the world in very different ways, and what are the new problems of representation particularly in the context of the gendered body? How has the notion of the ‘virtual’, by opposing itself to the ‘real’, shaped the discourse on what it means to have a body, and what is at stake in the question of disembodiment (or ‘the virtual body’) for the representation of women?

### ***Biotech to info-tech***

Since the late 1980s, the work of Nell Tenhaaf has inhabited the margin between the virtual and the material, focusing on the perceived links between info-technology and biotechnology, the culture of linguistic equivalence that has made such links possible and the way in which such models both constitute and are constituted by the tropes of gender and technology. During the 1980s and 1990s, media representations of biological research were becoming increasingly genetically deterministic, resulting in what Tenhaaf has described as a ‘code fixation.’ This code fixation is defined by her as an ‘attention to genetics at the expense of environment, or the supremacy of DNA ruling the somatic matrix in a way that parallels how the (rational) masculine has historically ruled the (irrational) feminine.’<sup>23</sup> As such, her work over the last two and a half decades has drawn on a variety of techniques and visual languages, incorporating computer technologies, medical imaging and drawing, in order to question technological and scientific practices and their impact on constructions of gender and identity. *Species Life* (1989) (figs. 4.3-4.4) is described by Tenhaaf as the work that initially re-located her practice from questioning the ethics of networked communications through database projects to investigating technological practices of embodiment. That is to say it marked a passage from

---

<sup>22</sup> Baudrillard, p. 166. Gilles Deleuze, by contrast, would claim that it is precisely the apparent sameness that sets up a resonance between these two orders of reality, in order to actually produce difference. See Deleuze, Gilles *Difference and Repetition*, Continuum, London, 2004.

<sup>23</sup> Tenhaaf, Nell ‘Production and Reproduction’ in *Women, Art and Technology*, Malloy, J. ed., MIT Press, Cambridge, Mass., 2003 (pp. 362-375) p. 365.

info-technology to biotechnology, in order to question the idea of coding and binary and how it relates to cultural constructions of gender. She writes:

With the introduction of biological subject matter into my work beginning with *Species Life* my objects and installations continued to use the computer as a way to composite images as well as a device for interactivity. But the focus shifted to a critical engagement with the burgeoning field of biotechnology, with a particular focus on the strong connection between computing and genetics that was appearing in all kinds of popular imagery.<sup>24</sup>

In this work, rectangular light boxes show a sequence of digitally processed images of a man and a woman, hand in hand on a hill, looking out towards a sunset. Swirling beneath them are pink and blue strands of DNA, with computer generated but hand-printed portions of text from Nietzsche and Irigaray crawling up the strands of the DNA of the man and the woman, respectively. Counterpoising handcraft and digital images, the *will to power* is opposed to an *ethics of care*.

Another work, *Oedipal Ounce of Prevention* (1993) (fig 4.5), employed similar visual languages as light boxes shaped like Erlenmeyer flasks showed images of Oedipus' pierced ankles. These were hung beside photographs of the artist's body, overlaid with images of medical instruments and protein molecules.<sup>25</sup> Similarly, in the installation *In Vitro (The Perfect Wound)* (1993) (figs. 4.6-4.7), Tenhaaf again used light boxes to display the 23 chromosomes that "determine" sexual development, superimposed over images of two glass beakers containing the barely perceptible figures of Mary and a wounded Jesus Christ.<sup>26</sup>

---

<sup>24</sup> Ibid., p. 365.

<sup>25</sup> Kim Sawchuk writes that the lightbox is 'a technique of display that references the lit screen of the computer monitor without relying on the symbolism of that particular hardware, as well as inherently alluding to the on/off of binary.' See Sawchuck, Kim 'Biological, Not Determinist: Nell Tenhaaf's Technological Mutations' in *Nell Tenhaaf: Fit/Unfit*, ex. cat., Robert McLaughlin Gallery, Ontario, 2003 (pp. 9-22) p. 12.

<sup>26</sup> Following from Sawchuck, I have put scare quotes around the term 'determine' since it was thought that information only flowed out of DNA, and not that the environment had any

Such works were early attempts at exposing the way that both genetics and Genesis presumed that our destiny was inscribed at the moment of conception, and were concerned with the way in which gender has been ascribed to these different mythologies. As Kim Sawchuck has noted, the message of these works was particularly important at that historical moment when, with the advances in biomedicine, biology was invoked as the cause of sex and gender differences. Looking at these works now, not only must we acknowledge the complex use of various forms of image production at an early stage of their development (digital processing, computer generated images, medical images and hand printing used in combination with one another), but also their role as a reminder that biology, and the representation of biology, has a long history.<sup>27</sup> It is particularly useful to keep in mind the fact that these works were produced in the 1990s, a period that emerges as a sort of watershed in this thesis, in terms of the explosion of studies around technology and the body across a range of disciplines. So that while we might take these insights somewhat for granted today, such works served as an important foil to mainstream images of science at the time, and enable us to see the shift in more contemporary practices away from the heavily laboured figurative representation of the organic-technological hybrid.

Conceptually closely linked to *Corps Étranger*, these early projects utilized medical imagery, in conjunction with drawing practices such as medical illustration, to think about the way in which certain forms of representation were perceived as having access to epistemological objectivity. Works such as *In Vitro (The Perfect Wound)*, *Homunculus* (1993) and *Oedipal Ounce of Prevention*, were investigations into the way in which technological vision – in this case biological or medical imagery – could be used to distort or degenerate representation, rather than produce increasingly higher resolutions or fidelity. This is perhaps in much the same way as both *Corps Étranger* and *Delicate Issue* used technology to counter-intuitively obscure representation rather than

---

influence on its operation. This was critiqued in much of Tenhaaf's early work and has now been widely re-theorised by the discipline of Epigenetics. See Sawchuck, p. 16.

<sup>27</sup> Sawchuck, p. 15.



enhance it. As we have already seen, both these works used the device of the close-up – a technique that is used in both medicine and pornography to supposedly give greater clarity by showing what the eye cannot see – in order to re-present such detail on the screen that any identificatory or desiring modes of viewing are actually disturbed rather than enhanced. In so doing, these artists work against the perceived logic of technological progress and, in the case of Hatoum and Tenhaaf, also question the way in which the medical gaze has been discursively and technologically formulated to analyze bodies that have been made coherent through charts, graphs and tables: bodies become bodies of knowledge. These works therefore absolutely foreground the body, the ‘somatic matrix’, but do so from within a highly complex technological practice, in order to think about the ways in which technology has historically been implicated in the very constitution of that body through modes of representation. Tenhaaf writes:

My work addresses the power of a scientific theory that got dislodged from the somatic, from the body. In response, I’m trying to relocate the body scientifically in the matrix, literally in the protoplasm of the cell. At the same time, I am trying to insert into this location the subject position of the individual and how they actually live out the myth of genetics, as opposed to how it lives in them.<sup>28</sup>

Tenhaaf’s projects, as Sawchuck has argued, question different forms of representation (whether artistic or scientific) in a highly sophisticated way that avoids making generalizations about either art or science’s lack of objectivity, a strategy that perhaps no longer seems effective in delegitimising the sense of science’s ultimate authority.<sup>29</sup> To quote Tenhaaf’s own praise of the work of female scientists like Donna Haraway and Evelyn Fox Keller, her works seem to ask: what is the hidden logic behind the new folk mythology of bio/info-technology? What is the economics of it? Why has genetics become a new,

---

<sup>28</sup> Nell Tenhaaf quoted in Tuer, Dot ‘Fit/Unfit: Nell Tenhaaf Speaks with Dot Tuer’ in *Nell Tenhaaf: Fit/Unfit* ex. cat. (pp. 51-57) p. 53.

<sup>29</sup> See Sawchuk, especially p. 9.

transcendent myth?<sup>30</sup> These works confront these challenges by thinking about the role of representation in constructing these narratives. While the work of Eduardo Kac, for example, seems to replay the problematic topos of equivalence between computer coding and genetic engineering, Tenhaaf uses new technologies in order to ask serious questions of them and how they operate in relation to both theory and practice.

One of her more recent works, *UCBM (You Could Be Me)* (1999) (figs 4.8-4.9), is focused on the way in which different representational practices might forge interesting, difficult, and provocative links between subjects and their understanding of their own body/self in a highly technologised world. Indeed, given that this work was exhibited at the Western Front, founded by Kate Craig, it perhaps reinforces the position of Tenhaaf's work in the space of body politics and Craig's work in the space of investigating this politics in and through technology.<sup>31</sup> In this complex work, an observer enters an installation environment, which activates a projection, causing it to play on a screen. The clip shows an image of a female scientist working in a standard laboratory setting. She is wearing a white coat and has an impassive look. A voiceover, allegedly that of the scientist, plays over the top of the image. While this voiceover discusses different manifestations of psycho-sexuality, another voiceover occasionally cuts in, describing the mental processes of the scientist herself. After a few moments, the diagesis breaks, the scientist turns to the viewer and asks, 'Now, what can I find out about you? I want to know about your fitness, your empathy factor, your willingness to get involved.' The film/scientist then goes on to show the viewer clips of sex scenes from a CuSeeMe live video link, before asking 'do you feel exposed? Are you feeling comfortable here? Answer yes or no please', to which the viewer must respond by pressing the relevant Y or N button mounted below the film in the installation. The individual's results are then tabulated and plotted in a comparison chart showing the results of nine other participants, and the viewer

---

<sup>30</sup> Tenhaaf quoted in Tuer, p. 53.

<sup>31</sup> Exhibited in the show *Subject*, featuring Jonathan Middleton with Randy Lee Cutler, Robert Helms, Daniel Jolliffe and Nell Tenhaaf, May-July 2001, Western Front, Vancouver.

is either praised or chastised depending on how well they have scored and whether they might have negatively affected overall population averages.

In and of themselves the questions, and the viewer's responses to them, perhaps have little meaning. What is important, rather, is the way in which the responses are structured according to the representations that are shown on the screen, such as the self-exposure on real-time webcam displays, which Tenhaaf calls 'the phenomenon of internet based intimacy, or pseudo-intimacy, including CuSeeMe video-conferencing sex exchanges.'<sup>32</sup> The emergence of new Internet technology enabled Tenhaaf to further explore the issues that already concerned her, around the subject and representation, even if that technology did not function quite as imagined. For example, RealTime webcams did not yet operate in 'real time', and were badly pixilated. Even with the inherent failure of the technology, this work still reveals something of its effect on user engagement. Thus, perhaps it questions the role of technology in the construction of received ideas about sexuality, asking what is the relationship between technological forms of explicit imagery and personal sexual development.<sup>33</sup> What was at stake, during this period, when badly pixilated 'live' imagery on the web might have been preferable to high fidelity reproductions elsewhere? This part of the *UCBM* installation had been adapted from a 1997 performance called *Neonudism*, which integrated a 'live' two-way video feed from the net into a live performance.<sup>34</sup> This performance placed the audience in a conceptual space in which they could experience a live online sex scene in order to assess the emotional impact of Internet display intimacy:

To participate, the user first engages with a constructed audio and visual environment, which is based on several layers of surrogacy. The top layer of imagery is the point of identification or entry for the viewer – a digital video 'self-portrait of the

---

<sup>32</sup> Tenhaaf, p. 372.

<sup>33</sup> For example see Braun-Courville, Debra K. and Rojas, Mary 'Exposure to Sexually Explicit Web Sites and Adolescent Sexual Attitudes and Behaviors' in *Journal of Adolescent Health*, Vol. 45, 2009 (pp. 156–162).

<sup>34</sup> I have qualified the term 'live' with scare quotes here both to acknowledge that, in the late 1990s, RealTime video uplinks were not really in 'real time', and also to reference the existing problem with notions of liveness and mediated imagery, as discussed in chapter two.

artist', or at least a portrait of a self-involved artistic temperament. This entity changes personae through both image and voice several times during the program. The portrait is merged into the next level of surrogacy, an 'eye-candy' program of self-generating artificial life imagery called *Bomb* that portrays the inner workings of the machine as having a quasi-organic and visually pleasurable life of its own. The composite of these two elements – the talking head artist overlaid with dreamy pixel flow – interacts with the feeding in of a CuSeeMe image. The 'amateur porn' participants who are present via CuSeeMe are transformed into 'art nudes' thus pushing the viewer through the boundary of distinction between experience and art and between nudity and sexuality.<sup>35</sup>

The other type of simulation that occurs in *UCBM* is the image of the female scientist herself. She is, as Tenhaaf explains, a surrogate to personify the system that runs the installation. This surrogate, she claims, draws comparisons with some of the well-known female computer personalities such as ELIZA, the interactive psychotherapist program developed by Joseph Weizenbaum at MIT in the mid 60s, or the more recent Julia, a popular online MUD persona programmed by Michael Maudlin at Carnegie Mellon University.<sup>36</sup> The installation, therefore, primarily asks how the images of the scientist or the live Internet uplinks affect viewer responses? How does the structure of scientific representation itself affect knowledge production? And what is the role of the system itself in generating meaning? In this work, Tenhaaf is thus concerned with the problem of technologically mediated representation, notably the significance of the notion of 'live' technology (as discussed in chapter two), and the way in which different representations are used analogously or metaphorically with one another in order to explain or understand a problem.<sup>37</sup>

---

<sup>35</sup> Tenhaaf, p. 372.

<sup>36</sup> Tenhaaf, p. 371.

<sup>37</sup> *Ibid.*, p. 373.

One of the ways in which Tenhaaf foregrounds the question of technologically mediated forms of representation is through the interactive device of the Y N touch buttons, in which the subject translates their emotional states into basic YES/NO responses, so that they can then be understood and analyzed by the system. This device, to me, resonates with several key traits in the broader context of our discussion. As discussed in relation to Hatoum, the work seems to claim that the production of knowledge within science (and Tenhaaf's 'scientist' is wonderfully non-specific) can only occur if the system is dealing with representations of the subject that are essentially simplistic: YES/NO for pathology, deviance, disease, emotional state, mental state, which in fact most likely require complex linguistic structures to adequately represent the subject's status in these areas. If medicine understands the subject in increments of YES/NO this not only leads to simplicity of analysis for the system performing that analysis, and formally references the structure of that very system by using what is essentially a binary input but, by being so closely linked both functionally and structurally, drives its own continued practice. Although this appears to suggest the sort of conceptual equivalence of the body across both computer technologies and medicine that I earlier opposed, perhaps this work is rather more concerned with their mutual reliance on, and co-constitution through, the languages of code in order to operate, and the ways in which the functional activity of computer technology affects one's relationship with it. Indeed, *UCBM* emphasizes the role of the interface in negotiating one's relationship with a self/image. By interface I am referring both to hardware such as a screen, mouse, keyboard, or Tenhaaf's Y/N touch buttons, as well as GUIs (Graphic User Interface), which are a fundamental development in the complex history of how computers emerged as primarily visual entities.<sup>38</sup>

---

<sup>38</sup> There is a well-rehearsed series of events that are widely agreed to chart the development of the computer in this respect. This history extends from Vannevar Bush's theoretical Memex device, as outlined in his article 'As We May Think' (1945), through to Douglas Engelbart's idea in 1968 to incorporate a graphic screen as a way of representing data (as used in RADAR), with a retrospective nod to the Greek poet Simonedes' 'memory palaces'. All of which resulted in computer interaction no longer being dependent on a bewildering array of codes, punch cards and abbreviated commands, and instead emerging with a front-end 'user friendly' interface. For an overview of these histories see Gere, Charles *The Computer as an Irrational Cabinet*, unpublished PhD thesis, Middlesex 1996; and Johnson, especially the chapter 'Bitmapping: An Introduction' (pp. 11- 42).

## *Inter/face*

Developed at Xerox's Palo Alto Research Centre during the 1970s, and subsequently popularized in the mass market by Apple (then Apple Mackintosh), the GUI is a user-friendly graphics-based front-end environment, which enables the user to run a variety of applications. Common examples of GUIs are Windows, Linux or MAC OS, which are now widely used in preference to DOS, a system which is text driven on the front end. In DOS, the user has to create environments for applications to run by setting variables using code, which GUIs can do automatically. With these, all the information is filed, graphically, in a 3D setting (also known as 'nesting'), rather than textually in a linear fashion, as with DOS. Even while graphics programs might run on DOS, they are simply emulations, since underneath they are fundamentally text driven. While DOS relies on knowledge of coding languages, and is thus less 'user-friendly', it is also a way of engaging directly with the operating system of the computer. GUIs, by contrast, do not require the user to run another program in order to start them, and as such have been used more widely, but remove the user from the actual material workings of the computer. GUIs are also multitasking, able to run several programs at once, without the user having to set the variables. In essence, the text systems that drive the programs run in the background of the GUI without the user's knowledge.<sup>39</sup>

While the development of GUIs contributed enormously to the rise of the personal computer, it perhaps also crystallised the sense of the computer as a 'black box': an engineering term to describe an object whose internal workings are not known but which nonetheless works, and which can therefore only ever be viewed solely in terms of its input and output, as with Tenhaaf's Y/N touch buttons.<sup>40</sup> Most users are unable to engage with the actual workings of the technology in order to generate new relations between the subject and the computer and so, on a mass scale, the relationship tends towards the

---

<sup>39</sup> An interesting analogy with medical imaging technology might be established, which perhaps starts to expose some problems with the way in which computer technology re/presents itself to the user. As I have already discussed in relation to MRI in the previous chapter, there is a tension between graphical and numeric representation in that MRI images, like GUIs, are a way of visually representing numeric data sets.

<sup>40</sup> On the model of the computer as a 'black box' see Gere, p. 22.

instrumental: knowledge of *how it works* has been superseded by knowledge that *it works*. In fact, just as Drew Leder demonstrated in relation to the somatic body, the problem of (not) knowing the technological body only seems to appear when something is not working. When the computer breaks down, we become aware that we never really understood it: the reason for the breakdown, and its possible resolution, will most likely be beyond the technical capabilities of the average user. The role of the GUI, therefore, perhaps serves a conflicted purpose in the history of computer development since it has both enabled more people access to the technology while simultaneously obscuring the processes, deepening the rift between those who understand them and those who don't.

As several theorists including have noted, one of the results of this is a deepening gender divide in the way in which technology is used: women use the technology that men have developed and programmed. Although work has been done by Sadie Plant to reintegrate women back into the history of technology by looking to the telephonists, operators, typists, secretaries and calculators, as well as figures such as Grace Murray Hopper and Ada Lovelace, these are largely examples that suggest an alignment of women with an instrumental model of both technology and subjectivity.<sup>41</sup> Instead, Sherry Turkle, Rosi Braidotti and Faith Wilding tread a more careful line between technophilia and technophobia in this respect.<sup>42</sup> For these writers, it is not simply enough that women have had a history of using technology, but that we must also acknowledge that that history itself might well be a reflection or repetition of historical forms of oppression which needs to be unpicked and understood. As Braidotti writes:

Western culture reiterates its habit of organizing things  
hierarchically at times of the greatest technological advance.  
And so it is that as technology progresses, and gives women the

---

<sup>41</sup> See Plant, Sadie *Zeros and Ones: Digital Women and the New Technoculture*, Doubleday, New York, 1997 and Plant 'On the Matrix: Cyberfeminist Simulations' in Bell & Kennedy eds., (pp. 340-351) especially p. 345.

<sup>42</sup> See Wilding, Faith & SubRosa group 'Where is Feminism in Cyberfeminism?' in *NeMe*, available online at <http://www.neme.org/392/cyberfeminism>; Braidotti, Rosi 'Cyberfeminism with a difference' available online at [http://www.let.uu.nl/womens\\_studies/rosi/cyberfem.htm](http://www.let.uu.nl/womens_studies/rosi/cyberfem.htm); Turkle, Sherry *The Second Self: Computers and the Human Spirit*, MIT Press, Cambridge MA., 1984; and Turkle, *Life on the Screen: Identity in the Age of the Internet*, MIT Press, Cambridge MA., 1995.

means by which to negotiate new and complex forms of subjectivity, the gap between men and women in computer literacy and participation in programming and design continues to widen.<sup>43</sup>

That different forms of technology might be characterized either as rational, functional and controlled (masculine) or as out of control, wild, unknowable (feminine), has been well observed in the literature coming out of science and technology studies, film studies and gender studies.<sup>44</sup> However, outside of popular representations of computer technology, there needs to be a closely woven link between women and computers, which demonstrates their ability to develop and access technology in a sophisticated way. Braidotti therefore calls on cyberfeminists, Tenhaaf amongst them, to reconfigure their relationship to technology by rejecting the instrumentality implied by the GUI and WIMP systems – and instead work beneath the level of the interface, whose functional role is to *represent itself* to the user and the user to themselves, in order to challenge the way in which they abstract the user from the material workings of the computer itself.<sup>45</sup>

Tenhaaf's most recent project, *Lo-Fi* (2005-2010) (figs 4.10-4.11), addresses the way in which commercial computer products have engendered a crisis of representation. It does so by exploring the use of alternative interface hardware and employing modes of representation that potentially operate beyond a discourse of the 'real' and the 'virtual', replacing the question of *the body* with the question of *embodiment*. The sculpture *Push/Pull* (2009), developed as part of the broader *Lo-Fi* project, is an interactive artificial life (A-life) artwork in which clusters of LEDs are used to represent encounters between computer-generated and live subjects, interacting with one another through sound and

---

<sup>43</sup> See Braidotti.

<sup>44</sup> For example see Jordanova, Ludmilla *Sexual Visions: Images of Gender in Science and Medicine between the Eighteenth and Twentieth Centuries*, Harvester Wheatsheaf, London 1989; and *Wild Science: Reading Feminism, Medicine and the Media*, Marchessault, J. & Sawchuk, K. eds., Routledge, London and New York, 2000; Fox Keller, Evelyn *Reflections on Gender and Science*, Yale University Press, New Haven and London, 1985; Huyssen, Andreas 'The Vamp and The Machine: Technology and Sexuality in Fritz Lang's *Metropolis*' in *New German Critique*, No. 24/25, Autumn 1981 – Winter 1982 (pp. 221-237).

<sup>45</sup> Although Braidotti mentions the work of Tenhaaf, it is not a sustained discussion.



movement. In this work, a spectator enters a room with the sculpture at its centre. As the spectator moves around the sculpture, her presence in the room seems to cause the pattern of LEDs on the sculpture to constantly change, as if in response. Tweeting and beeping sounds emanate. These changes occur because an overhead camera in the room senses the position of individuals around the sculpture and these sensors produce information which is fed to software that controls the 'on' or 'off' positions of the LEDs. The resulting pattern of the LEDs that the spectator sees displayed on the sculpture and the sounds that it makes is formed by the encounter between the information produced by the live subjects and the autonomous, but responsive, 'artificial agents': computer-generated subjects that are formally indistinguishable from the LED representation of any organism in the sculpture's environment.

As a sort of input/output device, the sculpture is much like a computer except in its appearance. The traditional monitor or screen has essentially been replaced by a grid of fiberoptic cables, connected to the LEDs, which stand in as functional alternatives to a grid of pixels. Importantly, given that the LEDs can only be in either an 'on' or 'off' position, they represent a sort of binary matrix equivalent to 1s and 0s, but here it is represented as a material entity rather than an abstract plane of numerical values. The support or ground for this matrix of fiberoptic cables with flashing LEDs at their tips is an undulating brash mesh 'screen' that presents a formal challenge to the flat surface of the traditional computer monitor, referencing the artist's interest in haptic technologies (fig 4.12).<sup>46</sup> This mesh is a clear re-investment in the materiality of the technology, since it is almost as if the viscera of the technological body are being exposed, rejecting the notion that the computer interface generally serves to hide the workings of the computer, as discussed earlier. By opening it up, and making it material, this sculpture undoes that logic and attempts to make the technological body and its 'internal' workings more open. Peculiarly, however, when we are shown inside the machine, the internal 'organs' are revealed to be fiberoptic cables, the very device that is usually used to see inside the human body, as per *Corps Étranger*.

---

<sup>46</sup> For example see Tenhaaf, Nell 'Art Embodies A-Life: The Vida Competition' in *Leonardo* Vol. 41 No. 1, 2008 (pp. 6-15).

In a sub-variation of this project, the human-representative subjects must work collaboratively to herd the artificial agent into a nesting area, through movement and sound (fig 4.13).<sup>47</sup> By altering the interface hardware, and subsequently choosing to represent all subjects as LED clusters, both the sculpture *Push/Pull* and the broader *Lo-Fi* project offers an alternative to the constraints of GUIs and computer-generated imagery in order to explore new visual economies. Indeed, all subjects are represented in the same visual register; foregrounding the question of how new technology might produce new subjectivities through the act of representation itself. In so doing, the use of LEDs perhaps seems to reject the tendency to describe the subject in terms such as ‘real’ or ‘virtual’, a debate that is motivated by those computer-based practices that repeat conventions of figural representation since they foreground formal differences. In other words, *Lo-Fi* appears to sidestep certain problems, which are perhaps unwittingly demonstrated by other practices, by operating outside of a visual economy that establishes a tension between the real and the virtual, since it no longer implies that there is a normative bodily standard, real or imagined, upon which an avatar or bodily simulation might have been modeled. Importantly, the use of LEDs specifically overturns anthropomorphism in the representation of virtual subjectivity, which is often employed to elicit certain behaviours or relationships with the ‘real’ subject, and which assumes that, as Tenhaaf notes, everyone’s anthropomorphic gesture is equal and that the set of relations among human and virtual entities is the same for all users.<sup>48</sup> The virtual representation can then no longer be measured either in its similarity or difference to that standard and, as such, severs a problematic link between subjectivity and bodily identity. As Braidotti has stated, ‘women need to repossess subjectivity by reducing their confinement to the body’.<sup>49</sup>

Indeed, the problem of bodily representation is absolutely the critical question in relation to emergent computer-based practices such as digital photography

---

<sup>47</sup> For a description of the work in the artists’ own words see Baljko, Melanie and Tenhaaf, Nell ‘The Aesthetics of Emergence: Co-Constructed Interactions’ in *ACM Trans. Computer-Human Interactions*, Vol. 15, No. 3, Article 11, 2008 (pp. 11:1-11:27).

<sup>48</sup> Baljko & Tenhaaf, p. 11:13.

<sup>49</sup> Braidotti, *Cyberfeminism with a difference*.

and Internet Art. For the last two decades, most projects have focused precisely on the question of virtual identities, and attempted to reconfigure the way in which the (usually human) subject might be represented, either through hyper-realistic simulation or exaggerated difference. An early example of internet-based artistic practice that has been widely discussed in the literature is *BodiesINC* (1995). Developed at UCLA by Victoria Vesna, who worked with Schneemann on *Vesper's Stampede to My Holy Mouth* (1992) (which will be returned to in the conclusion to this thesis) *BodiesINC* uses VRML to enable users at home to build a graphic representation of a virtual self or avatar. The welcome statement reads,

Welcome to *BodiesINC*. The building elements at your disposal are ASCII text, simple geometric forms, TEXTures and low-resolution sound. Bodies built become your personal property, operating in and circulating through public space, free to be downloaded into your private hard drive/communication system at any time. The MOO/WOO functions as an institution through which your body gets shaped in the process of identity construction that occurs in, and mutually implicates, both the symbolic and material realms.<sup>50</sup>

This work was innovative in its very early use of graphics applications at a time when most online identities were constructed only in text-based MUDs, as well as in using the Internet to network these bodies in a 'public space.'<sup>51</sup> But its most radical feature was that it allowed bodies to be constructed using combinations of body parts and textures that attempted to move beyond traditional categories of race and gender, thus avoiding the clichés and stereotyped representations associated with most avatars. It did so by enabling

---

<sup>50</sup> See <http://www.bodiesinc.ucla.edu/welcome.html>

Note that it is also of interest that Victoria Vesna uses the term 'symbolic' rather than 'virtual' here, as this echoes Johnson's model of computer space as symbolic rather than representational.

<sup>51</sup> For discussions of the Internet as public sphere see Bell, David 'Webs as Pegs' (pp. 254-263); Bakardjieva, Maria 'Virtual Togetherness: an Everyday-Life Perspective' (pp. 236-253); Robins, Kevin 'Against Virtual Community: for a Politics of Distance' (pp. 227-235); Willson, Michele 'Community in the Abstract: a Political and Ethical Dilemma?' (pp. 213-226); Holden, Todd Joseph Miles & Tsuruki, Takako 'Deai-Kei' (pp. 144-158). All in Bell & Kennedy eds.

any body part to be constructed from one of the following textures, black rubber, blue plastic, bronze, chocolate, clay, cloudy, concrete, glass, lava, pumice, water and wood (fig 4.14). Each of these parts in turn was associated with a particular characteristic, e.g. lava is ‘hot and dry; light that is trapped in matter; “perpetual fire”; team leader sense’; while water is ‘cold and wet; dissolution, evaporation; strong relationship with gravity and heat; conceptual element.’<sup>52</sup>

While these textures have been shown to unwittingly repeat some tropes associated with corporate stereotypes that rely on racial markers of identity, on the whole this project is widely conceived in a framework that suggests that the politics of identity construction are intimately bound up in the processes of self-representation.<sup>53</sup> Given the technological capabilities for graphic representations in the mid-1990s, *Bodies INC* seemed to offer alternative modes of identity construction in the then-emerging sphere of the Internet. However, I would suggest that, like many subsequent projects which suggested that new technology could enable the subject to align itself with its interior body-image, *Bodies INC* was limited in its capacity for alternative representations by formally referring back to the human body so closely in its choice of torso, head, two arms, and two legs (an anterior-posterior morphology). As such, perhaps a project such as *Bodies INC* inevitably actually became historically incorporated into a visual trajectory that includes popular or mass culture representations of the online subject: a body that wears its markers of difference so overtly that it only ever draws comparisons with an implied ‘real’ body on the other side of the screen. An example of how avatars now commonly exhibit, and indeed flaunt, the formal markers of difference (racial, cultural or sexual), albeit with improved graphics capabilities, can be seen in the options available for building screen selves in MMORPG’s. For example, XX Deudigren, an avatar I built for the MMORPG *EVE Online*, the second largest online gaming environment after *World of Warcraft*, seemed to appeal to non-specific ethnic or

---

<sup>52</sup> <http://www.bodiesinc.ucla.edu/frames1.html>

<sup>53</sup> See Nakamura, Lisa ‘Race In/For Cyberspace: Identity Tourism and Racial Passing on the Internet’ in Bell & Kennedy eds. (pp. 712–720); Gonzalez, Jennifer ‘The Appended Subject: Race and Identity as Digital Assemblage’ in *The Feminism and Visual Culture Reader*, Jones, A ed., Routledge, London and New York, 2003 (pp.534–544); Balsamo, Anne ‘The Virtual Body in Cyberspace’ in Bell & Kennedy eds., (pp. 489–503).

racial typologies, and yet was absolutely underwritten by them. Skin/eye colour, hairstyle, clothing, bone structure, poise and naming all invoked recognizable types from both the gaming world and everyday life (fig 4.15). The forward projecting cheekbones, lower nose bridge and shallow brow clearly reference a generic Asian facial type that is difficult to avoid making, in spite of the wide array of options for custom generating your desired face. As such, the avatars tend to resemble the sort of computer generated ‘face of the future’ type images periodically seen in the likes of *TIME* Magazine. Far from being ‘generic’ and non-specific, these images frequently re-play fears around miscegenation and the increasing populations of developing countries.<sup>54</sup>

By contrast, Tenhaaf’s project *Lo-Fi* actually rejects the figural altogether and turns toward a form of abstraction – what she calls *lo-fi embodiment* – in order to subvert and escape the clichés of computer generated representations, and question the relationship between the body and technological subjectivity.<sup>55</sup> Unlike a project such as *Bodies INC*, it does this by representing subjects (both organic and computer-generated) in the highly abstracted form of LEDs in either an off or on state. Tenhaaf writes,

Such low-fidelity embodiments stand in stark contrast to high-fidelity ones, such as humanoid-like, digitally rendered characters, and are preferable to use because they circumvent the clichés and expectations attached to humanoid characters, avatars, or (even worse) cartoons.<sup>56</sup>

This low-fidelity aesthetic perhaps also resonates with the work of Schneemann, Craig and Hatoum, who, as I have previously described, all overturn and challenge the vocabularies of realism and realistic representation in their

---

<sup>54</sup> On this, see also the work of Sandra Kemp, curator of the 2004 *Future Face* exhibition at The Science Museum, London. This was a critical examination of the concept of the ‘future face’ and digital composites that are becoming increasingly prevalent.

<sup>55</sup> On Tenhaaf and Baljko’s work on abstract forms of representation see Tenhaaf & Baljko ‘Different Experiences, Different Types of Emergence: A-life Sculpture Designers, Interactant, Observer’ in *Proceedings of AAAI Fall 2006 Symposium on Interaction and Emergent Phenomenon in Societies of Agents*, 2006 (pp. 104–110).

<sup>56</sup> Baljko & Tenhaaf, 2008 p. 11:14.

challenge to the masculinist drives of certain types of vision, most notably scientific and technological. From the use of extreme close up shots in order to make vision appear to obscure itself, to the practice of damage and deconstruction of the imaging technology to add depth and complexity to the image, to the visual language of de-skilled modes of representation, which play on woman's perceived inability to access technology in a sophisticated way, the concept of lo-fi actually inhabits and permeates all these possible challenges to representation, finally confronting and upending the continual (hard-) 'drive' for increasing sophistication in technology once and for all.<sup>57</sup> If the computer is a primarily visual tool, *Lo-Fi* is perhaps a radical challenge to histories of representation and computer imaging that rely on video technologies and "hyperreal" CGI representations that repeat the image of *the body*, in order to replace it with a model of *embodiment*.

In her influential 1996 essay 'Cyberfeminism with a difference', Braidotti described the process of using new technology to reflect on ways in which the female subject had previously been constituted through technologies of vision, and the emergence of potential new strategies of representation for women artists. As well as Braidotti, the work of other important feminist scholars such as Hayles and Elizabeth Grosz have argued that it is no longer satisfactory to speak of 'the body', but that instead we should be looking towards a model of 'embodiment'. That is to say, a form of subjectivity that allows one to inhabit multiple embodied positions as situated subjects. To go some way to offer a definition of Grosz's suggestion that there is no body as such, only *bodies*<sup>58</sup>, we might do well to look to Hayles, who writes,

Embodiment differs from the concept of the body in that the body is always normative relative to some set of criteria. To explore how the body is constructed within renaissance medical discourse, for example, is to investigate the normative

---

<sup>57</sup> The term 'drive' perhaps seems to be particularly appropriate in the context of historical fantasies of technological progress, as it resonates with Filippo Tommaso Marinetti's interest in the car crash as the symbol of technological progress. See 'The Futurist Manifesto' (1919). Tenhaaf's work actually stops this drive by confronting technological progress with itself.

<sup>58</sup> See Grosz, Elizabeth *Volatile Bodies: Towards a Corporeal Feminism*, Indiana University Press, Bloomington and Indianapolis, 1994, p. 19.

assumptions used to constitute a particular kind of social and discursive concept... Technologies turn embodiment into the body by creating a normalized construct arranged over many data points to give an idealized version of the body in question. In contrast to the body, embodiment is contextual, enmeshed with the specifics of time, place, physiology and culture, which together compose enactment.<sup>59</sup>

To think of embodiment in contrast to the body is useful in that it begins to shake off terms like ‘the virtual’ and ‘the real’, and the problematic oppositions structured within them. Instead, embodiment can encompass subject positions that are no longer bounded by categories of race, gender and species. Indeed, the term resonates in an important historical way with the three boundary dissolutions that Haraway associated with the cyborg nearly 30 years ago: that between human and animal, between organism and machine, and between the physical and the non-physical.<sup>60</sup> As such, the term ‘virtual embodiment’ is to be rejected since the single term ‘embodiment’ can account for this type of subject position. In fact, ‘embodiment’ can actually account for this subject position in a far more sophisticated way since the prefix ‘virtual’ gives the allusion that all material ties have been severed which, as I will demonstrate, is somewhat misrepresentative. Instead, embodiment argues that the material world is always in operation even, and most especially, in the realm of digital technology and information transfer. As described earlier in my chapter on video-based practices, one of Hayles’ most important contributions was to demonstrate that flows of data cannot be separated from the material substrate through which they flow. The tenacious grip of terms such as ‘real’ or ‘virtual’ on this discourse has perhaps clouded the important observations by Hayles and has resulted in a perceived detachment from the material world that Kevin Robins characterized as psychotic in nature, and Sadie Plant as hysterical.<sup>61</sup> What I

---

<sup>59</sup> Hayles, p. 196.

<sup>60</sup> Haraway, Donna ‘A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century’ in *Simians, Cyborgs and Women: The Reinvention of Nature*, Routledge, London and New York, 1991 (pp.149-181) especially pp. 151-153.

<sup>61</sup> By no longer being anchored in the ‘real’ the neural nets, links and hyperlinks of associations between spaces and objects in digital planes of representation become too free. For Plant, this is one of the characteristics of hysteria. Drawing on the work of Freud, she writes that hysteria is a

hope to argue for, by contrast, is a reinvestment in the material (embodiment) in relation to computer technologies so as to disrupt the exclusion of women that is implied by characterizations of information technology as transcendent, in opposition to the immanence of the female body, and revisit the ways in which the body/self has historically negotiated the numeric planes of binary representation.

Tenhaaf's *Lo-Fi* project seems to point toward this notion of embodiment through the use of light clusters as a representational strategy, since it generates a subjectivity that is not only unbounded by the categories described above, and which produces (A-Life) subjectivities through representation, but one that is also perpetually shifting in relation to its environment and other subjects.<sup>62</sup>

Tenhaaf describes the actions of both the artifact and the human user as 'context-dependent' or, a 'coupling to the environment', resulting in a form of participatory action that can therefore be best described as 'emergent', since it deals with the continual dynamic interplay between a self and Other.<sup>63</sup> In this, the model of embodiment that is being promoted is aligned with a type of multiplicity, both in the way in which an interactant can act as a single agent or as a population, and also in the potential for performing heterogeneous subject positions: the LED representation is a prosthesis to self.<sup>64</sup>

Lo-fi embodiment is not synonymous with the body and, in this sculpture, rejects any attempt at realistic simulation of the human form, instead working with a mode of representation that is essentially an extended metaphor on the medium itself. By describing the subject through LEDs in states of on/off, lo-fi embodiment is essentially a binary representation of the subject. By taking binary seriously as a representational strategy, lo-fi embodiment paradoxically

---

'lack of inhibition and control in its associations' between ideas which are dangerously 'cut off from associative connection with the other ideas, but can be associated among themselves.' See Plant, 2000 p. 345.

<sup>62</sup> By being detached from figural representation, there is a sense in which Tenhaaf's agents are free to constantly take on new positions in the assigned tasks, rather than being bounded by role. In this work resonates with the distinction that Gilles Deleuze and Felix Guattari make between the games of Chess and Go. See Deleuze, Gilles & Guattari, Felix *Capitalism and Schizophrenia: A Thousand Plateaus*, Continuum, London, 2004 p. 389.

<sup>63</sup> Baljko & Tenhaaf, 2008 p. 11:5 and p.11:10.

<sup>64</sup> *Ibid.*, p.11:14.



re-defines it outside of a dualistic framework (of human/not-human, real/virtual) and proposes a mode of encounter between technologically mediated subjects that is embodied and material. Although Tenhaaf's work might initially seem to be problematic in its inability to represent difference, the very use of binary actually points to a highly gendered form of representation which draws on a long history of women and computer technology, thus re-inserting the feminine into a field traditionally characterized as masculine, without resorting to an over-determined reinvestment in the corporeal.

### *States of superimposition*

In the 1840s Ada Lovelace developed the Analytical Engine with Charles Babbage, by taking inspiration from the Jacquard loom, which had been developed some 40 years earlier. The loom worked on the basis of punched paper programs, designed as a code for the highly complex patterns of textiles such as damask, brocade and matelasse to be produced on a mass scale. The loom is controlled by cards with punched holes, each row of which corresponds to one row of the design. Multiple rows of holes are punched on each card and the many cards that compose the design of the textile are strung together in order. Although the Analytical Engine could not be built because the machines for making the component parts of the device would not be sophisticated enough to do so for another 100 years, the design formed the basis for the earliest computers, and systems of punch cards as computer programs were still in use well into the 1970s.<sup>65</sup>

In her essay, 'On the Matrix: Cyberfeminist Simulations' (1997), Plant has reimagined the origin of computer technology not only as an invention by an individual woman, Lovelace, but ultimately also as an invention *by women* because of its relationship to weaving and the Jacquard loom. She writes:

If weaving has played such a crucial role in the history of computing, it is also the key to one of the most extraordinary

---

<sup>65</sup> As well as the work of Sadie Plant see also Essinger, James *Jacquard's Web: How a Hand-Loom Led to the Birth of the Information Age*, Oxford University Press, Oxford, 2004.

sites of woman-machine interface that short-circuits their prescribed relationship and persists regardless of what man effects and defines as the history of technology... In his new introductory lectures on psychoanalysis, weaving and plaiting are the 'only contributions to the history of discoveries and inventions' that Freud is willing to ascribe to women. He tells a story in which weaving emerges as a simulation of what he describes as a natural process, the matting of pubic hairs across the hole, the zero, the nothing to be seen...it is because of women's shame at the absence which lies where the root of their being should be that they cover up the disgusting wound, concealing the wandering womb of hysteria, veiling the matrix once and for all. This is a move which dissociates weaving from the history of science and technology, removing to a female zone both the woven and the networks and fine connective meshes of the computer culture into which it feeds.<sup>66</sup>

As a proto-binary system, the history of the punch cards of Jacquard looms not only offers a way of folding the feminine back into a field traditionally perceived as both male and masculine, but also suggests a way in which the concept of binary itself might be refigured not as a flattening out of the plane of representation but rather a process of transformation that weaves in depth and complexity. The punch cards, a system of hole/not hole, provide an interesting point of encounter between the design for the textile and the cloth that might be considered analogous to the point of encounter between the body/self and the self/image in binary planes of representation, or indeed the LEDs of Tenhaaf's fiberoptic grid. What is important in both these cases is that these planes of representation (the screen, the grid, the design and the cloth) are all intimately linked, constantly encounter one another and generate a transformation that is process-based rather than object-based. The punch card, like code, occupies an interstitial site between the subject and the field of representation, which allows for continued encounter between the two. Tenhaaf's subjects continually shift

---

<sup>66</sup> Plant, 2000 p. 346.

and renegotiate their position in relation to one another, and are determinedly not fixed. Indeed, this notion of reciprocity or mutual encounter that underpins binary perhaps forges a conceptual network with the earlier discussion of feedback in relation to video art practices. As with VHS, computer technologies including, and perhaps especially, Web 2.0 operate on a principle of user-generated content that resonates with the historical emergence of interactivity in art practice.<sup>67</sup> Crucially, this notion of reciprocity, in which a subject undergoes continual transformation through its encounter with another plane of representation is, for Plant, at the heart of a theorization of weaving. She writes:

Most technology is characterized as having an instrumental relationship to man, but weaving is outside this narrative: there is continuity between the weaver, the weaving and the woven which gives them a connectivity which eludes all orthodox conceptions of technology. And although Freud is willing to give women the credit for its ‘invention’, his account also implies that there is no point of origin but instead a process of simulation by which weaving replicates or weaves itself. It is not a thing but a process.<sup>68</sup>

In emphasizing the critical practice of process-based encounters, Plant touches on a challenge to object-centered practices that might be constructed as masculine.<sup>69</sup> Furthermore, Plant reconfigures computer technologies as fundamentally feminine by establishing an equivalence between the womb and the matrix (indeed, the etymology of the term matrix shows a relationship to both *mother* and *matter*, again reinstating the concept of materiality as an object of consideration in relation to computer technologies<sup>70</sup>) and, using the work of

---

<sup>67</sup> Tenhaaf has investigated this turn towards a concept of interactivity in art practices, emerging in the 1970s, as read through the work of Margaret Morse and Lev Manovich. See Baljko & Tenhaaf, 2008 pp. 11:7-11:8.

<sup>68</sup> Plant, 2000 p. 346.

<sup>69</sup> Most notably in relation to models of vision: theorized as a detached, critical eye rather than an embodied mode of encounter. For a discussion of these debates in the context of technological modes of vision in art see my earlier chapter on the work of Carolee Schneemann.

<sup>70</sup> In Latin the word for ‘womb’ is *matrix* or *mater*, so invoking a sense of both the mother and the material. In Greek the word for ‘womb’ is *hysteria*, from which we derive the term ‘hysteria’. The matrix is therefore configured as hysterical, i.e. non-rational.

Luce Irigaray in her book *This Sex Which is Not One* (1977), she also sets up an equivalence between the vagina and the 0 (zero) of binary:

For if 'she' says something, it is not, it is already no longer, identical with what she means. What she says is never identical with anything, moreover; rather, it is contiguous. *It touches (upon)*. And when it strays too far from that proximity, she stops and starts over at 'zero': her body-sex.<sup>71</sup>

If the vagina is the lack, then this nothing, or 0 that represents the entrance to the matrix/womb might be positioned against the phallus/1.<sup>72</sup> This is the claim that Plant originally makes for binary, 'they [1 and 0] made a lovely couple when it came to sex. Man and woman: one and zero looked just right, made for each other: 1, the definite, upright line; and 0, the diagram of nothing at all: penis and vagina, thing and hole.'<sup>73</sup> Indeed, it is precisely this logic of black/white, male/female, which has structured western epistemology, and which important theories of technology and technologies of thought have attempted to expose, or even overturn during the last three decades.<sup>74</sup> If 0 is the woman, she is indefinable, much like a computer: a general-purpose machine whose ontology is always theorized as relational, instrumental, as Other to the subject.<sup>75</sup> Perhaps even a black box since, as Plant writes, 'digitization sets zero (vagina) free to stand for nothing and make everything work.'<sup>76</sup> This clearly is an ontology of simulation, a being that poses as something, and which can only

---

<sup>71</sup> Irigaray, Luce *This Sex Which is Not One*, Porter, C. trans., Cornell University Press, 1985 p. 21.

<sup>72</sup> In *Neuromancer*, Gibson describes cyberspace/the matrix as 'the nonspace', 'a vastness...where the faces were shredded and blown away down hurricane corridors.' See Gibson, William *Neuromancer*, Grafton, London 1986 p. 45.

<sup>73</sup> Plant, 1997 p. 34.

<sup>74</sup> For example, Haraway's 'Cyborg Manifesto'.

<sup>75</sup> On the concept of the computer as a general purpose machine, see Plant, 2000 p. 345. She writes, 'unlike previous machines which tend to have some single purpose, the computer functions as a general purpose system which can, in effect do anything... Like Irigaray's woman, it can turn its invisible, non-existent self to anything: it runs any program, and simulates all operations, even those of its own functioning.' See also Gere pp. 9-12, especially p. 12, where he writes, 'the only possible definition of what a computer is, is a place where computing takes place. Computing itself can best be defined as a process where data is entered into a device, whereupon the device can store it, manipulate it, store or output the result of the manipulation. Anything that does this is a computer.' The computer is hard to define precisely because it mimics so many different things, the TV, typewriters, spreadsheets and so on.

<sup>76</sup> Plant, 2000 p. 347.

ever be understood in relation to something else rather than a thing in its own right.

But I'm not sure that the analogy between vagina and '0' holds true, nor that Plant's reading of binary sufficiently overturns the paradigm. Computers might operate using a binary system of representation, but to theorize 0 and 1 as equivalent to male and female raises more questions than it answers. Zero/0, as both a numeric value and a written digit, have a history that is clearly tied both to the feminine and to non-western mathematical systems, apparently perfectly opposing it to the rational system of western mathematics expressed in the concept of 1.<sup>77</sup> But perhaps the analogies have become scrambled somewhere along the line. Wasn't the hole in the punch card of the Jacquard loom the 'on' mode, the 'thing' rather than the 'no-thing'? The punched hole that *formally* references 0 was in fact an early representation of the binary 1. That 0 became the opposition to 1 in binary is a result not of the history of 0 as a number (zero) that, like computers and women, is hard to define; a number that is neither positive nor negative, that in itself is not really a number but only a *plan* for a number. Rather, 0 was adopted as a counterpoint to 1 in binary because it best represented the *gaps* between the punched holes in the Jacquard loom. And it did this because 0 also had an earlier, alternative history: it began not as a number, but as a way of separating digits in early mathematical systems that were positional and required physical spacing for clarity, generating difference between decimal columns. It thus served an entirely different function altogether, and one that is non-numeric. A clear example is that the figure 1 holds a different value when it is followed by a string of zeros (e.g. 1, 100, 1000). It does this not because of the numeric value of 0, but because of the way in which it moves the 1 into a different decimal column. In binary, therefore, perhaps we should not read 0 as no-thing, as the numeric value zero, and as a lack, but rather as a material figure that spaces out and separates the ones across a field of representation: 0 acts on a number to escalate the scale of that number.

---

<sup>77</sup> For an overview of the history of zero see Kaplan, Robert *The Nothing That Is: A Natural History of Zero*, Penguin Press, London and New York, 1999.

Although Plant suggests that by producing an equivalence between ‘zero’ and woman (and here I use the written *numeric* value in opposition to my material understanding of the figure ‘0’/‘oh’) you expose a system in which woman is indefinable and without a unified ontology, she asserts that this fluidity of identity is actually no longer a matter of ‘deprivation and disadvantage’ but rather ‘a positive advantage in a feminized future for which identity is nothing more than a liability.’<sup>78</sup> Ultimately, therefore, theorists like Plant have reconfigured the matrix as fundamentally feminine, even if that model of the feminine is still leaky, soft and malleable:

Cyberspace is out of man’s control: virtual reality destroys his identity, digitization is mapping his soul and, at the peak of his triumph, the culmination of his machinic erections, man confronts the system he built for his own protection and finds it is female and dangerous.<sup>79</sup>

Refiguring such technologies in the context of notions of identity, fluidity and femininity, as a means to upturn the rigidity and rationality of binary structures, has been a useful line of thought originating with Haraway and taking many incarnations along the way. However, by looking closely at how the technology actually works we might come to see that perhaps 1 and 0 cannot be so readily positioned within the broader understanding of binaries in the structure of Western epistemology, and that doing so perpetuates a discourse that is self-limiting.<sup>80</sup> 1 and 0 perhaps do not have equivalence in male/female, east/west, and day/night. Of course this is not to say that technologies aren’t gendered in complex ways, and computer technologies in particular have certainly been both theorized as masculine and dominated by an overwhelmingly male user-ship. But, by looking at the 1s and 0s as textual/material rather than as numeric values, we see that not only do they serve a somewhat different purpose, but also that they cannot be so readily opposed to one another.

---

<sup>78</sup> Plant, 2000 p. 345.

<sup>79</sup> *Ibid.*, p. 349.

<sup>80</sup> For an overview of the way in which Haraway’s important article has been taken up by scholars in the secondary literature see Sofoulis, Zoe ‘Cyberquake: Haraway’s Manifesto’ in Bell & Kennedy eds. (pp. 365-385).

Like the punched cards of the Jacquard loom, the 1s and 0s fill a field or plane of representation. As with Tenhaaf's low-fidelity forms of embodiment, it would therefore be a mistake to think that such a system is a reduction or flattening out of representation to two basic digits, since what is important in binary is not the digits themselves but the *places* where they occur. This is because binary is not just a string of digits but a field of representation, a plane or space that has to be filled with pattern (punched holes or 1's). *Every 1 is not equivalent to every other 1, but contains different meaning depending on where in the sequence it occurs.*<sup>81</sup> The origin of binary systems in the punched card of the Jacquard loom is extremely useful here in elucidating this concept: should every punched hole in the card be equivalent, it would be translated directly as an equivalent mark on the resultant cloth that is woven from the pattern. Instead the pattern of fabric, such as jacquard and damask, are complex, dense, and with long repeats and, in the case of matelasse, has substantial physical *depth*. The fabric is not merely a mirror of the pattern of punched holes, but it does bear a relationship to it. The punched holes actually describe a process of transformation that the design undergoes as it shifts its material being. Because of its formal reliance on code (in that one LED=one subject/cluster of subjects) *Lo-Fi* is unusual amongst computer-based art practices in that it actually foregrounds the function of binary and presents it as a field that is inherently spatial and with depth. By contrast, many practices invest virtual representation with a graphically produced illusion of depth or realism, which only further severs the links between the real and the virtual and reifies the planes of representation into two opposing structures. *Lo-Fi*, conversely, is interested in the points of encounter in-between.

As well as considering whether 0 and 1 are suitable representations for the states 'yes/no' or 'on/off' (corresponding to electrical pulses rather than holes punched in card), a final challenge I would like to mount to the overwhelming scholarship on the hegemony of binary and its ties to the systems of patriarchy

---

<sup>81</sup> Similarly, the functioning of the Analytical Engine, which relied on a series of spokes running down the length of a cylinder, was premised upon pattern and spatiality, since it was the position of the cylinder within a potential full cycle of rotation that transferred information.

and western epistemology concerns refiguring all the 1s and 0s as a pattern or rhythm whose spaces in between contain moments of anticipation and potentiality, much like the blinking cursor at the end of every last typed character, waiting to inhabit the next space.

As discussed in the chapter on video, quantum mechanics has allowed us to think about various phenomena in which multiple ontologies can occur simultaneously. The example of wave/particle duality is one such state of superimposition. These states are framed by anticipation and potentiality, and thus describe a model for inhabiting multiple, shifting subject positions: a form of embodiment that, as we have already seen, stands in opposition to the body and is a situated subjectivity. In *Digital Aesthetics*, Cubitt discussed Freud's case study of 'A child is being beaten' in relation to the model of a subject simultaneously inhabiting the cursor, the I-bar/arrow pointer and the word 'I' on a computer screen, which I described earlier. In this case, 'a child is being beaten' was the description of an erotic fantasy given to Freud by several patients. Freud drew from analysis of this fantasy another, more primitive one: 'the father beats the child'. In relation to this latter statement the added information was that the child that the father was beating was not the patient, but another child, while the patient was looking on. But of course, in this fantasy, the patient was the one being beaten and the one doing the beating, as well as the onlooker: the case described a state of superimposition. For Cubitt, this is precisely the experience of fantasy that is generated by computers in their various fields of representation, such as VR environments or online networks. He writes,

The specificity of fantasy is that it allows you to inhabit multiple subject positions...like dataspace, fantasy allows, encourages, a kind of masquerade in the position of the Other, an identification with otherness in which the centering ego is lost and forgotten in the play of alterities.<sup>82</sup>

---

<sup>82</sup> Cubitt, p. 85.



While Cubitt constructs this model of ‘dataspace’ as a place in which identification with the Other is seen as a positive form of play with subjectivity – although it is not clear whether for Cubitt this can only ever be a simulated identification or some kind of ‘authentic experience’, thus raising questions about why an individual might choose to participate in such an activity – the concept of entertaining fantasies of inhabiting the Other, known as ‘passing’, has also been criticized for its investment in replaying stereotypes of the erotic/exotic.<sup>83</sup> What is of interest to me here, therefore, is not the question of (virtual) identity tourism, in which one might inhabit other bodies, but the way in which the very structure of binary itself might be seen to produce an ontology of embodiment premised upon potentiality and multiplicity.

Jean Francois Lyotard’s reading of Freud’s case seems to me to set up an interesting way of thinking through this in relation to the concept of beating/a beat. This beat generates a rhythm of on/off on/off on/off, structured like binary, which represents, as Rosalind Krauss describes it, the alternating ‘charge and discharge of pleasure, the oscillating presence and absence of contact.’<sup>84</sup> This, for Lyotard, is the plane of representation, or a ‘matrix’, which fields the fantasy. Lyotard’s use of the term ‘matrix’ here is very interesting since the term clearly resonates with popular representations of computer technology, and the imagined vastness and incomprehensibility of dataspace, as represented in films such as *The Matrix* (1999). Lyotard argued that the matrix is an invisible order, which lies below the ‘seen’ order of the image, and which belongs to the unconscious. The matrix, for Lyotard, is the operation of primary processes, whose products are then projected onto the visible surface, so we can see its workings, even if we cannot see the matrix. As such, the matrix is here theorized much like the ‘black box’: *its workings* can only be inferred from the superficial representation of the fact that *it’s working*. Like dataspace, as discussed previously, Lyotard’s matrix is also considered to be spatial, even if

---

<sup>83</sup> See Gonzalez, Nakamura, & Sardar, Ziauddin ‘ALT.CIVILIZATIONS.FAQ: Cyberspace as the Darker Side of the West’ in Bell & Kennedy eds., (pp. 732–752).

<sup>84</sup> Krauss, Rosalind ‘The Im/Pulse to See’ in *Vision and Visuality*, Foster, H. ed., *Dia Art Foundation Discussions in Contemporary Culture No. 2*, Bay Press, Seattle, 1988 (pp. 51-78) p. 66.

that spatiality does not correspond to the coordinates of external space. Lyotard remarks,

Places are not *partes extra partes*; the intervals required for example in the perceptual order for things of the external world to be recognizable and for them not to pile up on one another – depth, in short – or in terms of phenomenological transcendence, negation – here, these intervals are abandoned.<sup>85</sup>

It is onto this matrix that we can map the fantasy of a blow that might also be a caress: a form of contact that is both painful and pleasurable (a form of superimposition).<sup>86</sup> The matrix of on/off on/off represents the rhythmic oppositions between contact and absence of contact, the beating, a ‘beat’, in which you are simultaneously the one being beaten and the one who is beating. What is important here is that, for Lyotard, this is not merely a recurrent pulse in which ‘off’ will always follow ‘on’. Rather, the recurrent rhythm suggests the potential for a rupture that is *not* followed by the onset of another contact: there is always a constant threat of interruption, an interstice between the ‘on’ and the ‘off’, a space of potentiality and anticipation. In *Lo-Fi*, this represents itself as an emergent ontology that is formulated precisely in relation to the participatory (inter)actions between human and computer agents: the actions are unfixed and undetermined, inhabiting unexpected and heterogeneous positions.

It is these gaps *between* the states on/off, gaps which are themselves not spatial, or which do not exist on the field of representation but somehow beyond it, that might invest computer binary with a theory of superimposition that provides a radical challenge to the theorization of binary as fixed and theoretically lacking in depth and complexity. By lifting computer binary out of the context of the binaries of western epistemology, we might hope to explode the perceived

---

<sup>85</sup> Lyotard, quoted in Krauss, p. 64.

<sup>86</sup> For a discussion of the way in which touch has been conceptualized around a simultaneous stroking and striking, see Derrida, Jacques *On Touching – Jean-Luc Nancy*, Irizarry, C. trans., Stanford University Press, Stanford, California, 2005. This concept is discussed in Chapter 1, in relation to the work of Carolee Schneemann.

rigidity of the block of code.<sup>87</sup> Instead, under these new terms, we might re-imagine the use of binary outside of the structure of *binaries* such as real/virtual, and instead reinvest it with a materiality. As such we might also position binary as an interstitial point of encounter between subjects (whether technological or organic) and thus acknowledge that the epistemological power of the system itself relies on the interstitial gaps between the 1s and 0s: the moments of potentiality and anticipation inherent in an embodied subjectivity, no longer tied to the body.

---

<sup>87</sup> Here I use the term 'block' to echo Lyotard's theory that the elements of a matrix 'do not form a system but a block.' Lyotard, quoted in Krauss, p. 64.

## CONCLUSION: LO-FIDELITY EMBODIMENT

To close the discussion with a case study of Nell Tenhaaf is fortuitous, since it takes us all the way back to the beginning, back to Carolee Schneemann. Between them is a point of connection, Victoria Vesna, whose collaborative work with these artists speaks to the continuing relevance of Schneemann's early work in moving image technology and the conceptual ties between projects such as *Fuses* (1964-1968) and contemporary computer-based practice. As new technologies emerge, and others fade into obsolescence, imagined patterns of teleological progress (plotted X against Y) should be replaced by wormholes and quantum leaps, in which relations of technology are plotted in four dimensions. That this thesis serendipitously stumbled across works that continue to speak to one another formally, conceptually or politically across different historical, cultural or technological milieus should sufficiently evidence this approach.

Victoria Vesna who, like Tenhaaf, also holds an established academic post as a theorist in electronic media practices, has not only dialogued with Tenhaaf in numerous panels, conferences and printed media, but has also worked closely with Schneemann on the more recent video work *Vesper's Stampede to My Holy Mouth* (1992). Like *Fuses*, this work interrogates the chain of co-signification in which the (female) human and the animal body have historically become bound up, weaving together many of the themes from throughout the rest of this thesis: technologically mediated animal encounters; the relationship

between video and domesticity; and the role of abstraction in overturning the epistemo-logic of certain types of technological looking.

In this short video, Schneemann and Vesna are shot in a domestic setting, talking frankly to one another in a manner that recalls the confessional mode of deploying the camera in important early feminist video works, such as Julie Gustafson's *The Politics of Intimacy* (1972). They are seen reading and chatting together, discussing the ways in which the female and the feline have historically become interwoven, looking at female genital (pussy) mutilation, destruction of goddess sites during the war in Lebanon and cat/clitoral condemnation during witchcraft trials. They discuss the connections between the cat and the vagina, postulating whether resultant phobias might stem from ideas of fur, claws and domesticity (of both cats and women).

The importance of conducting and documenting this research was, for Schneemann, intensified by her relationship with a new kitten, Vesper, after Cluny died in 1988. Schneemann believed that Cluny was reborn in Vesper, and the physical relationship that she had shared with him (see *Infinity Kisses* 1981-1988) continued with the new young cat. This relationship is explicitly foregrounded in the second half of the video, when it shifts into a more poetic and technologically experimental mode of representation. As Schneemann and Vesna discuss the research, sounds of a cat cleaning itself begin to overlay the images. We can hear it licking, purring and grunting: the sounds themselves connoting wetness and the oral. During a story about the lynching of Schneemann's grandmother's cats by neighbourhood children, the cat noises intensify and the film suddenly breaks. No longer a scene of two women discussing their research, Schneemann is now seen lying on her bed kissing Vesper and letting him lick her nipples, while a voice over reads the essay-poem, 'Vesper's stampede to my holy mouth', about the erotic affections of the kitten. The screen splits in two and is doubled; becoming a mirror image of itself, so that left to right we see the image and its negative, its reverse. This reversal is further compounded by the use of solarization techniques on the VHS images so that the light areas appear dark, and vice-versa. As the process of solarization bleaches out any detail, the reverse images on either side of the

split-screen move around, creating an abstract, optical effect that looks like a continuous stream of Rorschach tests. The voice over tells us that the intimacy that we are witnessing on screen ‘sounds the phallogentric bells of bestiality, obscenity and perversion’.

While the associations of the feminine and the feline (and the cat’s ties to domesticity, the almost exclusive remit of the feminine) have already been discussed in chapter one, it remains important to stress that an interest in crossing the borders between the human and the animal has been historically presented both as a feminine and a female pursuit. Notions of an animal(istic) Other have historically been conflated with the Other of post-colonial and feminist theory, i.e. the monster.<sup>1</sup> Hybrid bodies have been traditionally deployed in folk tales and horror stories to symbolically communicate a moral order, for example in animal-groom tales like *Hans My Hedgehog*, *The Frog Prince* or *Beauty and the Beast* or metamorphosis tales including *Peau d’Ane*, *Bearskin* and *La Gatta Cenerentola*. As Marina Warner has noted, what is of particular interest about these tales is not only that they largely assumed a female audience, who expected to be given away by their fathers to men who would ‘probably strike them as monsters’, but also that the tales themselves were mostly written by women.<sup>2</sup> For example, *Le Cabinet de Fees (The Fairy Library)*, is a series of 41 volumes comprising hundreds of tales from the Seventeenth and Eighteenth Centuries. Over half of these were written by women, unusual during a period in which women might otherwise have been

---

<sup>1</sup> For wide-ranging discussions of the historical construction of the feminine or the non-Western as ‘animal’ see: Adams, Carol J. *The Sexual Politics of Meat: A Feminist-Vegetarian Critical Theory*, 1990; in *Fleta*, the common law of England, 1290, makes numerous reference to Jewish people and their innate association with animals in the eyes of the law; Davies, pp. 1046-1047; Curtis, L. P. *Apes and Angels: The Irishman in Victorian Caricature*, 1997; Palencia-Roth, M. *Enemies of God: Monsters and the Theology of Conquest*, 1996; Mullan, B. & Marvin, G. *Zoo Culture*, 1999; Pagden, A. *The Fall of Natural Man: The American Indian and the Origins of Comparative Ethnology*, 1982; Ritvo, H. *The Animal Estate: The English and Other Creatures in the Victorian Age*, 1987; Salisbury, J. E. *The Beast Within: Animals in the Middle Ages*, 1994; Salisbury, J. E. ‘Human Beasts and Bestial Humans in the Middle Ages’ 1997; Schiebinger, L. *Nature’s Body: Gender in the Making of Modern Science*, 1993; Thomas, K. *Man and the Natural World: A History of the Modern Sensibility*, 1983; Colins, Patricia Hill *Black Feminist Thought: Knowledge, Consciousness and the Politics of Empowerment*, 1990; Braidotti, Rosi ‘Signs of Wonder and Traces of Doubt: on Teratology and Embodied Differences’, in *Between Monsters, Goddesses and Cyborgs: Feminist Confrontations with Science, Medicine and Cyberspace*, Braidotti, R. & Lykke, N. eds., Zed books, London and New Jersey, 1996.

<sup>2</sup> Warner, Marina *From The Beast to The Blonde*, Vintage, London, 1995, p. xii and pp. 267-286.

marginalised from many forms of cultural production, and Marie-Catherine, Baronne d’Aulnoy, has a volume all to herself. Warner has traced this genealogy of female authors interested in animal-groom and metamorphosis tales right up to Ruth Rose, the screen-writer of *King Kong* (1933), and Linda Woolverton, the screen-writer of Disney’s *Beauty and the Beast* (1991). Perhaps what we might learn from such a bewildering, cacophonous collection is that hybridity, or monstrousness, has historically been considered the means by which women might escape the oppressive logic of modern dualisms.<sup>3</sup> However, it is also a label that has been applied to certain bodies, as part of that very same oppressive structure, in order to invoke themes of fear, anxiety and the unnatural.

Vesna’s work is, perhaps, a continuation of this rather strange lineage in which female and animal bodies encounter one another, critically and textually. Her current project *Hox Zodiac* (2009-present) is a visual exploration of the role of the homeobox gene in morphogenesis. This gene is important because it is found in both human and non-human animals and, furthermore, because it is responsible for anatomical development – defining body regions, determining number of arms, legs, noses and so on – it speaks to a questioning of traditional body morphologies that we saw in Tenhaaf’s exploration of lo-fi embodiment, and Schneemann’s, Craig’s and Hatoum’s use of abstraction. This gene, paradoxically, thus both points toward what is similar between human and non-human animals, and is the site at which morphological differences between them are developed. Crucially, we are told, the homeobox gene could have a significant impact in the field of technologically mediated organ and limb regeneration.

*Hox Zodiac*, and its formal and conceptual ties to the other projects in this study, thus highlights one of the central claims of this thesis: that there is a conflict

---

<sup>3</sup> For a selection of debates relating to the ‘monster’ see Creed, Barbara ‘The Monstrous Feminine’, 1993; Cohen, Jeffrey Jerome ‘Monster Culture (Seven Theses)’ in *Monster Theory: Reading Culture*, Cohen, J. J ed., University of Minnesota Press, Minneapolis and London, 1996 (pp. 3-25); Haraway, 1985; Huet, Marie-Helene *Monstrous Imagination*, Harvard University Press, Cambridge, Massachusetts and London, England, 1993; Stephen Pender, ‘No Monsters at the Resurrection’ in Cohen, J. J. ed., (pp. 143-167); *Between Monsters, Goddesses and Cyborgs: Feminist Confrontations with Science, Medicine and Cyberspace*, Braidotti, R. & Lykke, N. eds., Zed books, London and New Jersey, 1996.

between the body and its representation, which technology has historically both engendered and attempted to resolve. To conceive of a split between the body and its representation underwrites other problematic divisions such as the real and the virtual, technology and the body, and nature and culture. In the works of Schneemann, Craig, Hatoum and Tenhaaf, moving image technologies are thus deployed in such a way that the body becomes consciously abstracted from its representation, both acknowledging the means by which technology has historically affected such a splitting as well as pointing towards a place from which it might be reimagined.

Indeed, it is precisely the question of a 'split' that this thesis hopes to do away with once and for all. Following the lead of Donna Haraway's theory of 'naturecultures', or Karen Barad's 'intra-action', I propose that the subject never exists anterior to technology, but that both are always involved in processes and cycles of mutual co-constitution. The political problems of representation inherent in those imaging technologies that have traditionally staked a claim to an objective point of view are here overturned as the technology itself becomes complicit in the formation of the subject that it seeks to represent, not distinct from it.

While this argument is now very familiar to the field of gender and science and technology studies, what is novel here is that the works included in this thesis all point toward the potentiality of *abstraction* in technologically mediated representations of the body, in order to shift the question away from theories of 'the body and technology' toward 'embodiment'. In so doing, the initial terms of the investigation need no longer imply that the body is distinct from technology, nor that terms such as nature and culture can be taken for granted. Through abstraction, or rather lo-fi embodiment, the very terms of the relationship are thus entirely reconfigured, as the technology is used in novel enterprises that undo the concern with mimesis and objectivity in representation.

Much of the work done in relation to feminism and technology has been about the problem of mimesis, since it feeds into theories of vision that are founded on a sort of rational perspectivalism, an over-privileged mode of representation



compared to touch, smell or sound. Furthermore, it has been an important site of critical enquiry given that mimesis presupposes a model of technology in which the (human) subject is not only recorded and analysed through ever increasing fidelity of re-production (subsequently objectifying it), but it also makes the technology itself into an object. In the instrumental mode required by mimesis, technology only ever has a 'role' to play in relation to the subject, and is never conceived as an active participant, or subject with agency, in these processes. Thus, I would argue, mimesis produces a double objectification of both the subject of representation and the technology.

The question of mimesis is haunted by anthropomorphism, in terms of our relation both to technology and to animals (i.e. non-humans more broadly). For example, the recent work of Lucy Suchman has tackled the problem of anthropomorphism in robotics, looking at the ways in which these projects are often judged on the degree to which they have either succeeded or failed to be human-like. Importantly for Suchman, this emphasis on the anthropomorphic has an impact not just on theories of the non-human subject, but also on those of the human itself.<sup>4</sup> She writes:

A recurring theme of Haraway is the historical prevalence of mimesis or mirroring as a guiding trope for figuring human-nonhuman encounters: a form of relation that privileges vision, and looks to find in the Other a differently embodied reproduction of the Self.<sup>5</sup>

Challenging mimesis through abstraction or, more accurately lo-fi embodiment, thus plays a crucial role in subject formation and in undoing the oppositional divide between the body and technology and between the real and the virtual (presupposed by the question of mimesis, as discussed in chapter four of this thesis). Because of the emphasis on a critical encounter with images, art history

---

<sup>4</sup> See Suchman, Lucy 'Subject Objects' in *Feminist Theory*, Vol. 12, No. 2, August 2011, Special Issue: *Nonhuman Feminisms* (pp. 119-145).

<sup>5</sup> Suchman, p. 121.

might conceivably be a site from which new theories of embodiment could be developed.

As such, the role of artistic practice is thus conceived as absolutely fundamental in shifting the terms of this particular discussion. By challenging anthropomorphism and destabilizing the figurative through abstraction, these works demonstrate both the way in which artistic practice has previously been the site of the formation of ideas around the subject (premised on bodily identity), and its potential role for generating new theories.<sup>6</sup> Works that engage technology in the mode of lo-fi potentially redirect discussions of technology away from mimesis, which is premised on vision. Although they are imaging technologies (film, video, medical imaging and computer-based work) they might, paradoxically, thus be seen to challenge vision itself. Furthermore, lo-fi representation is an important mode to consider for a theory of technology more generally since it overturns the assumption that technology only ever tries to reproduce the subject with greater and greater likeness (*high fidelity*). By rejecting the concept of the screen as a mirror, we might overturn the paradigm of repetition that has informed so much of art history for the last four decades.

With regards to this thesis, the work of art history has demonstrated that it is potentially able to initiate an original analysis of technologies, such as endoscopy, which moves from the visual to the political. Concerned as it is with vision and visualities, art history might address the blind spot in the literature in dealing with certain types of image production. Specifically, what is original here is the engagement with medical imaging and computer technology. As well as undertaking a unique analysis of endoscopy and binary (and here it is original not just within art history but also within science and technology studies) this

---

<sup>6</sup> Of note is that even in the realm of abstraction – and especially in relation to abstract expressionism – the body was seen as always present, and always figured in the work itself. Abstraction in painting was historically theorised as anthropomorphic, and the encounter itself was seen as anthropomorphic. ‘Any art that originates with a will to ‘expression’ is not abstract, but representational. Space is represented. Critics who interpret space see the history of art as a reduction of three dimensional illusionistic space to ‘the same order of space as our bodies’... Here Greenberg equates ‘space’ with ‘our bodies’ and interprets this reduction as abstract. This anthropomorphizing of space is aesthetically a ‘pathetic fallacy’ and is in no way abstract.’ Clement Greenberg, ‘Abstract, Representational and So Forth’, 1961, cit. Robert Smithson, ‘Quasi-Infinitudes and the Waning of Space’ (1966) in *Robert Smithson: the Collected Writings*, Flam, J. ed., University of California Press, London 1996 (pp. 34–37) p. 35.

thesis has also drawn on contemporary theories of the subject and technologically mediated representation to enable a critical re-examination of film- and video-based works whose analysis has perhaps become somewhat over-determined. Not only does this project therefore aim to open up pathways for new readings of medical imaging and binary technology beyond the thesis, but also to revisit important early works in feminist film practice, for example reading Schneemann's *Fuses* through current literature in animal studies to generate a new way of conceiving of the film screen in the tactile realm of the pet. Similarly, Craig's videotape *Delicate Issue* intersects with Schneemann's project as an example of an early feminist work that deployed new technology at the historical moment when it entered the mainstream public sphere.

Through these diverse practices, I hope to have brought to light categories of image production that are under-represented in art history, from medical imaging to online gaming to the home sex tape, evaluating their significance in wider visual cultures and artistic practice. By looking at the inter-connections between these different practices, this project has begun to draw formal and theoretical links between technologies in order to highlight the points at which the representation of the female body continues to pose a serious question to artists and theorists. In this I am particularly thinking of the relationship between video- and internet-based practices in relation to the figure of the amateur. Although the overlapping possibilities and problematics of representation in these two fields are hinted at in chapter four, they could be more fully developed in an art-historical context, particularly given that internet-based practice is currently under-represented in the literature.

As well as enabling new research to be conducted in relation to well-established practices, by mobilizing a serious consideration of gender and science and technology studies through the notion of lo-fi embodiment, I hope to re-position art history at the forefront of the literature in this field, and strengthen existing interdisciplinary work between the two.<sup>7</sup> As I suggested in the introduction: *as*

---

<sup>7</sup> Faith Wilding and the SubRosa Group, Rosi Braidotti, Sadie Plant, Christine Ross, Kate Mondloch and Julie Wosk all have an existing interest in the role of the visual arts in relation to gender and science.

*much as the sciences, and especially medical sciences, are finding a new position of prominence amongst art historians, I hope that this exchange might come to be bidirectional.* By 're-position' I am referring to the lack of attention to these questions post-2000 in an art-historical context; a real problem when dealing with an ever-changing technological culture. Instead, the 1990s emerges as somewhat of a pivotal moment in the formation of ideas around the body, gender and technology, in terms of both practical and theoretical output. However, this is not to suggest that this line of enquiry is no longer relevant, but that art history must now acknowledge that the terms of the debate have changed somewhat. For example, as discussed in chapter 4, the frame of reference for approaching computer-technology can no longer be structured around the real/virtual opposition.

While a vast amount of literature was published during the 1990s and beyond on a few important works (that of Orlan and Stelarc, for example) neither practice nor theory seems to have kept pace with developments in technology in terms of models of subjectivity and sexuality. The critical tools of psychoanalysis, feminism and Marxist theory are no longer being seriously deployed in relation to new technologies in art. Here, for example, I am thinking of the work of Parveen Adams on Orlan.<sup>8</sup> Likewise, the important contribution that Sherry Turkle made to the field of psychoanalysis and computer technology could be extended and continued.<sup>9</sup> No practice since the work of Orlan and Stelarc seems to have generated such critical interest and, subsequently, theorizations of technology in art now often seem outdated and polarized (extreme technophilia vs technophobia).<sup>10</sup>

---

<sup>8</sup> See Adams, Parveen 'Operation Orlan' in *The Emptiness of the Image: Psychoanalysis and Sexual Difference*, Routledge, London, 1996 (pp. 141-159).

<sup>9</sup> See Turkle, Sherry *The Second Self: Computers and the Human Spirit*, MIT Press, Cambridge MA., 1984; Turkle, *Life on the Screen: Identity in the Age of the Internet*, MIT Press, Cambridge MA., 1995; and Turkle 'Artificial Intelligence and Psychoanalysis: A New Alliance' in *Daedalus*, Vol. 117, No. 1, Special issue: *Artificial Intelligence*, Winter 1988 (pp. 241-268).

<sup>10</sup> That certain tools of analysis are no longer being consistently used is perhaps reflected in the transition between the *Cybercultures Reader* first and second editions (2000 and 2007 respectively), which shows the relative deceleration of new critical work in these areas, post-2000.

By looking beyond the practices that are now commonly associated with ‘art and technology’ projects, which have become somewhat staid, uncritical and overdetermined, this thesis hopes to reinvest art history with that earlier momentum to re-think how art has engaged imaging technology in an unlikely series of encounters both prior to that moment in the 1990s, during it, and after. Much of the current work on technology and the body is in the area known as ‘SciArt’, dominated by a handful of institutions that have developed a self-limiting discourse around themselves, as outlined in the introduction. By contrast, therefore, this thesis invests in a wider range of discursive practices, acknowledging a formal diversity not exclusively focused on lab-based (‘wetware’) practices, surgical interventions and neuro-scientific techniques of analysis.

And yet, I absolutely understand all the works included in this study as engaged with biotechnology. In this I understand the term through its two constituent parts: *bios*, and its associations with a Foucauldian notion of biopolitics, which is to say a politicized body, and *techne* in the Heideggerian sense, which opposes a traditional instrumental ontology of technology. Thus, biotechnology is here conceived as mounting a significant challenge to the orthodox definition, premised on *the application of science and technology to the utilization or improvement of living organisms for industrial and agricultural production*.<sup>11</sup> Outside of its instrumentalisation in the systems of economic production, I understand biotechnology as both political and poetic: a process of interaction (or, following from Karen Barad, ‘intra-action’) in which technology is always an acting, political subject in its physical and metaphorical encounters with other subjects (whether human or non-human).<sup>12</sup>

What is important to my understanding of biotechnology is that it enables us to draw together a wide range of practices that speak to one another across different historical periods, technological milieu and formal or conceptual differences. It also extends critical analysis of technology beyond lab-based practice, in order

---

<sup>11</sup> See OED on biotechnology

<sup>12</sup> See Barad, Karen *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*, Duke University Press, Durham and London, 2007.

to demonstrate how these issues feed in to visual cultures more broadly, and the bidirectional impact this has with art. As the works in this thesis have demonstrated, the field of technology in art is wider than the current literature might otherwise have us believe, and these practices now merit serious consideration in this context.

But, what is absolutely urgent to address is that the discourse around SciArt has also neglected considerations of gender and sexuality and the politics of technologically mediated representation and analysis. One of the primary aims of this project has therefore been to look at the role of various imaging technologies in the construction of subjectivity and sexuality in different visual cultures. Particularly, the similarities and differences in representation between art, medicine and pornography have emerged as a central axis around which our discussion has rotated. In this, the initial work in the early chapters on practices that identified as feminist lead the way for re-situating later projects amongst these concerns. For example, taking the work of Schneemann, Craig and Hatoum as a series of case studies, this thesis has considered the points at which pornography might differ from (or be similar to) other categories of explicit representation such as home sex tapes, erotic films and gynaecological imagery, examining the gendering of these forms of vision, and linking these findings to models of gendering in computer technology.

This has, however, highlighted several key areas in which my analysis of gender and sexuality is limited. Importantly, this study has only considered the work of women artists, focused primarily on heterosexualities, and drawn on theories from women working in the fields of Feminism and Science and Technology studies. Where is the male body? The queer body? The transsexual body? Is it even still useful to conceive of this project as 'feminist'? In so doing, it might jar against the petitions in chapter one that I make to animal subjectivities and sexualities, and the claims of both chapter four and this conclusion to the importance of embodiment as a way for thinking beyond the categories of gender and sexuality. And yet, the specific issue of the female body and its representation clearly runs throughout.

While conducting the research for this project, no initial restrictions were made on which artists would be discussed, based on race, sex, sexuality, class or species (either concerning the body of the artist themselves or the way in which these categories might be foregrounded in the content or structure of the work). It was not intended to be a study of women artists and, in fact, the body of the artist has been somewhat sidelined here except where it relates to questions that emerge from the strategy of self-representation. The only criteria in choosing the visual and textual practices for discussion concerned the way in which moving image technology might challenge conventions of representation in relation to gender and sexuality, through both the formal *and* structural properties of the technology. Perhaps, as a gendered body myself, this set of criteria automatically – but unwittingly – excluded certain practices. This conclusion therefore might usefully serve as a site for questioning my own blind spots and limitations. Are male or trans artists simply not working with technology in this way and, if so, why not? Would looking at non-heterosexual pornography trouble my discussion of forms of explicit representation? Can we even take this category of ‘explicit representation’ for granted as a single entity? Maybe. Yes. Probably not.

Looking back, the overall tone is not quite as ‘post-’ as I might have initially conceived it, and essentialism has reared its head at times. But this is how the research came to unfold, perhaps reflecting the fact that, at least in part, this is due to the advances made in such theories that are deeply indebted to the early work of feminism (as outlined in the introduction). Socially and historically, women have encountered technology both in its most instrumental mode (as telephonists, typists and operators) but also in its most poetic (as artists and inventors). Thus, finding my way to embodiment through the female body perhaps recognises the especially rich and dynamic relationship that women have had to technology, marking, as it does, their supposed transition from nature to culture. Furthermore, the fact that we might even imagine the possibility of speaking or writing beyond the categories of gender at all is largely thanks to the work of women theorists (Haraway, N Katherine Hayles,

Judith Butler)<sup>13</sup> and transsexual theorists (Judith Halberstam, Sandy Stone)<sup>14</sup>, and this important history needs to be acknowledged.

My interest in, and sympathy for, the project of embodiment clearly comes up against the problem of difference here. In this, my work performs a sort of vocal relay of other projects that draw similar conclusions: the terms are now set by which we might speak beyond the bounds of gender and sexuality, and yet we are rarely able ever fully to do so. The specificities of bodies are always configured not just in the representation, not just in the technology, but also in the discourse itself. And this, of course, is because there is still much work to be done.

---

<sup>13</sup> The works of Haraway and Hayles have been extensively referenced throughout this thesis. However, for the relevant works of Judith Butler see *Gender Trouble: Feminism and the Subversion of Identity*, Routledge, London and New York, 1990; Butler, *Bodies That Matter: On the Discursive Limits of 'Sex'*, Routledge, London and New York, 1993; and Butler, *Undoing Gender*, Routledge, London and New York, 2004.

<sup>14</sup> See Stone, Sandy/Allucquère Rosanne *The War of Desire and Technology at the Close of the Mechanical Age*, MIT Press, Cambridge, 1996; Stone, 'The Empire Strikes Back: A Posttranssexual Manifesto' (1987) available at <http://www.sterneck.net/gender/stone-posttranssexual/index.php>; Stone, 'Will the Real Body Please Stand Up: Boundary Stories About Virtual Cultures' in *The Cybercultures Reader* (first edition) Bell & Kennedy eds., Routledge, London and New York, 2000 (pp. 504-528); Halberstam, Judith *Female Masculinity*, Duke University Press, Durham, 1998; *Posthuman Bodies*, Halberstam, J. & Livingston, I. eds., Indiana University Press, Bloomington, 1995.



## BIBLIOGRAPHY

- Abrioux, Yves and Grant, Simon 'Mona Hatoum at the Pompidou: Two Responses' responses' in *Untitled*, September 1994 (p. 116).
- Adams, Carol J. *The Sexual Politics of Meat: A Feminist-Vegetarian Critical Theory*, Continuum, New York, 1990.
- Adams, Parveen *The Emptiness of the Image: Psychoanalysis and Sexual Difference*, Routledge, London and New York, 1996.
- Agamben, Giorgio *Homo Sacer: Sovereign Power and Bare Life*, Heller-Roazen, D. trans., Stanford University Press, Stanford, California, 1998.
- Alford, Violet 'The Cat Saint', *Folklore*, Vol. 52, No. 3, Sep., 1941 (pp. 161-183).
- Antin, David 'Video: the Distinctive Feature of the Medium' in *Video Art*, Schneider, I. & Korot, B. eds., Harcourt Brace Jovanovich, New York, 1976 (pp. 174-183).
- Antoni, Janine 'Mona Hatoum: Interview' in *Bomb Magazine*, No. 63, Spring 1998.
- Anzieu, Didier *The Skin Ego*, Turner, C. trans., Yale University Press, New Haven and London, 1989.
- Armstrong, P. et. al. *Diagnostic Imaging*, 5<sup>th</sup> Edition, Blackwell, Malden Mass., and Oxford, England, 2004.
- Arnold, Grant 'Kate Craig: Skin' in *Kate Craig: Skin*, Ex. Cat., Vancouver Art Gallery, 1998 (pp. 1-16).
- Auslander, Philip *From Acting to Performance: Essays in Modernism and Postmodernism*, Routledge, London and New York, 1997.  
–*Liveness: Performance in a Mediatized Culture*, Routledge, New York, 1999.
- Awise, John *The Hope, Hype and Reality of Genetic Engineering*, Oxford University Press, Oxford and New York, 2004.
- Baggish & Karram eds., *Atlas of Pelvic Anatomy and Gynaecological Surgery*, 2<sup>nd</sup> edition, Saunders, 2006.
- Bagley, Christopher 'Incest Behaviour and Incest Taboo' in *Social Problems*, Vol. 16, No. 4, Spring, 1969 (pp. 505-519).
- Bakardjieva, Maria 'Virtual Togetherness: an Everyday-Life Perspective' in *The Cybercultures Reader Second Edition* Bell, D. & Kennedy, B. eds., Routledge, London and New York, 2007 (pp. 236-253).

- Baker, Steve *The Postmodern Animal*, Reaction Books, London, 2000, p. 167.
- Bal, Mieke 'Mise en Abyeme et Iconicité' in *Literature*, Vol. 29, 1978 (pp. 116-123).
- Baljko, Melanie and Tenhaaf, Nell 'The Aesthetics of Emergence: Co-Constructed Interactions' in *ACM Trans. Computer-Human Interactions*, Vol. 15, No. 3, Article 11, 2008 (pp. 11:1-11:27).
- Ballard, J. G. with illustrations by Gloeckner, Pheobe *The Atrocity Exhibition*, Re/Search publications, San Francisco, 1990.
- Balsamo, Anne 'The Virtual Body in Cyberspace' in *The Cybercultures Reader First Edition* Bell, D. & Kennedy, B. eds., Routledge, London and New York, 2000 (pp. 489–503).
- Barad, Karen *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*, Duke University Press, Durham and London, 2007.
- Baron, Jeremy Hugh 'Passing Fair' in *BMJ*, Vol. 311, August 1995 p. 517.
- Baudrillard, Jean 'Simulacra and Simulations' in *Baudrillard: Selected Writings*, Poster, M. ed., Polity Press, Cambridge, 1998 (pp. 166 - 184).  
–*Simulacra and Simulation*, Glaser, S. trans., University of Michigan Press, Ann Arbor, 1994.
- Baudry, Louis 'The Apparatus: Metapsychological Approaches to the Impression of Realism in the Cinema' in *Narrative, Apparatus, Ideology: A Film Theory Reader*, Rosen, P. ed., Columbia University Press, New York, 1986.
- Beaulieu, Anne 'The Brain at the End of the Rainbow: the Promises of Brain Scans in the Research Field and in the Media' in *Wild Science: Reading Feminism, Medicine and the Media*, Marchessault, J. & Sawchuk, K. eds., Routledge, London and New York, 2000 (pp. 39-54).
- Beck, Alan & Katcher, Aaron *Between Pets and People: The Importance of Animal Companionship*, Purdue University Press 1996.
- Bell, David 'Webs as Pegs' in *The Cybercultures Reader Second Edition* Bell, D. & Kennedy, B. eds., Routledge, London and New York, 2007 (pp. 254-263).
- Bell, Kirsty *Mona Hatoum: Unhomely*, Holzwarth Publications, Berlin, 2008.
- Benedikt, Michael 'Cyberspace: First Steps', in *The Cybercultures Reader Second Edition* Bell, D. & Kennedy, B. eds., Routledge, London and New York, 2007 (pp. 19-33).

- Berger, John 'Why Look at Animals' in *About Looking*, Pantheon Books, New York 1980 (pp. 3-28).
- Bersani, Leo 'Is the rectum a grave?' in *AIDS: Cultural Analysis, Cultural Activism*, Crimp, D. ed., MIT Press, Cambridge, 1988 (pp. 197-222).  
 –*Homos*. Harvard University Press, Cambridge 1995.
- Boorse, Christopher 'Health as a Theoretical Concept' in *Philosophy of Science*, Vol. 44, No. 4, 1977 (pp. 542-573).
- Booth, C. C. 'What has Technology Done to Gastroenterology?' in *The History of Gastroenterology: Essays on its Development and Accomplishments*, Chen, T. S. & Chen, P. S. eds., The Parthenon Publishing Group, New York and London, 1995 (pp. 107-113).
- Bordo, Susan 'Anorexia Nervosa: Psychopathology as the Crystallization of Culture' in *Feminism and Foucault: Reflections on Resistance*, Diamond, I. & Quinby, L. ed., Northeastern University Press, Boston 1988;
- Bordo, Susan 'The Cartesian Masculinisation of Thought' in *Signs*, vol. 11, No. 3, 1986 (pp. 439-456).
- Braidotti, Rosi 'Body Images and the Pornography of Representation' in *Knowing the Difference, Feminist Perspectives in Epistemology*, Lennon & Whitford eds., Routledge, London and New York, 1994.  
 –*Nomadic Subjects: Embodiment and Sexual Difference in Contemporary Feminist Theory*, Columbia University Press, New York, 1994.  
 –& Lykke, N. eds., *Between Monsters, Goddesses and Cyborgs: Feminist Confrontations with Science, Medicine and Cyberspace*, Zed books, London and New Jersey, 1996.  
 –'Cyberfeminism With a Difference' (1996) available online at [http://www.let.uu.nl/womens\\_studies/rosi/cyberfem.htm](http://www.let.uu.nl/womens_studies/rosi/cyberfem.htm)
- Braun-Courville, Debra K. and Rojas, Mary 'Exposure to Sexually Explicit Web Sites and Adolescent Sexual Attitudes and Behaviors' in *Journal of Adolescent Health*, Vol. 45, 2009 (pp. 156-162).
- Briggs, Katherine *The Fairies in Tradition and Literature*, Routledge Classics, London and New York, 2002 (pp. 85-87).
- Brignone, Patricia 'Mona Hatoum' in *Art Press*, October 1994 (p. 113).
- Britton, S. & Collins, D. eds., *The Eighth Day: The Transgenic Art of Eduardo Kac*, Institute for Studies in the Arts, Arizona State University, Tempe, 2003.
- Brown, Beverly 'Private Faces in Public Places' in *Ideology and Consciousness*, No. 7 (pp. 3-16).

Bryan-Wilson, Julia 'Our Bodies, our Houses, our Ruptures, Ourselves', in *Ida Applebroog: Monalisa*, Exh.Cat., Hauser and Wirth, New York, 2010 (pp. 13-39).

Buchloh, Benjamin 'From Gadget Video to Agit Video: Some Notes on Four Recent Video Works' in *Art Journal*, special issue *Video: The Reflexive Medium* Vol. 45, No. 3, Autumn 1985 (pp. 217-227).

Bukatman, Scott *Terminal Identity: The Virtual Subject in Postmodern Science Fiction*, Duke University Press, Durham, North Carolina, 1993.

Bukatman, Scott 'Cyberspace' in in *The Cybercultures Reader Second Edition* Bell, D. & Kennedy, B. eds., Routledge, London and New York, 2007 (pp. 80-105).

Bullough, Vern *Human Sexuality: An Encyclopaedia*, Garland Publishing Inc., New York and London, 1994 (pp. 60-65).

Butler, Judith *Bodies That Matter: On the Discursive Limits of 'Sex'*, Routledge, London and New York, 1993.

–*Gender Trouble: Feminism and the Subversion of Identity*, Routledge, London and New York, 1990.

–*Undoing Gender*, Routledge, London and New York, 2004.

Camper, Fred 'Some Notes on the Home Movie' in *Journal of Film and Video*, special issue *Home Movies and Amateur Filmmaking*, Vol. 38, No. 3/4, Summer-Fall 1986 (pp. 9-14).

Carrard, Philippe 'From Reflexivity to Reading: the Criticism of Lucien Dällenbach' in *Poetics Today*, special issue *Representation In Modern Fiction*, Vol. 5, No. 4, 1984 (pp. 839-856).

Carroll, Noel 'The Specificity of Media in the Arts' in *Film and Theory*, Stam & Miller eds., Blackwell, Malden M.A. and Oxford England, 2000 (pp. 39-53).

Cassell, Eric J. 'The Body of the Future' in *The Body in Medical Thought and Practice*, Leder, D. ed., Kluwer Academic Publishers, Dordrecht, Boston and London, 1992 (pp. 233-249).

Catts, Oron 'The Art of the Semi-Living' in *Live: Art and Performance*, Heathfield, A. ed., Routledge, New York, 2004.

–& Zurr, Ionat 'Growing Semi-Living Sculptures: The Tissue Culture & Art Project' in *Leonardo*, Vol. 35 No. 4, 2002 (pp. 365–370).

Cohen, Jeffrey Jerome 'Monster Culture (Seven Theses)' in *Monster Theory: Reading Culture*, Cohen, J. J ed., University of Minnesota Press, Minneapolis and London, 1996 (pp. 3-25).

Connell, R. W. *Gender and Power: Society, the Person and Sexual Politics*, Stanford University Press, Stanford, 1987.

- Coopersmith, Jonathan 'Pornography, Videotape and the Internet' in *IEEE Technology and Society Magazine*, Spring 2000 (pp. 27-34).
- Crary, Jonathan *Techniques of the Observer*, MIT Press, Cambridge, Massachusetts, and London, England 1990.
- Creed, Barbara *The Monstrous Feminine: Film, Feminism, Psychoanalysis*, Routledge, London and New York, 1993.
- Creissels, Ann 'Foreign Bodies: the Spectator's Metamorphoses' in *Cahiers du Musée National d'Art Moderne*, No. 80, 2002 (pp. 41-55).
- Critical Art Ensemble, 'Body Invasion' in *Art Journal*, Vol. 59, No. 3, Autumn 2000 (p. 48).
- Cubitt, Sean *Digital Aesthetics*, Sage Publications, London and New Delhi, 1998.
- Cusumano, Michael A. 'Strategic Maneuvering and Mass-Market Dynamics: the Triumph of VHS over Beta' in *The Business History Review*, special issue *High-Technology Industries*, Vol. 66, No. 1, 1992 (pp. 51-94).
- Dällenbach, Lucien 'Reflexivity and Reading' in *New Literary History*, special issue *On Narrative and Narratives: II*, Tomarken, A. trans., Vol. 11, No. 3, Spring 1980 (pp. 435-449).  
 –*Le Rit Speculaire*, Seuil, Paris, 1977, p. 16.
- Daniel, Stephen L. 'The Patient as Text: a Model of Clinical Hermeneutics' in *Theoretical Medicine*, Vol. 7, No. 2, 1986 (pp. 195-210).
- Davies, Christie 'Sexual Taboos and Social Boundaries' in *The American Journal of Sociology*, Vol. 87, No. 5, March 1982 (pp. 1032-1063).
- de Lauretis, Teresa *Technologies of Gender: Essays on Theory, Film and Fiction*, Indiana University Press, Bloomington and Indianapolis, 1987.
- Descartes, Rene *Philosophical Writings Vol. III: The Correspondence*, Cottingham, J. trans., Cambridge University Press, Cambridge, 1997.
- Delaney, David 'Making Nature/Marking Humans: Law as a Site of (Cultural) Production' in *Annals of the Association of American Geographers*, Vol. 91, No. 3, September 2001, (pp. 487-503).
- Deleuze, Gilles *Difference and Repetition*, Continuum, London, 2004.  
 –*Francis Bacon: The Logic of Sensation*, Continuum, London, 2005.  
 –& Guattari, Felix *Capitalism and Schizophrenia: A Thousand Plateaus*, Continuum, London, 2004.
- Derrida, Jacques 'The Animal that Therefore I Am (More to Follow)', Wills, D.

- trans., *Critical Inquiry*, Vol.28, No.2, Winter 2002, (pp. 369-418).  
 –*On Touching – Jean-Luc Nancy*, Irizarry, C. trans., Stanford University Press, Stanford, California, 2005.  
 –*The Beast and The Sovereign: Volume I*, Lisse, M., Mallet, M-L. & Michaud, G. eds., Bennington, G. trans., University of Chicago Press, Chicago and London, 2009.
- Doane, Mary Anne ‘Film and the Masquerade: Theorising the Female Spectator’ in *Screen* 23.3-4, 1982 (pp. 74-88).
- Douglas, Mary *Implicit Meanings: Essays in Anthropology*, Routledge, London 1975.  
 –*Leviticus as Literature*, Oxford University Press, Oxford, 2001.  
 –*Purity and Danger: An Analysis of Concepts of Pollution and Taboo*, Penguin, London 1970.
- Eastwood, Gregory L. & Avunduk, Canan *Manual of Gastroenterology: Diagnosis and Therapy*, 2<sup>nd</sup> edition, Little, Brown & Co, Boston, New York Toronto and London, 1994.
- Edmonds, Guy ‘Amateur Widescreen; or, Some Forgotten Skirmishes in the Battle of the Gauges’ in *Film History*, special issue *Nontheatrical Film*, Vol. 19, No. 4, 2007 (pp. 401-4130).
- Emberley, Julia *Venus and Furs: The Cultural Politics of Fur*, I. B. Taurus & Co. Ltd, London, 1998.
- Erens, Patricia ‘The Galler Home Movies: a Case Study’ in *Journal of Film and Video*, special issue *Home Movies and Amateur Filmmaking*, Vol. 38, No. 3/4, Summer-Fall 1986 (pp. 15-240).
- Essinger, James *Jacquard's Web: How a Hand-Loom Led to the Birth of the Information Age*, Oxford University Press, Oxford, 2004.
- Fisk, Thomas ‘Relational Interpretation of the Wave Function and a Possible Way Around Bell’s Theorem’ in *International Journal of Theoretical Physics*, Vol. 45, 2006 (pp. 1205-1219).
- Flam, Jack ed., *Robert Smithson: the Collected Writings*, University of California Press, London 1996.
- Foster, Hal ‘The Artifice of Abjection’ in *The Return of the Real: The Avant-Garde at the End of the Century*, MIT Press, Cambridge, Mass., and London, 1996.
- Foucault, Michel *Birth of the Clinic: An Archaeology of Medical Perception*, Sheridan, A. M. trans., Routledge, London and New York, 2003.  
 – *The Will To Knowledge: The History of Sexuality Volume I*, Hurley, R. trans., Penguin Books, 1998.

- Fox Keller, Evelyn *Reflections on Gender and Science*, Yale University Press, New Haven and London, 1985 p. 3.
- & Grontowski, Carol ‘The Minds Eye’ in *Discovering Reality*, Harding, S. & Hintikka, M. eds., Reidel, Dordrecht, 1983.
- Fraser, Nancy *Unruly Practices: Power, Discourse and Gender in Contemporary Social Theory*, Polity Press, Cambridge 1989.
- Freud, Sigmund *Inhibitions, Symptoms and Anxiety* (1926) W.W. Norton and Co, London, 1990.
- Totem and Taboo* (1913) Routledge, London and New York, 2003.
- Frimberger, E. S. et. al., ‘Colonoscopy and Polypectomy with a Side-Viewing Endoscope’, in *Endoscopy*, Vol. 39, No. 5, 2007 (pp. 462-465).
- Gadon, Elinor W. *The Once and Future Goddess*, Harper and Row, San Francisco, 1989 (pp. 295-296).
- Garb, Tamar ‘Hairlines’ in *Women Artists at the Millennium*, Armstrong, C. & de Zegher, C. eds., October Books, MIT Press, Cambridge, Mass., and London, England, 2006.
- Gere, Charles *The Computer as an Irrational Cabinet*, unpublished PhD thesis, Middlesex University, 1996.
- Gever, Martha ‘The Feminism Factor: Video and its Relation to Feminism’ in Hall, D. & Fifer, S. J. eds. (pp. 226-241).
- Gibson, William *Neuromancer*, Grafton, London 1986.
- Gide, André *Journals 1889-1949*, Penguin, Harmondsworth, 1967.
- Giles, Dennis ‘Pornographic Space: The Other Place’ in *The 1977 Film Studies Annual: Part 2*, Redgrave, Pleasantville, New York 1977 (pp. 52-65).
- Gingras, Nicole ‘The Movement of Things’ in *Kate Craig: Skin, Ex. Cat.*, Vancouver Art Gallery, 1998 (pp. 17-29).
- Gingras, Nicole *Shifts and Transfers: on Some Tendencies in Canadian Video*, ex. pamphlet, Galerie d’Art d’Ottawa, 2003.
- Gonzalez, Jennifer ‘The Appended Subject: Race and Identity as Digital Assemblage’ in *The Feminism and Visual Culture Reader*, Jones, A ed., Routledge, London and New York, 2003 (pp. 534–544);
- Gottfried Leibniz, *Theodicy: Essays on the Goodness of God, The Liberty of Man and the Origin of Evil* (1710.)
- Greene, Brian *The Elegant Universe: Superstrings, Hidden Dimensions, and the Quest for the Ultimate Theory*, W. W. Norton, New York, 1999.

- Grimm, *Complete Fairy Tales*, Routledge Classics, London and New York, 2002.
- Grimshaw, Jean 'Practices of Freedom' in *Up Against Foucault*, Ramazanoglu, C. ed., Routledge, London and New York 1993.
- Grosz, Elizabeth *Volatile Bodies: Toward a Corporeal Feminism*, Indiana University press, Bloomington and Indianapolis, 1994.
- Hadlock, Wendell S. and Stimson, Anna K. 'Traditional Cat Names', in *The Journal of American Folklore*, Vol. 59, No. 234, Oct. – Dec., 1946, (pp. 529-530).
- Halberstam, Judith *Female Masculinity*, Duke University Press, Durham, 1998.  
–& Livingston, I. eds., *Posthuman Bodies*, Indiana University Press, Bloomington, 1995.
- Haller, Robert 'Amy Greenfield and Carolee Schneemann: An Introduction' and 'Through the Body: A dialogue between Amy Greenfield and Carolee Schneemann' both in *Field of Vision*, No. 4, Fall 1978 (pp. 2-4 and pp. 5-8).
- Haraway, Donna 'A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century' in *Simians, Cyborgs and Women: The Reinvention of Nature*, Routledge, London and New York, 1991 (pp.149-181).  
–'Biopolitics of Postmodern Bodies: Determinations of Self in Immune System Discourse' in *Knowledge, Power, Practice: The Anthropology of Medicine and Everyday Life*, Lindenbaum, S. & Lock, M. eds., University of California Press, Berkeley, L.A., and London, 1993 (pp.364-410).  
–*Primate Visions: Gender, Race, and Nature in the World of Modern Science*, Routledge, New York and London, 1989.  
–*When Species Meet*, University of Minnesota Press, Minneapolis, 2008.  
–'Sex, Race, Class, Scientific Objects of Knowledge: A Marxist-Feminist Perspective on the Social Generation of Productive Nature and Some Political Implications' Conference on Science, Technology, and Development Strategies, Cavtat, Yugoslavia, September 21-26, 1981.  
–'Maps of Power, Maps of Bodies: Feminist Approaches to the Territory of the Life Sciences' in *Modern Language Association*, Special Forum on the Politics of Domination, December 28, 1982.  
–panel session on 'Feminist Perspectives on Science and Technology' *Toronto meetings of History of Science Society*, October 17, 1980.
- Hartsock, Nancy 'Foucault on Power: a Theory for Women?' in *Feminism/Postmodernism*, Nicholson, L. ed., Routledge, London and New York 1990.
- Hayles, N Katherine *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics*, University of Chicago Press, Chicago and London, 1999.



Hayward, Eva 'Fingery Eyes: What I Learned from *Balanophyillia Elegans*' in *The Encyclopedia of Human-Animal Relationships*, Bekoff, M. ed., Greenwood Publishing Group, Westport, Connecticut, 2007.

Heidegger, Martin 'The Question Concerning Technology' in *Basic Writings: Martin Heidegger*, Krell, D. F. ed., Harper Collins, San Francisco, 1994 (pp. 283-318).

–*Being and Time*, MacQuarrie, J. & Robinson, E. trans., Harper and Row, New York, 1962 (pp. 95-107).

Heiman, Marcel 'The Relationship Between Man and Dog' in *Psychoanalytic Quarterly*, Vol. 25, 1956.

Henslin, James & Biggs, Mae 'Dramaturgical Desexualisation: the Sociology of Vaginal Examination' in *Studies of the Sociology of Sex*, Henslin, J. ed., Appleton-Century-Crofts, New York, 1971 (pp. 243-72).

Hirooka, Yoshiki et. al., 'Standardization of Endoscopic Ultrasonography Procedures for the Pancreas Using Radial and Convex Methods' in *Digestive Endoscopy*, Vol. 14, 2002 (pp. 34-39).

Hirschowitz, Basil I. 'The Development and Application of Fibreoptic Endoscopy' in *The History of Gastroenterology* (pp. 99-105).

Hocquenghem, Guy *Homosexual Desire*, Duke University Press, Durham, 1993.

Holden, Todd Joseph Miles & Tsuruki, Takako 'Deai-Kei' in *The Cybercultures Reader Second Edition* Bell, D. & Kennedy, B. eds., Routledge, London and New York, 2007 (pp. 144-158).

Horn, Jack C. and Meer, Jeff 'The Pleasure of Their Company: PT Survey Report on Pets' in *Psychology Today*, Vol. 18, No. 8, August 1984 (pp. 52-59).

Howard, Margaret M. 'Dried Cats', in *Man*, Vol. 51, Nov. 1951 (pp. 149-151).

Huet, Marie-Helene *Monstrous Imagination*, Harvard University Press, Cambridge, Massachusetts and London, England, 1993.

Hugo, Victor *Les Miserables*, Denny, N. trans., Penguin Books, London, 1976.

Hutcheon, Linda *Narcissistic Narrative: the Metafictional Paradox*, Methuen and Co. Ltd, London, 1990.

Huysen, Andreas 'The Vamp and The Machine: Technology and Sexuality in Fritz Lang's *Metropolis*' in *New German Critique*, No. 24/25, Autumn 1981 – Winter 1982 (pp. 221-237).

Irigaray, Luce *An Ethics of Sexual Difference*, Burke, C. & Gill, G. C. trans., The Athlone Press, London 1993.

- Speculum of the Other Woman*, Gill, G. C. trans., Cornell University Press, Ithaca, New York, 1985.
- This Sex Which is Not One*, Porter, C. trans., Cornell University Press, 1985.
- James, David E. *Allegories of Cinema: American Film in the Sixties*, Princeton University Press, Princeton, 1989.
- Jameson, Fredric *Postmodernism: or, The Cultural Logic of Late Capitalism*, Verso, London and New York, 1991.
- Jay, Martin ‘Dialectic of Enlightenment’ in *Downcast Eyes: The Denigration of Vision in Twentieth-Century French Thought*, University of California Press, Berkeley and Los Angeles, 1993.
- Johnson, Eve ‘Artvid’, *The Sun*, March 9, 1985.
- Johnson, Steven *Interface Culture: How New Technology Transforms the Way We Create and Communicate*, HarperCollins, San Francisco, 1997.
- Jonas, Joan ‘Transmission’ in *Women Art and Technology*, Malloy, J. ed., MIT Press, Cambridge Mass. and London England, 2003 (pp. 114-133).
- Jones, Amelia ‘Dis/Playing the Phallus’ in *Art History*, vol. 17, no. 4, 1994 (pp. 546-584).
- *Body Art: Performing the Subject*, University of Minnesota Press, Minneapolis and London, 1998.
- *Self/Image: Technology, Representation and the Contemporary Subject*, Routledge, London and New York, 2006.
- Jordanova, Ludmilla *Sexual Visions: Images of Gender in Science and Medicine between the Eighteenth and Twentieth Centuries*, Harvester Wheatsheaf, London 1989.
- Joselit, David ‘Art as Information: Systems, Site, Media’ in *American Art Since 1945*, Thames and Hudson, London, 2003 (pp. 129-159).
- ‘Tale of the Tape: Radical Software’ in *Art and the Moving Image: a Critical Reader*, Leighton, T. ed., Tate Publishing, London, 2008 (pp. 220-227).
- *Infinite Regress: Marcel Duchamp 1910-1941*, MIT press, Cambridge, Mass., 2001.
- Joyce, Kelly ‘Appealing Images: MRI and the Production of Authoritative Knowledge’ in *Social Studies of Science*, Vol. 35, No. 3, June 2005 (pp. 437-462).
- *Magnetic Appeal: MRI and the Myth of Transparency*, Cornell University Press, Ithaca and London, 2008.
- K. Thomas, *Religion and the Decline of Magic*, Charles Scribner’s Sons, New York, 1971.
- Kac, Eduardo ‘GFP Bunny’ in *Eduardo Kac: Telepresence, Biotelematics*,

*Transgenic Art*, Kostic, A. & Dobrila, P. T. eds., Association for Culture and Education, KIBLA Multimedia Center, Maribor, Slovenia, 2002 (pp. 100–130).  
–*Telepresence & Bio Art: Networking Humans, Rabbits, & Robots*, University of Michigan Press, Ann Arbor, 2005.

Kaizen, William ‘Live on Tape: Video, Liveness and the Immediate’ in *Art and the Moving Image: a Critical Reader*, Leighton, T. ed., Tate Publishing, London, 2008 (pp. 258-272).

Kaplan, Robert *The Nothing That Is: A Natural History of Zero*, Penguin Press, London and New York, 1999.

Kapsalis, Terri *Public Privates: Performing Gynaecology from Both Ends of the Speculum*, Duke University Press, Durham and London, 1997.

Kevles, Betyann Holtzmann *Naked to the Bone: Medical Imaging in the Twentieth Century*, Rutgers University Press, New Brunswick, 1998.

Kindon, Sara ‘Participatory Video in Geographic Research: a Feminist Practice of Looking?’ in *Area*, Vol. 35, No. 2, 2003 (pp. 142-153).

Kingsbury, J.B. ‘The Last Witch of England’, in *Folklore*, Vol. 61, No. 3, Sep., 1950 (pp. 134-145).

Kipnis, Laura ‘How to Look at Pornography’ in *Pornography: Film and Culture*, Lehman, P. ed., Rutgers University Press, 2006 (pp. 118-132).

Klein, Melanie ‘The Origins of Transference’ in *The Selected Melanie Klein*, Mitchell, J. ed., Penguin, London, 1991 (pp. 201-210).

Kleinhans, Chuck ‘The Change from Film to Video Pornography: Implications for Analysis’ in *Pornography: Film and Culture*, Lehman, P. ed., Rutgers University Press, 2006 (pp. 154-167).

Krauss, Rosalind ‘The Im/Pulse to See’ in *Vision and Visuality*, Foster, H. ed., *Dia Art Foundation Discussions in Contemporary Culture No. 2*, Bay Press, Seattle, 1988 (pp. 51-78).  
–‘Video: the Aesthetics of Narcissism’ in *October*, Vol. 1, Spring 1976 (pp. 50-64).

Kreisel, Deanna K. ‘Wolf Children and Automata: Bestiality and Boredom at Home and Abroad’ in *Representations* No. 96, Autumn 2006 (pp. 21-47).

Kristeva, Julia *Powers of Horror*, Columbia University Press, New York, 1982.

Kroker, Arthur and Kroker, Marilouise *Hacking the Future: Stories for the Flesh-Eating 90s*, New World Perspectives, New York, 1996.

Lajer-Burcharth, Ewa ‘Real Bodies: Video in the 1990s’ in *Art History* Vol. 20, No. 2, June 1997 (pp. 185-213).

- Lanza, Joseph 'Female Rollercoaster (and Other Virtual Vortices)' in *Performing Arts Journal*, Vol. 14, No. 2, May 1992 (pp. 51-63).
- Laporte, Dominique *History of Shit*, MIT press, Cambridge, 2000.
- Lardeau, Yanne 'Le Sexe Froid (du Porno au Delà)' in *Cahiers du Cinéma*, 289, 1978.
- Latour, Bruno 'Drawing things together' in *Representation in Scientific Practice*, eds., Lynch and Woolgar, MIT Press, Cambridge, Mass., and London, England 1990.
- Laurence, Robin 'Skin deep video' in *Border Crossings*, May 1998 (pp. 57-59).  
 – 'Getting under Kate Craig's skin' in *Front*, special issue *Kate Craig Memorial Issue*, Vol. XIII, No. 5, Nov./Dec. 2002.
- Leder, Drew 'A Tale of Two Bodies: the Cartesian Corpse and the Lived Body' in *The Body in Medical Thought and Practice*, Leder, D. ed., Kluwer Academic Publishers, Dordrecht, Boston and London, 1992 (pp. 17-35).  
 – 'Clinical Interpretation: the Hermeneutics of Medicine' in *Theoretical Medicine* Vol. 11, No. 1, 1990 (pp. 9-24).  
 – *The Absent Body*, university of Chicago press, Chicago and London, 1990.
- Lederer, Susan 'Animal Parts/Human Bodies: Organic Transplantation in early 20<sup>th</sup> Century America' in *The Animal/Human Boundary: Historical Perspectives*, Creager, A. & Jordan, W.C eds., University of Rochester Press, New York, 2002 (pp. 305-329).
- Leboevici, Elisabeth 'Mona Hatoum, Intérieur Nuit' in *Libération*, 2<sup>nd</sup> July 1994 (p. 111).
- Lloyd, Genevieve *The Man of Reason*, Methuen, London, 1986.
- Locher, Birgit & Prügl, Elisabeth 'Feminism and Constructivism: Worlds Apart or Sharing the Middle Ground?' in *International Studies Quarterly*, Vol. 45, No. 1, March 2001 (pp. 111-129).
- Macdonald, Scott 'Carolee Schneemann's Autobiographical Trilogy' in *Film Quarterly*, Vol. 34, No. 1, Autumn 1980 (pp. 27-32).  
 – *A Critical Cinema: Interviews with Independent Filmmakers*, University of California Press, Berkeley, LA, London, 1988.
- Manson-Smith, Sacha *Investigation into Scanning Tunnelling Luminescence Microscopy* unpublished PhD thesis, University of Strathclyde, 2000
- Marchessault, J. & Sawchuk, K. eds., *Wild Science: Reading Feminism, Medicine and the Media*, Routledge, London and New York, 2000.
- Marks, Laura *The Skin of the Film: Intercultural Cinema, Embodiment and the*

- Senses*, Duke University Press, Durham and London, 2000.
- Martin, Stewart 'Critique of Relational Aesthetics' in *Third Text*, Vol. 21, No. 4, 2007 (pp. 368-86).
- Meigh-Andrews, Chris *A History of Video Art: The Development of Form and Function*, Berg, Oxford and New York, 2006.
- Merleau-Ponty, Maurice *The Visible and the Invisible*, Lefort, C. ed., Lingis, A. trans., Northwestern University Press, Evanston Illinois, 1968.  
 –'Eye and Mind' (1960) in *The Merleau-Ponty Aesthetics Reader: Philosophy and Painting*, Smith, M. trans., Northwestern University Press, Evanston 1993.  
 –*Phenomenology of Perception*, Smith, C. trans., Routledge and Kegan Paul, London and Henley, 1962 (pp. 346-65).
- Metz, Christian in *The Imaginary Signifier: Psychoanalysis and the Cinema*, Williams, A. et al. trans., Indiana University Press, Bloomington, 1977.
- Michelson, Peter *Speaking the Unspeakable: A Poetics of Obscenity*, State University of New York Press, Albany 1993.
- Micklewright, F. H. Amphlett 'A Note on the Witch-Familiar in Seventeenth-Century England', in *Folklore*, Vol. 58, No. 2, June 1947 (pp. 285-287).
- Midgeley, Mary *Animals and Why They Matter A Journey Around the Species Barrier*, University of Georgia Press, 1983.  
 –*Beast and Man: The Roots of Human Nature*, Cornell University Press, 1978.
- Miletski, Hani 'Bestiality and Zoophilia: an Exploratory Study' in *Scandinavian Journal of Sexology*, Vol. 3, No. 4, 2000, (pp 149-150),.
- Miller, William Ian *The Anatomy of Disgust*, Harvard University Press, 1997 especially the chapter 'Orifices and Bodily Wastes' (pp. 89-108).
- Mitchell, Juliet *Psychoanalysis and Feminism: A Radical Reassessment of Freudian Psychoanalysis*, Penguin, London, 2000 (pp. 370-376).
- Monty, Martin M. et. al., 'Wilful Modulation of Brain Activity in Disorders of Consciousness' in *The New England Journal of Medicine*, Vol. 362, No. 7, February 18, 2010.
- Morris, Peter 'Blurred Boundaries' in *Inquiry*, No. 40, 1997, (pp. 259-290).
- Mullin, Molly H. 'Mirrors and Windows: Socio-Cultural Studies of Human-Animal Relationships' in *Annual Review of Anthropology*, Vol. 28, 1998 (pp. 201-224).
- Mulvey, Laura 'Visual Pleasure and Narrative Cinema' in *Screen* 16.3, Autumn 1975 (pp. 6-18).

- Murphy, Michelle 'Immodest Witnessing: the Epistemology of Vaginal Self-Examination in the U.S. Feminist Self-Help Movement' in *Feminist Studies*, Vol. 30, No. 1, Spring 2004 (pp. 115-147).
- Nadeau, Chantal *Fur Nation: From the Beaver to Brigitte Bardot*, Routledge, London and New York, 2001.
- Nakamura, Lisa 'Race In/For Cyberspace: Identity Tourism and Racial Passing on the Internet' in *The Cybercultures Reader First Edition* Bell, D. & Kennedy, B. eds., Routledge, London and New York 2000 (pp. 712-720).
- Nancy, Jean-Luc *Corpus*, Rand, R. A. trans., Fordham University Press, New York, 2008.  
 –*Entre Singulier Pluriel*, Galilée, Paris 1996.
- Nead, Lynda *The Female Nude: Art, Obscenity and Sexuality*, Routledge, London & New York, 1992.
- Nicholson, Heather Norris 'Seeing How It Was?: Childhood Geographies and Memories in Home Movies' in *Area*, Vol. 33, No. 2, Jun. 2001 (pp. 128-140).
- Nochlin, Linda *The Body In Pieces: The Fragment as a Metaphor for Modernity*, Thames and Hudson, London 1994.
- O'Bryan, C. Jill *Carnal Art: Orlan's Refacing*, University of Minnesota Press, Minneapolis and London, 2005.
- O'Dell, Kathy 'Performance, Video and Trouble in the Home' in *Illuminating Video: an Essential Guide to Video Art*, Hall, D. & Fifer, S. J. eds., Aperture, San Francisco, 1992 (pp. 135-151).
- Olbrist, Hans Ulrich 'Carolee Schneemann: when vision moves freely' in *Spiked Magazine*, 2007 (pp. 40-49).
- Onians, John *Neuroarthistory: From Aristotle and Pliny to Baxandall and Zeki*, Yale University Press, New Haven, Conn. and London, 2007.
- Panhaus-Buhler, Ursula 'Mona Hatoum: Being Involved' available on the White Cube website: <http://www.whitecube.com/artists/hatoum/texts/99/>.
- Pender, Stephen 'No Monsters at the Resurrection' in ' in *Monster Theory: Reading Culture*, Cohen, J. J ed., University of Minnesota Press, Minneapolis and London, 1996 (pp. 143-167).
- Pepper, Larry 'Mediatmosphere: Home Videocassette Recorders: the Ever-Changing State of the Art' in *American Libraries*, Vol. 10, No. 10, Nov. 1979 (pp. 622-624).
- Peter, B. & Williams, C. *Practical Gastrointestinal Endoscopy: The Fundamentals*, 6<sup>th</sup> edition, Wiley-Blackwell, Chichester, 2008.

Philippi, Desa 'Some Body' in *Mona Hatoum*, Exh.Cat., Editions du Centre Pompidou, 1994 (pp. 24-35).

Plant, Sadie 'On the Matrix: Cyberfeminist Simulations' in *The Cybercultures Reader First Edition* Bell, D. & Kennedy, B. eds., 2000 (pp. 340-351).  
–*Zeros and Ones: Digital Women and the New Technoculture*, Doubleday, New York, 1997.

Pollock, Griselda *Vision and Difference: Femininity, Feminism, and Histories of Art*, Routledge, London and New York, 1988.

Porter, J. R. *The Cambridge Bible Commentary On The New English Bible – Leviticus*, Cambridge University Press, Cambridge, 1976.

Prasad, Amrit 'Making Images/Making Bodies: Visibilising and Disciplining through MRI' in *Science, Technology and Human Values*, Vol. 30, No. 2, Spring 2005 (pp. 291-316).

Projansky, Sarah 'The Elusive/Ubiquitous Representation of Rape: a Historical Survey of Rape in U.S. Film, 1903-1972' in *Cinema Journal*, Vol. 41, No. 1, Autumn, 2001 (pp. 63-90).

Ramachandran, V. S. & Rogers-Ramachandran, D. 'Synaesthesia in Phantom Limbs Induced with Mirrors' in *Proceedings: Biological Sciences*, Vol. 263, No. 1369, Apr. 22 1996 (pp. 377-386).

Reichle, Ingeborg *Art in the Age of Technoscience: Genetic Engineering, Robotics, and Artificial Life in Contemporary Art*, Springer, Wien, 2009.

Rheingold, Howard *Tools for Thought: The History and Future of Mind-Expanding Technology*, MIT Press, Cambridge Mass., 2000.

Riegler, F. M. 'Light, Echnaton and Modern Medical Science' in *European Surgery*, Vol. 41, No. 6, 2009 (pp. 247-48).

Robins, Kevin 'Against Virtual Community: for a Politics of Distance' in *The Cybercultures Reader Second Edition* Bell, D. & Kennedy, B. eds., Routledge, London and New York, 2007 (pp. 227-235).  
–'The Virtual Unconscious in Postphotography' in *Electronic Culture: Technology and Visual Representation*, Druckrey, Timothy ed., Aperture, New York, 1996 (pp. 154-163).

Ron, Moshe 'The Restricted Abyss: Nine Problems in the Theory of *Mise en Abyme*' in *Poetics Today*, Vol. 8, No. 2, 1987 (pp. 417-438).

Ross, Christine 'To Touch the Other: a Story of Corpo-Electronic Surfaces' in *The Feminism and Visual Culture Reader*, Jones, A, ed., Routledge, London and New York, 2003 (pp. 514-19).

Roy, Marina 'Corporeal Returns: Feminism and Phenomenology in Vancouver Video and Performance 1968-83' in *Canadian Art*, Summer 2001 (pp. 58-65).

Rutsky, R. L. *High Techne: Art and Technology from the Machine Aesthetic to the Posthuman*, University of Minnesota Press, Minneapolis and London, 1999.

Sardar, Ziauddin 'ALT.CIVILIZATIONS.FAQ: Cyberspace as the Darker Side of the West' in *The Cybercultures Reader First Edition* Bell, D. & Kennedy, B. eds., Routledge, London and New York, 2000 (pp. 732-752).

Sawchuck, Kim 'Biological, Not Determinist: Nell Tenhaaf's Technological Mutations' in *Nell Tenhaaf: Fit/Unfit*, ex. cat., Robert McLaughlin Gallery, Ontario, 2003 (pp. 9-22).

– 'Biotourism, Fantastic Voyage, and Sublime Inner Space' in *Wild Science: Reading Feminism, Medicine and the Media*, Marchessault, J. & Sawchuk, K. eds., Routledge, London and New York, 2000 (pp. 9-23).

Sax, Boria 'The Magic of Animals: English Witch Trials in the Perspective of Folklore', in *Anthrozoos*, Vol. 22, issue 4, Dec., 2009 (pp. 317-332).

Schneemann, Carolee 'Interview With Kate Haug' in *Imaging Her Erotics*, MIT Press, Cambridge, Massachusetts, and London, England, 2002 (pp. 2-45).

– 'Notes' in *Imaging Her Erotics*, MIT Press, Cambridge, Massachusetts, and London, England, 2002 (p. 264).

– 'On censorship: interview with Aviva Rahmani' in *Imaging Her Erotics*, MIT Press, Cambridge, Massachusetts, and London, England, 2002, (pp. 210-215).

– 'The Obscene Body/Politic' in *Art Journal: Censorship II Special Edition*, Vol. 50, No. 4, Winter 1991, (pp. 28-35).

– *More Than Meat Joy: Performance Work and Selected Writings*, McPherson, B. R. ed., McPherson & Co., New York, 1997.

– panel discussion 'Women and art: empowering narratives', November 14, 1995, held as part of the conference *Beyond Beijing: Acting on Commitments to the World's Women (A World Bank Program on Gender)*, November 6-17 1995. Transcript No. BB-04 accessible online at: <http://tinyurl.com/mrmg9f>

Schneider, Rebecca *The Explicit Body in Performance*, Routledge, London and New York, 1997.

Serra, M. M. & Ramey, Kathryn 'Eye/Body: The Cinematic Paintings of Carolee Schneemann' in *Women's Experimental Cinema: Critical Frameworks*, Blaetz, R. ed., Duke University Press, 2007 (pp. 103-127).

Shell, Marc 'The Family Pet' in *Representations*, No. 15, Summer 1986 (pp. 121-153).

Shildrick, Margrit 'Contesting Normative Embodiment: Some Reflections on the Psycho-Social Significance of Heart-Transplant Surgery' in *Perspectives: International Postgraduate Journal of Philosophy*, Vol. 1 *Inaugural Issue: Body and Embodiment*, 2008 (pp. 12-22).



- Leaky Bodies and Boundaries: Feminism, Postmodernism and (Bio)Ethics*, Routledge, London and New York, 1997.
- Shohat, Ella ‘Lasers for ladies: endo discourse and the inscription of science’ in *The Visible Woman: Imaging Technologies, Gender and Science*, Cartwright, L. & Treichler, P. eds., New York University Press, New York and London, 1998 (pp. 240-272).
- Smith, M. & Morra, J. eds., *The Prosthetic Impulse: From a Posthuman Present to a Biocultural Future*, MIT Press, Cambridge, Mass., 2006.
- Smuts, Barbara *Sex and Friendship in Baboons*, Aldine Publishing Co., New York, 1985.
- Sobchack, Vivian ‘The Scene of the Screen: Envisioning Cinematic and Electronic “Presence”’ in *Film and Theory*, Stam & Miller eds., Blackwell, Malden M.A. and Oxford England, 2000 (pp. 67-84).
- Screening Space: The American Science Fiction Film*, Ungar, New York, 1987.
- Sofoulis, Zoe ‘Cyberquake: Haraway’s Manifesto’ in *The Cybercultures Reader Second Edition*, Bell, D. & Kennedy, B. eds., Routledge, London and New York, 2007 (pp. 365-385).
- Sommer, Lucia ‘In/Visible Body: Notes on Biotechnologies’ Vision’ in *Domain Errors! Cyberfeminist Practices*, Wilding, F., Fernandez, M. & Wright, M. M. eds., Autonomedia, New York 2002 (pp. 123-133).
- Steward Heon, Laura, Antoni, Janine & Glencross, Jo *Mona Hatoum: Domestic Disturbance*, Ex. Cat., MASS MoCA, North Adams, Massachusetts, 2001.
- Stewart, Susan *On Longing: Narratives of the Miniature, the Gigantic, the Souvenir, the Collection*, Duke University Press, Durham, North Carolina, 1993.
- Stiles, Kristine ‘The Painter as an Instrument of Real Time’ in *Imaging Her Erotics*, MIT Press, Cambridge, Massachusetts, and London, England, 2002 (pp. 3-17).
- Stone, Sandy/Allucquère Rosanne ‘Will the Real Body Please Stand Up: Boundary Stories About Virtual Cultures’ in *The Cybercultures Reader First Edition* Bell & Kennedy eds., Routledge, London and New York, 2000 (pp. 504-528).
- The War of Desire and Technology at the Close of the Mechanical Age*, MIT Press, Cambridge, 1996.
- ‘The Empire Strikes Back: A Posttranssexual Manifesto’ (1987) available at <http://www.sterneck.net/gender/stone-posttranssexual/index.php>
- Tracey, Frances ‘Bio-Art: the Ethics Behind the Aesthetics’ in *Nature Reviews Molecular Cell Biology*, 20 May 2009, doi:10.1038/nrm2699.

Suchman, Lucy 'Subject Objects' in *Feminist Theory*, Vol. 12, No. 2, August 2011, Special Issue: *Nonhuman Feminisms* (pp. 119-145).

Tamblyn, Christine 'Significant Others: Social Documentary as Personal Portraiture in Women's Video of the 1980s' in *Illuminating Video: An Essential Guide to Video Art*, Hall, D. & Fifer, S. J. eds., Aperture, San Francisco, 1992 (pp. 405-417).

Tashiro, Charles 'Home Video and Film: the Case of *Who Framed Roger Rabbit*' in *Journal of Film and Video*, Vol. 48, No. 1/2, Spring-Summer 1996 (pp. 58-66).

Tenhaaf, Nell 'Art Embodies A-Life: The Vida Competition' in *Leonardo* Vol. 41 No. 1, 2008 (pp. 6-15).

–'Of Monitors and Men and Other Unsolved Feminist Mysteries: Video Technology and the Feminine' in *Critical Issues in Electronic Media*, Penney, S. ed., State University of New York Press, NYC, 1995 (pp. 219-234).

– 'Production and Reproduction' in *Women, Art and Technology*, Malloy, J. ed., MIT Press, Cambridge, Mass., 2003 (pp. 362-375).

–& Baljko, Melanie 'Different Experiences, Different Types of Emergence: A-life Sculpture Designers, Interactant, Observer' in *Proceedings of AAAI Fall 2006 Symposium on Interaction and Emergent Phenomenon in Societies of Agents*, 2006 (pp. 104–110).

Thacker, Eugene 'Open Source DNA and Bioinformatics Bodies' in *Signs of Life: Bioart and Beyond*, Eduardo Kac ed., MIT Press, Cambridge Mass., 2006 (pp. 31-42).

Thom, Ian 'A Study of Surface' in *Blackflash*, Summer 1998, Vol. 16, No. 1 (pp. 22-25).

Tomas, David 'The Technophilic Body: On Technicity in William Gibson's Cyberculture' in *Cybercultures Reader First Edition*, Bell & Kennedy eds., Routledge, London and New York 2000 (pp. 175-189).

Toy, Crawford H. 'Taboo and Morality', *Journal of the American Oriental Society*, Vol. 20, 1899 (pp. 151-156).

Treichler, Paula 'Aids, Homophobia and Biomedical Discourse: an Epidemic of Signification' in *October*, 43, 1987 (pp. 31-70).

–with Cartwright, L. & Penley, C. eds., *The Visible Woman: Imaging Technologies, Gender, and Science*, New York University Press, New York and London, 1998.

Tuer, Dot 'Fit/Unfit: Nell Tenhaaf Speaks with Dot Tuer' in *Nell Tenhaaf: Fit/Unfit* ex. cat. (pp. 51-57).

Turim, Maureen 'Childhood Memories and Household Events in the Feminist Avant-Garde' in *Journal of Film and Video*, special issue *Home Movies and*

*Amateur Filmmaking*, Vol. 38, No. 3/4, Summer-Fall 1986 (pp. 86-92).

Turkle, Sherry *Life on the Screen: Identity in the Age of the Internet*, MIT Press, Cambridge MA., 1995.

– ‘Artificial Intelligence and Psychoanalysis: A New Alliance’ in *Daedalus*, Vol. 117, No. 1, Special issue: *Artificial Intelligence*, Winter 1988 (pp. 241-268).

–*The Second Self: Computers and the Human Spirit*, MIT Press, Cambridge MA., 1984.

Turner, Bryan S. *The Body and Society*, Basil Blackwell, New York, 1984.

Van Den Berg, J. H. ‘The Human Body and the Significance of Human Movement: A Phenomenological Study’ in *Philosophy and Phenomenological Research*, Vol. 13, No. 2, Dec., 1952 (pp. 159-183).

van Dijck, José *The Transparent Body: A Cultural Analysis of Medical Imaging*, University of Washington Press, Seattle, 2005.

Virilio, Paul *Open Sky*, Rose, J. trans., Verso, London and New York, 1997.

Wagner, Anne ‘Performance, Video and the Rhetoric of Presence’ in *October*, Vol. 91, Winter 2000 (pp. 59-80).

Waldby, Catherine ‘The Visible Human Project: Data into Flesh, Flesh into Data’ in *Wild Science: Reading Feminism, Medicine and the Media*, Marchessault, J. & Sawchuk, K. eds., Routledge, London and New York, 2000 (pp. 24-38).

Warner, Marina *From The Beast to The Blonde*, Vintage, London, 1995.

Wertz, Richard W. & Wertz, Dorothy C. *Lying In: A History of Childbirth in America*, Schocken Books, New York, 1979.

White, Betty *Pet Love: How Pets Take Care of Us*, Pinnacle Books, 1983.

Wilby, Emma ‘The Witch's Familiar and the Fairy in Early Modern England and Scotland’, *Folklore*, Vol. 111, No. 2, Oct., 2000 (pp. 283-305).

Wilding, Faith & SubRosa group ‘Where is Feminism in Cyberfeminism?’ in *NeMe*, available online at <http://www.neme.org/392/cyberfeminism>

Williams, Linda and Rich, B. Ruby ‘The Right of Re-Vision: Michelle Citron’s *Daughter Rite*’ in *Film Quarterly*, Vol. 35, No. 1, Autumn 1981 (pp. 17-22).

Williams, Linda *Hard Core: Power, Pleasure and the ‘Frenzy of the Visible’*, Pandora press, London, 1990.

Willson, Michele 'Community in the Abstract: a Political and Ethical Dilemma?' in *Cybercultures Reader Second Edition*, Bell & Kennedy eds., Routledge, London and New York, 2007 (pp. 213-226)

Wilson, Stephen *Art and Science Now: How Scientific Research and Technological Innovation are Becoming Key to 21st-Century Aesthetics*, Thames and Hudson, London 2010.

Wolfe, Cary *Animal Rites: American Culture, The Discourse of Species and Posthumanist Theory*, University of Chicago Press, Chicago and London, 2003.

Young, Iris Marion 'Pregnant Embodiment: Subjectivity And alienation' in *The Journal of Medicine and Philosophy*, Vol. 9, No. 1, 1984 (pp. 45-62).

### **Online resources**

*The Oxford English Dictionary*, 2<sup>nd</sup> Edition 1989, Oxford University Press  
<http://oed.com>

*Sexual Offences Act 2003*, chapter 42, Section 69.  
[http://www.opsi.gov.uk/acts/acts2003/ukpga\\_20030042\\_en\\_1](http://www.opsi.gov.uk/acts/acts2003/ukpga_20030042_en_1)

*Video: The New Wave* WGBH Boston Public Television 1973  
<http://www.youtube.com/watch?v=vLgVGYmOg5o>

<http://www.bodiesinc.ucla.edu/welcome.html>

<http://www.tca.uwa.edu.au>

<http://etext.virginia.edu/salem/witchcraft/texts/transcripts.html>.

<http://www.legislature.idaho.gov/idstat/Title18/T18CH66SECT18-6605.htm>

<http://www.legis.state.la.us/lss/lss.asp?doc=78695>

<http://www.mass.gov/legis/laws/mgl/272-34.htm>

[http://www.legislature.mi.gov/\(S\(d4pwp355gcftjeavb3jbja2l\)\)/mileg.aspx?page=GetObject&objectname=mcl-750-158](http://www.legislature.mi.gov/(S(d4pwp355gcftjeavb3jbja2l))/mileg.aspx?page=GetObject&objectname=mcl-750-158)

[http://www.ncga.state.nc.us/EnactedLegislation/Statutes/HTML/BySection/Chapter\\_14/GS\\_14-177.html](http://www.ncga.state.nc.us/EnactedLegislation/Statutes/HTML/BySection/Chapter_14/GS_14-177.html)

<http://leg1.state.va.us/cgi-bin/legp504.exe?000+cod+18.2-361>

[http://www.bbc.co.uk/radio3/johntusainterview/hatoum\\_transcript.shtml](http://www.bbc.co.uk/radio3/johntusainterview/hatoum_transcript.shtml)

<http://nanomed.bioch.ox.ac.uk/>