From ‘Death of the Female’ to ‘Life Itself’: A Socio-Historic Examination of FINRRAGE

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Submitted in accordance with the requirements for the degree of
Doctor of Philosophy

University of Leeds
School of Sociology and Social Policy

September 2012

The candidate confirms that the work submitted is her own and that appropriate credit has been given where reference has been made to the work of others.

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ACKNOWLEDGEMENTS

There are a number of people who made this thesis possible in a number of different, fantastically important ways. My deepest thanks to:

- My supervisors, Prof. Anne Kerr and Dr. Paul Bagguley, for their patience, advice, editorial comments, and the occasional kickstart when the project seemed just a little(!) overwhelming, and my examiners, Prof. Maureen McNeil and Dr. Angharad Beckett for their insight and suggestions.

- The School of Sociology and Social Policy, for awarding me the teaching bursary which made this possible, and all the wonderful faculty and support staff who made it an excellent experience.

- The archivists in Special Collections at the University of Leeds, and to the volunteers at the Feminist Archive North for giving me an all-access pass.

- The women of FINRRAGE, for their generosity, hospitality, and for being alternately a twenty-four person thesis committee and cheering squad.

- The Worldwide Universities Network for awarding me the Research Mobility Grant which allowed me to carry out fieldwork while studying bioethics at the University of Sydney, and Anoushka for all her help in achieving the grant. Many more thanks to Dr. Catherine Mills and to Lindy Gaze for making sure I had a home at VELiM, and to Prof. Catherine Waldby for taking me on as a temporary supervisee.

- The Postgraduate Forum in Genetics and Society for leading me into STS, and especially to Rachel Douglas-Jones for sticking it out till the end.

- Sally Hines, Zowie Davy and Maria do Mar Pereira for reminding me why I am still a feminist.

- The many other people who, unwittingly or not, gave me books, papers and ideas which nudged my thinking in completely unexpected directions: Fiona Philip and Penny Rivkin, Bice Maiguashca, Prof. Donna Dickenson and the members of the IAS/WUN Biopolitics Symposium, Olivia Harvey, Catherine Carroll, Nicola Marks, Melinda Cooper, LeeAnn and Stuart Mawler, and Linzi, Sam, Leon, Gen, Cassandra, Angelica and the rest of 14th floor postgraduate posse.

- And last but not remotely least, to Imona Haninger for putting up with the madwoman in the attic; to Noemie Bouhana for invaluable academic advice in between marathon bouts of critters, zombies, and things that go boom in the night; and to all my friends and family in the US, UK, Germany and Czech Republic, who accepted being ignored for months (years!) on end with grace and affirmations of confidence. I hope to make it up to all of you soon…

ABSTRACT

Although questions about the production of knowledge are finally beginning to be asked within social movements studies, these tend to rely on a very vague definition of 'knowledge', obscuring activists' engagement with informal and formal research, as well as social forms of knowledge. This thesis employs an analytic framework in which social movements are theorised as producing a distinctive cognitive praxis, in order to examine the ways in which movements emerge, develop, and operationalise their knowledge in pursuit of their goals. In order to do this, I will create a contextualised case study of the Feminist International Network of Resistance to Reproductive and Genetic Engineering (FINRRAGE), examining the ways it sought to develop a knowledge project around new reproductive technologies and present itself as a network of credible knowers.

Beginning as a reaction to a 1984 conference panel on new reproductive technology entitled 'Death of the Female', in its strongest phase (1984-1997) FINRRAGE comprised over a thousand women in thirty-seven countries. Although identified as an instance of radical opposition, its strategy relied upon knowledge generation, rather than protest. Employing a textual analysis of archival documents, published writings and lifecourse interviews with an international selection of twenty-four women, the thesis explores the processes by which the network pursued a project of creating an evidence-based position of resistance to the development of reproductive and genetic technologies through empirical research, publication, and continuous negotiation between women from very different social contexts. As such, the study also provides an opportunity to (re)consider feminist engagement with a specific area of technology over an historical period. It is hoped that the result will be a contribution to the academic literature on the development of collective knowledge and expertise for both social movements theory and science and technology studies, as well as to feminist history and theory.

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LIST OF ABBREVIATIONS

AHRC	Assisted Human Reproduction Canada
AID	artificial insemination by donor
AMS	Asociacion de Mujeres para la Salud (Spain)
ANZAAS	Australia-New Zealand Association for the Advancement of Science
ART	assisted reproductive technologies
CATW	Coalition Against Trafficking in Women
DI	donor insemination
DHSS	Department of Health and Social Security
ELSI	ethical, legal and social issues
ESHRE	European Society of Human Reproduction and Embryology
FINNRET	Feminist International Network on the New Reproductive Technologies
FINRRAGE	Feminist International Network of Resistance to Reproductive and Genetic Engineering
GATT	General Agreement on Tariffs and Trade
GRAEL	Green-Alternative European Link (Germany/Belgium)
HEW	Department of Health, Education and Welfare (USA)
HFEA	Human Fertilisation & Embryology Authority (Great Britain)
(I)RAGE	*(Issues in) Reproductive and Genetic Engineering*
IC	International Co-ordinator, FINRRAGE Britain, 1984-1989
ICG	International Co-ordinating Group, FINRRAGE Germany, 1989-1997
ICPD	United Nations International Conference on Population and Development (Cairo, 1994)
IVF	in vitro fertilisation
NBCC	National Bioethics Consultative Council (Australia)
NC	National Contact, FINRRAGE
NGO	non-governmental organisation
NHMRC	National Health and Medical Research Council (Australia)
NRT	new reproductive technologies
NSM	new social movements
NSW	New South Wales, Australia
NWSA	National Women's Studies Association (USA)
MRC	Medical Research Council (UK)
OBOS	*Our Bodies, Ourselves*
PROGAR	Project Group on Assisted Reproduction (UK)
QVMC	Queen Victoria Medical Centre, Melbourne
RAT	rational actor theory
REDEH	Rede de Desenvolvimento Humano (Brazil)
RMT	resource mobilisation theory
RAF	Rote Armee Fraktion (Germany)
RT	reproductive technologies
RWH	Royal Women's Hospital, Melbourne
RZ	Revolutionäire Zelle (Germany)
SHI	sociology of health and illness
SMT	social movements theory
SPUC	Society for the Protection of the Unborn Child (UK)
SSK	sociology of scientific knowledge
STS	science and technology studies

TTW	*Test-Tube Women*
(V)SRACI	(Victorian) Standing Review and Advisory Committee on Infertility
UBINIG	Unnayan Bikalper Nitinirdharoni Gobeshona (Policy Research for Development Alternative, Bangladesh)
UN	United Nations
UNCED	United Nations Conference on Environment and Development (Rio, 1992)
US	United States
WGNRR	Women's Global Network for Reproductive Rights
WHO	World Health Organisation
WLM	women's liberation movement (broadly 1960s-70s)
WRRC	Women's Reproductive Rights Campaign (Britain)
WSIF	*Women's Studies International Forum*

Names and Collections abbreviated when listing archival documents

GC	Gena Corea
JH	Jalna Hanmer
JR	Janice Raymond
RK	Renate Klein
RR	Robyn Rowland
AUS	Documents related to FINRRAGE Australia, collected by researcher. Electronic copies added to FINRRAGE Collection as FIN 13/Disk/AUS
FAN	Feminist Archive North (GB 3181 FAN)
FIN	FINRRAGE Collection, Feminist Archive North
FINDE	FINRRAGE Deutschland Collection (ICG documents and FINRRAGE International research archive), Feminist Archive North

Abbreviations used for categories of expertise

QS	Qualified specialist, has formal credentials in the specific relevant area
QG	Qualified generalist, has formal credentials in the larger field
QNS	Qualified non-specialist, applies other formal credentials to this specific area
NQS	Non-qualified specialist, has esoteric knowledge acquired outside the field
NQG	Non-qualified generalist, has extensive informal knowledge of the larger field
NQNS	Non-qualified non-specialist, has informal 'lay' knowledge

INTRODUCTION

> *…you had to know a lot to begin to understand this issue. We always spent a lot of time, you know, trying, helping everyone to understand the biology, the basic science of the thing. And we didn't understand it either. We had to find out what it was, we had to study it up. (Jalna Hanmer, Britain)*

Knowledge and expertise have historically been buried within social movements theory (SMT) beneath other categories of 'knowledge production' such as collective identity formation (Friedman and McAdam 1992; Stoecker 1995; Taylor 2000) and framing (Snow, Rochford, Worden, *et al.* 1986; Carroll and Ratner 1996; McAdam 1996; Zald 1996). As a more recent analytical concept it may refer to negotiation of meaning (Casas-Cortes, Osterweil and Powell 2008; Kurzman 2008), to embodied experience of one's own position in society (Esteves 2008), or it may be sometimes be confused with 'information' (Soule 2004). Moreover, the conceptual division of knowledge into the binary categories of 'expert' and 'lay' tends to obscure the lived reality of social movements by placing professional expertise outside the social movement field.

However, in science and technology studies (STS), social movements may be considered as part of a larger scientific controversy, such as can be seen in patient movements around contested illnesses (Epstein 2007) or environmental justice (Frickel 2004). This show that movements and movement actors may have a very important role to play in the way scientific knowledge is translated into society (Habermas 1969/1987). An analytic framework which addresses this newly-emerging area in both fields may help to overcome the present divide between STS and SMT approaches to knowledge in social movements, and aid in the theoretical development of both. Through a case study of the Feminist International Network of Resistance to Reproductive and Genetic Engineering (FINRRAGE), I will seek to uncover the processes by which a movement's knowledge project may be made visible, in order to develop a more nuanced understanding of the role of knowledge and expertise in collective action. The case itself focuses on a particular instance of feminist activity around new reproductive technologies (NRT), providing the opportunity for a re-examination of some of the key tensions in feminist engagement with reproductive technology in the process of uncovering the movement's knowledge practice.

Background to the work

There is an inherent tension in the production of a case study of a social movement organisation which tries to look largely at processes within the group, rather than at the problem the movement is trying to address. The ethical, social and legal issues thrown up by the rapidly

developing field of reproductive technology – commonly now referred to as ELSI to separate it from actual technical and scientific questions -- are fascinating, complex, and have generated an enormous body of literature which is well beyond the scope of this thesis. The medical literature has also undergone an exponential expansion in volume on human reproduction alone, without even considering the new fields which pertain more to the engineering aspects such as stem cells, gene therapy and agriculture. Therefore, I would like to begin by sketching a brief background to illustrate some of the reasons for choosing FINRRAGE as a case.

Although matters of reproduction were clearly central to the women's movement, IVF was not immediately seen as a significant issue. Within the grassroots activist literature of the latter half of the 1970s there is evidence that some feminists were aware of experiments in artificial conception, but there does not appear to have been much comprehensive discussion. For example, *Scarlet Woman*, a British socialist feminist newsletter, did question where the ova were coming from, and suggested campaigning against genetic engineering (McNeill 1978), but these are only two brief lines in a double-issue of fifty pages devoted to reproduction, just before Louise Brown was born. In the British radical magazine *Trouble and Strife*, Naomi Pfeffer (1985: 50) reports that her attempts to set up workshops on infertility at women's health conferences in England in the very early 80s met with no response. A later article in the same publication defends this lack of feminist attention by stating 'any analysis requires a great deal of scientific knowledge. Perhaps that is why so many of us have been slow and reluctant to confront the issues' (Berer 1986: 29).

Outside the feminist press, most of the controversy was based in moral arguments about the sanctity of life, rather than the danger to women. The mainstream media made the actual process of IVF sound relatively straightforward, albeit rarely successful: it was simply a matter of removing some eggs, fertilising them in a petrie dish, and replacing the resultant embryo in the womb (see, for example, Fleming 1980). Women who had undergone the procedures did not talk publicly about their experience, nor were there outlets in which to speak privately as clinics did not at this time provide counselling services (Machin 2008). The medical literature, however, showed that the actual process of egg collection required instruments inserted into the abdomen under general anaesthesia (Steptoe and Edwards 1970), and could damage healthy reproductive organs through perforation, abdominal adhesions or adverse reactions to hormonal stimulants (Rose and Hanmer 1976). For those who had been monitoring the scientist's activities, the underlying narrative of intense competition and endless innovation became a matter of deep concern as experimental procedures became codified as 'treatment' and the numbers of women involved through extensions of the category of 'fertility patient', particularly in private for-profit clinics, increased. While moves towards regulation were welcomed by some as feminists as a positive step, they also noticed that women were still absent from the

discourse, either reduced to their reproductive organs, or replaced entirely by concern for the moral status of the embryo (Holmes 1980).

Despite the proliferation of academic feminist literature on the topic since (see Franklin and McNeil 1988; McCormack 1988; Moss 1988; Warren 1988; Donchin 1989; Sandelowski 1990; Allen, Dietrich, Lutfiyya, *et al.* 1991; Denny 1994; Donchin 1996 for excellent overviews), mainstream feminists interviewed recently in the US have offered similar reasons – that the science is too intimidating (Gougon 2008: 97) and NRT is of interest only to the small group which might need them (*ibid:* 93-94) – as explanations why their own well-known national organisations still do not engage with the issue. In the meantime, many of the permutations of the technologies, such as children with four, five or even six parents[1], embryos chosen as tissue-compatible donors for older siblings, and surrogacy industries in developing nations, all of which were dismissed as science fiction in the 1980s, have now become normative applications. It is for this reason that an historicised case study of an organised feminist response to reproductive and genetic technologies is both timely and needed.

Choice of this case

Whatever one's 'position' on the technologies in question, FINRRAGE represents an important episode in feminist history, as well as an opportunity to study how social movements develop the knowledge to engage with complex scientific issues. As a transnational network, FINRRAGE had representation in thirty-seven countries at the height of its active period (1984-1997). Although many of the activists and organisations involved have maintained their connections, particularly those still working professionally on the issues around NRT, in most parts of the world the network has been quiescent since the late 1990s. The title of this dissertation, therefore, is not just a clever wordplay on the name of the conference panel at which FINRRAGE was 'born'. Both 'the death of the female' and 'life itself' are terms which capture the conceptual edges of the argument over whether scientific control of human procreation would reduce women's value to the price of her reproductive raw materials, or whether it would herald a glorious new age of perfect babies, better medicine, and longer lives. The network was chosen for several reasons: as a mixture of Western academics and activists, many drawing on ideologies learned as part of the women's liberation movement in the '70s, and anti-population policy activists from developing countries, the network can be contextualised as a microcosm of some of the broader changes reflected in the global history of feminist activism. It may also be fairly unrepresentative of grassroots feminist organisations in terms of the general level of education of the participating women. In addition to sociologists, economists and

[1] It is currently possible for children to have a biological and social father, and a genetic, mitochondrial, gestating and social mother, all of whom may be different individuals.

historians, the network also included medical doctors, biologists and geneticists. This mix of those trained in the natural or social sciences and members of what would normally be considered the 'lay public' also creates an unusual opportunity to question the normative definitions of 'expert' and 'lay' and develop a more nuanced understanding of the kinds of expertise social movement actors display. While I will also be drawing on prior work which looks more directly at integrating STS perspectives into the study of social movements (Yearley 1992; Hess, Breyman, Campbell, *et al.* 2007; Epstein 2008), I will also propose an integration of newer approaches to expertise (Arksey 1994; Collins 2004) with Eyerman & Jamison's (1991) theory of social movements as an autonomous space for cognitive praxis. This will be used as the basis of a conceptual bridge between categories of inquiry more familiar to SMT, such as framing (Snow and Benford 1992) and oppositional consciousness (Mansbridge 2001); and approaches to knowledge derived from STS.

Aims and Structure of the Thesis

The thesis will attempt to answer three key questions using FINRRAGE as a case for uncovering the mechanisms by which social movements create knowledge to support their analysis of a social problem and its solution: How did the international FINRRAGE network emerge, develop, and operationalise its 'position' as a collective epistemological project? What were the tactics used to develop and disseminate its knowledge? How were the different kinds of expertise the women brought to or developed within the network used to legitimate FINRRAGE as an epistemic community of credible knowers within the public sphere?

I will begin to explore these questions in the next chapter by considering the ways in which SMT and STS have studied knowledge and expertise in social movements. I will also take a separate look at feminist research, which will inform a reflexive discussion of my chosen methodology in Chapter Three. Chapters Four, Five and Six will consider my research questions through a contextualised study of FINRRAGE, drawn from internal organizational documents, lifecourse interviews and external accounts. In Chapter Seven I will discuss FINRRAGE as a cognitive praxis, looking more closely at the tactics used to create and disseminate the group's collective knowledge project, and to legitimate the women of FINRRAGE as holding credible expertise. In this chapter I will also present the framework I have developed to clarify the different forms of knowledge the women of FINRRAGE brought to the network, and the kinds of formal and informal expertise they developed. Chapter Eight will bring these strands together, concluding with a discussion of the case's contribution to the study of knowledge and expertise in social movements, and possible avenues for future research.

As the study of knowledge in social movements is a relatively new area, there is some ontological confusion over what 'knowledge' means in this context, and how it relates to the function of expertise in making credible knowledge claims. Moreover, there is as yet little theoretical or epistemological overlap between the fields of SMT and STS. This thesis intends to bring these closer together into a case study which should be coherent to both by looking specifically at the generation and dissemination of technoscientific knowledge among a group of feminist activists around the issue of new reproductive technologies. I will therefore begin the next chapter by reviewing the relevant literature created by both sub-disciplines, with a specific attempt to map out areas of coherence from which a mutually intelligible framework might emerge.

CHAPTER 2: LITERATURE REVIEW

> *This was way before STS had really taken off, before people were really doing this kind of work, like getting inside the science and reporting from there? Before that sociology of science was really more like historians or sociologists approaching science from within their discipline. And so this is very new stuff.*
> *(Annette Burfoot, Canada)*

Despite complaints that the public no longer trusts the statements of scientists, the epistemic privilege of science still carries significant power within any debate. Normative modes of popular argument on scientific issues are based upon two connected assumptions produced through the mixed messages received from basic education and from a media which is by turns laudatory and condemnatory of science: that 'the facts are facts' (or alternatively, that technologies are neutral), but the way they are used is under human control. The lay public is often assumed to be reliant upon morals, values and opinions, rather than facts about a disputed technology (Sturgis and Allum 2004), whereas activists are still often portrayed as social deviants driven by irrational belief, or at the very least, improperly biased. At the same time, scholars of social movements may also be working from a normative concept of science in which 'the facts' and the production of facts are not interrogated. This has meant that what is meant by 'knowledge' in the study of social movements can describe a variety of processes, including, as Kurzman (2008: 5) suggests, 'any other understandings that we may choose to identify'. Without a system through which we are able to separate and analyse the use of different forms of knowledge, we are not able to compare them to each other or to processes in different fields, therefore we are not able to see what, if anything, may be unique to social movements, despite claims that 'produce knowledge' is precisely what social movements are meant to do (Habermas 1981; Eyerman and Jamison 1991). This has meant that the study of knowledge within social movements is still a very tentative, very broad topic in SMT, with no clear ontology and few methodological tools.

This chapter will outline the theoretical basis of a contribution to the study of knowledge practices in social movements. Working first through the development of social movement theory, I will attempt to trace the way the field has developed through successive theoretical waves. I will then turn to science and technology studies (STS). Here, one finds a similar problem in reverse: while social movements frequently appear as actors in controversy studies, until recently there has been very little drawn from SMT to understand movements and movement actors as having their own knowledge context. My intent is to find a theoretical framework drawing from both traditions to counter the tendency towards technoscientific neutrality and fuzziness of concepts such as 'knowledge' and 'expertise' in SMT by drawing on work around these areas being pursued in STS. What can clarifying these relationships add to

both the study of social movements as mobilisers of political change, and the study of social movements as collective knowledge projects? And finally, what does this teach us about the relationships between scientific, academic, and 'lay' production of knowledge, and the making of 'experts' with the authority to articulate knowledge claims?

A brief history of social movements theory

The field of social movements theory (SMT) in America grew from a series of questions asked in the post-war years about what motivated people within democracies to engage in anti-democratic movements such as Fascism (Gusfield 1962). Some of this first group of theorists were social psychologists, who saw those who engaged in collective actions as experiencing psychological 'strain' due to rapid social change (Blumer 1951/1969; Turner and Killian 1957/1992). Smelser (1962: 8) also defined collective behaviour as a 'value added' process in which systemic strain causes a generalised belief to circulate that X is to blame for a social problem, and if Y is done, the problem will be solved. If some form of illustrating event appears (or can be made to appear), this belief may be mobilized for collective action (*ibid*). In Smelser's model, however, this belief was considered to be hysterical, hostile or wish-fulfiling, and therefore could provide only a 'clumsy or primitive' form of analysis (Smelser 1962: 73 in Crossley 2002: 47).

Those coming from politics tended to see the strain as political, caused by the erosion of secondary institutions such as churches, trade unions, and other civic organisations which had formerly functioned as a buffer between state and the individual, allowing access to power, but also offering a rational (as in reasoned, scientific) interpretation of current events (Kornhauser 1960; Gusfield 1962; Pinard 1968). According to Kornhauser (1960: 38), in a mass society, those who did not participate in such institutions were more likely to be thrown into a panic when politics intruded upon their personal lives, and turn to irrational explanations and 'ad hoc methods of direct pressure' such as protest and riots. While the spread of the civil rights movement through the black churches of the American south showed that secondary institutions could also mobilise mass protest (see Pinard 1968; also later McAdam 1996), at this point, participation was still seen to be 'based on a set of *unrealistic* beliefs that together function as a reassuring *myth* of the movement's power to resolve the stressful situations confronting movement members' (McAdam 1982/1999: 10, emphasis mine). For both psychological and political approaches, therefore, 'shared belief' remained central to the explanation of why people acted collectively, but the processes of logic, evidence and reason through which that belief might be constituted were buried under the repeated assertion that collective action was not a rational response.

To a large extent, this formulation was a reflection of the state of American sociology in the 1950s and '60s. In the functionalist theory developed by Parsons, the normative state of society is balance. Those who seek to change, disrupt or overthrow the system must be irrational, as any rational person knows that the system is intrinsically fair and capable of rebalancing on its own (Buechler 2004). Resource mobilisation theory (RMT), still the basis of most US paradigms, arose out of the argument that strain of one sort or another is always evident and this alone could not explain mass mobilisation (McCarthy and Zald 1977). Smelser's value-added model had the strength of allowing for both structure and agency (Crossley 2002) as it described mobilisation as a process of individual action shaped by institutional restraint, but it could not explain why seemingly rational people came to be convinced by this 'magical' belief. As participants from the well-organised, longstanding mass protest movements of the 1960s and '70s entered the academy as researchers, they found the older models 'limited' and frequently 'unflattering' (Buechler 1993: 218). This group looked toward ideas which were concurrently diffusing outward from neo-classical economists such as Mancur Olson, where 'rational' is defined as the most efficacious way of achieving the highest benefit with the least cost (Olson 1965). This conflation of rationality with instrumental models borrowed from economic theory has provided the underlying basis of resource mobilisation theory (RMT).

Resource mobilisation – reinscribing 'rational'

In RMT, individuals are presumed to always act in their own narrowly-defined self-interest; altruism is therefore not rational and is excluded from the model (see Olson 1965). RMT theorists claimed that a rational actor might accept the cost of an action in order to reap its benefit on a personal or familial level, but there is no rational reason to incur a participatory cost on behalf of a large anonymous group when one can simply 'free ride', that is, enjoy the benefit without the costs (Buechler 1993: 218). There must, therefore, be incentives beyond merely achieving a public good, as these belong to all and can be enjoyed without effort (Klandermans 1984). Understanding how organisations mobilise self-interested instrumental-rational actors to engage despite the costs would become the focus of early RMT.

Much of this work also revolved around matters of typology and modelling of organisations as a way of distancing itself from the collective behaviouralists (see, for example, Jenkins 1983; Klandermans 1984; Ferree and Miller 1985; Klandermans 1985; Hirsch 1986). This required a redefining of the field so that violent and extreme belief systems, such as fascism, could be kept firmly out. Blumer's (1951/1969) early model had defined both armed revolution and non-violent reform as social movements, but RMT narrowed the definition to movements directed towards 'changing *some* elements of the social structure and/or reward

distribution of a society' (McCarthy and Zald 1977: 1218, emphasis mine), which were sequestered in a relatively well-behaved conceptual space outside primary political institutions. This made it difficult for classical RMT to theorise the entirety of a movement even on a purely organisational level, as mass movements will invariably contain both formal and informal, violent and non-violent, reform and radical organisations. The result has frequently been that informal, particularly radical, organisations are wiped from the field (Fitzgerald and Rodgers 2000). However, RMT did allow for a re-introduction of altruism, which had been eliminated by Olson's (1965) original formulation of the rational-actor model, in the form of 'conscience adherents' (McCarthy and Zald 1977), such as white people who joined the civil rights movement. It also reformulated the character of social movements from an aberation caused by intolerable strain, to a normal process of social change (Ferree and Miller 1985). However, the ontological reliance on ideas drawn from neo-classic economics – movements as industries and activists as entrepreneurs (McCarthy and Zald 1977) – may be one of the reasons why it is difficult to reconcile approaches deriving from RMT with fields such as science studies, which strongly resist defining 'rational' in purely cost-beneficial terms. In particular, RMT was challenged by the translation of works from European neo-Marxist theorists, which began to appear in English in the early 1980s, and saw the mass movements of the 1960s and '70s as 'new' forms of political engagement.

New Social Movements – European perspectives

Europe was a very different context from that of America in the 1960s and '70s, where the unspoken legacy of McCarthyism was still limiting the kind of questions academia was able to ask (Howard 2009). Where Parsonian functionalism sought ways to maintain the status quo so that the individual could prosper, in Europe a critical Marxist analysis had formed the backbone of a post-war welfare state consensus which sought to avoid social conflict through mediating the market's effect on the individual (Offe 1985: 207). However, as Buechler (1995) explains it, by the late 1960s, high wages and lowered demand for production had resulted in economic stagnation, deeply exacerbated by the 1973 oil embargo. As unemployment rose, instead of the expected worker's revolution, the great mass movements of this period – the student, women's, environmental and peace movements – were led by the children of the bourgeoisie. Within this newly-defined 'civil society' -- a sphere between the public and the private created by a refusal to do politics through institutional channels -- issues such as access to abortion, racial equality, and environmental degradation could be opened to public debate (*ibid)*. These social movements were seen as 'new' by European theorists because the issues were cultural, and the actors did not define themselves by a class identity, a development which Marxist ideology had no ability to explain (Canel 1997).

However, Calhoun (1993) has argued persuasively against the tendency by NSM theorists to consider the labour movement as the only legitimate struggle, beyond which all movements are 'new'. A civil society of salons, coffeehouses, and social organizations where matters of the day were debated had risen along with the bourgeosie, particularly in Europe, and there were a number of nineteenth century movements around personal or cultural issues – for example, abolition, suffrage and temperance (*ibid*, see also Panicker 2008). As these theorists also happened to be white male neo-Marxians, it is perhaps no coincidence that the labour movement would be valorised over others of the same period which directly challenged social injustice and other cultural issues – particularly since these were often movements in which educated middle-class women took leadership roles. What also tends to be obscured in RMT is the function of science and technology as the underpinning (or sometimes the enemy) of a movement's belief in what has caused a problem and how it should be solved. In the 19th century, when science was touted as the knowledge-method through which all of humanity's problems would be solved, both science and social progress were assumed to be marching hand-in-hand towards utopia (Calhoun 1993). Science itself has been characterised as a social movement for the primacy of empirical observation over religious teaching for determining truth (Yearley 1988: 45). This was a movement with an almost evangelical cast in the 18th and 19th centuries, when public lectures and demonstrations of science were used by proselytising secularist organizations such as the Freethinkers, to prove the superiority of their knowledge and campaign for the right to free intellectual enquiry (Royle 1974) in conjuction with other demands derived from the Enlightenment's challenge to the hegemony of the church over intellectual and political life. However, according to Habermas (1969/1987), after Hiroshima, the idea of science as benign and beneficial had substantially changed, and it was now seen as an instrument of power, domination, and control. Habermas argued that this was a second stage of the Weberian model of 'rationalization', in which science becomes the rational (evidential) basis of the organs of state administration, i.e. the bureaucracy and the military, while politics is left to merely carry out their decisions. Where ‘old’ social movements, such as trade unions, had the power to negotiate directly with the state, the cultural movements which had emerged in the postwar climate had no such institutional mediator. Instead, they had been forced into a position of ‘resistance and retreat’ (Habermas 1981: 37) with regard to institutionalized politics, and could now only challenge the intrusion of technological control, or what Habermas referred to as colonisation of the unconscious 'lifeworld', by negotiating directly with an autonomous public.

According to Touraine (1981), this meant that social movements have a specific function as the 'motor' of social change; the proof of passage from industrial to knowledge society was that these struggles were now no longer over control of the production of goods. Instead, it was over control of 'historicity', the production of information. For Touraine (2002),

like Gusfield (1962), social movements are not indicators of a system out of balance, but are essential for the maintenance of political cohesion, for without a civic sphere in which to argue, people will pick up arms to settle their differences. According to both Touraine and Habermas, the strains produced by life in this increasingly complex world could only be articulated through these new *social* – here meaning cultural, individual, autonomous – movements. For Melucci (1980/2007; 1985) this produced tactics for symbolic demonstration of the system's flaws, using the media to act as a conduit to carry the message to those in power. In this sense, the movement itself was the message (Melucci 1985*:* 807), the manifestation of a search for a 'new consciousness' (*ibid*: 812, quotations in the original). In the next section, I will consider these ideas more closely as part of the next phase of SMT.

The knowledge turn in SMT

The influence of Continental philosophies gradually led social movements researchers in the US to consider some of the issues which had formerly been the province of NSM theory, such as the formation of movement cultures (d'Anjou and Van Male 1998; Gamson 1999; Staggenborg 2001) and construction of collective identity (Friedman and McAdam 1992; Hercus 1999; Taylor 2000). By the 1990s, calls for some form of synthesis between organisational and cultural approaches were being heard on both sides of the Atlantic (Mayer 1991; Buechler 1993; Canel 1997; Buechler 2004). However, one of the least defined areas in SMT continues to be its approaches to 'knowledge'. For Kurzman (2008), 'knowledge' is interpretative, social movements simply engage in 'meaning-making' more visibly and with more directed purpose than individuals. For Ingalsbee (1996), it seemed to have a largely communicative function, making invisible issues visible through symbolic demonstration. Meanwhile, Casas-Cortes, *et al.* (2008), each looking at a different movement, argue that knowledge has to be more than mere communication, or the dissemination of the oft-repeated 'new ideas', presumably left to the experts to research. However, it is precisely this collaborative paper which shows some of the difficulty in considering knowledge production in social movements, as the three writers each use the term in different ways: to describe negotiations between activists, scientists and policy makers; organisational experiments in non-hierarchical forms of democracy; and the self-reflexivity of movement actors. It is not that these are *not* knowledge practices, but since *everything* we do as social actors can be considered some form of knowledge (Eyerman and Jamison 1991: 52), an analytic framework specific to movement practices has been difficult to define. In following sections I will discuss the most developed of these paradigms, cognitive praxis, and some of the other approaches deriving from SMT which may fill the gaps this paradigm still leaves.

Knowledge as process: cognitive praxis

One proposition for a new paradigm was to unite questions of structure and mobilisation with questions of movements as knowledge-producers by situating movements within their broader social and historical context, looking at the forms of knowledge it produced, and tracing their diffusion into the wider society as evidence of social change (Eyerman and Jamison 1991). Following Habermas, Eyerman and Jamison suggest that it is the province of social movement actors to negotiate how scientific theory should be translated into the social realm by testing its precepts against empirical problems. The success of social movements should therefore be analysed through their ability to translate esoteric science into a practical way of life (*ibid*: 73). In their primary example, 'systems theory', or the scientific elaboration of the world as an interconnected ecosystem, became operationalised as the underlying belief system – or 'cosmology' (*ibid:* 68) – of the environmental movement by emphasizing the connection between human economic activity and environmental degradation. A solution must be able to put forward new methods of maintaining certain life-sustaining activities (provision of food, power, building materials, etc) without causing further degradation. The more radical edge of the movement may advocate regressive measures, such as using less technology, but most will seek what they term a 'practical' solution, creating an epistemology based around a central belief that sustainable development is not only possible but necessary for the maintenance of human life. It is the spread of this belief which opens up an economic space for funding for new scientific research and for entrepreneurial opportunities in the manufacture and sale of new, environmentally-friendly technology. It opens political space for the creation of Green parties or environmentally conscious platforms from traditional parties, and new directions in academic research. Eventually, systems ecology becomes a normalised way of thinking, so that specific movement goals can largely be pursued through these new institutional channels, leaving the mass movement looking relatively depleted, when in fact, this is a marker of its success in winning the battle for ecological consciousness in policy and research, as well as in the lifestyle of the general population. Through this kind of processual examination, they argue, the cognitive praxis paradigm offers the opportunity for a macro level analysis of an entire movement field across space and time.

Working from Smelser's (1962) value-added model of movement emergence, Eyerman and Jamison agree that an 'illustrating event' which demonstrates the problem clearly must occur, but argue that this must appear within a context in which there are already individuals capable of taking up the problem, who can identify opportunities through which the energy created by the illustrating event can be mobilised into a collective, rather than an individual, response. In this way, movements build on previous movements, on both a macro and an individual level (*ibid:* 57). In Eyerman and Jamison's original formulation, the cognitive praxis

of a movement is best seen as it emerges and consolidates through the actions of an identifiable set of 'movement intellectuals' (*ibid*: 98-99) who are formed within, not outside it. As praxis is the process by which theory is transformed into action, it is through these individuals, or 'movement intellectuals' (*ibid:* 56), that the opportunity for emergence is created through opening a cognitive space in which new thoughts and ideas can be developed to challenge normative assumptions. Thus, while Eyerman and Jamison agree with Habermas that movements bring scientific ideas into the social realm to be tested, the cognitive praxis paradigm also considers that movements have their own 'knowledge interests' (*ibid*: 62) and as such can be producers as well as interpreters of knowledge. It is the form(s) of knowledge a movement produce(s), and how, its theory more than its campaigns and organisations, which distinguishes its unique cognitive praxis; movements themselves are considered necessarily transient (Eyerman and Jamison 2001: 65) and success in the paradigm is only achieved through institutionalisation of its cognitive praxis. The paradigm focuses on three forms of knowledge, identified as 'dimensions' (*ibid:* 66-67) which can be studied in retrospect against a broader historical backdrop: cosmological, technological, and organisational. The cosmological refers to the underlying belief system, the technical to both the topics taken up by the movement and the alternatives suggested, and the organisational to the relationship between movement knowledge and the formal knowledge it engages with, as well as the more familiar elements of strategies, tactics and goals.

In their original formulation, Eyerman and Jamison also tend to consider knowledge as 'new thoughts and ideas' (*ibid*: 55), rather than empirically validated facts. Despite overtures to constructivist approaches to science, it still appears to consider science and the people who do professional science to be separate from the space(s) which social movements inhabit, even as it explains the passage of activists from the student movement of the 1960s into the laboratories of the 70s as the introduction of an ecologically-minded new generation of scientists who would go on to create the research and engineering opportunities upon which sustainable development technologies would be based. Another problem is the invisibility of small, informal, radical-action based organisations who also contribute to the overall cognitive praxis of a movement, and who in fact may be some of the most visible remnants of the mass protest phase as this begins to fade. I would therefore like to briefly explore two other approaches to movement knowledge, frame theory and oppositional consciousness, which may help to open the paradigm more fully to the different underlying belief systems a movement may exhibit.

Frames as organisers of meaning

Based on Goffman's (1974 in Snow, *et al.* 1986) work on cognitive frameworks, the study of frames as organisers of meaning has spawned a literature which is far beyond the scope

of this review. In SMT frame theory looks at processes used to focus attention on specific parts of an issue, or to present a specific interpretation of events in order to mobilise participation (Snow, *et al.* 1986; Snow and Benford 1992; Zald 1996; Benford and Snow 2000).

Frame theory, at first glance, seems relatively straightforward. According to Zald (1996), frames are 'the specific metaphors, symbolic representations and cognitive cues used to render or cast behaviour and events in an evaluative mode and to suggest alternative modes of action' (p. 262). The core tasks are the creation of diagnostic, prognostic, and motivational frames (Snow, *et al.* 1986), a process very similar to that of grievance formation as set forth by the collective behaviourists: identification and description of the problem, methods of redress, and urgent reasons to do something about it (Crossley 2002). All together, the various frameworks in use by any particular group becomes a shared set of cultural references, or what Goffman calls a ‘cosmology’ (1974: 27). For this to function correctly, movement frames must go through a process of alignment with specific cultural ‘master frames’ (Snow, *et al.* 1986; Carroll and Ratner 1996) which describe values or moral expressions of belief. Master frames reflect intangible goods such as human rights, peace, freedom of choice, which ‘inspire and justify collective action' (Snow, *et al.* 1986: 477). These frames guide the formation of the movement's claims, and delineate its meaning-making activities, strategies and tactics. The theory postulates that the stronger the resonance between the movement's frames and the master frames they draw upon, the more likely the movement is to achieve its goals.

Approached cognitively, this would seem to help explain why certain movement frames are only persuasive in certain contexts. For example, 'equality' is a powerful master frame within Western feminism; but it failed to inspire women in Eastern Europe after 1989 who rejected it for its similarity to state-imposed obligations to work at low-paying jobs (Heitlinger 1996). Frame theory can also show how a movement operationalises its underlying belief by reframing what has hitherto seemed normative, in order to problematise it by linking it to a master frame. The 'social model' developed within the disability movement, for example, separates 'disability' from the individual effects of physical impairment and reframes it as the product of a deliberately non-accommodating social environment (Oliver and Sapey 1983). This becomes actionable through resonance with master frames such as human rights (Dowse 2001) or claims to equal citizenship (Beckett 2006) which allow people with highly divergent medical conditions to form a collective identity to campaign for change. Similarly, the breast cancer movement has been extremely successful in reframing the disease from private tragedy to a matter of public health, which creates opportunities to campaign the state directly for funding for medical research and awareness campaigns, rather than having to rely upon private charitable donations for research (Kolker 2004). To some extent, all movements must engage in a process of reframing its issue(s) from individual problems to the effects of social conditions on a collective in order to problematise and make visible what is normative and otherwise

invisible. However, within SMT there is also a tendency to approach framing as media effects (McInerney 2006), or political ‘spin’(Klandermans and Goslinga 1996; Carragee and Roefs 2004; Ryan and Gamson 2006; Chong and Druckman 2007), rather than a cognitive process. Other critiques of frame theory have generally centred on their use in empirical analysis, pointing out issues of bias (Benford 1997), neglect of linguistic concepts such as discourse and signification in frame creation (Steinberg 1998; Westby 2002), and confusion with the more complicated processes of developing and disseminating a political ideology (Oliver and Johnston 2000). Where discourse analysis has been added to frame theory, however, it has been productive in revealing gaps between competing frames, particularly where these arise from a context of structural imbalances between institutionalized and extra-institutional actors (Skillington 1997). Luke (1995), for example, points out how the environmental movement has become circumscribed by uncontested discursive processes whereby 'nature' has been re-constructed as 'natural resources'. Since a resource is definitionally something there to be used, this functions to reframe 'nature' from something to enjoy in an unmediated state into something which must be governed for insertion into the market, with the result that the only valid argumentative frame within the mainstream environmental movement has now become 'sustainable development' – in other words, *how* nature can be used, not *should*.

However, because master frames in this theory are intangible values, it does not necessarily reveal how they work to help movements do Habermas' work of interrogating validity claims based on *factual* evidence. As an analytic methodology, uncovering a movement's use of frames may indeed uncover factual distortion, or the choice to leave inconvenient truths outside the frame, as well as attempts to direct the listener's attention. However, Benford (1997) himself has argued that as virtually anything can be considered as a master frame, it is difficult to assess their effectiveness, or similarities in their use from one organisation to another. This means the question of how movements convince others that their belief is true cannot always be clearly addressed merely by looking at the framing processes a movement uses, as these would limit activists to making moral or ethical, but never factual arguments. Again, this could be due to the fact that frame theory still emanates from RMTs formulation of the cost-conscious 'rational' actor and how s/he can be mobilised into action, which has promoted its use in studying purchasing decisions, reinscribing the reduction of social action to a matter of economics. However, it may be possible to consider master frames as creating a specific political consciousness.

Oppositional and other forms of 'raised' consciousness

'Consciousness' is normatively defined as an awareness of self. However, in SMT, 'consciousness' has a deliberately political aspect, what Eyerman and Jamison (1991: 68), also

drawing from Goffman, refer to as a 'cosmology' or 'worldview', a cognitive framework through which the movement's knowledge interests will be shaped and processed. Thus consciousness must be 'raised' from a state of unquestioning belief in received precepts, through the formation of knowledge-generating projects aimed at revealing the conditions in which that belief has been generated, so that its naturalness may be questioned and contested. Following Obershall (1973), some RMT theorists have argued for a 'constellation of incentives', or principles, ideas and feelings about the group to which one belongs which creates an 'oppositional consciousness' through which benefit to the group takes precedence over the personal cost of resistance (Mansbridge 2001). Although it tends to be limited in this literature by RMT's inability to move beyond cost-benefit models designed to study mobilisation, the idea that movement participation creates different forms of consciousness is worth a closer look.

Crossley (2002: 133) suggests that Goffman's frame theory is meant to describe a 'meta level of categorisation of the objects of experience, which affects the meaning which they have for agents and, consequently, the way in which they act towards them', and it is in this sense that I consider it here. Removing cost-benefit, what is left is a process of identity formation in which one's consciousness of self is deliberately reshaped to understand oneself as a member of a historically oppressed social group (Mansbridge 2001), whose exclusion is caused by external forces, not by individual failings, and which can only be challenged collectively. McAdam (1982/1999) refers to this as a process of 'cognitive liberation' through which group members work together to deliberately re-frame their shared experience of oppression into a positive form of identification so that strategies of overt resistance may be formed amongst those conditioned to accept their subordination as natural. Mansbridge further suggests that to initiate this process a form of safe, or separate space, from the dominant group is required. For some, such as the disabled rights movement, this space had been provided by institutionalization (Groch 2001), whereas other movements, such as women's liberation, had to create it by deliberately excluding those defined as not-women – boys, men and transsexuals. In Mansbridge's model there are three types of movements, with 'oppositional' describing liberation movements. She describes equality movements as issue-specific, borrowing the symbols of the larger liberation movement without necessarily creating an oppositional consciousness. Social responsibility movements address problems such as peace and the environment which are shared by all, regardless of social identity, although they may impact more heavily upon oppressed groups. Construction of a group identity here may require 'considerable education and persuasion' (Morris and Braine 2001) as identification is wholly a matter of choice; it seems that no particular consciousness is implied.

While the idea of different forms of consciousness informing different movements is persuasive on the surface, there are a number of problems with Mansbridge's model, the first being that 'oppressed group' is assumed to be a natural category, and as such, is a singular

interpretation of social identity which assumes a singular consciousness. This ignores the possibility that oppressed groups may also demonstrate hegemonic forms of oppression such as homophobia, classism or racism (see Gorelick 1998 on the implications for feminism), or that a biological boundary will inevitably become a site of contest, as has been the case with transgendered and mixed-race people. Since it is actually through such boundary disputes that knowledge about the conditions in which the category came to exist is produced, the category itself must be theorised as constructed and negotiable, rather than natural, bounded, fixed and inescapable (Nathanson 2005). The second problem is that this theory of political consciousness does not explain why, having achieved cognitive liberation from the idea that their oppression is natural, some activists advocate revolution, some create a separate system, and others choose a strategy of pursuing equality through existing institutions. Looked at more closely, Mansbridge's model really only describes two forms of consciousness, one based on biological identity and one not. The difference she outlines between liberation and equality movements is strategic, not cognitive, as both rely upon self-identification as a member of the group in order to become part of collective effort for change.

However, what is interesting about Mansbridge's model is that it appears to argue for an epistemological basis for activism which can be investigated. I would suggest that the political consciousness which Mansbridge is trying to describe would perhaps be better understood as cons*cience*ness, in the sense that it seems to incorporate an innate sense of what constitutes righteous action with a heightened awareness of self as an actor embedded in a complex web of social processes. Consciousness-raising in this sense is something a bit akin to raising a barn – it first requires construction of a cognitive meta-frame which will generally guide the processing of knowledge and formulation of strategies for action towards a certain shape. I would argue that all social movements are based in some form of cognitive liberation from normative discourse, whether from the idea that one's subordination is natural, or from cultural assumptions such as 'there is no alternative to the market', or 'science is value-free and neutral'. However, not only different movements, but different strands within the same movement may incorporate different forms of consciousness, and therefore different means of producing knowledge around the movement's central problem(s), and different strategies for change. This is not to be confused with ideology, or what is often referred to as the specific 'belief system of any social movement' (Oliver and Johnston 2000: 5), which I define as a deliberately constructed system of political ideas developed by specific thinkers and encoded in key texts. Consciousness will inform ideology, but does not produce it, and conflicting ideologies may develop from the same general form of consciousness, as can be seen in the 'fractured and failing…liberatory impulse' of the women's liberation movement in the 1980s (Clegg 1996: 62). Therefore, rather than typologising whole movements as belonging to different consciousnesses, I would suggest that it may be more productive to think of *all* social movements as inherently

displaying some form of oppositional consciousness which must separate from normative consciousness in order to challenge social order, creating what Castells (2000: 22) refers to as networks in 'opposition to the codes of the currently dominant networks' of power. All movements must be capable of producing some form of group identity from which to act as a collective against the dominance of normative consciousness, whether that identity is understood to be biological, ideological or otherwise constructed (Friedman and McAdam 1992; Stoecker 1995). Sandoval (2000: 44), for instance, argues for five organisational categories for her own theory of oppositional consciousness, which she characterises as a process of breaking through hegemonic ideology: equal rights, revolutionary, supremacist, separatist and differential. Although like Mansbridge, these are attributed to actors in identity politics (specifically in Sandoval's case, US Third World feminism), it also suggests that the same movement can produce multiple forms of oppositional consciousnesses, which will then guide different strategic responses.

Although the term 'consciousness-raising' was used within the women's liberation movement (WLM), to describe a particular form of non-hierarchical practice in which knowledge was validated through discussion of anecdotal as well as formal evidence, it is employed by a variety of movements as ordinary parlance for being made aware of the normally invisible implications of an issue. In addition to creating a collective internal identity and knowledge base, activists also see consciousness-raising as an essential process for communicating the movements' belief system to outsiders (see its use in Oliver 1997, for example), raising public consciousness in order to restructure the discourse around an issue (Tesh 2000 in Brick and Cawley 2008: 204). Ingalsbee (1996), for example, suggests that direct-action environmentalism promotes the formation of an 'alternative consciousness' through which a radical resistance to the neo-liberal underpinning of both the state and the established movement may be articulated. This is a different form of collective identity which marks one as a member of 'the movement' not so much through organisational affiliation, as through a permanent alteration of consciousness and conscious action which is demonstrated by a lifestyle which attempts to limit consumption and resists incorporation into the market. Ingalsbee's suggestion that activists develop an underlying world view which extends beyond incidents of protest also suggests that movements create a difference in the way information is actually processed, organised, and understood – in effect, a change in cognitive, not merely ideological frames. Feminists from the WLM era who are no longer politically active, for example, have claimed that they continue to see the world from within the framework learned in the movement, and that in fact it cannot be unlearned, even if their choices have had to become more pragmatic (Whittier 1990: 92-93). This may also help to explain why activists are frequently involved with more than one issue, beyond being recruited through pre-existing submerged (Melucci 1989) or overlapping personal networks (Jasper and Poulsen 1995). If the

overall consciousness is similar, there may be a feeling of continuity which allows activists to see similarities and connections between different causes with the same underlying world view. For example, the biocentricism which Ingalsbee (1996) speaks of as a cosmology which privileges all life equally, rather than just human needs, may also be perceived as part of the underlying world view of movements as diverse as indigenous sovereignty, animal rights, and ecofeminism, although it is expressed in very different ways. Activists from one movement, therefore, may be more easily mobilised in support of certain others, particularly where a large group is required for a specific action or campaign.

Rather than ideal-types based on goals, I would therefore suggest that movements, organisations and individual activists fall into three general categories of sometimes overlapping political consciousness – liberatory, egalitarian and alternative – which should be thought of not as ideologies, but as cognitive meta-frames which help direct the movement's analysis of the problem(s) and the solution(s) it proposes. The differences can be seen through considering their relationship to control. Broadly speaking, a liberatory meta-frame proposes taking control from the dominant group, an egalitarian meta-frame seeks a more equal share of control, whereas an alternative meta-frame argues that no one should have control. My purpose here is not to create three separate ideal-types, but to break the conceptual tie between 'consciousness raising' and identity politics, revealing it to be a necessary process of developing a particular kind of framework through which the movement's knowledge practice will be built. This I believe will help clarify the category of 'cosmological' in cognitive praxis, as it will help reveal what is perhaps more aptly described as its *doxa*: its philosophies, theories, values, in other words, the underlying belief from which its analysis proceeds. However, this leaves two gaps in the other two categories – forms of knowledge which may be based on generating evidential claims as well as social action, and forms of expertise which may arise in the category of 'movement intellectual'. In the work of Eyerman and Jamison (1991), where movements are considered as cognitive entities, each develops a distinctive practice around an underlying scientific belief. However, science and technology are largely normative within the cognitive paradigm, considered to be an industry which can be influenced by political and social elements, but scientific knowledge itself is not considered to be socially produced. It is for this reason that I suggest a framework which applies tools devised in STS for investigating the co-production of science and society to further open up the cognitive praxis paradigm to a constructivist perspective. In the next section I will consider how some of these may be adapted to address the questions of collective knowledge generation which have been so difficult to clarify in SMT.

STS through a social movements lens

Just as RMT and NSM developed along separate theoretical trajectories in America and Europe, so Collins (1983) traces a similar history for the sociology of science in the US, and the sociology of scientific knowledge (SSK) in the UK. American sociology of science descends largely from the work of Robert Merton (1942/1973), whose research set out to clarify the institutionalised norms by which science was able to produce verifiable knowledge. These were communism (meaning here the free circulation of findings as common property of the community), universalism (what is true for one case is true for all), disinterestedness (freedom from personal bias or gain), and organised scepticism (the basis of peer review). Work within this tradition may consider the influence of society on funding and science policy, but the actual process of creating scientific knowledge is still a 'black box' (Whitley 1972 in Knorr-Cetina 1983: 154) into which 'outsiders' are not allowed to peer. Merton's primary interest was in establishing sociology itself as a credible science, through incorporation of the same normative paradigm of disinterested, unbiased observation that governed the natural sciences (Shapin 1995). By applying the institutionalised norms of natural science to the study of society, the same authority could be conferred upon sociological knowledge. Challenges to the epistemology of science were therefore 'threats to the firmament of civilization' (Gieryn 1999: 25) which, like the 1950s concept of social movements, needed to be ruthlessly suppressed.

Although Eyerman and Jamison claimed an interest in bringing constructivist approaches to science and sociology of social movements together, for them, constructivists such as Latour were too narrowly focussed on the laboratory, using it as a 'surrogate society', rather than considering the 'wider social context' (Eyerman and Jamison 1991: 52-53). Overall, their paradigm appears uncomfortable with the work of those studying the actual process of doing science (see, for example, Latour and Woolgar 1979/1986; Knorr-Cetina 1983; Yearley 1988), perhaps because of the possible challenge to their own claim that due to the parameters of impartiality governing the production of scientific knowledge, science is 'directly dependent on social movements' (Eyerman and Jamison 1991: 54) to raise the questions it pursues. Despite their argument that the constructivists should consider science in its whole social context, scientists themselves still appear to be set apart, a reflection perhaps of the basic debate in science studies around the production of scientific knowledge. Here, Popper, arguing from Plato, equated knowledge (*episteme*) with 'justified true belief': in order to create belief, an observation had to be neutral, reproducible and falsifiable (Fuller 2004). Value statements can express belief, but because they are unprovable and unfalsifiable, they cannot be considered knowledge; only through repeated attempts to falsify the fact could we *rationally* come to believe it to be true. In this sense, rationality is linked to a very specific epistemology for producing credible evidence for knowledge claims. All else is *doxa*, or belief much in the way

Smelser formulated it: as either based on morals or faith (requiring no evidence) or opinion (requiring no method of testing evidence for truth). Kuhn, however, argued that knowledge was 'determined jointly by the environment and the particular normal-scientific tradition that the student has been trained to pursue' (1962/1996: 111-12). Facts were not Out There possessing an inherent truth, but were constituted by agreement amongst scientists as to which theory had the greatest probability to be true, based on the available evidence at the time. Revolutions occurred when anomalies in the theory could no longer be ignored; eventually, this would force the creation of a new paradigm meant to solve the problems which could not be addressed by the old. Should this new paradigm prove, through rigorous testing, to provide a better explanation, a new scientific truth will have been born. Kuhn's theory has also been applied to paradigm shifts in the social sciences – in fact, the emergence of NSM from the inability of Marxism to account for the middle-class constituency of the mass movements of the 1960s would be a case in point.

I have pointed to the Poppernian/Kuhnian debate because the tension between these two perspectives still characterises differences in the study of social movements in SMT and STS, as well as the ways in which different movements, and different consciousnesses within those movements, frame their own perceptions of science. Constructivist perspectives argue that science itself is not-value free, nor are the individual humans who produce it (Yearley 1988); this has also been a key argument in feminist theorising about gender bias in the production of scientific knowledge, particularly in the life sciences (see, for example, Rose 1975/1987; Harding 1986; Longino 1988; Keller and Longino 1996). In particular, the actual production of knowledge is considered to be a social, rather than individual activity (Fuller 1988/2002). A claim may be made by an individual, but it takes others, with a shared methodology, to test it to determine its truth; thus knowledge is not derived through empirical evidence, but through a 'socially ascribed status' (*ibid*: 30) which determines whether the knowledge-holder can be considered a credible source. In science and academia this is normally determined through publication, with greater credibility accruing to those most frequently cited, both for refutation and agreement. According to Fuller, credibility disappears, along with the knower, not when the knowledge has been definitively refuted, but when the text itself ceases to be read. Goldman (1999) parts with Fuller's strong constructivist definition, and argues for the place of material reality in the determination of how the group produces knowledge; since our senses are limited and we cannot always adequately describe our experience, language is only partially capable of constructing what we perceive to be reality, therefore something beyond mere sensory experience must determine whether a belief is justified and true. Although Goldman accepts the basis of an argument for socially situated forms of knowledge, this must be comprised of two components, only one of which can be situated within the knower. The other must be externally valid, universal and eternal regardless of position of the knower, in order to be true. Indeed,

Goldman argues that in a social epistemology, a group may be considered as a knowing agent in its own right. Grasswick and Webb (2002) also argue that feminist epistemologies, though they may differ in terms of their relationship to the material world and in the ways of knowing they validate, are also social epistemologies; the difference between these and Fuller's formulation is that the political project of feminism as empowerment of women puts primary importance on the influence of gender, and has an imperative to go beyond describing the construction of knowledge to improving it.

More recently, a concept of civic epistemology, or the different forms of knowledge and knowledge validation practices which take place in the public sphere around matters of science policy (Miller 2008), has begun to emerge. Rather than knowledge being a matter of factual validation, Miller argues that it is a matter of 'dynamic social processes in which competing knowledge claims are articulated, deliberated, negotiated, discarded, and valorized…[which] determine, in turn, whose knowledge claims matter and how claims are constructed, evaluated, contested, and sanctioned as knowledge' (*ibid*: 1898). In Miller's work 'epistemic frameworks', combine with specific social and political configurations as relatively stable 'knowledge-orders' (*ibid*: 1898*)* which create a culturally-specific civic epistemology which can be studied through careful examination of episodes of policy creation (*ibid*: 1900).

These formulations have significant possibilities for the study of social movements as knowledge-producing, rather than purely political, projects. While social movements are able to ask questions about who gets to determine which facts are The Facts (or in some cases, why there are no facts), they themselves must also provide some form of evidence for their own claims if they wish to create enough authority to be heard, and the more technologically-based the issue the movement seeks to problematise, the more this will be the case. Moreover, because their status as knowledge producers is often relatively low vis-à-vis other actors in the public sphere, activist knowledge claims are easily open to dismissal by 'experts', in much the same way as Smelser dismissed movement belief as 'hysterical' action emanating from ambiguity and anxiety (1962: 85).

For STS, whose dominant questions revolve around the ways in which science and knowledge are produced, social movements do occupy a space within the literature on scientific controversies, but the ontological problem of 'what is a social movement' remains. For example, the chapter on social movements (Hess, *et al.* 2007) in the most recent *Handbook of STS* (Hackett, Amsterdamska, Lynch, *et al.* 2007) begins with a definitional statement that separates the object 'social movements' from other collective formations such as networks, single-issue campaigns, advocacy, interest groups, or any other 'elite-based reforms or campaigns' (*ibid:* 474). However, they then go on to map breast cancer advocacy as part of the health social movements field, and a single Internet-based communications network as a movement in its own right. To borrow from Hess himself, what their own paper illustrates is an 'object conflict'

(Hess 2007), or a definitional struggle over what kinds of collective action the term 'social movement' actually describes. One can also see this object conflict historically embedded in a body of literature from both sides of the Atlantic which argues over whether a 'new' movement has actually emerged (Schiller and Levin 1983; Shakespeare 1993; McInerney 2000; Crossley 2003; Williamson 2008), as if, in the style of Fuller's (1988/2002) assertion that knowledge does not exist until it is published in a peer-reviewed format, a social movement can only exist if academics agree it does.

Perhaps this has been a consequence of a generalised increase in professionalisation, so that at the organisational level it is no longer so easy to separate what is or is not part of a movement field. While Melucci (1985) argued that social movements exist only in a public space beyond civic institutions and must remain autonomous within that space or they were no longer social movements, what the *Handbook of STS* shows is that even when defined, the ontological borders of the concept are actually porous. Single-issue campaigns are almost always embedded in a larger movement (Mansbridge 2001), while advocacy, lobbying, and non-profit or charitable organizations sometimes represent its later-stage professionalized elements (Andrews and Edwards 2004). If movements are conceived as networks (Castells 2000), individuals may be active in both grassroots and more formal organisations, or – as increasingly became the case in the women's movement – have matched their activism to their professional work (Clegg 1996). Additionally, not all movement organisations use protest repertoires (Tarrow 1994), particularly in complex fields such as health social movements, which are frequently a collaborative effort between patient-activists and qualified experts (see, for example, Levin and Idler 1983; Rogers and Pilgrim 1991; Braun 2003). STS itself has what it considers a social movement strand, which has focussed on bringing constructivist insights into the teaching of science, raising the consciousness of scientists to see themselves as social actors and their work as having social consequences (Waks 1993). Some groups of scientists have also developed movements considering science from the alternative consciousness of socialist ideals (see, for example, Rose and Rose 1972, among others).

There are also movements aimed at democratising science in various ways. The European Commission, for example, has supported a project of 'Citizen Science', in which scientists are encouraged to use their work in service to justice projects in connection with local NGOs (Stilgoe 2009), similar to the science shop movement which began in the Netherlands in the 70s, and has now been dispersed across Europe and beyond (Leydesdorff and Ward 2005). These programmes facilitate 'downstream' access to scientific knowledge, usually through the medium of an individual scientist, and encourage knowledge transfer from the university or laboratory to the community in a non-economic model. The 'upstream' version is geared towards involving citizens in the creation of research and science policy, a tactic which is prevalent with regard to sustainable technology projects (Wakeford 2004), and newly emerging scientific fields

such as nanotechnology and synthetic biology (Singh 2008). However, there are arguments that these are mere exercises aimed at 'selling' a new technology more effectively by identifying possible objections at an early stage of research (Singh 2008), or as Thorpe and Gregory (2010: 273, 275) succinctly put it, preparing 'the product for the market and the market for the product'. While local groups or individuals are allowed some voice in the proceedings, they are not allocated an equal place at the table, particularly in top-down initiatives where corporate interests and significant investment in R&D may be at stake (Wakeford 2004: 19). Additionally, movements to democratise expertise have created a new dilemma, particularly for policymakers: that of sorting through conflicting expert knowledge (Grunwald 2003). Within these initiatives, the 'deficit model' of public understanding of science, or the idea that resistance to new technologies stems from ignorance of science, may remain largely unchallenged (Davison, Barns and Schibeci 1997; Sturgis and Allum 2004), denying the agency of 'lay experts' whose rejection comes from a reasoned, if informal, consideration of how the issues will impact on their lives (Wynne 1993; Kerr, Cunningham-Burley and Amos 1998).

This also brings into focus a need for more nuanced categories of expertise than the binary of expert/lay, particularly in the study of the health social movements field. This is a voluminous and extremely heterogenous literature beyond the scope of this paper, some examples of which include movements for alternative therapies and other challenges to the institution of biomedicine (Zoller 2005; Archibald 2008; Baggott and Forster 2008; Barker 2008), women's health and reproductive rights (Braun 2003; Turshen 2007), advocacy around specific conditions and patients' rights (Rogers and Pilgrim 1991; Landzelius 2006; Callon and Rabeharisoa 2008), movements for environmental justice and against health inequalities (Tesh 1999; Brown 2007; Scambler 2007), and has significant intersections with the disability rights movement (Shakespeare 1993; Dowse 2001; Chamak 2008). Until recently, there has been a general conceptual separation of these from other social movements, partly because these frequently include charitable research organisations and credentialed medical experts, which makes them difficult to study within the models available to SMT (see, for example, Brown and Zavestoski 2004). As has been argued above with reference to cognitive praxis as an analytic framework, what appears to be required is a more nuanced understanding of different forms of expertise beyond the binary of expert/credentialed and lay.

'Lay' knowledge as a form of expertise

Ultimately, questions of where research funding goes, and which scientific questions are pursued, are a matter of both the political economy and the underlying value system(s) of the society doing the funding (Hess 2011). Knowledge is therefore co-produced as mixture of scientific curiosity and entrepreneurial activity which is subject to the vagaries of public

influence on electoral cycles as well as on the market (Grundmann and Stehr 2003). In democratic systems, politicians who are no more scientifically literate than the non-elected layperson are increasingly expected to provide some form of oversight through developing legislation or regulatory agencies creating new spaces in which scientific 'progress' may be challenged. The 'deficit model' adopted in Britain after a Royal Society report (Bodmer 1985) urging scientific education of the public, including public officials, blamed the growing distrust of science on public ignorance and called for strategies for creating scientific literacy to curb public resistance to scientific developments. This has been more recently superceded by a 'contextual' (Sturgis and Allum 2004: 117) model suggesting lay actors use other forms of knowledge in which they feel they have more expertise to judge scientists' public claims (see also Wynne 1993). Therefore, a more scientifically literate public, while in and of itself a laudable idea, will not necessarily produce a more agreeable public, particularly with regard to questions such as human enhancement, production of nuclear arms, genetically modified food and commodified reproduction which, as Habermas argued, intrude deeply into the lifeworld. Moreover, as Grundmann and Stehr suggest (2003: 186), experts and lay people do not necessarily wind up on opposite sides of a technoscientific debate, since their position is more likely to be influenced by personal values which lead them to support different knowledge claims, some of which cannot be empirically verified either way. Again as Wynne (1992; 1993) and others have argued, what appears to be crucial is the relative credibility of the claimants. However, the entire construction of 'lay public' tends to remove social movement participants as either already too expert for 'lay', or having already formed their own opinions (Hess 2011). This would suggest that social movement actors have a very specific form of lay expertise, if that is even the proper term.

Studies from the field of STS show quite clearly that activists can indeed insert themselves into the process of creating verifiable factual knowledge. Epstein's (1991; 1995; 1996) work on ACT-UP provides a primary case study of the complexities of expertise in protest movements that engage directly with the foundational premises of science. In this instance, activists were not protesting a technoscientific innovation, but attempting to insert themselves into the process of developing a treatment for AIDS that would respond to their needs, not merely to the dictates of 'pure' science. While most of the movement's knowledge-claims were delivered to the medical elite through credentialed intermediaries, some members of ACT-UP were eventually able to gain a seat at the researcher's table in their own right through becoming 'a new species of expert that could speak credibly in the language of the researchers' (Epstein 1995: 417). Some were speaking from lived experience, both with the disease and as participants in clinical trials; forms of embodied expertise which were not directly accessible to the research professionals. Others learned to connect their claims to longstanding arguments in the literature of clinical trial design. Through these new forms of 'lay'

expertise, activists were able to gather and persuasively present their data about the ways in which the design of 'gold-standard' double-blind trials induced widespread non-compliant behaviour, such as using undeclared medications, or exchanging pills in the hope of getting the drug rather than the placebo at least 50% of the time, which belied the scientists' defence of double-blind random trials as the gold standard for providing 'clean' data (Epstein 1995). Epstein also showed that activists can try to determine the credibility of knowledge under their own terms, particularly when a plausible, but largely ignored, answer which directly challenges the 'accepted' explanations exists. In the case of ACT UP there were two key schisms in the AIDS community which provided an intellectual space for ACT UP's entry. One was molecular biologist Peter Duesberg's controversial assertion that AIDS was not caused by the retrovirus identified as HIV. Parts of the movement did adopt this dissident belief, circulating it through the media as coming from a credentialed source and demanding to know why it was being ignored, so that public pressure caused it to become a legitimate question for further scientific enquiry (Epstein 1996: 331). The second schism was between the bench scientists and the clinical practitioners, or between the 'clean' results promised by the methodology of double-blind clinical trials, and the reality of the 'unclean' world of actual patients (Epstein 1991, 1995). In this kind of epistemic struggle between medicine as art and medicine as science, Epstein suggests that activists had a natural ally in the clinical practitioners, whose credentials gave them the power to transform the activists' embodied knowledge into clinical practice, thus bolstering both groups' attempts to control the AIDS research agenda.

However, what if there is no Duesberg, no dissident *scientist*, however controversial, but only 'lay' people doing their own research to prove their claim? Without professional credentials, is it possible for movement activists to negotiate belief in a scientific counter-claim directly with the public, as Habermas claimed? Or must they always seek to convince at least one credentialed 'expert' to accept their claim in order to be heard? Epstein's research suggests that while non-credentialed activists can 'in certain circumstances become genuine participants in the construction of scientific knowledge' (1995: 409), they are structurally barred from institutions which would allow them real control. Even had they attracted the funding and developed the clinical skills to run their own trials, ACT-UP as an organisation would not have access to the drugs, the hospital facilities, or the journals which validate scientific facts through peer review. In other words, coherent with Fuller's claims, the activists' empirical data could not become scientific knowledge until published by a credentialed agent. It is perhaps for this reason that movement knowledge is always already presumed to be not-science, and that movements amongst scientists and academics, even when explicitly politicised and linked to the efforts of street protest, are seen at best as 'kindred phenomena' (Frickel and Gross 2005: 225), rather than part of the social movements field. However, one of the factors also working strongly towards legitimation of ACT UP's claims was that the middle class demographic of the

homosexual community meant that there would inevitably be some 'insiders' – people with medical or scientific training – who would become activists through their social identity as gay men (Epstein 1996: 65). Epstein's work shows that the organisational aspect of the cognitive praxis paradigm should also be able to include activist-professionals (those whose activism is expressed through their work in institutions such as medicine or law or through politically-informed service provision), as well as professional activists (those working in movement-oriented research, advocacy or lobbying organisations, or full-time staff in funded grassroots organisations which function as non-governmental organisations), in order to truly see what kinds of knowledges are being utilised within a movement's entire field.

Expertise beyond the binary of 'expert' and 'lay'

The work of Collins and others from the Bath School was meant as a Third Wave in science studies (Collins and Evans 2002; Collins 2004; Collins, Evans, Ribeiro, *et al.* 2006; Collins 2007), a reply to the progressive extension of scientific decision-making powers to non-qualified actors, beginning with those in political institutions, and now extending so far into the ordinary lay public that some argued further democratisation would 'open the floodgates of unreason' (Collins and Evans 2002: 237). Rather than reinscribing scientists as having special access to the truth, since British sociology of scientific knowledge had been dedicated to showing they did not (Bloor 1976/1991; Collins 1983; Barnes, Bloor and Henry 1996), Collins and colleagues argued that scientists should instead be valued for the special quality of their technical expertise. This has been clarified in a 'periodic table of expertise' (Collins and Evans 2007) dividing forms of knowledge into three general groups. The first group, 'ubiquitous tacit knowledge', describes forms of basic knowledge which largely amount to the possession of facts, conferring no special skills, and with only a limited ability to derive meaning from the information (*ibid*: 18). In cases of scientific controversy, the average person has few details about the issue and lacks the kind of tacit background knowledge of the larger field and the knowledge-producers in it, which would be required for evaluation of their claims. Of interest in the argument here is that by its nature, knowledge derived from popular scientific literature, particularly media coverage, must be flattened, so that doubt is removed, and failures and controversies will be hidden (*ibid*: 20-21). The next phase, 'primary source knowledge' comes from reading the professional literature, however, deciphering it may be technically too difficult to produce real knowledge, and again, it is unlikely that the reader will know which sources are considered valid, or why the science is disputed (*ibid*: 22). In the worst cases, this can lead to dangerous errors in technical decision making by those with political power who believe they have understood the science well enough to make judgements in a controversy, or who use science to obscure political aims (Weinel 2007). 'Specialist tacit knowledge' requires immersion

and repetition in order to achieve technical expertise. This is not difficult to master, but it is not available to everyone, and cannot be taught beyond the basic rules; in Collins' and Evans' example, it is like the skill required to drive a car (Collins and Evans 2007: 23). The difference between ubiquitous and specialist knowledge in their paradigm is that the first is based upon reading, and the second upon mastering a skill through action. Contributory expertise is what is normally thought of as 'expert', moving through stages of knowledge until, with continued use, the holder encompasses the whole context unconsciously and can react to and evaluate new information without conscious direction (*ibid*: 25). In terms of science, this would belong to the core-set who hold esoteric knowledge of the specialty.

Within this new research programme, Collins (2004) introduced the idea of a third kind of expertise which lies between formal knowledge and technical skills; an 'interactional' expertise which allowed a person to converse in the language of the expert, without needing to acquire the technical skills. Interactional expertise does not give non-qualified experts the kind of technical proficiency they would need to actually *do* science or medicine; what it describes is an understanding of the esoteric language and concepts involved in the field derived from immersive contact with the core-set (Collins 2004), conferring the ability to interact with qualified professionals at a level which is indistinguishable from those with contributory expertise (Collins, *et al.* 2006). In popular parlance, it is similar to the Turing Test, where a person is fooled into thinking they are having a conversation with a real person, rather than a computer programmed to respond to linguistic cues (Collins and Evans 2007: 85-6). This, they claim, is the form of expertise developed by sociologists of science, science journalists, and others who spend significant time immersed in the culture of the core-set, including activists, who they agree can be 'a medium of interchange between scientists and groups of the public' (*ibid*: 32). Other work on social movements would suggest that it is certainly possible to see these five different forms of knowledge – 'beer mat', popular, primary source, interactional, and contributory – within most social movements, and that this is a useful addition to clarify the role of different kinds of 'movement intellectual' in the cognitive praxis paradigm. However, because 'interactional expertise' is a theory developed to explain the function of linguistic socialisation in producing the appearance of technical proficiency, it has been argued to lack a consideration of the function of the body in producing other background information which contributes to discursive knowledge, even in physically impaired individuals with minimal sensory input, and the requirement of an embodied, fully expert knower to impart the information from which interactional expertise can be derived (see Selinger's arguments in Selinger, Dreyfus and Collins 2007).

This is an important point with reference to the ontological question of what constitutes a 'social' movement. While Eyerman and Jamison (1991:93) claim that scientists do not enter the 'messy world' of the social movement, work from STS which looks directly at scientist-led

activism (Frickel 2004), and forms of movement that are expressly academic (Frickel and Gross 2005; Arthur 2009) suggest that this is only true if one redraws the boundaries of the movement to deliberately exclude scientists, medics, and other credentialed knowledge-holders solely on the basis of their profession. My discussion of SMT has shown that so far most uses of the term 'knowledge' within this area are in fact describing social, rather than scientific, forms of knowledge. It may be that this is a result of the question itself being in the descriptive stage within SMT, so that we must first do the work of describing all the various ways in which 'knowledge' appears within social movements before we can consider the processes involved. However, this has meant that the question of *scientific* knowledge, or more precisely, of using the validation mechanisms of science – hypothesis testing, controlled data collection, repeated experimentation – for the development of knowledge-claims by both credentialed and non-credentialed movement actors has largely been ignored because science is still normatively understood by SMT as value-free, done only by formally qualified scientists, and produced only outside the movement's field, even though movements themselves have frequently questioned bias in the construction of scientific facts.

This is particularly evident in movements in two key areas, environmental and health movements, in particular where these intersect with justice frameworks which criticise the asymmetrical effect of environmental degradation on economically deprived groups and historically underdeveloped areas (Brown 2007). Unlike identity movements which tend to rely on biologically-based criteria and embodied knowledge, these movements rely heavily on empirically collected data such as toxicity levels, epidemiological statistics, or time-lapsed documentary evidence for the formation of credible claims (Yearley 1992).

The question of what constitutes 'expertise' in the social movements field is further complicated by the appearance of a category of 'expert patient' in the medical literature. This might suggest that the earlier work of health-based social movements in questioning biomedical models of disease and treatment has been successful in creating a more empowered role for those living with chronic conditions. However, it has also been argued that expert patient programmes may actually reinforce rather than interrogate the biomedical model (Wilson, Kendall and Brooks 2007). In other instances there may be resistance from the medical or policy-making establishment in according such patients equal authority with credentialed experts in making claims (Traulsen and Almarsdottir 2005), suggesting that their expertise is indeed seen as relevant only to management of their own individual condition. In addition, the neo-liberal tendency towards constructing patients as 'consumers of health care' means their involvement in studies of treatment management can bear an uncomfortable similarity to that of focus groups in marketing research (see, for example, Boote, Telford and Cooper 2002), with the medical establishment looking for ways to 'sell' the treatment they endorse, rather than ways to validate the patient's embodied knowledge of alternative forms of care.

In other words, the 'expert patient' in most of the literature describes someone expert at managing his/her own chronic condition by following medical direction, not necessarily someone whose embodied knowledge is considered *expert* in terms of contributing to medical research. Arksey draws upon Fleck's (1936, in Arksey 1994) idea of scientific communities as a thought-collective of concentric circles beginning with an inner core-set of qualified individuals, surrounded by generalists, and then educated and non-educated lay persons. However, she argues that dividing expertise by formal qualifications alone is too simplistic, and that the embodied knowledge possessed by affected patients places them in an exoteric, or non-qualified, specialist relationship to a qualified specialist with esoteric medical knowledge, as the activist-patient may be able to communicate a more sophisticated level of disease-specific knowledge to a specialist, than might a general practitioner whose qualifications in the larger field do not confer the necessary expertise in that particular condition. Similarly, Barbot (2006) suggests a tripartite delineation between experiential, scientific and clinical knowledge, as those dealing directly with patients have a different way of producing and validating medical knowledge than those whose facts are produced in the laboratory. This was a distinction noted by Epstein (1996) as well.

The interplay between scientific knowledge and embodied, experiential, orally-transmitted or other non-credentialed forms of knowledge is even more present when studying environmental movements. For example, Powell details a meeting between North American tribal leaders, activists, and 'doctors, researchers, engineers and scientists' to create a strategy for engagement with environmental politics on native lands (Casas-Cortes, *et al.* 2008). Although all were part of, or at least sympathetic to, the indigenous environmental movement, Powell still categorically separates 'activists' (without indicating whether these were indigenous or not) from those normally considered to have special forms of qualified expertise. She then goes on to claim that although there were no 'credentialed development "experts" with institutional backing' present, the meeting was 'producing a form of expertise tailored to the material and spiritual context of particular communities' and that this blurring of boundaries was 'a particular style of social movement practice' (*ibid:* 30).

While not in disagreement with the overall thrust of the paper, it points to several significant problems with SMT's attempts to theorise movement knowledge. First, Powell's example illustrates the normative concept of expertise as applied to social movements, so that despite arguing against the restrictive categories of traditional SMT, she has still fallen into the same trap whereby 'expert' is defined as holding *any credentials at all*, rather than by expertise in issues critical to the movement. Second, she uses the fact of holding expert credentials to place the holder in a category separate from 'activists'. This begs the question of who, after boundaries are blurred by this meeting, would be the movement's experts, and how would they validate their claim to expertise? Would indigenous knowledge of the local effects of strip-

mining be subsumed beneath the scientists' assessment of acceptable levels of toxicity? Would white environmental activists' expertise in sustainable development take precedence over indigenous expertise in maintaining their relationship to their land, as McCormick (2006) observed in her study of environmental/local partnerships in anti-dam activism in Brazil? To answer these kinds of questions, a more nuanced consideration of expertise beyond mere credentials is necessary to begin to understand how processes of knowledge sharing, validation, and consensus building – the elements of a social epistemology – actually work between actors with different forms of knowledge, expertise, and different levels of epistemic authority within the movement. This thesis will attempt to answer some of these questions using the case of a knowledge-based activist network, the Feminist International Network of Resistance to Reproductive and Genetic Engineering (FINRRAGE), in order to extend theorising about social movements in both sub-disciplines.

Conclusion

Beginning with the proposition that movements must be able to convince others of their belief that their analysis of a problem is correct, I have sought to look at some of the ways SMT has tried to address the study of social movements. Knowledge is a subject of increasing interest in SMT, but the subject is too broad, and too little understood from within the paradigms that SMT offers. However, the cognitive praxis paradigm developed by Eyerman and Jamison at the time when synthesis between the RMT and NSM analytic traditions was first being considered offers a possible basis upon which to build.

The constructivist aspect of STS suggests that a movement's unique cognitive praxis may be best understood as a form of social epistemology, and that the production of movement knowledge may be studied using the tools developed through the study of other epistemic practices, including laboratory science. This would allow questions about the processes of developing and validating a movement's belief system, including what kinds of expertise are utilised or possibly created in the process, to be asked. For this, I have suggested that the best solution lies in an extension of the cognitive praxis paradigm, through incorporating the tools developed within STS for uncovering the construction of scientific knowledge. While the character and intensity of many of the debates mentioned is beyond the scope of this work, they have mapped out a pathway between the two subdisciplines, using Eyerman & Jamison's cognitive praxis paradigm as a bridge to draw together similar concerns from both sides, and create a theoretical framework which can be operationalised to study the processes by which social movements fulfil their purported function as mediators between science and society. If it

is true, as Habermas contends, that social movements exist to translate science into social action, then perhaps this is not a place to finish, but to begin.

CHAPTER 3 – METHODOLOGY

Tell them stories of action and reflection, these things belong together.
(Maria Mies, Cologne group, Germany)

In this chapter I will discuss the methodology developed in order to study the knowledge practices of one particular network within the larger women's movement. The core methodology was a multi-modal case study centred around a contextualised reading of the network's organisational archive and published writings, coupled with semi-structured lifecourse interviews carried out among an international selection of participants. Working from the general to the practical, I will begin by discussing the overall approach to the project and the way it was designed and developed in order to answer my questions about the ways in which FINRRAGE emerged, developed and disseminated its knowledge interests, and constructed themselves as experts in the public sphere. In part two, I will discuss the process of data collection and analysis. I will then conclude with an overview of the strengths and weaknesses of the approach I chose to take, before moving on to present my data.

PART I: Devising the approach

At the outset, I think it is important to stress that this group of activists were not initially chosen because they appeared to be a good case for looking at knowledge in social movements. In fact, it was the other way around. The choice of FINRRAGE for my PhD research was predicated on a prior interest in human cloning, and to some extent, pure chance. As a master's student at the Center for Interdisciplinary Gender Studies at the University of Leeds, I had begun volunteering at the Feminist Archive North (FAN), which is housed in Special Collections at the Brotherton Library. During this time I helped Jalna Hanmer, one of FAN's trustees, unpack and process a very large collection of materials she was donating to the archive, which centred around a feminist effort to challenge the development of reproductive and genetic technologies. I became fascinated by the materials, as much of it dated from the 1980s, before IVF had become – as it was to me, to a large extent – normalised. Hanmer mentioned that as an activist the work she had done with FINRRAGE had been some of the best work of her life, and she thought it would make great material for a PhD one day, if someone could think of 'some interesting questions' to ask.

The thought stayed with me, as I knew then that I eventually wanted to go on to do a PhD, although at that point I was considering a continuance of my MA topic, which was women in online communities. However, my MA study had also drawn me towards ways of looking at science and technology which were entirely new to me, particularly through the work of Hilary

Rose, Evelyn Fox Keller, Helen Longino and Donna Haraway, and I wanted to explore more of that field. Moreover, FINRRAGE coincided generally with my own introduction to feminist theory through friends made while studying politics in France in 1987, and I was interested in what it said about the history of feminist activism in general. By the time I had finished unpacking the documents, the idea of studying a feminist movement around technological issues I already found fascinating seemed to be the perfect PhD topic, pulling together strands of my own background that I wanted to understand in a social context, without being directly personal. I suggested the idea to Jalna Hanmer, who responded enthusiastically, and helped organise agreement from Renate Klein and Maria Mies to use the archival materials in this way. Hanmer and Klein subsequently became my primary informants.

I began by trying to find an analytical approach in the social movements literature, however, it quickly appeared that FINRRAGE was not going to fit any of its theoretical models particularly well. There were no dues, no codified membership lists, they did not employ protest tactics, they were neither a single organisation nor a single-issue network, and they did not seem to constitute a movement on their own. Resource mobilisation paradigms were too narrow and instrumental, the framing literature too much like marketing, and the new social movements literature focussed at too broad a level to provide specific tools. Above all, because I wanted to speak to the women, not just read the documents, I did not want to take an approach which centred on judging whether their analysis had been right, or whether their efforts had been a success.

As I began to look through the organisational documents in the archival collection in order to identify potential respondents and think about what kinds of questions I wanted to ask, I noticed two unexpected trends. The first was that out of the one hundred twenty-seven women initially identified from conference attendance and mailing lists, internet searches provided biographical data for seventy-six, of which sixty-one held PhDs. This was as true for women from developing countries as for the Anglo-European ones, although I was less likely to find information about the women in the developing world overall. The second was that the women of FINRRAGE had collectively produced a very large body of published literature, including an academic journal. My questions now began to clarify around the interplay between activist knowledge and formal expertise, and how this might function in movements around highly technological issues. This informed the focal questions I chose to ask: How did FINRRAGE emerge, develop, and operationalise its 'position'? What were the tactics used to develop and disseminate its knowledge? And how were the different kinds of expertise the women brought to or developed within the network used to legitimate that knowledge within the public sphere? As I had chosen a framework which did not have a gender emphasis, I now looked towards feminist research methodologies to shape my methods in a way which would be appropriate for approaching this group.

Methodological considerations for feminist research

The field of qualitative research has changed substantially in both demographics and methods of representation since Ann Oakley (1981) argued against the standard 'researcher's manual' approach to conducting 'neutral' and 'objective' interviews. In general, it was argued that what makes a research project *feminist* (rather than simply a gendered analysis) are its emancipatory aspects -- 'a transformative view of women's destiny' (Rose 1975/1987: 267), the inclusion of women and women's lives in studies of the social world (DeVault 1996), and a legitimation of women's ways of 'doing knowledge', including producing knowledge in a form which ordinary women could access (Acker, Barry and Esseveld 1983); in other words research which is *for* women, not merely about them (Stanley and Wise 1990). However, I should also stress that I see the 'feminist' in this project as having more of an interpersonal dimension, as reaching towards 'theory derived from experience analytically entered into by enquiring feminists' (*ibid:* 24), rather than being something distinct from good research practice, which should always embody reciprocity, reflexivity, and an ethics of care towards respondents (see, for example, British Sociological Association 2002). Cook and Fonow (1986) offer an excellent distillation of what they see as the key points of feminist research beyond simply prioritising analysis of gender relations: constant reflexivity, rejection of normative 'objectivity', methodological innovation, and an ethics of empowerment. In the following sections I will discuss the choices I made to ground the project in each of these areas.

Empowerment

Although my project does not have a directly empowering aspect, such as gathering data to directly address a social problem which affects the women who take part, I see 'empowerment' as having multiple forms of application. These have more to do with power sharing, in terms of being responsive to the needs and interests of those who offer their participation, as a way of mitigating the imbalance inherent in the research process (Acker, *et al.* 1983). There is also a form of empowerment which comes from the opportunity to tell a story the women clearly wanted to tell. Overall, the women I interviewed were proud of their accomplishments in FINRRAGE, and frequently reiterated how glad they were that someone wanted to talk to them about it. This aspect of the project, of making visible what was felt to be a piece of feminist history in danger of being lost, was important to all of us. For this reason, where specific permission has been given, the interview data and any additional documents given to me by the participants, along with a final copy of the thesis, will be added to the FINRRAGE collection at the Feminist Archive North for future researchers to use.

From the beginning, then, the intellectual interests of the network have helped to guide the way I have studied it. In this sense, I view my position as something more akin to the director of a play, where I retain an overview of the 'big picture' and a significant level of control, but the final product is made richer through creative contribution from all. For example, in a short, exploratory interview which took place in my first year, Jalna Hanmer expressed a desire to know how the other women now understood the issues FINRRAGE had been working on (Interview 1). This led me to consider using a life history approach to my interviews, a technique often used in social movements research for its ability to uncover the reasoning processes used by activists as part of their involvement (Della Porta 1992), particularly when studying past action. I began to think of FINRRAGE as part of the trajectory of an activist life, rather than an isolated instance of collective action, so that the interviews were not merely about filling in the blanks left by the archival documents or verifying their accuracy. Instead, they were focussed towards the role FINRRAGE had played in each woman's intellectual and political development, as well as the role she had played within the network.

Armitage and Gluck (2002) also suggest that while differences in the positionality of interviewer and 'narrator' will inevitably be part of the process in oral history research, a more collaborative approach can be facilitated by using lifecourse interviews because they take much longer to collect, and the process allows the participants to come to know each other beyond the interview setting. For these reasons I made the conscious decision not to foreclose the possibilities offered by invitations to stay in people's homes, or to join them in social activities; in other words, leaving it up to the women themselves to decide how 'professional' our relationship should be. I also wanted to remain responsive to being questioned in detail about the research, my own opinions on the technologies, and my own life history both during and outside the interview process -- in other words, in the spirit of 'no intimacy without reciprocity' (Oakley 1981: 49), to allow my respondents to ask me any question that I asked of them. This kind of reciprocity was important as I wanted the women to find personal satisfaction in their participation, and to see my interest in the network as a validation of the immense amount of energy they had put into FINRRAGE, whether I agreed with their analysis of reproductive technologies or not.

However, power turned out to be a particularly flexible commodity in this project, as some of my participants had literally written the book on feminist methodologies (Klein 1983; Mies 1983) and their work informs my analysis of their approach to knowledge, as well as some of the elements of reciprocity I chose. My vantage point as researcher was frequently reversed by my real world position of student versus well-known professor. Many of the women also had their own theories and questions about women's knowledge practices, and several pointed to the specific analysis I was trying to develop as the reason they had chosen to take part in the research. The insights they offered into the process of becoming socialised into academia

enriched my data far beyond what I had imagined, although in terms of feeling confident of the validity of my own knowledge product, knowing that they would read the thesis with the eyes of established academics did make the writing up experience possibly more daunting than research with another cohort might have been.

Reflexivity

Feminist praxis also calls for reflexivity in that its methods are transparent and it is accountable to its participants (Maynard 1994), as well as making the experience of the researcher visible and known, not only to the participants but to other researchers (Klein 1983). Overall, this has become good practice for qualitative work, which accepts that all researchers are as subject to social forces as those they seek to study, and therefore the conditions in which the research is produced – who, as well as where and when -- invariably influences both collection and interpretation of the data (Davidson and Layder 1994: 51). As discussed above, I have tried to locate myself within the interview process by sharing my own stories with the women, particularly the origin story of how I came to be interested in FINRRAGE. My own knowledge claims about the research are situated and extremely partial (Haraway 1996) as I am external to the group, and able to analyse only a fraction of its voices and from a great deal of historical distance. Ultimately, I felt that inserting myself and my own personal reflections into the written narrative would be an intrusion into the far more interesting story the women wished to tell. I therefore chose not to follow this form of reflexivity as part of writing up the data, although I have discussed it in this chapter, and will return to it briefly in the conclusion to the thesis. However, there are other ways to give a measure of reflexive validation to my participants. As part of reclaiming their history, I wanted to allow the women to participate under their own names, if they wished. This made it doubly important that they have a say in how they would be represented. The consent forms were drafted to allow respondents the choice of anonymous or named participation, and were accompanied by an explanatory letter outlining the project, a general sampling of the questions they would be asked, how their data would be used, and what opportunities they would have for review. The project allowed for feedback at two key points. Transcripts were provided after all the interviews were complete and respondents were able to add, amend or delete information from these, and from the recordings, if they wished, to create a more collaborative situation which allowed room for later reflection (Larson 1997, in Ellis and Berger 2003: 470). They were also given the opportunity to read the three history chapters, and to provide feedback. In addition to being attracted to the general analytic approach of looking at knowledge practice, many of the women mentioned that being allowed to review the transcripts and see the relevant chapters were key factors in their decision to participate, and approximately half did take advantage of these options.

Objectivity

As I could not do participant observation (apart from one instance of joining a FINRRAGE panel organised by Renate Klein for Women's Worlds 2011), I did try to become as immersed in the world of FINRRAGE as possible during the interview period, through reading the archival and published works, listening to tapes of meetings and conference presentations and watching videos of media interviews. In this sense, 'objectivity' was something I deliberately attempted to lose during the data collection process. I can say without hesitation that I enjoyed all the interviews immensely, and indeed there are some women that I now consider friends, and would hope to remain in touch with long after the thesis is finished. However, this can also produce uncomfortable tensions during the analysis, complicated by the responsibility of interpreting another woman's words (Riessman 1987), particularly where the different stories conflicted. For this, I wanted to find an analytic approach which could ensure enough critical distance from the data to write about the areas of conflict without being overly sympathetic to any particular interpretation, and without having to provide a determination of what had 'really happened'.

The challenge to positivism in the 1970s was not only a feminist project; many of the same precepts of reflexivity and challenges to objective neutrality were being developed in other spheres, particular in the sociology of scientific knowledge (SSK), which is rooted in principles which do not require a determination of what is 'true'. As I did not want to have to evaluate the quality or veracity of FINRRAGE's analysis, I wanted a way of sidestepping questions of whether FINRRAGE had their facts about reproductive technologies correct, and focus on context and process. The 'Strong Programme' (Bloor 1976/1991; Woolgar 1988; Barnes, *et al.* 1996) has four principles used to determine how belief in scientific fact comes about: it looks for causal explanations, judged impartially, and applied symmetrically regardless of whether the science is normatively considered to be 'good' (such as physics) or 'bad' (such as parapsychology). My interest in the way activists create belief in their knowledge claims fits well into that paradigm, since it is processual.

The Strong Programme is not without its pitfalls – what Woolgar (1988: 32-33) has called the 'methodological horrors' of a reflexivity so reiterative that it becomes impossible to 'know' anything at all. Moreover, Bloor's (1976/1991) initial introduction of the programme is itself still imbued with some of the same binary, positivistic thinking it argues against – some sciences are true and some are false; symmetrical analysis will produce truth about causality; causal explanations are full explanations of belief. However, the four requirements of the SSK paradigm do not necessarily require a journey into extreme relativity of the sort engaged in by its early proponents. Jasanoff (1996: 395-6) for example, has argued for a version in which the elements of causality, impartiality, symmetry and reflexivity should be 'construed more

generatively… as skeleton keys for unlocking some of SSK's deeper preoccupations', which are to make visible the ways in which science and social order are co-produced, and it is here that I locate the use of SSK in this project. Because social movements often seek to insert themselves into scientific controversies in ways that symbolically render the normative visible (Melucci 1985), an SSK methodology allows examination of a movement's use of 'evidence' without requiring that it be scientifically produced, or even true. The symmetry principle is also of use in navigating conflicting accounts of events, so that the researcher can attempt to remain impartial through presentation of multiple perspectives, because she is not required, as in historical analysis, to make a determination of truth. Instead conflict can be considered as marking areas of analytic interest. I also consider 'reflexivity' to be a sense of acknowledgment of my role in crafting the narrative of my research through my choice of which data to present and how (Acker, *et al.* 1983). This, as will be discussed in the analysis section further below, proved to be a very useful choice.

Methodological innovation

Methodological innovation was key to the development of women's studies (Cook and Fonow 1986). If traditional paradigms were androcentric, they could only produce androcentric data, therefore women had to be free to invent tools that could incorporate intuition, emotion, connection and other elements of the research experience which were traditionally frowned upon as subjective and biased (Acker, *et al.* 1983). The encouragement of innovation is still one of the most exciting parts of doing feminist research. It is also, to the novice researcher who needs to be sure her methodology will be robust enough to produce sound data, an element of considerable uncertainty.

As discussed in Chapter Two, even where SMT outlines a role for researcher activists (McCormick 2007: 7), it is not able to move beyond the binary of expert and lay. This was the main problem I wanted my research to address. My initial study of the FINRRAGE documents had uncovered a distinct group of social scientists who had merged their activism with their professional career, and had developed a possibly quantifiable (through citation analysis of publications, for example) level of epistemic authority outside the network. Overall, while few women in the network were natural scientists, neither were they the 'lay public' as normatively understood. Some carried out empirical research. Some testified before governments as experts. Some had embodied knowledge of IVF. Other women engaged with the technologies as family lawyers, social workers, or women's health activists. In order to understand the cognitive praxis of the network as a whole, it seemed necessary to understand how these different forms of expertise functioned within it. For this, I developed a framework which utilized a set of categories which could reveal the interplay between professional expertise and the movement's

knowledge interests. While the purpose of the framework was to make visible the intellectual life of the movement for the PhD case study, and to identify possible participants for the interview phase, it is also designed to be generalisable to any movement for which similar biographical data may be obtained. This framework will be discussed in detail in Chapter Seven. In the next section of my methodology, I will discuss the ways in which the above precepts informed my construction of the case.

PART II: Constructing the case

Preliminary analysis of the archival documents had shown that FINRRAGE was an exception to most models found in the social movement literature, even those attempting to work radical networks back into the field (Fitzgerald and Rodgers 2000). I therefore decided to approach FINRRAGE as an anomalous case, as something which had elements of both protest and intellectual movements, but was not restricted either to the grassroots or to academia. In a theoretical case study, the goal is in facilitating the extension or development of existing theory (Gomm, Hammersley and Foster 2000), in this instance by extending our understanding of how movement activists develop knowledge and obtain credibility for the belief system they wish to promote. Looking particularly at how case studies are used as a primary methodology in social movements theory, Snow and Trom advocate an '[e]mpirical and analytic focus on an instance of some more generic phenomena [with] richly detailed, 'thick' description…of the context in which it is embedded' (2002: 149). Wieviorka (1992) suggests, however, that there must be a particular means of interpreting or contextualising it; a case is a historical phenomenon, whether observed contemporaneously or reconstructed, and should be able to shed light on its particular context as well as help the researcher draw sociological observations from it. For this, I have found it useful to draw on Ragin's (1992) discussion of 'casing' as a way of considering different levels of aggregation within the case of FINRRAGE – an entity with, as shall be further discussed within the data, porous and ill-defined boundaries in both time and space. Casing allows the creation of categories during the process of research, until the smallest unit of useful analysis has been reached. However, the researcher does not necessarily abandon analysis of the larger aggregates to which these units belong. Ultimately, the smallest unit of analysis was the individual woman, however, as I was looking at an international network, each country also provided a unit of comparison, particularly where I had several respondents. Although data on some regions is scant, there is enough to see sometimes significant cultural variation. On a network-aggregate level, I have also drawn on two other case studies of contemporaneous feminist knowledge projects – the Boston Women's Health Book Collective (Davis 2007) and the Women's Global Network for Reproductive Rights (Maiguashca 2001) – as a way of

examining to what extent FINRRAGE may have been unique, and to what extent a product of a specific time in the history of feminist health activism overall.

Gathering the data

From Latour and Woolgar (1979/1986), I borrowed the concept of a kind of 'orderly disorder', in which the researcher begins without a literature review, with only the vaguest of questions, and ideally, without prior theoretical knowledge of the field. I did have some acquaintance with the basic arguments for and against reproductive technologies before beginning the project, although not necessarily from a feminist standpoint. I did not, however, have a particular position of my own, apart from a strong stance against anonymity in donation rooted in my own experience as an adopted person, and against contract surrogacy. I was aware that FINRRAGE represented a strongly negative position which was sometimes characterised as technophobic (see, for example, Lublin 1998). As part of my strategy of immersion, I wanted to remain as 'naïve' as possible for as long as possible, in order to see the technologies through the network's eyes, in effect to do the action of the research before doing too much reflection, as the quote above states. For this reason I began by reading only the material the women of the network had gathered and written, available to me through the collection at the Feminist Archive North (FAN). I deliberately ignored the larger body of feminist writing on the topic until my interviews were well underway, at which time I also began to gather and analyse medical literature, committee statements and other governmental documents, in order to contextualise the FINRRAGE materials and the interview data.

The FINRRAGE collection (FIN) in the Feminist Archive North comprises the organisational papers of the British group, and of Jalna Hanmer's activities as part of FINRRAGE, including her work as Managing Editor of the academic journal, *(Issues in) Reproductive and Genetic Engineering* (IRAGE),[2] her attendance at feminist and fertility industry conferences, and her own extensive collection of research materials, including those circulated through the network. Near the end of my first year (summer of 2009), FINRRAGE Australia finished a digitalisation project, making many key documents available online, including their own newsletters, papers, and submissions to government consultations, from 1984 to 2008. Early in 2010 the papers of the International Co-ordinating Group in Germany (FINDE) were added as a separate collection at FAN, which included the network's international research archive and additional materials from the European, Asian, and South American chapters. The total of both collections (not including the Australian website) is ninety-one six-inch-deep archival boxes, or approximately forty-five cubic feet of material.

[2] 'Issues in' was added to the original title in the 3rd year at Pergamon's request, to clarify that it was not a scientific journal.

Conceptually, I have divided these into documents internal and external to the network. The case has therefore been 'cased' on the following three levels:

Macro - The external context

Wherever possible, I have tried to contextualise my analysis through external materials, both those collected by the network and by myself. In addition to the books and other research materials in the archival collections, I have also collected materials published by others in which FINRRAGE is discussed, as well as social science and medical literature about reproductive technologies, public consultations, parliamentary debates and legislation, and conference documents. I also used a keyword search of the term 'test-tube baby' in the Lexis-Nexus newspaper archives, and made extensive use of the online archives for The New York Times, The Times (London), [3] The Age (Melbourne), and the Sydney Morning Herald[4] to see what information was available to the public at specific times. I also consulted several of the larger circulation grassroots feminist publications available at the Feminist Archive North (FAN), particularly *off our backs*, *Spare Rib* and *Trouble & Strife* to contextualise 'ordinary' feminist engagement with the technologies in the early 1980s.

Meso – internal documents of the network

The analysed internal documents consist of organisational material such as letters, memos, minutes of meetings, grant proposals, research proposals, conference planning and proceedings, and other means by which the historical life of the network could be traced. I have also made some reference to additional materials supplied directly to me by the women themselves, including the extensive collection of radio and television interviews preserved by Robyn Rowland. The other large source of internally generated materials were published and unpublished academic works -- peer reviewed articles, books, conference papers, informal articles, as well as submissions for government consultations, public interviews and talks. This includes documents pertaining to the setting up, management, and editorial functions of IRAGE, which was published by Pergamon between 1988-1992. Internally-generated video materials include a short documentary on the Bangladesh conference in 1989, and 'Soft Cell' (Mondale 1987), a one-hour documentary on genetic engineering made for Channel Four, which included an extensive round-table discussion by several of the younger international women.

In addition to using mailing lists and conference proceedings to identify as many women as possible, the archival material also dictated which four countries I would concentrate

[3] Both available through ProQuest.
[4] Both available through http://news.google.com.

on, as it was not possible to give all thirty-seven equal attention, nor did I have enough information to do so. My key areas became: the UK and Australia for their strong FINRRAGE presence, and their technological and regulatory prominence in the fertility industry of the mid-to-late 1980s; Germany as the largest national network and the international co-ordinators in the 1990s; and Bangladesh as the organisational hub for the global South.

Micro -- Interviews with members

One hundred and forty-six women were eventually identified as having participated in FINRRAGE in some manner, either through mailing lists, documents of local activities and regional meetings, attendance lists for the larger international conferences, or recommendations from other interviewees. Nvivo was used to create cases for each woman as I searched for biographical and contact information. Initially, this was to keep a record of selection criteria such as country, education, employment and role in the network, so that I could choose a diverse sample. Later, I also employed this information to help develop the categories of expertise which will be discussed in Chapter Seven.

The choice of who to interview was partly dictated by theoretical sampling (Finch and Mason 1990) in that I selected what appeared to be a relatively representative sample to start and then added women who could fill in specific gaps as the project progressed. Thirty-six individuals were eventually contacted, based on a number of factors including geographic area, diversity of network roles and visibility, ability to locate a working email address, and occasional serendipity, such as a grant from the Society for Social Studies of Science (4S) to travel to their annual conference in Tokyo, which allowed unexpected access to the Japanese affilitates. In several instances names and contact information were supplied by the other women as 'someone you have to talk to', and two women whose names did not appear in the archival documents were identified by 'outsiders' as friends who had been in FINRRAGE. Sampling was also partly dictated by the logistics of locating people fifteen to twenty years after an event, which ultimately skewed the sample towards academics, who tended to have university webpages with current email addresses. I was also able to secure a Research Mobilities grant from the Worldwide Universities Network to spend a summer at the University of Sydney, during which I was able to carry out interviews in Sydney, Wollongong, Melbourne and Geelong. Approximately two-thirds of the women were chosen and emailed in March 2010, with the rest being added as identified. Fieldwork took place from May 2010 to September 2011. Of the thirty-six, six emails bounced, four did not reply, and two indicated they were not interested. One woman, Rebecca Albury, replied to say that she had been on the mailing list, but did not consider herself a member, although she was happy to talk to me. She was interviewed

as a 'fellow traveller' because she had been an integral part of the same arena in Australia. There were no 'outsiders' deliberately contacted.

The twenty-four interviews took place in clusters mainly dictated by geography, as I wanted to speak to as many of the women as possible face-to-face, and this had to be organised around my own teaching commitments, which made it difficult to travel at certain times. This could mean delays of over a year between initial contact and actually carrying out the interview itself, and several had to be cancelled and rescheduled because of the participant's ill health. Funding was also a significant issue. Unfortunately, my original plan to conduct part of the fieldwork in Bangladesh and India had to be dropped, although several network members helped bring the Bangladeshi contact, Farida Akhter, and myself to the Women's Worlds conference in Ottawa in July 2011, where, after a year and a half of trying, we finally met. Overall, it turned out to be extremely difficult to locate and gain responses from women in developing nations, and in the end, I was only able to interview one other woman, from India, before time forced me to bring the interviews to a close. This is a much regretted limitation to the data gathered.

Because I would be asking them to remember events that had taken place years ago, and half the women did not speak English as a native tongue, a schedule of sample questions was sent to all respondents ahead of the interview, along with an outline of the project, a general description of what the interview would entail, and a sample consent form. Respondents were told to think about these merely as general areas I was interested in and would be asking about, not as a strict schedule to be covered. These areas were: intellectual and activist history, FINRRAGE activities, and the use of reproductive and genetic technologies within the respondent's particular cultural milieu. Through this I hoped to be able to understand the women's formal and informal knowledge interests, how these had motivated them to become involved with FINRRAGE, and how this had shaped the network as well as how working with the network had shaped their own careers and lives. I also wanted to see how they understood their own contexts to clarify some of the national differences which were evident through the documents. Last, and perhaps most important, I wanted to unpack the relationship between the women's professional qualifications and the tactics they used to present themselves as expert knowers in different settings.

Six of the interviews are life histories of approximately three hours, conducted face-to-face in two or three sessions, usually over a period of several days staying at the respondent's home. Seventeen are semi-structured interviews, averaging one and a half hours; of these eight were carried out in person and nine either by phone or Skype. The two contacts from Belgium were interviewed together at their request, as were two of the Australian women for the second of their three sessions. All the interviews took place in English, with the exception of the Japanese national contact, Satoko Nagaoki, which was conducted with the help of a translator,

another woman from the FINRRAGE affiliate Soshiren. Three of the women chose anonymity until they were able to read the draft; all three eventually gave permission. None were concerned with remaining anonymous to other network members, and all were happy to have their names on a final list of participants which was circulated to all the women at the end of the interview period.

Analysis

Although I could not do ethnography on a past event, I did want my analysis to have the kind of 'thick description' (Geertz 1973) more common to anthropology in the writing up, as this would be the best way to both examine FINRRAGE in context, and to present the data as a narrative constructed by multiple voices. In addition, I chose to treat the interviews and documents symmetrically as texts, rather than analysing the interviews as episodes of meaning-making (Riessman 1987) or other techniques more common to narrative analysis, as I was interested in the content of the stories, rather than their presentation. The following section sets out the analytic techniques used on the documents and interviews, and ends with a discussion of a framework devised through this work to extend the cognitive praxis paradigm to make it more responsive to the needs of my research.

The history of FINRRAGE

Although not employing the forms of triangulation used in historical research, I did compare the organisational stories told in the interviews to each other, and to the archival documents. Wherever possible, I have also tried to verify events through gathering information from sources such as academic and grassroots publications, press accounts, government documents, and medical papers, in order to ground the account in evidence (Hammersley 2011: 152), and give the most accurate representation of the FINRRAGE network possible on a holistic level (Snow and Trom 2002). Even so, documents are produced in a specific context for a specific purpose (Clemens and Hughes 2002), and because the bulk of the archival documents were collected by one person, these are understood to be both incomplete and unintentionally biased towards that person's experience (Platt 1981).

FINRRAGE's historical trajectory appears to fall into three distinct periods, and this has been used to structure the three history chapters. These are a period of ***Emergence***, which culminates with the 1984 Women's Worlds conference in Groningen, from which the proto-network, FINRRET emerged. The ***Expansion*** period covers the time from Groningen to the 'Emergency Conference' at Lund a year later, which solidified the network's name, strategy, agenda, and most of the key participants, to the conference in Comilla in 1989, after which the

network's geography and focus began to move from Europe to the developing world, a period which I will argue constitutes ***Abeyance***, rather than dissolution. As the most visible collective knowledge work was done at the international meetings, and there is extensive internal and external documentation on these activities, I have concentrated mainly on these. I have also sought to briefly spotlight each of my four key countries throughout, so that their contextual and organisational differences may be compared.

The women of FINRRAGE

The twenty-four interviews were recorded and transcribed by myself. In addition to the collaborative aspects outlined above, this was also a necessary process of validation, as many of the women spoke with heavy accents and/or indistinct grammar and there were sometimes sections I could not understand, often because we were laughing or talking at the same time. Because many of the women had difficulty expressing themselves fluidly in English, I quickly stopped transcribing every utterance (uh, um, ah, etc), particularly where these are listening noises, as I was not doing conversational analysis. Likewise, where a speaker had the habit of repeatedly interjecting 'uh', 'like', 'you know' or pauses into their speech I have also not included instances which convey no real information, as these made the transcript unnecessarily difficult to create and to read. I did, however, transcribed 'um', 'you know', false starts, U-turns, asides, etc, where these hesitations stemmed from the content of the question, and did provide information that some answers were difficult to articulate. I have also retained the respondent's original words and grammar, even when these were incorrect, although I have sometimes clarified the speaker's intent, or added translation or other pertinent information when quoted in the thesis, if the meaning might not be otherwise clear to the reader. As Poland (2003) has observed, I had found myself frustrated by how much information is lost through transcription, particularly in terms of irony and sarcasm, which occasionally made the text read the opposite of what the speaker was really saying. For this reason, I also went back and compared all the transcripts with the recordings to verify those decisions one more time before sending them to the respondents, a process I actually found very enjoyable once all the typing was done, as it allowed me to re-capture some of the emotional flavour of the interviews, as well as further familiarising me with the data. This also bolstered my decision not to fix grammatical errors or otherwise 'tidy up' the transcripts as I felt this would distort the content, as well as the quality of the data. Where a section was not transcribed, it was because I was speaking at length about myself or about the project, or had been asked during the interview to keep that part of the conversation off the record. These were indicated by a notation including time codes and explanation. The transcripts and recordings were then uploaded to a secure server with each respondent having her own password, which was furnished via email. Sixteen of the women did

download their files, of which six sent back minor corrections and clarifications. One woman insisted on rewriting large portions of her interview, which I had already explained I could not allow, and so quotes from her transcript are only from sections she did not change. In terms of the analysis, I have treated her rewritten version as I have treated new information contained in the comments on the history drafts, as clarifying, but not primary data.

The list below shows the women who took part in my research and the conditions in which they were interviewed. Several respondents indicated that they still consider themselves part of FINRRAGE. For these, I have not marked an end date for their participation. Otherwise, in the absence of an earlier date, it has been marked as 1997.

FARIDA AKHTER – UBINIG/National Contact Bangladesh from 1985. Asian editor, IRAGE. Interviewed in accommodation during Women's Worlds 2011, University of Ottawa, Canada on (1) 6 July 2011 (two parts), (2) 7 July 2011.

REBECCA ALBURY – non-affiliate. Interviewed in office, University of Wollongong, NSW, Australia on 20 September 2010.

PENNY BAINBRIDGE – Britain 1985-1989. Interviewed in office, Cardigan Center, Leeds, UK on 19 July 2011.

ANNETTE BURFOOT – Britain 1985-1988, National Contact, Canada from 1989. North American co-editor, IRAGE. Interviewed via Skype on 19 May 2010.

MARILYN CRANSHAW – Britain 1985-1989. Interviewed by phone on 12 September 2011.

CHRISTINE CROWE – Australia 1985-c1992. Interviewed in office, University of Sydney, NSW, Australia on 17 September 2010.

SARAH FERBER – Australia 1984-c1992. Interviewed in office, University of Wollongong, NSW, Australia on 20 September 2010.

ERIKA FEYERABEND – Gen-Archiv/International Co-Ordinating Group, Germany 1985-1997. Interviewed at home in Essen, Germany on (1) 9 April 2011, (2) 10 April 2011 (two parts).

LARIANE FONSECA – National Contact, Australia 1984-1988. Editorial Advisory Board, IRAGE. Interviewed by phone on 6 August 2010.

SARAH FRANKLIN – Britain 1985-1989. Interviewed in office, London School of Economics, UK on 15 December 2011.

ANNETTE GOERLICH – GRAEL/National Contact, Belgium 1985-1988, Germany 1988-c1990. Interviewed with Margaret Krannich via Skype on 5 June 2010.

JYOTSNA GUPTA – India/Netherlands from 1984. Interviewed by phone on 13 September 2011.

JALNA HANMER – Founder, National Contact, Britain 1984-1997. Managing Editor, IRAGE. Interviewed at Feminist Archive North, University of Leeds, UK on (1) 17 Jan 2008, (2) 19 February 2010, (4) 11 May 2010 and at home in Leeds on (3) 5 May 2010.

RENATE KLEIN– Founder, International Co-ordinator (Britain) 1985-1987, Australia from 1987. European editor, IRAGE. Interviewed at home in Melbourne, Victoria, Australia on (1) 23 June 2010, (3) 28 June 2010 and with Robyn Rowland in Geelong, Victoria on (2) 24 June 2010.

LENE KOCH – National Contact, Denmark 1985-1997. Editorial Advisory Board, IRAGE. Interviewed by phone on 11 September 2011.

MARGARET KRANNICH – GRAEL/National Contact, Belgium 1985-1988. Interviewed with Annette Goerlich via Skype on 5 June 2010.

MARIA MIES – Germany, 1985-1997. Editorial Advisory Board, IRAGE. Interviewed at home in Cologne, Germany on 12 April 2011 (two parts).

SATOKO NAGAOKI – Soshiren/National Contact, Japan 1985-present. Editorial Advisory Board, IRAGE. Interviewed in Soshiren office, Tokyo, Japan (with translation by Chiaki Hiyaki) on 26 August 2010.

JANICE RAYMOND – Founder, International Co-Ordinator 1984, National Contact USA 1985- 1988. Consulting Editor, IRAGE. Interviewed by phone on 21 July 2011.

ROBYN ROWLAND – Founder, Victoria, Australia 1984-1996. Australian Editor, IRAGE. Interviewed at home in Geelong, Victoria, Australia on (1) 24 June 2010, (2) 24 June 2010 with Renate Klein, (3) 25 June, 2010.

HELGA SATZINGER – Germany 1984-1997. Interviewed in office at Wellcome Trust, London, UK on 16 Dec 2010.

PATRICIA SPALLONE – Britain 1985-1989. Interviewed by phone on 8 September 2011.

AZUMI TSUGE – FINRRAGE-no-kai/Japan from 1992. Interviewed during 4S conference at University of Tokyo, Japan on 28 August 2010.

AURELIA WEIKERT – National Contact, Austria from 1985. Interviewed by Skype on 11 August 2010.

The interviews were open coded through a method of constant comparison as they were collected, using Nvivo in the first instance. This was meant to begin refining theory and identifying other possible respondents from the outset (Finch and Mason 1990) as I knew the interviews would take some time to complete. While I knew I was looking for knowledge processes, I wanted to remain open to other themes the women found important and also coded for these. Unfortunately, the end result, most likely from my own inexperience, was a mass of categories which could be hierarchically organised in multiple ways. Strauss and Corbin (1998) suggest a basic coding paradigm of conditions, interactions, strategies/tactics, and consequences for novice researchers, which I found commensurate with the concerns of the cognitive praxis paradigm and this project in particular. Although theirs is a positivistic methodology, as simple categories I felt these also meshed well with the concerns of SSK, which looks for the

conditions in which belief is generated. This basic structure was then used to reorganise the first set of codes for the final analysis (after all the interviews had been collected) in order to provide a smaller and more coherent set of themes more clearly related to the organisational, cosmological, and tactical aspects of FINRRAGE as a case. This helped in the process of structuring the data for the writing up, but did not fully address the question of expertise. For this, I have created a framework which would allow me to more closely examine the relationship between forms of knowledge, expertise and epistemic authority. This will be described in the next section and then utilised in Chapter Seven.

Expert Roles in FINRRAGE

Perhaps not coincidentally considering the technicality of the subject, the levels of education in FINRRAGE overall are very high. However, this does not necessarily suggest that the women necessarily all had a background in science. The twenty-four respondents are a reflection – although not fully representative – of the diversity of geography, expertise, political orientation, intellectual interest, and life history of the network. Analysing the case through the cognitive praxis paradigm suggested the need for a more nuanced way to understand what kinds of knowledge were available to the network's project, beyond the crude separation of 'expert' and 'lay'. It is here that I have used my case study of FINRRAGE as a way of developing categories of expertise drawn from Collins' and Evans' (2007) periodic table into a framework which should be extensible to other movements. These were derived through analysing a combination of biographical information available through the documents and via the internet, supplemented by the interview data, which helped reveal how the different women contributed to the network's development. However, rather than viewing natural scientists as a distinct class always possessing a specialist's expertise, my framework is based on the resonance of their knowledge with the knowledge interests of the movement. The process of refining these categories has been based on constant comparison, so that each time I sought to place a respondent within the framework I had to reconsider the boundaries of each category based upon the information I was using, and the other individuals already assigned to it. Interestingly, utilising this framework has caused me to question a number of my own basic precepts about the way academic disciplines are constructed, in particular disciplines such as anthropology and medicine, in which there are longstanding arguments over whether it is an art or a science (see, for example, Carrithers, Barry, Brady, *et al.* 1990; Saunders 2000). From the intersection of these categories, six distinct forms of expertise have been identified amongst the FINRRAGE women, using a number of factors including educational attainment, disciplinary affiliation, employment, intellectual interest, political activity, embodied experience, and (where available)

their own formal and informal writing. These categories and the framework itself will be discussed in Chapter Seven.

Methodological reflections

Choosing semi-structured lifecourse interviews instead of focussing purely on the women's time in FINRRAGE presented a serious tactical problem in the time it took to complete the fieldwork, as several key women had to reschedule their interviews due to illness, and my own teaching commitments meant I could only travel at certain times. This stretched the collection period out to nearly a year and a half, and in fact two local interviews were eventually completed by phone as they could not be postponed any longer.

I also understood the collection of these interviews to be an important opportunity, as some of the participants are now reaching their eighties, and both longer and shorter interviews used the techniques of lifecourse interviews, working through a relatively chronological set of questions used as prompts for storytelling, with few attempts to interrupt or redirect the focus mid-story (Wagner 2002). Taken together they do provide an intriguing international picture of feminist activity during a time of enormous change and it is possible that I, or perhaps another researcher will use them for this purpose at a later date, so I do not regret this decision. However, the lifecourse structure meant that they also provided me with far more data than I could productively analyse in the space of this project. Because many of the women had very heavy accents, they also took a considerably longer time to transcribe than had been allocated. In addition, because the 'trustworthyness' of a lifecourse narrative is hard to evaluate (Reissman 2003), I did ultimately have to do a great deal of comparison and cross-checking of details with the archival and external documents to create a balanced account, particularly around areas which I knew, through letters exchanged by relevant parties in the archival documents, were likely to be sensitive, and about which I had chosen not to ask directly. For one, I did not want to awaken an argument that may have been long ago put to an uneasy bed, but I also felt that whether or how it came up spontaneously would also be a form of data, and this did turn out to be the case. Overall, I have tried to symmetrically present all sides of these events in general terms in the writing up, concentrating on the underlying reasons for conflicts, rather than trying to describe the sequence in detail. Likewise, although the longer interviews had more information, I tried to be as symmetrical as possible in terms of the weight I gave them, although inevitably some of the women are quoted more often than others in the text.

Handling the information in the internal documents was also difficult, not only because there was so much, but because I felt very uneasy about quoting material written by those who had not given their consent, in particular the two who had declined participation, but it would

have been both impossible and inaccurate not to mention something of the role they had played, and the knowledge they had contributed. In the end, I chose not to use any information from or about people who had not given consent unless it was derived from a document which would have been circulated freely, at least within the network. I also did not use any sections of the interviews where one member commented on another, although I did, of course, consider this as organisational information.

For my own part, as well as being more ethically sound, I also felt that allowing the women to comment on the history chapters would provide a level of checks and balances, and indeed their comments did help me avoid making what would have been several 'howling errors' of fact (Clemens and Hughes 2002: 207). They also pointed out areas where I might unconsciously be imposing my own subjective or naive interpretation onto events which were complex, and possibly outside my understanding for not having witnessed them. Overall, although it was somewhat nerve-wracking to send the chapters out, the process of receiving them back was unexpectedly empowering, not only for confirming that I had represented them well, but that the approach I had chosen to take had captured their interest in and of itself.

Conclusion

In this chapter I have discussed the methodology through which the project was developed, and the data gathered and analysed. A case study of an explicitly knowledge-based social movement organisation has been chosen as a way of overcoming some of the present limitations in theorising knowledge in social movements. By looking at the strategies through which FINRRAGE developed and disseminated its knowledge-claims, I have attempted to uncover the network's cognitive praxis. In addition to analysing documentary and oral history interviews, I have also tried to develop a systematic way of looking at the various forms of expertise the women utilized within the network so that patterns in the way knowledge and expertise interact to promote individual and collective credibility, allowing the network's 'position' to be operationalised in an international context. In the next three chapters, I will use a socio-historic approach to present the network's trajectory from the context of its emergence in 1984, to its eventual abeyance in the late 1990s. Although I have tried to make this as accurate as possible through seeking verification with external documents and allowing my participants to read and comment on the chapters, I consider my analysis to be both a partial representation of an unrepresentable whole (Haraway 1996), and in part an interpretive snapshot of a stage in my own trajectory as a scholar, cropped to fit within the confines of a thesis, which must be produced to a specific form.

CHAPTER 4 – EMERGENCE

> *…the challenge in the whole thing was that we would be reading about the technologies that would be changing at the rate of knots…And we had to come up with a feminist position on that because there had never been one before, because the technology hadn't been there. So what is A Feminist Position on the use of fetal tissue to generate eggs, do you know what I mean?*
>
> *(Robyn Rowland, Australia)*

FINRRAGE is generally spoken of as a product of a specific time. Charis Thompson (2001: 53), for example, refers to infertility as 'the perfect feminist text', classing the writings into a structuralist phase 1 in which, according to her, the needs of the infertile were subsumed beneath the attempt to create an anti-patriarchal critique, and an 'increasingly sensitive' phase 2 in which post-structuralism 'liberated feminist thinking on the problem of infertility' (*ibid:* 62). These periods she correlates loosely to second and third wave feminism. However, Hemmings (2005: 115-116) argues that the process of constructing the history of Western feminism as narratives of *progress* (overcoming false boundaries), *loss* (depoliticisation), or *return* (from performance to the material), each corresponding to certain decades, has largely gone unquestioned. Such narratives suggest that there is/was/should be a correct endpoint towards which feminism must strive, a form of storytelling which Hemmings vehemently resists. Rather, she argues, what should be traced is the contribution feminist theorists make to other feminist theorists through:

> …stressing the links rather than the discontinuities between different theoretical frameworks, as a way of challenging the linear 'displacement' of one approach by another…to suggest a way of imagining the feminist past somewhat differently – as a series of ongoing contests and relationships rather than a process of imagined linear displacement (*ibid:* 131).

It is with this idea of feminist approaches to NRT as a continuous critique, rather than specific, historically fixed 'positions', that I shall try to present the next three chapters. Using an historicised analysis, this chapter will consider the context in which the network emerged, and the processes through which the original group of founders came to produce the event which culminated in the forming of an international network at a women's conference in 1984. What is it that drew these particular women to establish FINRRAGE, and how did their own knowledge interests, friendship networks, and various forms of expertise contribute to the emergence of the network? In the following two chapters I will discuss the expansion of the international network between this event and the last international conference in 1991, and then its eventual drift into abeyance culminating in the disbanding of the International Co-ordinating Group in 1997. As stated in Chapter Two, Eyerman and Jamison consider that a movement needs three things in

order to emerge: a pre-existing context, an illustrating event, and intellectuals already placed to take it up and create the political opportunity which becomes the foundational action of the movement. The rest of this chapter will consider these in light of the emergence of FINRRAGE. However, since the rest of the thesis will no more than scratch the surface of the actual topic of reproductive and genetic engineering, I would like to first take a short 'interlude' to very briefly sketch the development of IVF and the early attempts to regulate the field as a background to understanding the context in which FINRRAGE emerged.

Interlude: A brief overview of the development of IVF

Although artificial means of reproduction had been debated in medical, scientific and philosophical circles for thirty years before Louise Brown was born, it could be argued that her birth was the illustrating event which suddenly brought technological procreation into the public sphere through the worldwide media frenzy it produced. Before Louise Brown was born in July 1978, IVF was a small, scientifically marginalised, underfunded and ethically contentious field (Edwards and Steptoe 1980). It was also highly competitive, particularly between the teams in Britain and Australia (Kannegiesser 1988; Challoner 1999). The formal narratives told by the practitioners about the early days of IVF (Edwards 2001; Jones 2003; Leeton 2004; Cohen, Trounson, Dawson, *et al.* 2005) have become reified by the more informal memoirs produced around significant events such as the 30th anniversary of the first Australian child (Australian Science Media Centre 2010; Lopata 2010; McBain 2010), the awarding of the Lasker Award to Robert Edwards in 2001(Edwards 2001) and the Nobel Prize[5] in 2010 (Gardner and Johnson 2011; Johnson 2011; Zhao, Brezina, Hsu, *et al.* 2011; Biggers 2012). These are steeped in the imagery of heroism and conquest, written as the 'history of a dream' (Brown 2005) or a triumph of the excluded: visionary scientists working on shoestring budgets from labs in converted storerooms (Edwards and Steptoe 1980) and janitor's closets (Lopata 2010), keeping their hormonal preparations in shoeboxes (McBain 2010), supported by bake sales organised by hopeful mothers and grandmothers-to-be (Martin 1986). The origin story that the fertility industry tells about itself, then and in retrospect, is very much told in a male voice, even where vocalising dissent, and yet – as feminists would go on to argue – the eggs used to develop the programme had come from an uncountable number of women over a period of more than twenty years. Reading between the lines of the early medical literature, however, the field more closely resembles a collaboration between animal husbandry and bench science: Robert Edwards began his career as a mouse embryologist (Jones 1995), while the Australian team's counterpart, Alan Trounson, earned his PhD unsuccessfully trying in vitro fertilisation in sheep (Wood and Westmore 1984: 41; Cohen, *et al.* 2005: 440).

[5] Patrick Steptoe had passed away in 1988, and the Nobel cannot be awarded posthumously.

In his autobiography shared with Steptoe, Robert Edwards writes extensively of his difficulties in obtaining human ova for his fertilization experiments (Edwards and Steptoe 1980). In the mid-1960s, he managed to obtain a fellowship at Johns Hopkins with the gynaecologists Howard and Georgiana Jones (who would go on to start the first programme in the US) in order to obtain excised ovarian tissue from their surgical practice (Jones 1991), but human eggs proved too difficult to mature in vitro (Edwards, Donahue, Baramki, *et al.* 1966). He became interested in gynaecologist Patrick Steptoe's work on laparoscopy as an alternative to pelvic surgery, and approached him at a Royal Society of Medicine meeting in London suggesting a collaboration (Litynski 1998; Challoner 1999). In the procedure, the abdomen was filled with carbon dioxide in order to create a space for a tiny camera and manipulation instruments which could be inserted through small incisions near the navel made under general anaesthetic. Although Steptoe had largely developed the procedure for sterilization (Litynski 1998: 99), it also allowed a surgeon to guide a long needle through one of the incisions to reach the ovaries and aspirate any maturing eggs (Steptoe 1968). Combined with hormonal stimulation to produce multiple mature follicles, Steptoe and Edwards began the first of a series of experiments in which they attempted to retrieve mature human ova, fertilize them in a petrie dish, and transfer the embryos back to the women in the hope they would implant and produce a child (Steptoe and Edwards 1970). Although their funding request for a dedicated clinic was turned down by the Medical Research Council in 1971 on a number of grounds, including fears that the procedures were too experimental to be carried out on patients, and that Edwards was not medically qualified to run an infertility clinic (Johnson, Franklin, Cottingham, *et al.* 2010), ultimately, the team found financial support through private donations and the Ford Foundation and were allocated a small surgical space at Kershaw's Cottage Hospital by the Oldham Area Health Authority (Edwards and Steptoe 1980). This work eventually resulted in four pregnancies, one of which would be Louise Brown, after which Steptoe was forced by NHS requirements to retire, and the team no longer had access to facilities or patients.

While Steptoe and Edwards had published each step of their work throughout the 1970s, they now refused to publish the protocols used for these last patients, drawing accusations of excessive secrecy from others in the field, and the inability to duplicate the procedure led some to assert that the British team, which had used a natural cycle ova retrieval, did not actually know why it had worked (Kannegiesser 1988).[6] Meanwhile, newspapers and popular magazines such as *The Economist* (1979) publicised the failures as well as the successes. Of the four women who became pregnant, a second had given birth to a healthy boy in January 1979, but the third fetus had been triploid, carrying three sets of chromosomes instead of two, and the fourth had been born at twenty-one weeks and died within two hours (Steptoe, Edwards and

[6] In 1979, *Medical World News* had also quoted Steptoe admitting they didn't know 'exactly why' the procedure worked with Lesley Brown (in Corea 1985: 115).

Purdy 1980: 767). Although the estate of Bourn Hall in Cambridgeshire had been purchased for Steptoe and Edwards by a benefactor in 1978 (Challoner 1999: 48), subsequent overtures to venture capitalists continued to be unsuccessful for fear that parents might sue if abnormal babies were born (Edwards 2005: 6) and they were not able to open their private clinic until 1980. In the meantime, IVF children had been born in India[7] and in Australia, and the British team appeared to have lost its place as world leaders to the increasingly successful group at Monash IVF, in Melbourne, who were using a hormonal protocol to produce multiple eggs.

The much larger Australian team began in 1971 as a collaboration between clinicians from the University of Melbourne who were working on ovarian stimulation at Royal Women's Hospital (RWH), and scientists from Monash University working on a procedure for in vitro fertilization at Queen Victoria Medical Center (QVMC). According to their biographer, the Australian team was 'devastated' after hearing of Louise Brown, and 'more or less ceased to function during the latter half of 1978' (Kannegiesser 1988: 71-72). Carl Wood, the Monash scientist who was head of the project, eventually decided to split the lead scientists and make them compete to speed up results (Cohen, *et al.* 2005). The immediate effect was that the two teams stopped sharing information, exacerbating already-existing personal antagonisms (Lopata 2010). There was concern from RWH that the QVMC team might 'unjustly' (Kannegiesser 1988: 44) get the credit for a child born from an egg they had collected, however, when Candice Reed was born in June 1980, all the publicity actually went to RWH (see, for example, Ballantyne 1980). This generated 'considerable hard feelings' among the QVMC team (Kannegieser 1988: 75), made worse when the RWH team published the details of the pregnancy (Lopata, Johnston, Hoult, *et al.* 1980) without mentioning the Monash/QVMC team. Wood and Trounson retaliated with a stepped-up programme of publication based on considerable experimentation with fertility drugs and numbers of embryos replaced (See Trounson, Leeton, Wood, *et al.* 1981 for an example). Monash would eventually claim the first IVF twins (1981), first donor egg birth (1983), first frozen embryo[8] birth (1984), and twelve of the first fifteen babies in the world (Monash IVF 2012a). Given the atmosphere of antagonistic competition amongst the Australian specialists, it is probably not a matter of chance that the world's first IVF triplets (1983) and quadruplets (1984) were also born in Australia (at Flinders in South Australia and RWH respectively).

Whereas IVF was viewed with suspicion but little protest in the UK and Australia at this time, the Joneses' attempt to establish the first US clinic at a little-known medical school in

[7] An Indian scientist, Subhas Mukerji, produced the second child in the world in October 1978, but the Indian Medical Association denied the claim and the doctor committed suicide. His work was later validated by the doctor credited with the first 'official' Indian child (See Kumar 1997).

[8] The Indian child born in 1978 was also the first from a frozen embryo (Kumar 1997), but Monash never retracted this claim, although it does count Reed as the fourth IVF birth (Monash 2012). Melbourne IVF, the clinic which evolved from the team at RWH, still counts her as third (see McBain 2010).

Virginia in 1979 met with vociferous challenge from the right-to-life movement, which had grown increasingly co-ordinated after the Supreme Court decision legalizing abortion in 1973 (National Right to Life 2012). Lawsuits and demonstrations ensued, delaying the opening of the clinic by several months (Jones 1995), but also publicizing it internationally, so that by the time it did open in March of 1980 it already had a waiting list of 2500 couples from around the world (Franklin 1980). Ironically perhaps, it was the settlement from a libel lawsuit filed by the medical school against a local paper which helped fund the clinic (Jones 1995: 40; Biggers 2012: 8). The first IVF child in the US was born in 1981, followed by children in Austria, France, Germany, and Sweden in 1982.

By this time there were clinics in most industrialised countries, and growing calls for some form of governmental oversight, although in the civil sphere these were largely based in moral arguments about the sanctity of life coming from the clergy and conservative groups (see Cohen, *et al.* 2005 for a description of some of this resistance, and the scientists' response). The initial result was a relatively inexperienced collective grappling with the meaning of artificial reproduction, throwing the most fundamental questions about the meaning of life itself, and the process of scientific 'progress', into the public arena, along with the scientists themselves. Although all of the early specialists seem to have understood the need for public discussion of the social, ethical and legal implications of in vitro conception in order to position IVF as an 'acceptable and desirable form of treatment for infertility' (Edwards and Steptoe 1983: 1268), they did not seem to understand themselves as personally implicated in this debate through their own research. Asked about the furor over embryo experimentation, for example, Jones answered, 'I am basically a biologist…When does the soul enter the embryo? For me, it is not a problem' (Cohen 1979). In the most benign interpretation this suggested it was a question which science simply could not answer, and in the most cynical, that the questions were ultimately irrelevant and should not stand in the way of the inevitable march of scientific progress.

Overall, the concept of science as a privileged institution separate from the rest of society was reinforced through the idea that governance should be discussed in the civic sphere while research continued to be pursued in another. In the US, the Department of Health, Education and Welfare (HEW) had convened an Ethics Advisory Board in 1979, which deemed that IVF research could be publicly funded through the National Institutes of Health (United States. HEW 1979), but the Board's charter expired in 1980 and the newly-elected President Ronald Reagan refused to authorise the recommendations (Gunning and English 1993: 21-22). However, even practitioners were becoming alarmed at the commercial activities of some clinics in the US, particularly in Britain, where doctors at IVF clinics operating through the National Health Service (NHS) feared a public backlash would seriously impede their own work (Veitch 1982). Although the UK government was reluctant to act (Gunning and English 1993: 27), in 1982 the Department of Health and Social Security finally appointed a committee headed

by Mary Warnock, a moral philosopher and Mistress of Girton College, Oxford, to examine the ethical implications of IVF and embryo research. The initial response to the Report, both in the general public and in Parliament, was more negative than the scientists had expected, particularly on the matter of embryo experimentation, upon which even the Committee members were split (Challoner 1999: 68). Experimentation was deemed necessary in order to perfect the technology and could be allowed up to fourteen days (Warnock 1985), which the HEW had also recommended.[9] While the Australian scientists would adopt a largely adversarial position to regulation, frequently threatening to leave the country (Hepburn 1992), the British scientists formed a lobbying group, PROGRESS, and successfully took control of the debate in Parliament (for an excellent discussion of this process, see Mulkay 1997), beginning by establishing their own Voluntary Licensing Authority in March 1985, and circulating a code of practice which was intended to restore confidence that the clinics could regulate themselves (Gunning and English 1993: 47-49). It would take six years, including several failed attempts by MPs to introduce private members' bills designed to make the human embryo a legal person (*ibid:* 83), for the Warnock recommendations to become legislation, creating the first national regulatory body in the world, Human Fertility and Embryology Authority (HFEA), in 1990.

In the Australian state of Victoria, where Monash IVF was located, a Committee to Consider the Social, Ethical and Legal Issues Arising from In Vitro Fertilization was also convened in the spring of 1982, under the direction of jurist Louis Waller. This group very rapidly produced an Interim Report (Victoria 1982) assessing the state of the technologies, a second on the use of donor gametes (Victoria 1983), and a final report on surrogacy, frozen embryos, and embryo research (Victoria 1984). The three reports would become the basis of the *Infertility (Medical Procedures) Act 1984*, the first legislation regulating IVF programmes in the world, and the committee would become a permanent Standing Review and Advisory Committee on Infertility (SRACI). Similar state-level committees were convened in South Australia, Western Australia, Queensland and Tasmania during the period 1984-1986. On a Commonwealth level, the Law Reform Committee of the Family Law Council, chaired by a Senior Judge of the Family Court of Australia, Austin Asche, was convened in February 1984 to consider uniform national legislation to clarify the legal status of children born through assisted conception (Australia. Family Law Council 1985). Committees were also convened in Ontario, Canada, and on a national level in Germany, Spain, the Netherlands, and France, all delivering

[9] In addition to allowing embryo experimentation up to fourteen days, the Warnock committee recommendations confined the use of artificial conception to 'stable' heterosexual couples using clinics licensed by a central authority, bringing non-technological practices such as artificial insemination and genetic surrogacy (where the carrying mother is also the biological mother) also under medical control (Warnock 1985; see also Spallone 1987; McNeil 1990). It allowed egg and sperm donation, but rejected surrogacy. The Surrogacy Arrangements Act 1985 was quickly passed to allow 'altruistic', or non-commercial surrogacy, after a British woman was reported to be carrying a child for an American couple (Lee and Morgan 2001:196).

reports which included public consultation during the mid 1980s and which eventually resulted in some form of oversight, although varied in response (see Walters 1987 for a contemporary overview). However, the voices of women – largely because few women were doctors, scientists, clergy or politicians in the 1970s – are notably absent at all levels of the early period of debate, from the popular media to peer-review. It was not until the first steps towards regulation were taken that a feminist[10] response began to appear. This will be the focus of the rest of this chapter.

Theoretical beginnings

Not all feminists considered reproductive technology to be problematic. Shulamith Firestone (1970/1979), for example, had argued that technology should liberate women from the onus of childbearing so that they could achieve their full potential as human beings. Other feminists advocated using sex selection to give birth only to girls, and there was a growing movement, particularly amongst lesbians, for using do-it-yourself artificial insemination to take control of procreation completely away from men (Birke, Himmelweit and Vines 1990: 114-115). These positions derived from a liberatory consciousness which saw female control of reproduction as a primary locus of resistance to patriarchal norms, but it was not resistant to technological help. However, the 'Firestone position' of technology-as-liberation could be disturbingly reminiscent of the rhetoric employed by advertising agencies to promote new household goods with the claim that these would free women from the drudgery of their role as homemaker, and other feminists working from the same consciousness came to a very different conclusion. In a paper written with her then-colleague at London School of Economics, Hilary Rose, Jalna Hanmer argued that Firestone had ignored the influence of capital on science, and as long as economic production was geared towards male interests, particularly control over nature, the prediction that the artificial womb would liberate women was akin to asking 'male biological engineers…to create the feminist Utopia' (Rose and Hanmer 1976: 219). Such technologies, they argued, would not give women *more* control over their reproductive lives, but would ultimately put control of reproduction entirely into male hands. Nor could women create the technology to their own design, as they did not have control of the necessary institutions and resources, and even if they one day did, most women would not actually want to give up the experience of carrying and nurturing a child.

[10] Mansbridge (1995: 33) argues that what distinguishes feminist from women's movements is the focus on male domination, and it is within this loose definition that I locate my use of the term 'radical feminist' in this thesis. However, not all of the women in my study necessarily identified themselves with this term, which was part of the impetus behind considering forms of consciousness, rather than political labels.

Unlike Firestone, Hanmer's and Rose's analysis was also informed by an anti-capitalist alternative consciousness. Rose, along with her husband Steven, was part of the socialist radical science movement which had developed in the late 1960s amid protests against the (mis)use of technology in Vietnam (Rose and Rose 1972), while Hanmer was an American who had become politically active in the anti-Vietnam war movement in Britain in the 1950s, before becoming involved in the women's liberation movement (Interview 1). Now working in the refuge movement, Hanmer's attention had been caught in the early 70s by newspaper reports of scientists trying to prenatally determine the sex of a fetus (see, for example, Keenan 1971; The Times 1971), and she immediately connected this to her work on violence against women.[11] In particular, her early writings often reference a lengthy *New Atlantic* article, 'The Obsolescent Mother', by a well-known science journalist, which was meant to provide an overview of the history and current state of reproductive science for the general public. The article begins by characterising birth as a 'disturbance, and more or less a shock' (Grossman 1971: 1 [online]) and goes on to state that 'the transformation of childbirth from painful and dangerous event to safe and efficient routine was thanks to men, to the energy of males' (*ibid*), who had developed the practices of gynaecology and obstetrics. Arguing strongly in favour of Steptoe's and Edwards' research, which he describes in careful detail,[12] Grossman agrees that ultimately technology should replace nature in every step of the reproductive process, eliminating birth defects by growing the fetus in an artificial womb and raising the children in state-run nurseries, thus freeing women from all aspects of motherhood (*ibid:* 4). Although he seems genuinely concerned that women should be 'liberated from the special pains and dangers of their biology' (*ibid:* 2) – and in language not substantially different from Shulamith Firestone's – in Grossman's version it is clearly through the heroic work of *men* that this liberation will be achieved.

In Hanmer's analysis, however, such Huxlean visions were more likely to reduce women's value even further by removing the one irreplaceable function women have – gestation – after which there would be no need for females to exist in any great number, since one woman could serve the sexual needs of any number of men (Hanmer and Allen 1980). This assertion was derived from the writings of biologists who advocated producing a pill which would ensure male babies as a method of population reduction, after which the few females left would be treated like queen ants, living in purdah and given as rewards to outstanding males (Postgate 1973, in Hanmer 1976: 214; Hanmer 1980: 216). While admitting that such fantasies were extreme, Hanmer worried that men like Postgate, a noted microbiologist and eugenicist, had both the intellectual and institutional resources to create the technologies they envisioned, as

[11] Clarification provided by Hanmer in draft comments.
[12] Their application to open a clinic for infertile women was under consideration by the Medical Research Council at the time.

they claimed that it would be an improvement to humanity and this was 'the most laudable ambition you could ask of a biologist' (Postgate 1995: 60). Edwards himself had written articles in medical journals predicting that his in vitro conception process could be used for male infertility, preimplantation diagnosis of genetic disease, and transfer of embryos to unrelated carrying mothers, justifying this on the grounds that 'to give a couple their own wanted child obviously needs no justification' (Edwards 1974: 10). Hanmer argued that these kinds of predictions, outlandish as they might seem, must be taken seriously as claims of intent because it was not possible to be sure how far the work may have already gone. Reading between the lines of Steptoe's and Edwards' numerous papers, it appeared clear to Hanmer that their claim that reproductive technologies would bring hope to 'desperate' women was merely a smokescreen to appropriate the necessary raw materials – ova and embryos – needed for the development of technologies which would ultimately be about engineering 'better' humans:

> 'In and of themselves these potential developments need not be oppressive to women; it is the social meaning they may be given and the way in which they may be enforced on the population that is potentially oppressive. Before coercion will come the con trick, the argument, of how it is really all being done for women's benefit' (Rose and Hanmer 1976: 226).

Similar misgivings about Steptoe's and Edward's work were equally prevalent in the critiques developed by men. Writing in the Hastings Center Report, Christopher Lasch (1972: 3) called Grossman's 'touching solicitude' for the freedom of scientific enquiry a too-oft heard refrain meant to silence any questions about the social consequences of these technologies by burying them beneath the rhetoric that this 'relentless progress' was not only inevitable, but ultimately good. In the same issue of *The Atlantic*, in fact, the Nobel winner James Watson had singled out Steptoe and Edwards' work with the claim that should they succeed, this would likely lead to 'a frenetic rush to do experimental manipulation with human eggs' (Watson 1971). Watson's worry was that this would lead to human cloning. Hanmer, however, was trying to develop a woman-centred analysis, rather than one based in moral objection to creating children without sex, conducting research on human embryos, or altering a child's genetic inheritance. In this she was heavily influenced by her friend Mary O'Brien's (1981) idea of 'reproductive consciousness'. Working from a critique of Marx's theory of labour, O'Brien suggested that while women's reproductive labour was directly experienced, men were dependent on women for the production of children, and thus were alienated from their own reproductive labour as they could not directly experience their child until it was born. This subconscious jealousy led men to develop increasingly technological interventions which removed the barrier of the female body and allowed them to make independent contact with the fetus – through ultrasound and caesarians, for example – in order to reassert ownership and control. Of Steptoe and Edwards specifically, Hanmer states that:

> '…their work, while using the language of helping women, is in fact deeply conservative in terms of preserving women's role. Their speculation that some women, who are better breeders, could carry the babies of other mothers, suggests a form of biological emancipation of a dominant class of women achieved only by the biological exploitation of another class' (Rose and Hanmer 1976: 216).

As one of the first women in Britain to attempt to develop a theoretical position on NRT which was strongly rooted in an analysis of reproductive technology as a tool of patriarchal control, Hanmer's work focussed attention on the possible effects of making women's bodies available to science for the purposes of experimentation, rather than on IVF's possible benefit to a small number of individuals. While not all of the women in the network would necessarily embrace all parts of her analysis, the argument that NRTs were ultimately about men achieving control of women's reproductive capacities in order to decide which children would be born and to whom, would be the basis of the 'position' that FINRRAGE would go on to develop.

Gathering Resistance

In 1979, the biologist Becky Holmes obtained a grant from the National Science Foundation to organise a conference called 'Ethical Issues in Human Reproduction Technology: Analysis by Women', which was held at Hampshire College in Amherst, Massachussetts in June. While Lublin (1998), in her overview of FINRRAGE, seems to consider the Amherst conference as the beginning of the network, this is not the origin story told by the women. However, it was indeed a key point along the way. Raymond, at that time the Five-College Professor of Women's Studies and Medical Ethics based at Hampshire College, co-organized the conference with Holmes, and invited Gena Corea to be a keynote speaker (Raymond, Interview). Corea had recently published a controversial book, *The Hidden Malpractice* (1977), in which she had accused the American medical profession of deeply institutionalised sexism, with profound effects upon women's health. By 1979, she was relatively well-known on the lecture circuit, and was in the process of researching the book that would become *The Mother Machine* (1985b). Raymond had begun to research sex preselection, and made sure it was a key issue, making Amherst one of the first conferences to discuss sex preselection in a feminist context (Raymond, Interview).[13]

The conference was largely concerned with technologies such as contraception, fetal monitoring and other interventions into childbirth, and do-it-yourself insemination, but there were also papers on the very new high-tech solutions for infertility, both achieved and projected. The papers were collected into two volumes (Holmes, Hoskins and Gross 1980; Holmes, Hoskins and Gross 1981), and though overall the discussion of assisted conception technologies

[13] Clarifications provided by Raymond in draft comments.

is only about one-third the total, this represents the first attempt by feminists to collectively grapple with the issue in a major forum. In their introduction to Vol I, the editors write that the conference was not aiming for closure, but rather sought to open a discussion foregrounding women's views across the traditionally drawn lines of expertise which separated scientists and clinicians from health care workers, patients, policymakers and the interested general public (Holmes, et al. 1980: x-xi).

While Amherst was probably not the first women's conference to attempt to combine scientist, activist, experiential and embodied knowledge, it does appear to have been the first to include NRTs in the topic. Use of the term 'closure' suggests that the preface may have been written to negotiate the expectations of both readers and the funding body. The structure of the conference did follow what could be called a 'crisis' model, in which the members of a particular field are called together to review the state of research, with the purpose of producing a statement which will close debate or outline a programme of action on a key issue, much as had taken place at the Asilomar conference which had ended with a voluntary moratorium on recombinant genetic engineering in 1975 (Berg 2008). However, the Amherst conference was not called by the practitioners of the science, nor by those with the power to create or change science policy, and in fact had not been intended to do more than reframe the issues to a woman-centred view (Holmes, et al. 1980: x-xi). This did not necessarily mean negative; some of the women at the conference argued strongly on behalf of IVF and pre-natal diagnosis, citing their professional and/or embodied experience, often highlighting ways in which these could produce personal conflict (see particularly the transcripts of the discussions which conclude each section, suggesting the importance the editors placed upon these more informal exchanges of information). Although the conference had not planned to draft a consensus statement, because the funding body was a public institution which did have the power to influence policy, the Amherst organisers decided to utilise the 'surge of participant activism' (Holmes, et al. 1981: 311) engendered by the conference to pass a set of policy recommendations to be fed back to the funders. These mainly concerned the inclusion of women on relevant boards and other publicly-funded decision-making bodies, and in particular a widening of the definition of 'expert witness' to include infertile people, and forums to bring lay, academic, activist, and professional women together to determine models and programmes of research into human reproduction.

Although the Amherst conference shows that there were already a significant number of potential 'movement intellectuals', the conference did not produce any solid steps towards further collective action. There are several reasons why this may have been so. One, as stated above, the conference was not actually intended to produce any kind of consensus or forward political motion. Two, although some of the women might identify as radical feminists, the underlying consciousness overall appeared to be largely egalitarian, meaning that further action

was most likely to be pursued institutionally, as can be seen from the conference resolutions. Three, the vehement protests over the HEW report, and the Jones' clinic in Virginia, which were roughly concurrent, showed that in the political economy of the US any debate about NRT could have extreme and unpredictable results, and in fact, the Ethical Advisory Board of the HEW was disbanded the following year. Four, American glorification of the entrepreneurial spirit meant there would be a general reluctance to regulate what already appeared to be a very lucrative market. Overall, however, while the Amherst conference did not have the political force to generate a sustained action, it did begin to create connections among 'like-minded women' (Hanmer, Interview 2), who had similar feelings of extreme distrust of where the technologies might be going.

Test-Tube Women

Unlike the other four founder women, Renate Klein had not begun to research NRT prior to becoming active around it. Originally trained as a neurobiologist in Switzerland, Klein had taken a post-doctorate diploma in development studies in the late 1970s, and had gone on to teach science in Paraguay, where she grew disillusioned with her colleagues, and with the relevance of science to her students. Finding herself eventually drawn towards feminism, Klein went to Berkeley to teach women's studies while simultaneously doing a BA (Honours) in the subject. By the early 1980s she had moved to London, where she was researching 'the hopes and dreams' (Klein, Interview 1) of women's studies for her PhD. During this time she co-edited a formative collection, *Theories of Women's Studies*, on the methodologies of the emerging discipline (Bowles and Klein 1983a), and was asked to join the editorial board of Women's Studies International Forum (WSIF), where Dale Spender was Editor. In her recollection, it was through these connections that she was given the idea to edit a book on NRT, rather than having it herself:

> I was there at a meeting at Dale Spender's house and somebody -- and I can't think of who -- said to me what do you think of a test tube baby and I said I don't know, I mean I barely knew that Louise Brown had been born in 78. Now we're talking 1981…and she looked at me and said you're a biologist you should do a book on that subject....so I wrote to Shelley [Minden, whom she had known in Berkeley] and said would you be interested in doing something and she said yes, yes…and she said let's let's ask Rita Arditti if she wants to do it with us… And really the point of all this is that at the beginning when we sent out the call for papers for Test-Tube Women none of us really had much of a position. Apart from maybe knowing when I had been a scientist how, to use that word again, how tunnel visioned scientists were and how they really wouldn't let kind of any other explanation come and intrude into their, their you know, ultimate aims (Interview 1).

Klein's story underlines the general feeling among feminists at the time that NRT was a subject for experts, not ordinary women. Like Becky Holmes, who had organised the Amherst conference, Klein, Minden and Arditti were all trained as biologists, however, and had experience in the culture of laboratory science, which had trained them to think in ways which, once having left the lab, they came to see from a different perspective. Arditti was also a member of Science for the People, a left-wing organisation of scientists and engineers protesting the misuse of science, along with Harvard biologist Ruth Hubbard, who had given a paper arguing strongly against IVF at Amherst (Hubbard 1981). By this point, there was in fact a small community of academic-activist feminists interested in the issue in the Boston area. Although Hanmer had not heard about the Amherst conference until afterward, she had subsequently been invited to Massachussetts by Holmes, and had met Raymond and Corea. All four were already known to Klein or her colleagues, and were specifically contacted, and asked to submit chapters.[14] Klein and Minden also put out a call for papers in 1982,[15] which was sent to international newsletters as well as academic publications (Klein, Interview 3). Like the Amherst conference, Test-Tube Women (Arditti, Klein and Minden 1984) covered a very wide range of reproductive subjects, from contraception, abortion and infant mortality, to amniocentesis, disability, pregnancy and IVF, from personal experience to empirical research to theoretical ethics. The contributors, although mainly academic, also included a teenaged reproductive rights activist, midwives and health workers, journalists and creative writers, and were drawn from the US, Britain, Australia, New Zealand, India and Germany. Klein explains the formation of her own resistance as being rooted in her job as editor of TTW:

> …basically every paper showed us some other aspect, some other problem…There were so many different aspects of it in that book that by the time we had finished the book we were all three totally opposed to it. But I think it's important to point out that we didn't just come to it knowing fully, you know, we didn't have a fully fledged analysis or even a theoretical position when we started. (Klein, Interview 1)

The papers in TTW do not entirely set out the positions the women would continue to pursue – Klein (1984), for instance, writes enthusiastically about the use of anonymous sperm donation in lesbian insemination groups, based upon a strongly liberatory analysis which looks not at what a technology does, but at who controls it. Because insemination technology is no more complicated than sperm and a turkey baster, and allows women to single-handedly take control of conception, Klein did not at this time consider the problems posed by anonymity, although as she learned more about the 'heartaches' it caused in adoption and donor insemination, she would come to regret her initial stance.[16] However, what is common to the

[14] Letter, RK to JH, 19 November 1982: FIN 01/01.
[15] TTW Call for Papers: FIN 04/01/01.
[16] Klein, comment to the draft.

origin stories of many of the women I interviewed was a similar experience of radicalisation-through-research. In the introduction to The Hidden Malpractice, Corea had written of her time researching the issue of medical control of female reproduction as a reporter for the local paper, stating that 'when I began my investigations, I was not a feminist. By the time I had finished, the evidence I had gathered forced me to become one' (Corea 1977: 15). In SMT, this is normally thought of as a kind of moral shock which produces action, as Jasper and Poulsen (1995) found amongst animal rights activists, who pointed to being shown pictures of animals in testing facilities as their moment of radicalisation. However, there must be some sort of pre-existing receptivity to both the new idea, and the possibility of action around it. Jasper's and Poulsen's activists were being deliberately mobilised into an existing movement. This was not quite the case with FINRRAGE, which does not seem to have mobilised anyone to become a feminist; however, for women whose political consciousness already centred on the ways power was enacted through male control of women's bodies, learning the real technicalities behind procedures such as removing eggs and transferring embryos from one woman to another could certainly produce the kind of cognitive dissonance which required some form of active response.

Overall, *TTW* seems to have attracted the attention of a surprisingly wide readership, suggesting that the strain to normative social and legal conceptions of parenthood produced by NRT was becoming endemic enough that those who were not necessarily feminists would pick up the text. Reviewed by a male pediatrician and his geneticist wife in the *American Journal of Human Genetics* (Hecht and Hecht 1986), it was considered an 'unorthodox' work written to 'incite activism', but the reviewers do not necessarily seem to consider this a shortcoming as they understand its intended audience as ordinary women. Rather, the review concludes by comparing the book to the famed statement from the Gettysburg address -- 'of the women, by the women and for the women' and concluding that 'reproductive genetics is ammunition in the rifles of the insurgents' (*ibid:* 264) – although it is difficult to discern if the authors considered themselves to be on the side of the union or the rebels. Likewise, a review in *Sociology of Health and Illness* (McKay 1985) notes that while the perspective may be 'intense' (*ibid:* 276), the information therein has not been available to the layperson, and for this alone it should be read. Although both reviews point out the activist language, it is interesting that neither actually challenges the accuracy of the information.

In feminist circles, however, the book provoked a much more polarised response. While some praised it, a review in *The Women's Review of Books* encapsulated what would become the main argument against 'the FINRRAGE position' before FINRRAGE even existed: that *Test-Tube Women* as a collection had failed to analyze 'women's assertion of autonomy and "choice" through the use of these technologies' (Fine and Asch 1985: 8). The conclusion was that there was 'too much rhetoric and polemicism about exploitation, with women cast as victims' (*ibid:*

9). Here, the different underlying consciousnesses produced diametrically opposed analyses – one, that a woman has greater 'choice' and is asserting her autonomy and control over her life by undergoing IVF (Fine and Asch 1985: 8), and the other that IVF requires a woman to put her body completely under medical control for an extended and indefinite period of time, thus reducing her autonomy and her ability to choose other possibilities until hope or finances are exhausted (Raymond 1984). Fine's and Asch's objections do indicate the key analytic concerns feminists of a strongly egalitarian consciousness were likely to use with regard to NRT, as this is closest to the normative consciousness in terms of seeing the project of democracy as one of free choice, best enacted through the market. However, I am hesitant to assign liberal and radical feminists to these separate positions. Firestone, after all, was a radical feminist, and the literature shows that feminists from both groups have argued against commercial surrogacy, for equal access to NRT regardless of ability to pay,[17] and against subjecting women who need technological assistance to conceive to forms of social control, such as the requirement to be married or heterosexual, which cannot be imposed on women who can get pregnant naturally. While not creating a consensus position, what *TTW* was able to show was that women did have informed opinions on the technologies, and it was possible to make these heard beyond purely feminist spaces.

Britain: First steps

At the start of 1984, there was still very little dialogue about NRT amongst feminists in Britain, either in their own publications or in the mainstream press. The imminent delivery of the Warnock report was seen as an opportunity to invigorate the debate. The Women's Reproductive Rights Campaign (WRRC) organised a two-day women-only conference in Leeds at the end of March 1984 (complete with crèche and disco), for which Hanmer and Klein organised the programme.[18] This was structured as a teach-in, preparing women to understand the report so that they could consider ways to resist the recommendations. The abstract for the conference again suggests control and male domination as the key analytic stance:

> Most [of these new technologies] are high technology and out of easy control by women. The male 'experts' of science and technology also manipulate public understanding with easy unchallenged access to the media and they dominate the so-called debate on ethics…the aim is to explore the implications for ALL women, be they fertile or infertile, with special attention to the women the establishment will try to

[17] In states with national health care services, this has translated into a demand for state-funded provision, whereas in wholly private systems, like the US, there has been a campaign to force insurance companies to cover the procedure.
[18] Conference schedule, Leeds, 1984: FIN 01/02/01.

> silence: Disabled women, Black women and Lesbians, so that we can begin to think about what we want and what we can do.[19]

Most of the first day was taken up with small group discussions attempting to demystify the technologies. The women received a packet of documents at registration which included a lengthy overview of the technologies supplied by the Department of Health and Social Security (DHSS) to the Warnock Committee, [20] which the organisers had utilised as a way of decoding what the dominant arguments of the report were likely to be. Because it had been developed for the Committee, the language of the DHSS overview was relatively jargon-free, and therefore accessible to the general reader. Also included in the information packet were two submissions, one from the radical grassroots organisation Rights of Women, and the other from Women in Medicine. The medics argued along similar lines as the radicals: that sex selection was undesirable as most couples would choose boys as first or only children, that it was 'unrealistic to assert that infertile women have a real choice in entering IVF programmes' and that it was an unethical diversion of women's health services.[21] On a marked-up draft copy of the submission, Hanmer has noted that this was the only feminist evidence from a medical group supplied to Warnock;[22] the fact that this is in her possession suggests she may have been given this earlier version for comment.

The second day was devoted to 'radical feminist perspectives' on the effect of the technologies on women as a group and possible modes of action.[23] Hanmer and Klein each led a workshop; Hanmer's outline for hers reads like a plan for covert action more than a research project, including trying to get an advance copy of the report, trying to gain access to the upcoming 3rd World In Vitro conference in Finland, and sending a woman to Bourn Hall asking for sex selection to find out the response.[24] Although none of these suggestions would be likely to be taken up, what is of note is that they are geared towards the kind of actions an activist might take, not an academic, suggesting that 'study it up', at this point, was more about the informal ways of generating knowledge which any woman could use, bolstering the claim that 'we are all experts' and hopefully individual confidence that a formal higher education was not necessary to engage in these debates.

Reviewing the conference for *Women's Studies International Forum* (WSIF), Klein and Zmroczek suggested two more likely strategies, including drafting a response to the Warnock report as a short term action, and the building of a network within which women could discuss the issues, particularly around social pressure towards motherhood and discrimination against

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[19] Conference abstract, Leeds, 1984 : FIN 01/02/01, emphasis in text.
[20] DHSS Document A: FIN 02/02/01.
[21] Women in Medicine (draft) submission, page 6: FIN 01/01/01.
[22] *Ibid*, page 1.
[23] Conference agenda, Leeds, March 24-5: FIN 01/02/01.
[24] Workshop outline, Hanmer: FIN 01/02/01.

certain groups inherent in the way the technologies were likely to be regulated as well as used. While acknowledging the diversity of the women present (and that black women were under-represented), they urged discussion in feminist settings using a women-centred frame of reference to uncover the real motivations of the 'experts'. In addition to knowledge building, however, they too also put forward the possibility of direct action, to 'infiltrate relevant governmental offices, leak information…(sic) destroy data and human experimentation material; be subversive, think originally and creatively.[25]

Writing of the conference in the relatively new radical magazine *Trouble and Strife*, several of the organisers concluded that:

> We did not think it was necessary to have a complete consensus of opinion, a 'feminist line', but we did agree about how to approach the issues…We agreed that we reject the underlying philosophy upon which the medical profession, and we think the Warnock Inquiry, are basing their recommendations for practice. We can therefore work together to demand increased control by women over all reproductive technologies, both old and new. We agreed there is a need to present an alternative view to the general public and to widen the discussion within the movement. There is a particular need for a network of women to monitor developments and more opportunities to come together to raise consciousness around these issues (Hanmer, Powell-Jones and Leonard 1984: 45).

The Leeds conference can be considered as the first attempt of the group to create a teaching experience for an audience of about 150 'long-term reproductive rights activists, health workers, nurses, doctors, social workers, teachers, scientists, concerned lesbian and heterosexual mothers, deliberately 'child free' women and those who were trying to make up their minds about mothering.'[26] The careful description of the various participants can be seen as an attempt to advertise the different forms of expertise – professional, scientific, embodied, lay – in order to promote the underlying philosophy that these were not issues beyond the grasp of ordinary women, while still using the qualifications of some to confer credibility so that their objections would not simply be dismissed as an irrational, uneducated response.[27] In this sense, whether they wished it so or not, the workshop leaders would be occupying a more elitist position as knowledge-conferrers than would normally be the case in the more structureless groups in which women's liberation movement work was usually done. Nor was the critical approach as dominant as the write-ups suggest. The Women's Reproductive Rights Campaign (WRRC) – as

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[25] Klein and Zmroczeck, *ibid*, p.4.

[26] Renate Klein and Christine Zmroczek, *Reflections on the Conference on the New Reproductive Technologies, Leeds, UK March 24-25*, Feminist Forum, undated, c. April 1984, p.1 : FIN 01/02/01. At this time, this was a typed newsletter circulated to those subscribed to WSIF, written by the editors. It later became an official part of the journal.

[27] According to Sturgis and Allum (2004: 57), the concept of public understanding of science at this time was that 'the public's doubts about the value of scientific progress or fears about new or unfamiliar innovations, such as genetically modified organisms or microwave ovens, are due to ignorance of the science behind them. Lacking a proper understanding of the relevant facts, people fall back on *mystical beliefs and irrational fears of the unknown*.' (emphasis mine). Smelser, it seems, was alive and well.

their name might indicate – were organisationally supportive of IVF and altruistic surrogacy, arguing that 'it is unfair that biology should decide who has children' and that infertile people had 'as much right to have children' as those who did not need help (Henry 1984: 16). However, their position on commercial surrogacy in general was strongly negative, and it appears that individual women within the organisation had more varied positions, as several members of York WRRC were also active members of FINRRAGE.

In Britain, as in the US, an individualistic rights-based argument *for* NRT had always existed alongside the anti-individualistic woman-as-social-class critique which urged wholesale rejection, however, the early publication of *TWW*, and the mobilisation of support around it meant the latter position was more visible at this point.[28] While I have hesitated to assign these completely to any particular strand of feminism, it is possible that the factionalism within the women's movement in this time period in these two countries did produce more polarisation between liberal and radical feminists on this subject than appears to have been the case elsewhere. For the most part, however, these emerging feminist voices were still quite far from the locus of fertility experts, the right-to-life movement, the religious authorities, and the social conservatives who at this point dominated discussion in the public sphere (see Mulkay 1997: 12-15). In the next section, I will look at the case of Australia, where the feminist project had taken a route which attempted to combine a liberatory consciousness with an egalitarian praxis, and where the competitive drama behind the 'technological race' had been much more publicly evident.

Australia: From the Inside out

Of all the women in FINRRAGE, Robyn Rowland probably came closest to inhabiting the position of 'insider' in the development of IVF. In 1982 she had returned to Australia from New Zealand, where she had been teaching women's studies, and contacted Carl Wood at QVMC asking for permission to do research with couples on IVF. Wood handed the request off to Prof. John Leeton, now director for AID, who suggested she research donor insemination couples instead (Interview 1). By this point, AID in humans had been practiced in Australia for approximately 10 years (Gould 1986), but as elsewhere was not publicly discussed; Rowland herself was not aware it happened outside the cattle industry (Interview 1). Rowland's research revealed wrong sperm delivery, single donors for whole ethnic communities, and a disturbing amount of secrecy overall. Talking it over with her father, he revealed that he had a cousin who had found out she was adopted at age forty and had walked away from the family, never to

[28] The first collection of works stemming from a more rights-based, individualistic perspective was not published until several years later (Stanworth 1987).

return (Interview 1). This led Rowland to begin talking to social workers in adoption, where she found out that they were also not aware that Melbourne had a donor insemination programme.

Having talked to the couples and the medical professionals, Rowland now suggested a study of donors, and was told that they were medical students specifically selected because they had no interest in the offspring, and would not want someone coming to talk to them about it twenty years later. She went ahead anyway and found that the men were from a variety of occupations, that more than half would not mind meeting their offspring once they turned 18, and that the main concern about retaining anonymity was that they not become financially or legally liable for any children conceived (Interview 1), a possibility under existing Victorian law if their identity were known. Rowland became convinced that the reasons given for maintaining secrecy, in particular that it was in the child's best interest not to know they were AID-conceived, were not only false, but causing psychological harm to all parties (Rowland 1983; 1985c). She began speaking at adoption conferences and in the media, calling for records to be properly maintained, and for AID offspring to be included in the movement to open records for adoptees (Interview 3). In the meantime, she suggested to Wood that an ethics committee be set up to monitor further research. Shortly afterward the doctors began considering a new technique, 'lavage', which consisted of using a fertile woman to conceive via artificial insemination, then flushing the embryo from her uterus and transferring it to the uterus of the intended mother – in effect, a form of egg donation which would not require retrieval of the egg. Doctors were already experimenting with the process in California, where 29 attempts had yielded 12 retrievals, although one 'donating' woman had been left with an ectopic pregnancy and another with a pregnancy which miscarried (Bustillo, Buster, Cohen, *et al.* 1984). As Rowland tells it:

> [The committee] was all of the top doctors at three hospitals[29] and me. And we used to have these stupid meetings in Carl Wood's office…and they used to just talk quite freely about what they were doing, and one day they were talking about this flushing technique…I said 'there's a bit of a problem with this, you know, like, what if you flush it and you push it right up into the fallopian tubes, or what if it's damaged like on the way, and then you're going to put it in another woman? And it seems to me to be huge moral issues here.' And there was this terrible silence. It felt like minutes, it was probably about thirty seconds of dead silence. And then they went on like I hadn't spoken. And I thought, oh I'm out of here (Interview 1).

Rowland's resignation was not simply over use of a controversial technique, however, but was also a reaction to increasing attempts by one of the QVMC doctors to control her own research, demanding personal approval of her projects, and that she place the names of all the

[29] According to an excerpt from her unpublished autobiography, the doctors were Carl Wood, John Leeton, John McBain and Alan Trounson (unpaged, supplied by Rowland: FIN 13/Disk/AUS/RR/01).

doctors on the team on any further publications.[30] As her research was funded through Deakin, where she was employed, and not through Monash, she was able to refuse (Interview 1), but the lavage incident appears to have been the last straw in a situation that was already difficult.

Rowland had, by this time, been invited to contribute a chapter to TWW, after being introduced to Renate Klein in London by Dale Spender in 1982 (Klein, Interview 1). Together with Becky Holmes, she also put together the 'Death of the Female' panel on sex selection for the Women's World conference in Groningen in April of 1984, where – as she put it -- she 'consolidated' her critical stance on IVF.[31] In May, just after her return to Melbourne, her resignation from the Monash research committee suddenly became public knowledge:

> I was giving a paper at the ANZAAS Congress[32] in Canberra….And I had dinner with Robyn Williams, who was an ABC[33] Science reporter, do you know, *is* the science reporter. And he, I was telling him some of this stuff and he said, '*jeez*.' He wanted me to give him an interview and I said, '*no* way, god no.' He said, 'why not?' And I said, 'Well, you know. I mean, I haven't got *evidence*, or…and you know, no no no. You just go and talk to them.' Anyway, the next morning I was doing this radio interview on the paper I'd given -- I don't know what that was on, probably donor--, birth certificates or something. And he came to the window of the studio, I remember, and he held up the front page of The Australian newspaper and it said 'Kids Come Better in Glass,[34] Professor Carl Wood said IVF children are superior to naturally conceived children.' And he mouthed to me, *now will you talk*? …So we went, we did an interview…and I just remember that everything went ballistic, everything went mad, there were about 27 phone calls and the televisions and radios and there was like this massive, massive response. (Interview 1)

The next morning, the Sydney Morning Herald proclaimed: 'Doctor wants in-vitro babies program halted' (Morgan 1984), while in Melbourne the headline read 'IVF researcher quits over 'reprehensible techniques' (West 1984). Although the articles do go on to identify Rowland as a social psychologist and not a medical doctor, these and other headlines in papers around the country over the next week gave the distinct impression that a member of the research team had 'defected'. This impression was bolstered by another raft of articles the following week claiming Wood and Rowland had publicly clashed over issues of secrecy at a prominent bioethics conference (Whitlock 1984a). In a letter sent to Hanmer in early June 1984, Rowland writes 'I've finally taken a stand! And it's incredible – over 30 radio interviews and 4

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[30] *Ibid.*
[31] *Ibid.*
[32] The Australia-New Zealand Association for the Advancement of Science. The annual ANZAAS Congress, like all large conferences in Australia, is widely reported in the general press.
[33] In her unpublished autobiography, Rowland remembers this person as Norman Swan of the Health Report for the Australian Broadcasting Corporation's radio station.
[34] Whitlock (1984b) *'Test Tube Babies Are Smarter and Stronger'*, The Australian; see also Schauble (1984a) *'Brighter Babies Come in Glass'*, Sydney Morning Herald, both 17th May. Rowland appears to have conflated the two.

national television shows – and a debate with a doctor on the Monash team!'[35]

While the suddenness of the publicity around Rowland's resignation may have been unexpected, it was part of (or perhaps could be argued to have co-produced) a larger wave of public unease with the rapidity of technological innovation. Waller, attending the same bioethics conference at which Rowland had clashed with Wood, had been on a panel with the chairman of the National Health and Medical Research Council (NHMRC) ethics committee, and both had expressed worry that the honour system through which the NHMRC monitored the ethics of medical research was not adequate to stem the IVF researchers' desire to keep going 'one step further' (Elias 1984). As had been the case in Britain when the existence of fetal research became public in the early 1970s, the public outrage appeared to be fuelled not just by the practice of lavage itself but by fear of what else might be happening in secrecy. Between the lines of the publicity around Rowland's resignation was a growing public and professional unease that each new permutation of the technology – twins, triplets, quadruplets, egg and embryo donation, frozen embryos, commercial surrogacy, 'treatments' for male infertility involving otherwise fertile women, and now embryo flushing – was being presented by the doctors as a wonderful fait accompli, and there was effectively no oversight to what IVF clinics were doing, nor was the legal system prepared for the complexity of third party procreation.

This unease was bolstered by concurrent coverage of the saga of the two Rios embryos, left frozen at Monash after an unsuccessful attempt at IVF in 1982, by an American-Chilean couple who were subsequently killed in a plane crash bringing home an adopted child from Argentina. In June 1984, probate lawyers discovered the existence of the embryos, sparking off a world-wide debate. Cast as 'orphans' (Schauble 1984b; Sydney Morning Herald 1984; Veitch 1984), for weeks the papers discussed the questions: Could the embryos inherit the Rios considerable fortune? Could they be put up for 'adoption', as a Victorian right-to-life group demanded? Should they be destroyed? And who, as the couple had left no will, actually had the responsibility for making that decision? Interviewed in Melbourne (Elias and McIntosh 1984),[36] Rowland was quoted as saying this was the result of the QMVC team 'willfully pursuing the technological race' without community dialogue, while the prominent Catholic bioethicist Nicholas Tonti-Filippini criticised the Waller committee, which had been created to consider exactly these questions, for 'shelving the issue' of cryopreservation in its first two reports, despite a number of submissions indicating such problems were likely.

The agreement of three men who were presumed to have significant expertise – as head of the medical council, as the judge tasked with evaluating IVF practice, and as a cleric whose opinion was often sought by non-religious parties because of his familiarity with medical ethics – did much to bolster Rowland's credibility in terms of her argument that the doctors were going

[35] Letter, RR to JH, 10 Jun 1984: FIN 01/01, emphasis hers. The doctor was Trounson.
[36] Articles by the same authors also appeared on pages 4, 11, and 13 of this day's newspaper.

too far too fast. In addition, as Rowland explains it, the doctors' attempts to defend themselves by attacking her 'insider' credentials backfired badly:

> In those days, none of these hospitals had PR sections, so the doctors were on their own, and hopeless at it. And so they start saying things like Robyn Rowland never worked at this hospital and we don't know who she is, and it was ridiculous. When I was saying well, of course, we used to meet in Carl's office. So there was all this sort of going on and they were trying to discredit me (Interview 1).

Instead of making Rowland look as if she was lying, the doctors' denials reinforced the image that she had indeed been part of their team, even if not working directly with the technologies herself. Rowland already had a public profile of being vehemently opposed to secrecy because of her work on AID and with the adoption movement, which positioned her as trustworthy and open. Through this, she was able to construct herself as holding epistemic authority, or as Gieryn (1999: 1) defines it, 'the legitimate power to define, describe, and explain bounded domains of reality' – in other words, for her assertions to constitute reliable evidence as to what the doctors were really doing behind closed doors:

> I think the first reason was, I was seen to be an insider coming out. And in some ways, I was, you know. So, that always has quite a bit of credibility, you know, '*she was there, she knows, you know they said that'* sort of thing...The other reason was they loved debates and controversy, and I wasn't afraid of the doctors…And that was at a time when people still bowed to doctors, so there had never been public debates about anything like this with medical science or doctors (Interview 1).

Rather than detracting from her credibility, the QVMC doctors' initial denials of her presence at the embryo flushing meeting looked similar to strategies used by the powerful to suppress whistleblowers (Martin 1998), which opened up their other claims, particularly success rates, to question. This lack of public trust would become a significant problem for Wood and Trounson over the next several years, as they attempted to convert Monash IVF's publicly-funded research into a chain of private clinics in the US, spurring another well-reported, rather furious public debate. Rebecca Albury (1999: 16), a political scientist and an activist in the same arena, credits the publicity generated by Rowland's resignation with opening the space for a variety of feminist voices to be heard. However, she also suggests this was greatly helped by the political structure of Australia, particularly the very successful 'femocrat' strategy adopted by the women's movement:

> I would say that as a political scientist my explanation for this is twofold: one is it's small in population. And secondly, we're overgoverned. So there's actually always someone to send your submission to. And your friends are in the bureaucracy. And elected to office. And you know. So there's a sense of if you want to be in it, you can…during the 80s that Labor government was very big on consultation and I don't mean in a hollow sense. But in which people could say things, and it got a part of the

> story…So it's a, that's, that's a strength of, well, it makes things appear here in a way that it seemed to be, uh, invisible or on the margins elsewhere.
>
> Q: Was it quite normal in that time period for people to just be radical out-and-out feminists and yet still manage to get places on those kinds of consultations?
>
> Yes. Yes… And to be Senators.[37] (Albury, Australia, Interview).

This was quite the opposite of the situation for feminists in Britain, where the women's liberation movement had deliberately carved out a sphere quite separate from the state, and where the more traditional structures of government were far less permeable. The Australian NHMRC, for example, eventually rejected embryo flushing in strong and surprisingly woman-centred terms. Even with a woman's consent, the procedure was deemed to be using her 'as a means to an end in a way which may be thought to violate something central to her personality…to ask a woman to be an embryo donor is not simply to put her at risk of injury; it is to do her wrong' (National Health and Medical Research Council 1985: 5).

While the general focus of press attention on the activities of the Waller committee provided a considerable political opportunity to make a strongly resistant voice heard, it is important to stress that Rowland had not been looking for a chance to 'go public', nor was she at this point trying to start a movement and gain adherents. While the men on both sides of the debate had forms of epistemic authority which rested largely on their professional credentials – as IVF professionals, heads of ethics committees, legal scholars -- in Rowland's case, her credibility at this time appears to have been largely constructed through the willingness of the mainstream media to continue to seek her opinion on stories such as the Rios embryos as an 'IVF insider', rather than as an academic, or even as a public advocate of record-keeping in AID. Rowland's story points to the importance not just of professional credentials, but of seeming to have *relevant* expertise. She was not an IVF doctor, and therefore did not have technical expertise or a medical degree. She did not hold direct embodied or experiential knowledge of IVF – something which was rarely discussed in public from the point of view of the woman patient anyway, except to express her joy at its (rare) success or her 'desperation' at lack of funding and waiting times for the few programmes in existence (Hepburn 1992). However, Rowland could claim to hold direct experiential knowledge of the decision-making processes of the IVF doctors, and had observed other esoteric aspects of their practice over the course of working with them for almost three years. All of these aspects – a media eager to cover the

[37] Albury is referring to Rosemary Crawley and Olive Zakharov, two radical feminist Senators who were appointed to the Senate Select Committee on the Human Embryo Experimentation Bill in 1985. Crawley and Zakharov wrote a dissenting report which argued that the only appropriate decision makers for the disposition of embryos were 'the gamete donors and/or the woman into whose uterus an embryo will be received' (Australia. Senate 1985: 91). They were not, however, opposed to embryo experimentation, and in fact rejected the Bill on the grounds that it should enable, rather than hinder research.

various issues, a period of public consultation for regulation, and the unusual visibility of feminists in 'legitimate' arenas such as political and civil service institutions -- appear to have made a crucial difference in the eventual establishment of FINRRAGE as a credible part of the epistemic community of IVF policy-making in Australia in a way which does not appear to have been achieved in any other country.

'Death of the Female' – The Groningen panel

As mentioned above, Holmes and Rowland had organised a workshop panel on sex selection for the upcoming 2nd International Interdisciplinary Congress of Women (familiarly known as Women's Worlds) at Groningen,[38] utilizing the informal network which had begun to coalesce around the women involved in TTW. Women's Worlds is still one of the largest feminist conferences, originally funded with seed money from the Ford Foundation and the National Science Foundation, and provides a meeting ground for academics, policymakers and activists (Safir 2005). The first Congress, held in Haifa in 1979, drew enough attention to launch the first Israeli women's studies programmes, at Hebrew University and the University of Haifa. The second, five years later in Groningen, drew approximately 800 participants and was intended to evolve into a more permanent structure.[39] It was, therefore, considered to be a major opportunity to bring the discussion into the international sphere.

Social psychologist Roberta Steinbacher (who had also been at Amherst and had contributed to TWW) and Madhu Kishwar, a founder of the influential Indian journal *Manushi*, were added to the panel alongside Holmes' co-editor for the Amherst papers, the biologist Betty Hoskins, and Corea and Klein. Raymond was the discussant, and Hanmer, having given her paper at another panel, was present in the audience. The workshop was titled 'Death of the Female?' as a way of drawing connections between scientists claiming to be perfecting new methods of preselecting a baby's sex (Holmes and Hoskins 1985; Rowland 1985b; Steinbacher 1985), reports of the increasing sex ratio imbalances in India since the introduction of amniocentesis (Kishwar 1985), and the possibilities of farm-like control of human breeding (Corea 1985c). It was perhaps this last paper that was the most disturbing to the audience. Drawing on Andrea Dworkin's (1983) linkage of the brothel model for prostitution with the already-extensive use of IVF in the cattle industry, Corea surmised that once embryo transfer was perfected, there was every possibility that Third World women could be gathered into carefully supervised groups to factory-produce white babies for the West (Corea 1985: 42-45).

The panel ended with the workshop drafting a statement for immediate circulation. A Swedish academic, Martha Ullerstam, offered to help co-ordinate an international conference

[38] Workshop handout, Groningen: FIN 01/02/02.
[39] The congresses have been held in a different country every three years since.

devoted solely to NRT, to be held at her university as soon as possible. In the meantime, it was decided that the women would focus on collecting information pertinent to their country, which Klein offered to collate and redistribute across the network as the British contact. Rowland and Raymond would serve as contacts for their regions, while Ullerstam briefly became the contact for continental Europe. The women agreed to set up networks for information-sharing in their own countries by co-ordinating with already-existing reproductive rights and women's health groups as well as interested individuals. A sign-up was circulated, which provided the first National Contact list for the nascent network, at that point called the Feminist International Network on New Reproductive Technologies (FINNRET). By the end of 1984 there was an Australian network with representatives in every state, and a smaller one in Britain with London and northern branches, as well as a scattering of women across the US, Europe, and Latin America, representing approximately 20 countries in all.

The panel was also successful to the point of being singled out in a review critical of the lack of diversity at the conference in general, as an example of creating a diverse analysis even with limited physical representation of non-European women (Bunch, Carrillo and Guinée 1985). Interviewed at Rowland's home, she and Klein remember it as an electric experience:

> KLEIN: There were all these people, // it was like 500 people, and they were clapping—
>
> ROWLAND: (overlapping) It was in front of all these people and they were absolutely going beserk. And we thought *ooh*. (surprised) But it was like they, they were really disturbed by it.
>
> KLEIN: But it was Jalna who said, I think from memory at least, it was Jalna who said we need a network, and everybody said yes, yes! (Interview 2, together)

The excitement of the respondents as they told this story is still apparent in the transcribed text. As Davis (2007) describes it, organisational origin stories provide a narrative starting point from which the collective identity of a social movement can be constructed in a way which casts the founder group as having a mandate for action, and a continued authority claim through participation at the foundational event. In a similar manner, the origin story of Our Bodies, Ourselves (*OBOS*) is told as being the result of a workshop on 'Control of our Bodies' offered at a women's conference in 1969 (Pincus 2002), where the women found they all harboured 'frustration and anger toward the medical maze in general, and toward those doctors who were condescending, paternalistic, judgmental, and uninformative in particular' (Norsigian, Diskin, Doress-Worters, *et al.* 1999: 1). This became a consciousness-raising group, which eventually produced a grassroots teaching manual, which became the iconic publication (Boston Women's Health Collective 1973) which is credited with launching the women's health

movement (Seligson 2011). According to Davis, the *OBOS* origin story takes on a 'heroic character' so that the women of the collective:

> …emerge as resourceful heroines who surreptitiously entered medical libraries to look for information and refused to be intimidated by medical texts…The appeal of this story resides in the fact that they, as ordinary women – that is, women without medical training – were able to see through the discourse of one of the most powerful institutions in the United States and unmask it as 'unscientific.' This was more than a simple questioning of the authority of medical knowledge. It paved the way for *any* woman to believe that she, too, could criticize dominant forms of knowledge (Davis 2007: 96-97, emphasis hers)

This first edition of *OBOS* is fondly remembered by feminists of the time (see, for example McNeil 1987: 24) precisely because it was knowledge derived from women's experience.[40] As Davis argues, *OBOS* showed that it was possible for non-credentialed women to create knowledge projects around complex medical issues. While it is not possible to say how much, if any, influence this example had on FINRRAGE, it is worth noting that in *TTW*, Hanmer (1984: 447) credits the original idea for an international network to Corea, who had created the conference statements at Amherst with Judy Norsigian of the BWHC.[41] It may also be significant that greater Boston is the only area of America which ever had any significant FINRRAGE activity. Oliver (1989), for example, suggests that each action taken within the interconnected networks which form a social movement creates opportunities for other actions through generating new knowledge or altering the belief system of the larger 'diffuse collectivity' – those who share a sense of being part of the movement – so that formerly closed or unquestioned areas of experience begin to open up.

In a broadly international context such as Groningen, where the panel audience would have been self-selected for their interest in the topic, this would mean that at least some of the women were also desperately seeking others who felt that this issue -- which feminists in their home countries seemed to consider low priority -- was actually of huge concern:

> I think I thought at the time, oh thank god for this, because there I was having these terrible interviews…with doctors on the TV. And feeling like, god I was on my own. And then suddenly there was this huge number of people saying, you know women who had the same kind of feeling, and opinion (Rowland, Interview 2, with Klein).

In the narratives told by the women – even those who had not been there, but

[40] Albeit, as McNeil (1987: 25) also notes, the experience of a small group of educated, middle-class white women.

[41] The chapter on NRT which appeared in the 1984 revision of *OBOS* would, in fact, be sent to Corea for comment. According to Davis, the collective 'struggled' with this chapter, finally deciding on providing clear information with a caveat that they disapproved of all but donor insemination (BWHBC 1984: 323 in Davis 2007: 31). Corea responded that their position was 'timid and cowardly', and suggested they read Raymond's and Hanmer's work more carefully. Letter, GC to JH, 22 Apr 1982: FIN 01/01/01.

particularly those who became the 'founder' group of FINRRAGE (Corea,[42] Hanmer, Klein, Raymond and Rowland) – the decision to form a knowledge-sharing network at Women's Worlds is always a powerful, joyful, *spontaneous* event. However, by tracing the personal and intellectual links backwards, one can see that this was an event eight years in the making, from Hanmer's and Rose's 1976 paper, to Amherst in 1979, to Leeds earlier in 1984, and presumably a number of other conferences as well. However, this is not necessarily to call into question the impression of spontaneity for those attending -- having made the suggestion in other settings with apparently very little response, there would certainly have been a great power in feeling it finally come together. Moreover, this was the first time the suggestion had been put forward in a broadly international context, which may have provided the crucial difference. In effect, the workshop provided the opportunity Hanmer and others had been seeking for some time, that of a critical mass of engaged, relatively educated, 'like-minded' women from around the world, gathered in one place, in a setting that encouraged action, during a time when media attention to the growing ethical, social and legal complications of families constructed via IVF made the issue harder to ignore, or to marginalize as of interest only to a few infertile women.

Conclusion

In this chapter I have sought to illuminate the context within which the five founder women came together, and the ways in which their knowledge interests, friendship networks, and professional and intellectual trajectories contributed to the emergence of the network. In general, despite the very successful conference at Amherst in 1979, a feminist response to NRT still took a significant time to develop. In Britain, there appears to have been a deliberate emphasis on building collective resistance amongst grassroots women. Meanwhile, in Australia, Robyn Rowland had been active in the public sphere for several years, but without attempting to form a collective project. While brought together through the publication of TWW, the five founder women did not all meet face-to-face until the panel at Groningen. This provided the political opportunity to present their concerns about NRT to a room of activists from around the world who were already interested in the questions. However, while Groningen showed there had been an obvious surge in interest around NRT amongst feminists around the world, this had not yet become a distinctive collective praxis. At this point, the strategy identified was mainly monitoring and deciphering the doctors' research and making that information available to other women to act upon in their home countries. In the next chapter, I will discuss the reformulation of network's cognitive praxis into one of resistance, and consider the ways in which this shaped its organisational practices, tactics and knowledge interests.

[42] Unfortunately, despite the best efforts of women in the network, Corea could not be located for this project.

CHAPTER 5 – EXPANSION

> *The international perspective I think is very important, and this is something which will stay with me…I mean the world was different as today, it was not as globalised, this was an open door for acting internationally that was really very interesting and eye open for such a young women as we were.*
>
> *(Erika Feyerabend, International Co-ordinating Group, Germany)*

As discussed in the previous chapter, the period from the late 1970s to the mid 1980s was a time of highly competitive experimentation in IVF, where the existence of new technologies was often revealed only after scientists could claim success. Research programmes continued to try to improve egg retrieval rates with different regimes of hormonal stimulation, and expanded on the basic process of in vitro fertilisation and embryo transfer, originally intended to allow women with blocked fallopian tubes to have their own biological child. Experiments in egg and embryo donation, freezing of embryos, and procedures for male infertility, already envisioned in the 1970s, began to produce live births. Partly because of these technologies, genetic and later gestational surrogacy were increasingly being shaped into paid services arranged by lawyers and matching agencies.[43] Despite its still very limited success, by 1984 IVF had moved from the category of bench science, to experimental medical treatment, and was becoming normalised through the development of private, for-profit clinics, first in the US and UK, then worldwide. During this time, however, there were almost no accounts from women on the programmes, except to celebrate the birth of an IVF child.

This was the context into which FINNRET emerged, one where right-to-life and other conservative groups had already shaped the battle into a focus on the sanctity of the human embryo, countered by two very strong discourses coming from the scientific establishment. One claimed that research was necessary in order to improve success rates, bolstered by references to the queues of women at their clinics who clearly wanted children, and were demanding greater access to IVF. The other discourse, aimed wider, was that knowing more about embryonic development would eventually produce health benefits for all of society.

Amongst feminists, there had been limited grassroots discussion up to this point, although a handful of work had been published and one could already see two distinct viewpoints emerging. One was rooted in an egalitarian consciousness which championed the

[43] One of the earliest surrogacy brokers, an American lawyer from Michigan, Noel Keane, claimed to have started his business in 1976, before Louise Brown was even born. In 1980, he was arranging contracts for $10,000 for women to bear babies for single men (Walz 1980). Keane eventually was forced to relocate to Florida when the practice was deemed baby-selling under Michigan law (Spar 2006: 76). He was also the lawyer who arranged the services of Mary Beth Whitehead, mother of 'Baby M' (Merrick 1990). By 1986 he was earning fees of $15,000 for arranging gestational surrogates in Manhattan (Spar 2006: 80). His planned expansion to Frankfurt, Germany was shut down by the city, partly through the activities of FINRRAGE women (see Winkler 1988).

technologies for mitigating the unfairness of infertility and promoting autonomy, agency and choice, and the other in a liberatory consciousness that saw IVF and its related technologies as putting women's bodies and their procreative capacities under male control. Both positions, and the space between, tended at this point to be relatively underdeveloped. In addition to developing their own position, the fledgling network which had been created at Groningen was also attempting to find ways to reach out to other 'like-minded' women to widen their knowledge base, as well as build the network. In this chapter I will look more closely at the tactics used by the network to develop and disseminate its knowledge, and to establish the idea of a 'woman-centred' perspective as a missing, and vital part of the public debate.

FINNRET begins

Perhaps the most important point FINNRET was trying to make at this point was that NRT was not an individual issue, and that in fact while the existence of the technologies would allow some socially-sanctioned women the possibility of having children they might not otherwise have, they would also make it possible to deny children to others, and to commodify women as reproductive parts, in other words, that the technologies had the power to shape women's choices to those it made available, closing down resistance through normalisation, as could be seen with forms of prenatal diagnosis which were rapidly becoming an ordinary part of prenatal care. While the rapidity of innovation in the fertility industry was part of the context into which FINNRET emerged, so too were the ongoing fractures in feminism, in particular the arguments over racism and classism within the movement. In the form of radical feminism shared by the founder group, theory was based upon women's lived experience and action, and women were considered to be a political, rather than a biological class (Atkinson 1974: 41, in Rowland and Klein 1990: 275) whose bodies were 'internationally…the currency of patriarchy' (*ibid*: 279). The collection of papers from Groningen, *Man-Made Women*, already stated that the technologies were not just about control of women, but had classist and racist assumptions (see Holmes and Hoskins 1985, as well as others in this collection), and the organisational documents of this period show a concern with the lack of representation of black women at the Leeds conference, and a discussion of strategies for reaching out, as the issues were likely to affect them more.[44] One suggestion was that FINNRET women should go to their conferences and listen to their concerns, an opportunity which the upcoming International Women and Health meeting in Amsterdam would provide. Where the first meeting had concentrated on abortion rights, as more women from the global South began to attend, the scope of concern had expanded to considerations of access to contraception, as well as forced sterilization and abuses

[44] Minutes of meeting, 15 Jun 1984: FIN 01/03.

of contraceptive technologies (Maiguashca 2005), and the fourth meeting was expected to focus more heavily on issues affecting women in non-Western countries, being billed as a Women's International Tribunal and Meeting on Reproductive Rights. Since FINNRET saw itself as broadly located within the women's health movement, it was decided to send a delegate both to report back, and to bring their perspective on NRT to the meeting.

Women say NO, Amsterdam 1984

Klein was on the editorial board of Women's Studies International Forum (WSIF) and could legitimately apply for a press pass, since the journal routinely covered feminist conferences. Together with British affiliate Elizabeth Fraser, two other FINNRET members from the Netherlands participated in several workshops on NRT during the week-long meeting.[45] In an informal, unsigned document attached to Fraser's conference report, the authors communicate the same sense of urgency which seems to have informed the panel at Groningen:

> All of us felt that our knowledge of reproductive technology was minimal…we think that hindsight will be of no value, and that now is the time to address ourselves and our consciousness to the issue…there is a need to get behind the 'front' propoganda [sic]… Our recommendation therefore is that we demystify these issues, and demand and struggle for access to the information we need. [46]

As most of the participants in Amsterdam were from the developing world, the report notes that they tended to see NRT as a Western problem which did not concern them as much as coercive population control policies and the dumping and testing of contraceptives which were not approved for use in the West. The workshop report goes on to warn of the danger of poor women being 'economically forced to lease their wombs', and suggests that the connections with population control which had begun to emerge in the discussions needed to be taken up and developed, in the same way as research about the use of amniocentesis for sex selection:

> As is so often the case, what may appear to help first world women is destroying those in the third world…We feel that a campaign is necessary. Various methods of gaining some control were discussed…Most important, this has to be a popular issue with women, we must make it meaningful to a wide audience in a creative way.[47]

Thus, while the FINNRET workshops in Amsterdam brought the existence of the network to the attention of a new, and more internationally diverse, group of feminist activists, it also brought an embodied perspective of population control to the attention of FINNRET

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[45] Typed manuscript, 'Report from Women's International Tribunal and Meeting on Reproductive Rights (aka 4th International Women and Health Meeting) Amsterdam, Netherlands, July 22-28 1984', by Elizabeth Fraser: FIN 01/05.
[46] Workshop report attached to above, author and date unspecified, emphasis and errors in the text.
[47] *Ibid.*

through the sometimes harrowing stories told by women at the meeting (see Laws 1985). The Amsterdam conference is considered to be the foundation of the reproductive rights movement,[48] which has the larger agenda of looking at the structural conditions in which women live and the affect this has on health and reproductive choice. Its organisers, the International Contraception, Abortion, and Sterilization Campaign, became the Women's Global Network on Reproductive Rights (WGNRR) after this meeting.

The meeting also brought FINNRET to the attention of the keynote speaker, Farida Akhter. Although the literature written about FINRRAGE tends to concentrate on the founder members and their published works (Franklin and McNeil 1988; McCormack 1988; Moss 1988; Warren 1988; Sandelowski 1990; Allen, *et al.* 1991; Denny 1994; Donchin 1996; Thompson 2001), Akhter's contribution was substantial in terms of FINRRAGE's overall knowledge project, which required empirical data about the effect of population control in the third world robust enough to be quoted in academic publications, in order to provide evidence for the connections between contraceptive and conceptive technologies, which was an intrinsic part of the analysis the network was trying to develop. Through her research organisation, UBINIG,[49] Akhter was able to provide much of that base, later collected and published in English as *Depopulating Bangladesh* (Akhter 1995) and *Resisting Norplant* (Akhter 1995).

Akhter had some background in science, having fought to study it as one of four girls in an all-boys secondary school on her way to becoming a doctor, but on finding out she would have to cut up cadavers in medical school had wound up taking a degree in economics instead. Akhter later took a job on a project examining women's cooperatives, funded by the Canadian government through the World Bank:

> [W]e found that they were doing very good work, actually, in terms of the co-operatives. They were given opportunities and they were using it…But from the donor's point of view we found that when we were writing the report, and every time that we met the donors, they were consumed with how many children did they have, did they take contraceptives….it was not enough for us to say that they were doing quite good. It was not enough for us to say that they were earning an income. It was not enough for us to say that they were quite happy…So that was my first understanding of the population policies. (Akhter, interview 1)

Akhter relates this as her own origin story, her radicalisation-through-research experience. The narrow focus of the donors suggested that whatever good might come of the money made available for easing the economic conditions of the rural poor, these were only a smokescreen to coerce women into 'family planning' programmes, and the research commissioned by the donors did nothing to help the women. She began looking into issues of population control, which, in Bangladesh in the mid-1980s including coercive measures such as

[48] Comments to draft by Jyotsna Gupta. See also (Maiguashca 2001; Maiguashca 2005).
[49] In English, the organisation's name is Policy Research for Development Alternatives.

sterilization camps, and started her own research organisation, UBINIG, in 1984, with the idea that they would only engage in projects that would help the people they were researching. Because they did not take money from donors involved in the population policy community, UBINIG was free to carry out ad-hoc research as well as funded projects, and to write about whatever they saw. This was initially how the group became involved in what would eventually become a major campaign against the contraceptive Norplant:

> [My colleague] went for a research on conditions of slum women, and she said that you know I saw a woman, she showed me her arm, that there were six capsules underneath her skin. And she said that she got it in a family planning clinic. I said, oh we have to go back there! We didn't know what Norplant looked like, actually. So we immediately went and talked to her and found that there are ten other women in the same slum who were given [this] and she didn't know what it was, she only knew that it will help any family planning. But she was not feeling well after taking that for the last three months, she has breathing problems, she feels dizzy, she's not happy with it. That's why she complained, look somebody put it here and I cannot take it out, you know, what to do. So we had an interview of all these ten women.…And immediately I wrote a small, very small report on Norplant, that this is, I got [information] from some sources at Norplant whose the producer and what it does, and then what these women were feeling. And then submitted it to the organisation who was doing [the distribution], you know, women's health conditions. They were furious. Because they were, they were projecting its success. (Interview 2)

Akhter's story illustrates a crucial question in terms of the knowledge held by activist-scholars. Although not embodied, as she herself did not use Norplant, she was able to be the generative source of empirical evidence through talking to women who did, an experiential form of knowledge none of the other women would have had. Moreover, it was evidence which was difficult to produce, as Norplant was new, and women in the slums tended to move around (Akhter, Interview 2). Akhter's credibility was supported by her embodied knowledge of being a woman from Bangladesh, and her growing international reputation as an invited plenary speaker at important conferences like Amsterdam. Additionally, complaints of racism in the women's movement, which had been building for some years, appear to have reached a critical mass around this time (see the report on Women's Worlds 1984 by Bunch, *et al.* 1985; also Murdolo 1996 on the Women and Labor 1984 conference in Australia the same year), meaning that the space in which women from non-Western contexts could speak was beginning to widen in some spheres.[50] The epistemology of radical feminism as knowledge derived from 'women's lived experiences' (Rowland and Klein 1996: 9) could also help privilege the knowledge of non-Western women as an embodied standpoint which white women, as representatives of the dominant racial class, could not challenge. However, that did not mean that there was a unified

[50] Hull and Smith (1982: xx) have argued that the very early women's movement in the US did include black and working class women before it became dominated by those of the educated white middle class, suggesting that this may have been a matter of reclamation rather than creating novel spaces.

position, nor that women from the South did not resist the expectation of providing representation for their entire culture.[51]

Akhter's story suggests that formal knowledge may also be created through informally published research if credibility is derived through quasi-academic structures such as women's conferences, where invitations to address the plenary confer a level of epistemic authority on the speaker, particularly if the data is then cited by established activist-scholars in their own publications. Within FINRRAGE, although she was not the only non-Western woman in the network, even at this time, many of the respondents indicated that it was the strong stance against population policy Akhter brought to the network early on which made a significant change in their own knowledge interests, and in fact, it is the 'two-sides-of-the-same-coin' analysis which was developed collectively at Lund which forms a unique part of what would become thought of as 'the FINRRAGE position'.

Britain: the embryo wars

In general, feminists in Britain were having much less success in being heard in the press than their Australian counterparts at this time. Prime Minister Margaret Thatcher's family rhetoric was reinforcing traditional ideas about motherhood being a woman's greatest achievement, at the same time that her government was cutting many of the programmes, such as nursery places and child benefit, upon which single working mothers on low incomes relied (Segal 1983). This mixed message that only certain kinds of mothers were desirable left British FINNRET with little room to manoeuvre between a discourse which either positioned IVF doctors as heroes for making families (as long as the couple was married and presumably white) or as out of control and a threat to traditional family life (Lewis and Cannell 1986). There was, at this point, little room for any criticism of IVF which was not based in arguments about the sanctity of embryonic life.

In addition, a number of other issues were occupying the left-wing press at this time, particularly Thatcher's rollback of the welfare state, and her protracted battle with striking mineworkers in the North. The strike had unexpectedly opened enormous political opportunities for women from the mining areas who had formed into a national organisation in the spring of 1984, *Women Against Pit Closures*, which became a focal point for feminist support over the next year, despite the fact that most of the miner's wives emphatically did not think of themselves as feminists (Rowbotham and McCrindle 1986). Overall, competition with other issues was seen as making it difficult to get the 'message' into the hands of women who were in the political arena, and in getting other grassroots feminists to accord a campaign against NRT the same level of importance:

[51] Akhter herself made this statement addressing a FINRRAGE meeting in 1986 (Akhter 1995: 45).

> I think that time, it's really important what happened, to put it in terms of the date, and where was feminism at that point, in the early 80s. And it was still, incredibly difficult. We had no state support really for domestic violence, or any other forms of violence against women. The issues around health, abortion were being hard fought over. And health issues in a general sense. And women's studies was only just trying to begin, to get a foothold…So there was a whole myriad of different kinds of issues [on] all of which we faced really heavy opposition. So we lost, I'm saying this to explain why we really couldn't do anything about Edwards and Steptoe. (Hanmer, interview 1)

With the Warnock report due to be released, there was a push over the summer of 1984 to get the fledgling British group recognised so that it would have some authority to publicly address the issues alongside the more established organisations which had made submissions to the committee, such as Women in Medicine, Rights of Women, and the Women's Reproductive Rights Campaign, all of whom had also been represented at the Leeds conference in March. In addition to announcing the formation of FINNRET to the Leeds participants and scheduling an update meeting in London in June,[52] the group also issued a press release to the media offering themselves as analysts: [53]

> Our move into action consisted in a letter sent out to about 30 journals / newspapers …We've set up an answering machine message and are now waiting (somewhat frightened!!) what will happen…[sic] We realise that people want to talk with 'authorities' – now we have to get the message through that we are <u>all</u> authorities even if we're not Profs. and Drs. and theologians etc!! [54]

Although less dramatic than Rowland's resignation, the announcement did create a small ripple of media response, but this was difficult to sustain in light of all the other voices already in the arena, particularly the very loud opposition of the anti-abortion lobby, particularly the Society for the Protection of the Unborn Child (SPUC), who were actively prepping MPs to fight the Warnock recommendations when they were opened to Parliamentary debate (Mulkay 1997: 17-18). According to Mulkay, with a Conservative government sympathetic to arguments about the sanctity of family and human life, it was expected that most of the Warnock recommendations would be rejected on the grounds that IVF created spare embryos, the destruction of which for any purpose, particularly experimentation, was immoral. While welcoming rejection of a report that would inevitably sanction the use of IVF, FINNRET had to frame their objections in a way that could remind people that the eggs from which the embryos came were being obtained through the experimental use of women's bodies, to counter the largely-male dominated debate. This they tried to do by offering women's views of the legal and social implications of the report from 'an international group of doctors, scientists, researchers, students, mothers, midwives, healthcare and social workers, women with disabilities and writers

[52] Letter to Leeds participants, undated, circa May 1984: FIN 01/06.
[53] Press release, 4 June 1984: FIN 0/06.
[54] RK to the Planning Committee for Lund, 21 Jun 1984: FIN 01/01/02. Emphasis hers.

on ethics'.[55] This rather extended listing covers several categories of expertise by offering qualifications in a number of areas implying direct professional experience with matters of reproduction, as well as the lay embodied categories of 'women with disabilities' and 'mother'. In other words, while FINNRET wished to communicate that this was an issue grassroots feminists could and should consider themselves knowledgeable enough to engage with simply by virtue of being women, the emphasis -- intentionally or otherwise -- on professional qualifications in the press release suggests an understanding that the media would require some 'traditional' proof of authority before their interest could be engaged.

In November 1984, the British group brought Gena Corea over from the US. Rowland was already at Exeter University on study leave from Deakin in Melbourne, and with the encouragement of Pandora Press, who had published *Test Tube Women* in June, the group was able to put together a short speaking tour to drum up interest in FINNRET and to widen awareness of the issues presented in the book.[56] With Klein and Hanmer accompanying them, Corea and Rowland spoke in Leeds, Manchester, Newcastle, Bristol, Bradford (where Hanmer was a lecturer in Applied Women's Studies), Cambridge, Exeter, and Canterbury. The tour lasted two weeks, and finished with a meeting in London on 10-11th November. The meeting was not necessarily a resounding success -- Rowland describes the four surviving it 'bruised and battered'[57] and Klein reported that a group from the Women's Reproductive Rights Information Centre who were pro-IVF had walked out in protest.[58] In Rowland's letter, she also describes taking part in a YWCA conference entitled A Child at Any Price?, which put her on a panel with Dr. David Davies, director of the Dartington North Devon NHS Trust, and a member of the Warnock Committee. Davies told her that women had been invited onto the committee (a key complaint of the various women's groups), but the feminists had all refused because it was a government endeavour and Rowland admits to the others that there might be some truth in that. She also adds that he was not terribly responsive to the ideas put forth by FINNRET until after her talk, at which point he asked her to send him everything they had. Rowland seems to have felt that this was proof of the network's analysis that very little about women's actual experience of IVF had been discussed in the Warnock committee's internal deliberations, and that it had been a philosophical exercise in utilitarianism focussed on the embryo. However, it also suggested that if they could develop their own authority vis-à-vis other 'experts', there were some within the policy community who would listen.

Rowland's letter also indicates the considerable ambivalence with which the technologies were being received at this time. With the strongly pro-family climate of

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[55] FINNRET Press Release, 19 June 1984: FIN 01/01.
[56] FINNRET meeting, minutes, 15 June 1984: FIN 01/03.
[57] Letter, RR to Lund PC, 24 Nov 1984: FIN 01/01/01.
[58] Letter, RK to JH/RR/JR/GC, 14 April 1985: FIN 02/03.

Conservative politics, the British public appears to have found 'straight-forward' IVF, or the making of babies for married couples who couldn't conceive naturally, relatively unproblematic (Gillon 1984: 16). This was encouraged by popular publications such as Steptoe's and Edward's account of the work that led to the birth of Louise Brown, which frequently referred to the 'desperation' of their patients (Edwards and Steptoe 1980). It was the technological controversy around the use and disposition of 'surplus' embryos resulting from the widespread adoption of superovulation after Monash's early string of successes (see Wood, Leeton, Talbot, *et al.* 1981), which caught and held the public's attention. For most feminists concerned with the issue, however, superovulation was a more important site of ambivalence than questions about the disposition of surplus embryos, a risky area which could provide support for arguments which could be used to challenge the legality of abortion. Superovulation was directly enacted upon women's bodies, by using hormones designed to create an artificial menopause, after which the menstrual cycle could be controlled, and excessive ovulation could be induced for retrieval at a specified time (Templeton, Van Look, Lumsden, *et al.* 1984). This required women to submit to a difficult regime of technological surveillance and control, largely because it was 'easier' for the doctors than following the natural menstrual cycle (see Edwards and Steptoe 1980; also Edwards 1981: 253). On the other hand, by producing multiple possibilities for fertilization and embryo transfer, it could also reduce the need to repeat the discomfort and risk of egg collection for every IVF cycle, particularly after excess embryos could be frozen. These arguments made the doctors appear to be using superovulation not only for efficacy, but to protect women's health, despite the use of higher and higher doses of hormones to produce increasing numbers of eggs (Klein and Rowland 1989). The extent of experimentation with the protocols generally had to be discerned through a close reading between the lines of papers outlining some other form of success (see, for example, Edwards and Steptoe 1983; Cohen, Simons, Fehilly, *et al.* 1985).

The group did eventually succeed in getting a briefing meeting with Labour MP Jo Richardson, the Opposition Spokesperson on women's rights.[59] In Parliament, Richardson criticised the Warnock committee for not including a lay representative from a women's group, or inviting any of the wide range of women's groups who had submitted written evidence to give oral testimony,[60] but her position on IVF was essentially supportive, which seems to have discouraged any further attempts to influence Parliamentary politics. Overall, the more disenfranchised place of women in the British political structure was seen by British FINNRET to be a great impediment to legitimating a woman-based analysis in Britain, and the group chose to continue the women's liberation model of deliberately rejecting any possibility of intervention through the institutions of the state, including party politics, and instead sought to create

[59] She would hold this post from 1983-92.
[60] *Hansard (Commons)*, 23 November 1984, column 560.

discursive opportunities for themselves through consciousness-raising activities within the civil sphere.

However, the larger-circulation grassroots publications which formed the international communications network of the women's movement, such as *off our backs* in the US, and *Spare Rib* and *Trouble & Strife* in the UK, were now beginning to exhibit a much livelier debate. Naomi Pfeffer (1985) relied on both her own experiential knowledge as a woman who had undergone testing for infertility, and technical knowledge from her research into the medical management of infertility through history, to argue that IVF was part of a continuum of technological intervention, and although crude now, likely to provide the best outcomes once perfected. In particular, she was angry at the characterisation of infertile women as desperate by both the medical profession and by feminists, exacerbating the real grief of the experience and making it yet harder for the infertile to speak for themselves (*ibid:* 50). FINNRET, with its strong stance against selective abortion and IVF, was also critical of an emerging reproductive rights discourse. One of the WRRC women who had walked out of the conference in Leeds later wrote a scathing review of the three books so far published by FINRRAGE women (*TTW, Man-Made Women* and Corea's *The Mother Machine*), arguing that a woman's right to decide which child to have and by what means needed to be defended as vigorously by feminists as the right to decide not to have a child at all (Berer 1986). The article, published in *Trouble & Strife,* set off a storm of response from all positions which raged through the Letters section of the next three issues, illustrating the significant emotional investment feminists who were beginning to engage with NRT already felt. Perhaps unsurprisingly, the article and subsequent controversy also evolved into a longstanding enmity between the founder group of FINRRAGE and some of the women from the Women's Global Network for Reproductive Rights (WGNRR).[61]

The 'Emergency' Conference – FINNRET becomes FIN*RRAGE*

The 'Emergency' conference took place from 3-8th July, in Lund (Vallinge), Sweden.[62] Approximately eighty-two women attended, with just over half scheduled to give reports or papers. The attendance list for the Sweden conference shows that it attracted an extremely professionalised range of women. Of the seventy-four who filled out the pre-conference application[63] detailing their profession and reasons for wanting to attend, seventeen listed themselves as biologists or geneticists, and another five as physicians. Fourteen were sociologists and eight worked in the field of women's health. Of those who did attend for whom

[61] Local allied groups in Britain were the Women's Reproductive Rights Campaign (WRRC), which had some women who were active with FINRRAGE in Leeds and York, and the Women's Reproductive Rights and Health Information Centre (WRRHIC) in London.
[62] Documentation uses both towns interchangeably.
[63] Sweden conference documentation: FIN 03/01/02/02.

data could be obtained, forty-two of the women either had or were working towards PhDs, and four were MDs. At this point, however, very few of the women actually had *relevant* expertise. Of the PhD students only one, a sociologist, was studying reproductive technologies; none were natural scientists. Five of the PhDs, however, were qualified specialists in molecular biology or genetics and another thirteen were generalists, having studied biology or biochemistry at least till Masters level, although several of these had gone on to do their PhD in a social science instead. Of the established academics, while eight were beginning to publish in the area, none were doing empirical research.[64] It is this last which is particularly important; at this point, empirical knowledge about women's experiences with new reproductive technologies was generally confined to the area of contraceptives and sex selection. There was still very little research into the actual experience of infertile women in any published literature, although some, like Naomi Pfeffer, were beginning to offer embodied accounts (Pfeffer and Wollett 1983).

Geographically, however, the conference was diverse, reinforcing the impression from Groningen that feminist interest in NRT was growing. There was a large contingent from Australia, as well as women from Asia, South America, North America and Europe. Unlike the conference reports from Groningen or Amsterdam, where internationalism seemed to have been experienced as divisive (Moira 1984; Bunch, *et al.* 1985), all of the women I interviewed who had been in Sweden spoke of this as being a powerful and transformative element:

> I was interested in the whole issue of feminism and control of women's bodies. So I just picked up this [call for a meeting] that I had never heard of before. And at the same time I was looking for a project to, an interesting feminist project…So I thought, why not go to Sweden?...And we were sitting there about, well it must have been about 100 women speaking in all languages. And everybody was helping everybody translating to be understand each other, it was an amazing way of feeling community and sisterhood, it was wonderful…And in my career it was a turning point. Because at that time I decided to do my research and my PhD in that field. And that was really very much determined by the fact that I had met all these very articulated and clever, clever women. And realised that this was, yeah, I wouldn't hesitate to say a revolutionary technology (Lene Koch, Denmark).

As with the women editing *TTW*, this radicalisation-through-knowledge moment is also described as a social experience. The conference was scheduled to last for five days, beginning with breakfast at 8am and continuing until 10pm each night; although meal breaks of two hours for lunch and dinner had been scheduled, these were often utilised for informal sessions. On a tape made to share the event with Rowland,[65] who had become ill and returned to Australia shortly before the conference, Corea and Klein noted that so many women now wanted to speak

[64] Rowland, the only one who had done so far, became ill shortly beforehand and could not attend, so she is not included in these figures.
[65] Cassette tape c.10 July 1985, as digital audio: FIN 13/Disk/AUS/RR/02/RK_GC_for_RR.wav.

that they were constantly adding more to the sessions and overrunning. In addition to papers, country reports were presented from Australia, Bangladesh, Brazil, Canada, Denmark, England, France, Ireland, Israel, Japan, Netherlands, Norway, Switzerland, Sweden, U.S.A., and West Germany.[66] These covered the state of technological development, impending regulation, public discussion, and feminist response and taken together paint a surprisingly detailed picture of the state of IVF world-wide in 1985, despite the fact that many of the women who presented the reports did not normally carry out research, and most did not speak English as a first language.

In addition to feeling as though the international network had finally come together, the Sweden conference marks a turning point for the network's collective knowledge project. Up until this point, 'knowledge' had mainly constituted monitoring what the medical and scientific communities were doing and saying within their own publications, and using the tools of academia, particularly of sociological analysis, to draw social meaning from those scientific facts. The 'facts', however, were largely generated by others. In creating the country reports, the women were now beginning to collect their own evidence, a learning process for some who were also learning the tools of social research. The preparation of information for the conference also allowed experimentation with new methodologies, such as the Brazilian doctor who used newspaper accounts to document the adoption of IVF in her country. Analysed collectively, those more familiar with IVF's origin stories could now trace the transmission of technical knowledge from practitioner to practitioner, revealing the international scope of influence of the Joneses from Norfolk (who the leading Brazilian specialist had gone to observe) and Alan Trounson, who had spent several weeks in Brazil teaching scientists the 'Monash method' as part of a televised event using patients recruited from all over the country, sequestered with TV crews on two floors of a prominent Sao Paolo hospital. It was during this so-called 'obstetrics carnavale'[67] that one of the patients suffered respiratory arrest during ova retrieval and subsequently died, leading news accounts to speculate that the attending physicians may have been concentrating more closely on the monitor where the Australian doctor was about to pierce the patient's follicles, rather than on her anaesthetic levels.[68]

The reports also provided social knowledge about the vast cultural differences which governed the practice of IVF. In Israel, for example, where survival as a nation was constructed as precarious and voluntary childlessness was not a social option, informal interviews with IVF doctors carried out by a member of an infertility self-help group showed that all were willing to treat unmarried Jewish women, which was against regulations, if they would donate eggs to other Jewish patients.[69] Yet in Japan, where the discourse of eugenics was so strong that

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[66] Country reports, Lund: FIN 03/01/02/02.
[67] Extracts attribute this to the president of the Brazilian Society for the Advancement of Science. Brazil report given by Ana Regina Gomes Dos Ries: FIN 03/01/02/02.
[68] *Ibid.*
[69] Israel report given by Alison Solomon: FIN 03/01/02/02. Jewish lineage is derived from the mother.

disabled women were routinely sterilized and prenatal diagnosis was almost impossible to resist, public condemnation of IVF had become so intense that meetings of the fertility society had to be held under armed guard.[70] Understanding such cultural differences became a central part of the network's knowledge strategy in terms of analysing how social context was shaping the way the technologies were used and developed.

Sweden, however, also gave the few women who were doing professionalized research a platform to share their own newly-generated, novel findings. This would become particularly important for the PhD students in the network. Christine Crowe, for example, had done an honours thesis[71] in which she had interviewed sixteen women about their infertility, but was told to write up only the eight who had chosen IVF, because those who had not were not interesting (interview). Crowe was now beginning her PhD and had wanted someplace to present her work to a more amenable audience:

> I knew that it was original material and I wanted to get it out there… And I didn't know anyone, I just thought this is the conference for me, and that's where I went…So I gave a paper at the conference, and I think that was, I'm pretty sure that was the first empirical work in this area…I just got a, I felt an accord about the cause, because I could see you know this is Pandora's box that that's been opened (Interview).

Crowe had not been connected to the fledgling Australian network before Sweden, and in fact of the eight who made the trip to Sweden, very few were already acquainted. Many of my respondents expressed this sentiment, a kind of relief of finding 'like-minded women' (Hanmer, Interview 3), an 'oh thank god' much like Rowland expressed in Chapter Four. But Sweden also showed that collectively, they could provide a powerful evidence basis for the critical analysis the network wanted to promote. For instance, one of Crowe's findings was that the women in her study were less concerned with biological relationship than their husbands, who generally preferred to have no children rather than adopt.[72] However, it was the women who felt an intense social pressure to use IVF to create a child related to both parents, and to keep trying even when there was clearly no chance for success (Crowe 1987). While the *TTW* writers had theorised that this would be the case, Crowe's research provided some of the first instances of empirical proof.

Similarly, Gena Corea and a colleague who worked for the *Medical Tribune*, an industry weekly newsletter, had carried out a survey of success rate reporting practices amongst

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[70] Japan report given by Satoko Nagaoki, written collectively by Soshiren: FIN 03/01/02/02.
[71] In Australia, this is the equivalent of a UK masters degree, with a postgraduate year of coursework and a 20,000 word dissertation.
[72] Rowland had also found that infertility appeared to be more psychologically devastating when it was the male partner, hence exacerbating the need for secrecy in AID.

the US's one hundred and eight IVF clinics (Corea and Ince 1985; Corea and Ince 1987).[73] The study confirmed that, as suspected, clinics were reporting chemical, ectopic and spontaneously aborted clinical[74] pregnancies as part of their 'success' rates (1987: 135), however, their research uncovered numerous other ways in which the statistics were manipulated. Of the fifty-four clinics who did answer the survey, half had actually never succeeded in producing a child, although some of these claimed 'success rates' as high as 25%. One doctor from a well-respected programme even admitted that Corea's definition of 'percentage of live births per laparoscopy' was the one calculation no clinic ever used, because it would be bad for the team's morale (*ibid*: 134).[75] Because it had been published in a medical newsletter, and not the feminist press, the *Tribune* article was considered authoritative, and was quoted in law journals as evidence of the low actual success rates of IVF, even after the figures were long out of date (Dickey 1986; Harvard Law Review Association 1989; Fabricant 1990). This was exactly the kind of result the network was seeking, positioning their questions as worthy of investigation, and constructing their knowledge as valid evidence.

The various country reports also suggested the need, widely discussed during the strategy sessions which took up most of the last day, of a co-ordinated programme of research in areas which were being systematically ignored: investigating women's reasons for rejecting as well as accepting IVF, causes and prevalence of female infertility worldwide, and exploring the possibilities of initiating self-help counselling groups in women's health centres and the use of 'soft' (Jansen 1987) technologies such as diet, herbs and yoga for aiding fertility. To further provide an evidence basis for feminist work, the entire conference proceedings were gathered into a publication edited by two of the women from the British group, Patricia Spallone and Deborah Steinberg, and published by Pergamon's Athene series (of which Klein was an Editor) as *Made to Order: The Myth of Reproductive and Genetic Progress* (Spallone and Steinberg 1987). In addition to getting information to those who had not been there, publication also constructed an opportunity for validating evidence through academic citation.

But perhaps the strongest epistemological change in Sweden was the incorporation of genetic engineering and a firm stance of resistance into the network's name. This was largely at the behest of the German academic Maria Mies, who was part of the journal collective which

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[73] The 1987 version was delivered at Lund and published in *Made to Order*. The papers are nearly identical.

[74] 'Chemical' is a slight rise in recorded hormones over the first 48 hours, with no further evidence of pregnancy. 'Clinical' is any pregnancy carried for at least eight weeks, regardless of outcome.

[75] There is still considerable flexibility in the reporting of 'success'. Bourn Hall advertises a 33.5% clinical pregnancy rate for IVF in women above 38 in 2010 (Bourn Hall 2011). However, according to the HFEA (2012), predicted success for *live birth per cycle* at Bourn Hall in 2010 averages 16.4% for IVF using own eggs between 38-42, 0% above, and 8% for donated eggs at all ages. Monash advertises an undefined 'pregnancy rate' of 28% in 2010-11 coupled against a 'cumulative rate of live birth with single transfer' which gives the false impression that 70% of women under 35 undergoing IVF took home a baby between 2007 and 2009 (Monash IVF 2012b).

had helped organise a highly successful women-only congress in Bonn, just before the one in Sweden, of approximately two thousand women from unions, churches and the medical profession, as well as grassroots activists. In Bonn, genetic engineering was included as a separate topic and the Congress strongly rejected both technologies. This sentiment was carried to Sweden by the German women.[76] As Maria Mies explained it:

> You cannot just say *on*, feminist interest to moderate and to watch what's going on and then to write down what we know as biologists or doctors or sociologists. We have to say that we don't want this. And that we resist this kind of development (Interview 1).

In her published autobiography, Mies (2010: 214) remembers this as a 'forceful debate', which resulted in the name of the international network being changed from Feminist International Network *on* New Reproductive Technologies (FINNRET) to Feminist International Network of *Resistance to Reproductive and Genetic Engineering* (FINR*RAGE*). Following the crisis model implied in the name 'Emergency Conference', the meeting also set out to produce a consensus statement . The main declaration laid out what would eventually come to be known as 'the FINRRAGE position':

> …the female body, with its unique capacity for creating human life is being expropriated and dissected as raw material for the technological production of human beings. For us women, for nature, and for the exploited peoples of the world, this development is a declaration of war…we do not need to transform our biology, we need to transform patriarchal, social, political, and economic conditions…We resolutely oppose all attempts through genetic and reproductive engineering, to bring about a racist and fascist division of women into 'valuable' women in the industrial world, who should have children, and 'inferior' women in exploited countries who are forbidden to have children (Spallone and Steinberg 1987: 211-212).

There was also a second declaration specifically from the Third World women, which was aimed at the organisers and criticised the packed academic format (*ibid:* 213), demanding room for emotional expression and celebration at the next conference. The intense concentration on information-exchange was also criticised as following male knowledge paradigms by Sarah Jansen, one of the Green Party women who had also helped organise the much more activist-oriented conference in Bonn (*ibid*: 209-210). As a consensus statement, language such as 'declaration of war' was perhaps stronger than some of the women were comfortable with, and indeed some of those who attended the Sweden conference chose not to become involved with the new network. However, it is from these kinds of statements, encoding the language of liberation, that what is generally taken to be 'the FINRRAGE position' is derived.

[76] Klein, comments to draft.

The structure of FINRRAGE after Lund

The structure of FINRRAGE was derived from the women's liberation movement organisations in which its founder members had been active: deliberately non-hierarchical, with no formal membership – to paraphrase Hanmer (Interview 3), one became a member of FINRRAGE simply by declaring one was. Whether deliberate or intentional, the incorporation of 'resistance' into the name could be seen as drawing a boundary so that women who were strongly oriented towards the egalitarian 'increases choice' arguments would not be tempted to join. This would uphold the network's intention to allow anyone to call herself a member of FINRRAGE while still maintaining some control over what might be done in the network's name:

> It was a network, not a formal body of any kind. It was a network put together to exchange information so that people could fight in the place they were in for what they wanted. Basically. As long as people agreed basically with the tenets of FINRRAGE. But if you didn't you wouldn't want to be in it anyway (Rowland, interview 1).

While the regional and international meetings provided the primary opportunity for recruitment, there was no single way to become part of the network, and strategies for expansion increasingly concentrated on identifying 'like-minded' women in new countries, rather than trying to mobilise large numbers of women to join. Members, usually referred to as 'affiliates', could be individual women or entire organisations. Each country had a national contact (NC), or someone responsible for liaising with the international co-ordinator (IC) and with local groups in her own country. There was no limit on the time one could be a national contact, nor did it have to be a single person. In addition to UBINIG in Bangladesh, some of the other whole-organisational affiliates were the Women's International Cross Cultural Exchange (Isis-WICCE) in Switzerland, the Non-Aligned Women's Movement of Greece, Rede de Desenvolvimento Humano (REDEH) in Brazil, Soshiren and FINRRAGE-no-kai in Japan, and the Green Party's Green-Alternative European Link (GRAEL) in Belgium. The vast majority of countries had the same contact for most, if not all, of the international phase of the network. Men were not allowed into the network, although they were occasionally invited to conferences as speakers, or allowed to participate as part of the host organisation.

In theory, the title of NC or IC was not meant to confer special authority on the holder. Their function was the circulation of information, rather than creating strategy and policy as a group within the group. However, because strategy, policy and tactics were created through discussion at the various regional and international conferences, those who were more able to travel did accrue more visibility, and therefore had more influence over the general direction of the network. The IC's main responsibility was to gather the documents sent by the various national contacts and at-large affiliates into 'Infopacks' of approximately 150-200 pages which

were distributed back to network members every 3-4 months; in lieu of dues, women were asked to pay for receiving the packets. Four packets per year cost £35 in 1986 [77], a cost prohibitive to many members, particularly those from the South. However, because they were the communications lifeline of the organisation, containing organisational letters, newsletters, and reports of local conferences and campaigns, as well as research papers and newsclippings, they were frequently sent to whomever signed up for the mailing list, whether or not they could pay. The first pack was sent out in October 1985, and they continued to be the mechanism through which network communications were distributed until 1997. After Sweden, and until she moved permanently to Australia in 1987, Renate Klein – who speaks German, French, Spanish and English – was the IC, based in London. This facility with language helped enormously in pulling the network together in the early years, particularly with connecting FINRRAGE international to the extensive German network of feminists which developed after Bonn. The title then passed to Deborah Steinberg, another member of the British group who had been helping Klein put the packets together, along with the amassed archives of circulated documents. On an international level, the lingua franca was always English, even after the international co-ordination passed to Germany in 1989, and most NCs had good command of the language as a second tongue.

Without formal membership lists it is difficult to estimate the exact number of women in the network at any given time. In addition, the structureless format could hide the fact that some chapters[78] were only one woman, whereas others, such as UBINIG, were large organisations. The national contact for Peru, for example, reported on a 1990 survey taken by the International Co-ordinating Group that 115 individuals and 32 women's groups in her country had contact with FINRRAGE, and that she was in communication with national contacts in Chile, Ecuador, Costa Rica, Bolivia, Puerto Rico, Dominica, Argentina and Paraguay. Since almost nothing in the archival documents mentions FINRRAGE affiliates in these countries, this appears to be a Spanish-language regional network which developed after the conference in Comilla, Bangladesh in 1989. As a rough estimate, the network had national contacts in twenty-six countries after Sweden, thirty-seven after Comilla,[79] and women from at least fifty countries were involved in the meetings in Bangladesh and Brazil in the 1990s. Multi-city networks existed for some time in Australia, England, Spain, Germany, the Netherlands, India, and Brazil, whereas in Austria, Bangladesh, Switzerland and Japan there might be women from several different activist groups in one chapter concentrated in a single city.

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[77] Infopack 2: FIN 06/02.

[78] Many of the European women used this term, although apart from Hanmer, the British group (half of whom were also North American) did not use it to describe themselves. I have chosen to keep it as a way of distinguishing between national groups which used the name FINRRAGE and those such as UBINIG (essentially FINRRAGE-Bangladesh) which did not.

[79] FINRRAGE flyer, circa 1990: FINDE 03/G.1.1.

Demographically, although the picture is by no means complete, the oldest of the women I interviewed were born in the very early 1930s, and the youngest in 1960, making the age range approximately 25 to 55 at the start of the network. Although the women themselves saw FINRRAGE as an activist network, the levels of education were extremely high in both the North and the South, and as discussed above, the vast majority were academics. Many had degrees in several disciplines, many were multilingual, and a noticeable number had lived outside their country of origin. In other words, regardless of region, the overall demographic of FINRRAGE was highly educated, middle class, and cosmopolitan. On this level alone, they are significantly different from what is generally thought of in the SMT literature as a grassroots social movement organisation. However, all of the women I spoke to considered themselves to be FINRRAGE *activists*, whatever their occupation.

Australia: the cradle of reprotech?

As in Germany, the Australians were also building their own national network during this time. Rowland had made a video of a seminar talk given shortly after her resignation (Rowland 1984), which was presented at the July 1984 Women and Labour conference. This was a biennial congress which had been held since 1978, and was considered to be the most important event for Australian feminists, attracting about 1500 participants (Murdolo 1996). In the video Rowland is arguing for a moratorium on further advances in order to allow for public debate and for a measure of control to be drafted on a national level. The primary question for feminists, according to Rowland, was the application of 'choice' to these new technologies. Was IVF really a choice in the face of pronatalist rhetoric – a particularly strong discourse in Australia, which considered itself underpopulated (Hepburn 1992: 8-9)? Could the use of poor and marginalised women's bodies for ova or surrogacy ever be justified by feminists? At what point should individual needs and desires give way to protecting the interests of women as a social group?

The video had a similar galvanising effect at that conference as the panel had at Groningen. In particular, it caught the attention of Lariane Fonseca, a former medical student now turned women's health activist, who was part of the organising committee for the conference. Fonseca became friends with Rowland, and later with Klein, who came to Australia in 1986 on a Georgina Sweet fellowship to do research with women on IVF, and then returned for a post-doc to continue her work at Deakin and stayed. Encouraged by Rowland, Fonseca began to put together a National Feminist Network on New Reproductive Technology, at that point run from the Women's Community Health Center in Adelaide (Interview). In May 1986, along with Australia National University, the network organised a three day national conference, *Liberation or Loss? Women act on the new reproductive technologies,* which

attracted approximately 200 women in the capital, Canberra.[80] Corea and Raymond were flown over to give papers and the workshops were led largely by FINRRAGE women. There was some attempt to include discussion from the perspective of infertile women, although the response appears to have been equivocal. Barbara Burton (1986), an IVF client fighting for better access,[81] gave a paper which clearly shows some of difficulties in trying to negotiate a position which acknowledges a technology as risky and perpetually experimental (and sometimes irresponsibly so, according to her own experience with Monash)[82] yet still supports it. Lindsey Napier (1986), a feminist running an infertility self-help group, also offered a workshop with the attempt to 'establish a dialogue' between the two largely polarised positions of rejection and choice.[83] Although many of the presentations were value-based discussions, the conference also drew heavily on statistics gathered by the National Perinatal Statistics Unit, which had recently issued an overview of IVF outcomes from 1979 to 1984 (National Perinatal Statistics Unit and Fertility Society of Australia 1985), not only for actual births – estimated at about 7% of women starting programmes – but also in financial costs to both patients and the country in terms of health service expenditure on rebates for parts of the procedure, and the extensive medical care often required for miscarriages, caesarean deliveries, preterm and underweight births, and postnatal complications, all of which occurred at much higher rates than the rest of the population (Rowland 1986).

By this time, the amount of money to be made in the private sector was also driving a different kind of innovation. Monash IVF was deep in a controversial negotiation to market its protocols as IVF Australia through a private venture in the US, which would give the university and Wood's team royalties on their techniques worldwide (Hepburn 1992: 59). While the content of the university's negotiations with Wood's team were largely secret, the fact of the transfer had been hard fought in the press from late 1984 onward. The company was eventually launched with AUD$4.5 million in venture capital, about one quarter of which came from a new company licensed under the 1984 Management and Investment Companies (MIC) Program,[84] which was designed to stimulate the transfer of university-developed knowledge into the private sector by offering investors a 100% tax break on their investments in 'small, young, high-growth, employment-creating, export-oriented, and internationally competitive business' (Wan 1989), such as IVF. Even *The Bulletin*, a popular national news magazine, reporting on a rival

[80] Collected conference papers, unbound. Archived at Jessie Street National Women's Library, Sydney: JSNWL Q174.25 NAT.
[81] Near the end of 1983, Burton and two other patients had successfully sued the government of Victoria to lift the moratorium on egg donation which had been imposed after the Waller paper on donor gametes, on the basis of sex discrimination since sperm donation was legal (Machin 2008: 113).
[82] See conference report by Rosemary West (1986) in *The Age*, 14 May: FIN 05/05 (photocopy).
[83] See also workshop report from Barbara Burton in conference collection.
[84] QNP (1987) First MIC proceeds with IVF interests. Sunday Mail, Queensland, 5 July.

clinic's plan to float an AUD$4 million listing on the Australian stock exchange half-jokingly called IVF a 'fertile field for investment' (Martin 1986).

Much of the argument centred on the general public distaste for turning publicly-funded research over to private profit companies, exacerbated in this case because IVF was already too expensive for most couples, and some clinics had waiting lists of years. However, while many reports also took a great deal of national pride in the idea that Australia had something to teach the Americans, who had not been having nearly the same success,[85] a lengthy article in the business press noted that in addition to projected revenue of AUD$6.5 million per clinic per year, licensing the protocols would also have the effect of allowing Wood's team to work outside the very restrictive environment in Australia, where the Victorian government had recently called a moratorium on egg donation, and the Federal Parliament was currently debating a bill by the Tasmanian Senator Brian Harradine, which would outlaw embryo experimentation, possibly shutting down all Australian clinics (Waugh 1986).[86] Within the international network, this and numerous other press articles had been widely circulated through the infopacks, along with letters exchanged between Corea and Monash University, and several leaked documents outlining the University's plans.[87]

These events, reported at the conference by Ramona Koval (1986), a geneticist turned science reporter who was at that point part of FINRRAGE Australia, underlined one of the network's other primary arguments: that IVF was an international, largely unregulated, business which could only be resisted by international co-ordination amongst feminists. Reviewing the conference for *Australian Feminist Studies* (Ramsey 1986: 128, n.9), one of its organisers noted that the declaration passed unanimously at the end – which largely echoed the one passed in Sweden – had gathered enough media attention for the NHMRC to take at least its recommendations for a national commission seriously. This proposal, prepared by the New South Wales Women's Advisory Council, would eventually become the National Bioethics Consultative Committee (Albury, Interview).

Germany: 'Erst die kuh, dann du'

Along with Sweden, France, and Austria (Cohen, *et al.* 2005), Germany also saw its first test-tube babies in 1982 (Lenzen-Schulte 2003). A parliamentary working group on genetic engineering and reproductive technologies had been formed in 1983, under the auspices of Erika Hickel, then a newly elected Green Party MP, and her research assistant, Sarah Jansen

[85] Monash was also circulating articles through its press cuttings service with headlines such as 'US calls on our in vitro experience': FIN 05/05.
[86] Ultimately, when the license was approved, IVF Australia was restricted to procedures which were legal in Victoria, regardless of where they were carried out.
[87] Infopack 4: FIN 06/04.

(Satzinger, interview). This group consisted of people who were expert in veterinary and human medicine, pharmacology and biology, and met in Bonn every six weeks. In April of 1985, Sarah Jansen and Maria Mies, along with several other women from the Women's Section of the Green Party and the journal *Beitrage zur Feministischen Theorie und Praxis*[88] organised a Congress, *Frauen gegen Gen- und Reproducktiontechnik,*[89] in Bonn. The slogan 'erst die kuh, dann du' (first the cow, then you) refers to the links that were drawn at that conference between IVF as practiced in the cattle industry and Corea's idea of the reproductive brothel (Mies 2010: 213). This became the rallying cry for the German network (Mies, interview). Speakers which were invited to the Congress include Renate Klein, Gena Corea and the American biologist Ruth Hubbard, who had contributed a piece on prenatal diagnosis (Hubbard 1984) to *TTW*, the German edition of which, *Retortenmütte*, was launched at the conference.

However, unlike the English-speaking countries so far discussed, the political landscape of Germany in the 1980s was very different. Like elsewhere, the left had roots in the student revolutions of 1968, but in Germany these were a particularly violent reaction to the 1966 election of a former Nazi officer to the Chancellorship and a return to vicious suppression of public dissent (Rethmann 2006: 72). The relationship of the public to the medical profession was also more complex here than elsewhere due to the legacy of medical experimentation and extermination of the disabled during World War II (Robertson 2004: 196). Although IVF was not a prominent discourse in the German mainstream in 1984 (Satzinger, Interview), because of its possibilities for eugenic engineering, it was a serious issue for the left:

> …it was all around the 80s this completely interwoven amalgamation of being anti-nuclear, pro-ecology, feminist, anti-militaristic, anti-violence, justice style of politics. And coming from biology, genetic engineering and reproductive technology were the topics which were the hot topics of the time… So we had networks of people who studied together and worked in these…science for the people groups where we tried to think about the use of science and technology and if we wanted it or if we didn't want it…and at a time where we still could live on a very low economic basis after having studied. You could earn money and save money and have time and to use this time for political work, which is different I think today (Satzinger, Interview).

The result was that well into the 1990s, militant resistance groups were an integral part of the movement scene in Germany. One of these was the Revolutionaire Zelle (RZ), a group similar to the Rote Armee Fraktion (RAF). However, while RAF members lived underground, RZ activists kept their membership secret, held ordinary jobs and were active in other organisations on the left. Rote Zora, the militant women-only cell which split from the RZ in 1984 in order to concentrate on actions against population policy and reproductive and genetic engineering (Rote Zora 1993), was claimed by the left press to have had 'wide popular support',

[88] [Contributions to Feminist Theory and Practice].
[89] [Women against Genetic and Reproductive Engineering].

particularly amongst feminists (Autonomedia 1989; see also Torry 2007 on the more recent resurfacing of Rote Zora member Adrienne Gerhauser), perhaps because they did not engage in personal violence.[90] Property damage was not a contravention of 'anti-violence' within the broader German left, which was strongly based in alternative and liberatory consciousnesses which were anti-capitalist, anti-imperialist, and believed itself aligned with decolonisation struggles going on in the Third World (Rethmann 2006). While the RAF and RZ are remembered for the 1972 kidnapping of the Israeli Olympics team, and the 1976 hijacking of a plane to Entebbe respectively, Rote Zora targeted only empty buildings (Rote Zora 1984). None of the militant groups distinguished between activities such as leafleting, educating people, and bombing; everything was considered part of the work (Autonomie 1980 in Hansen and Belmas 2009). In an anonymous interview given to the popular feminist magazine *EMMA* (Rote Zora 1984), Rote Zora claimed that a spectrum of action was necessary for the women's movement, since most oppression was legal. The bookstores and consciousness raising groups and congresses were considered to be:

> …a strong part of the development of the struggle…. [but it] requires a continuous movement whose aims cannot be integrated, whose uncompromising section cannot be forced into legal forms, whose anger and dedication to non-parliamentary struggles and anti-institutional forms is expressed without limit….Oppression is only recognized through resistance. Therefore we sabotage, boycott, damage, and take revenge for experienced violence and humiliation by attacking those who are responsible.[91]

As their 'contribution' to the Bonn Congress in 1985, Rote Zora set off bombs in the unfinished Heidelberg Technology Park with the aim of scaring away potential investors (ID-Archiv 1993).[92] Although their efforts to use the media to break the 'organised silence' around reprotech were only briefly successful in the mainstream,[93] Helga Satzinger, who was also one of the organisers at Bonn, recalls that after the bombing the Congress was 'overwhelmed by applicants…And that sparked off a dramatic public debate in Germany on reproductive technology and genetic engineering' (Interview). The event was included in the German report given in Sweden, which Hanmer recalls being met with great approval.[94] In August 1985, just after Sweden, Rote Zora helped continue the momentum by bombing the Max-Plank-Institut, and in September, the Institut fur Genetik, both in Köln. All together, Rote Zora took part in a dozen bomb campaigns between 1982 and 1988, alone and with RZ, against targets they

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[90] See *Mili's Tanz Auf dem Eis: Kampagne gegen Bevölkerungspolitik, Gen- und Reproduktionstechnologien* [Mili's Dance on the Ice: Campaign against Population Policy and Reproductive Technologies]: http://www.freilassung.de/div/texte/rz/milis/kampagne.htm.
[91] Available in English at http://www.freilassung.de/otherl/arm/rzora84.htm.
[92] See *Die Früchte des Zorns,* Kapitel XIII Erklärung [The Grapes of Wrath, Chapter XIII Clarifications] explaining these and other bombings: http://www.freilassung.de/div/texte/rz/zorn/Zorn01.htm.
[93] Satzinger, German country report given at the 'Emergency Conference' in Lund: FIN 03/01/02.
[94] Personal conversation, 29 August 2012.

identified as involved in genetic engineering, forced sterilization, sex trafficking, and exploitation of women workers (Rote Zora 1993).

In 1987, several members of German FINRRAGE were arrested as part of a government raid on thirty-three offices and homes of people suspected of engaging in what the government termed 'extreme condemnation' of genetic technologies (Gen-Archiv 1988: 103). This included physicians critical of prenatal screening, and volunteers at the Gen-Archiv in Essen, a mixed-gender group which collected data on reprogenetic technology and served as consultants to universities, trade unions, and churches, whose office was also where the research archives for German FINRRAGE were housed.[95] The official charge was new, amounting to possessing *Anschlag-relevante Themen,* or documents on a subject that had been used as justification for a bomb attack (*ibid).* According to Feyerabend, a FINRRAGE affiliate who was arrested as part of the raid on Gen-Archiv workers, because there had been no success over the years in identifying members of the RZ or Rote Zora, the term had been made so broad that virtually anyone possessing any left-wing literature could now be charged with being a member of a clandestine terrorist cell:

> …why the police and this *Staatshutz* [German Secret Service] something like CIA or so, say that we are a terrorist [is] because we know others who are also involved politically in this issue of genetic engineering and reproductive technology… And everyone who's really engaged in this with a radical position was really suspicious to be part of this terrorist group. And you have this wonderful law which make it possible without any proof to have done any action against the law, you can be judged as being a member of a terrorist group. They do not need to prove it, ja? And that was the case. And two women were put into prison. One she was really, also very connected to FINRRAGE. Ulla Penselin. (Feyerabend, interview 2)

The existence of an aligned faction of women engaging in violent resistance against reprogenetic technologies had long been an open secret within the international network. It had been mentioned in country reports from Germany since Lund, and FINRRAGE members, both individually and in the name of the network, were closely involved in the international campaign for the release of Ulla Penselin and Ingrid Strobl. Penselin was eventually charged with 'bare membership' in Rote Zora and held in prison for eight months before being released without trial. Strobl, a journalist who had anonymously interviewed two members of Rote Zora at the beginning of their anti-reprotech campaign (Rote Zora 1984), was accused of buying the alarm clock which had been used in an RZ action in 1986. Strobl was finally sentenced to five years, though the charges were never proven, and was released after serving two (ID-Archiv

[95] FINRRAGE Newsletter, May 1988, pp 22-24: http://finrrage.org.

1993).[96] The other dozens of arrested activists, including Feyerabend, were all released without charge, although they were kept under surveillance for several years afterward (Feyerabend, Interview 3) and while some Gen-Archiv members fled underground, the organization itself continued to function.[97]

Germany presents the single case where 'resistance' was taken to this level. The raid on the Gen-Archiv, a respected knowledge-producing organisation, was taken by many in FINRRAGE to signal the accuracy of their suspicion that there was more to embryo research than making better babies. The geneticist Paula Bradish, in particular, would continue to try to develop research around the links between IVF and possible military applications, particularly the use of genetically-targeted bioweapons. However, because most this area of research was carried out amongst the German affiliates, it does not tend to appear in the English-language accounts of FINRRAGE written by outsiders, which focus mainly on the network's resistance to IVF (see, for example, Woll 1992; Wajcman 1995; Lublin 1998).

Germany would eventually become the largest and strongest network-within-the-network. The Bonn congress, which would be followed up with an even larger second congress in Frankfurt in 1988, showed that in the right socio-political context, it was possible to gather an enormous number of women around the issues, something which had never happened in Britain. While Rote Zora actions were not taken in the name of FINRRAGE, the German respondents all felt the network certainly benefited from the publicity generated, as the enormous size of the two congresses indicated; however, Germany was also a milieu in which the entire society was implicated in the legacy of eugenics social engineering. This had helped the Green Party, led by the Petra Kelly, into power in the 1983 elections, through a platform demanding that the political establishment honestly address the past, and the continuing abuse of science and technology in the service of domination:

> What was different, there was this big big public debate that was different [than] England and that is due to why the Greens were successful because we wanted this very uh, strong public discussion where does it want to go to, what should the science want to be, in what direction do we want to go. Which was, and we started to talk, we were invited to give talks by women's groups from the unions, from the Catholics, from the Protestants, from the lawyers, women's lawyers federations. We could cross suddenly the political borders and boundaries and talk to each other. That was absolutely amazing, how many people were able to communicate (Satzinger, Interview).

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[96] See *Die Früchte des Zorns*, Prozeß gegen Ingrid Strobl [The case against Ingrid Strobl]: http://www.freilassung.de/div/texte/rz/zorn/Zorn01.htm. Gerhauser was also accused of buying clocks for Rote Zora actions and received a two-year suspended sentence (Connolly 2007; Deutsche Welle 2007)

[97] Since membership in a clandestine organisation is still a criminal offence in Germany, I deliberately did not ask which of the FINRRAGE women besides Penselin had been members. In her comments to this draft, Klein added that even she still does not know for sure.

This kind of broad coalition could also be mobilized in support of single-issue campaigns which did not require long-term coalition, and so could ignore differences in underlying consciousnesses in order to get something done. The swift reaction to Noel Keane, an American businessman who in 1987 attempted to set up an agency in Frankfurt arranging surrogacy services in the US for German couples,[98] showed both how effectively the German FINRRAGE network could use those connections to mobilise a street-level protest, and how widespread the distaste for such activities was. Within weeks of its opening, the city of Frankfurt was persuaded to file an injunction, although no laws had yet been broken, and the agency was closed by court order (Winkler 1988).

Ultimately, the debate in the 1980s which succeeded in bringing IVF under legislative governance in Germany appears to be a result of the ability of the Green party, feminists, disability activists and others on the left to sustain coalition with the churches (Richardt 2003; Robertson 2004), and the inability of scientists to rally support for embryo experimentation because of its association with the Nazi concept of '*unwertes Leben'* or unworthy life (Feyerabend, Interview, see also Robertson 2004, which considers FINRRAGE Germany's part in this debate). Of all the countries in which FINRRAGE had a national network, Germany had the largest, and the most integrated with other parts of the radical left, which made it one of the most effective national chapters.

FINRRAGE in Europe

Although there were already FINRRAGE chapters or affiliates in the developing world at this time, until the very end of the 1980s most of the activity was taking place in Europe. In this next section I will look more closely at the development of the network's knowledge practice through the international conferences which were the major shared events.

Brussels: The Feminist Hearing

Two of the German Green Party women who had attended Bonn, Margret Krannich and Annette Görlich, were now working in the women's bureau of the Green-Alternative European Link (GRAEL) at the European Parliament in Brussels. Neither had backgrounds in science, nor were they academics, but both had been involved in the student movement as high school students in the early 1970s, and had continued into the women's and ecological movements while at university. Both felt very strongly after Bonn that the issue was being taken over by

[98] Surrogacy contracts were judged unenforceable in Germany in 1987 as fathers had no legal claim to children born outside of marriage; any cases had to be treated as adoption, which could only be arranged by the State (Winkler 1988). Both surrogacy and egg donation were banned under the Embryo Protection law enacted in 1989 (Rothmayr 2006) and are still illegal.

male experts and there needed to be feminist voices brought into the discussion on a European level (Krannich and Görlich, Interview). The EU Committee on Legal Affairs and Citizens' Rights had met on 27-29 November 1985 to discuss reproductive technology, and was scheduled to meet again on 19-21 March 1986 to discuss genetic engineering. Görlich and Krannich wanted to use the resources available to them at GRAEL to bring a feminist debate directly to the Parliament.

Brussels was actually two conferences: a formal, two-day Feminist Hearing on Genetic and Reproductive Technologies, which took place at the European Parliament on March 6-7, and a separate FINRRAGE strategy session on the 8th, at the Université des Femmes. Because of the authority conferred by holding the formal hearing at the Parliament, the Hearing gained a great deal of media attention:

> [W]e made the point to invite to hearing also women and scientists who gave a feminist point of view, so this success was about normalcy…We had articles in Belgium and Austria, the television from UK and Ireland and the feminist press…So spreading it in the women's community and in the wider press was quite successful I would say. And also what Margret already mentioned, our aim of influencing the discussion within the European Parliament, within the institution. It was quite interesting because we had the summary of the conference was translated and given to every member of the legal committee of the European Parliament. The legal committee was at the time the committee responsible for the decisions on genetic engineering and reproductive technology. So we were quite proud that our paper was a success and became a kind of reference of the ongoing debate (Görlich, interviewed with Krannich, National Contacts, Belgium).

The minutes for the Feminist Hearing suggest that a variety of viewpoints were brought forward during the discussions. Some of these did valorise motherhood, supporting the technologies as increasing women's choice, while simultaneously promoting population control as a method of 'protecting' third world women against too many children.[99] While this was, in fact, exactly the normative egalitarian consciousness FINRRAGE saw itself as trying to 'raise', such statements banded together also created the perfect opportunity to illustrate the centrality of its argument that *contra*ceptive and *con*ceptive[100] technologies were the same sides of an inherently racist coin through rebuttal. In this sense, although engaging directly with diametrically opposed positions can be counter-productive in a grassroots setting, where there may be no rules to keep the discussion from descending into unproductive argument, in a more formalised venue of debate it can in and of itself become an excellent knowledge-generating process, widening the cognitive space in which discussion can take place. The Hearing did produce some areas of consensus, such as fighting the restriction of NRT to married couples as

[99] Minutes, Feminist International Hearing on Genetic and Reproductive Technologies, European Parliament, Brussels, 6-7 March 1986: FIN 03/01/03.
[100] My use of this term comes from my interview with Jyotsna Gupta, although I have since noticed it appears in much of the literature written by women from India and other parts of the South.

a way of countering state involvement in deciding who was qualified to mother, and calling for feminist self-help groups for infertile women. However, the former illustrates one of the difficulties of reconciling liberatory and egalitarian consciousnesses on these issues, in that 'resistance' becomes defence of provision equally for all women.

Most important for an activist epistemological project, however, giving papers at a meeting sponsored by the European Parliament positioned the women as having had their expertise validated by an important international political body's willingness to listen to their knowledge claims:

> …FINRRAGE and the FINRRAGE women took up the issue very early. And they have been expert very early. So they have been better expert [than] you found expert on the subject in the European Parliament at the time. And that was also a big chance to bring up feminist point of view together with this expertise which was appreciated in a certain sense. And I think it was also one of the reasons why, why they could, why FINRRAGE women could really have some influence in the early years of debate…people and also high educated people didn't have as much information as FINRRAGE women at that time (Krannich, interviewed with Görlich).

The Feminist Hearing also projected the FINRRAGE women as experts by drawing nearly all their speakers from three professional groups which would already be generally recognised as credible knowledge holders: biologists, academics, and activists from policy-oriented organisations. These professions would normally be represented in the policy community, so that despite being both women and feminists (two normally under-represented groups in policy circles) the venue of the debate combined with the women's professional qualifications added weight to arguments which might otherwise have been ignored if seen to be coming from mere activists. While it is beyond the scope of this research to directly trace the epistemic links between individuals and resultant policy, it is worth noting that both of the resolutions which incorporated the official Parliamentary meetings (on artificial insemination in November 1985, and genetic engineering in late March 1986, just after the Feminist Hearing) took a surprisingly woman-centred standpoint which brought it very much within the FINRRAGE arguments, and which were critical of the technologies in ways which the Warnock Report, at that point the gold standard of committee reports (Spallone 1987), was not. In particular, the final resolutions passed by the European Parliament stated that the technologies did not actually treat infertility and that research into preventable causes of infertility was more desirable than technological intervention after the fact, that IVF caused 'great physical and psychological stress' for women with very low success, that there were 'serious problems' of commercialisation, and that sale of gametes or surrogacy services of any kind should be illegal (European Parliament 1989: 171-173). This would suggest that while some of the linguistic rhetoric used by some of the FINRRAGE writers, particularly in the early collections, may have been seen as 'going too far' (Klein, interview), the underlying analysis was *not* always seen as

too radical for mainstream political discussion. Moreover, both resolutions stated categorically that discussion of the disposition of embryos was to be separated from any discussion of abortion (European Parliament 1989: 166, 172). This was a significant departure from the normal committee discourse and -- in theory, if not in practice – an important point which opened a much-needed space for feminists to argue for respect for the embryo's humanity without being forced into an anti-abortion position against their will.

Mallorca: Experts only need apply?

By the end of 1986 there had been several smaller national conferences organised by FINRRAGE affiliates in conjunction with other entities – some large and university-sponsored, like the *Liberation or Loss?* conference in Canberra, Australia, in 1986, some much smaller, like the first Austrian women's conference that same year. There were also a number of regional meetings, often organised with local groups, such as the Women's Reproductive Rights Campaign, which held a meeting in York early in May, 1986.[101] According to the original ideas of the founding group, an important part of the network's mandate would be to reach out to women on a grassroots level, holding the international conferences in places the technologies were not being publicly discussed, rather than someplace they might find a larger Bonn-style audience. Because they also wanted to house all the women together as they had at Lund and in Brussels, this meant the numbers had to be kept small, so that the conference could remain affordable.

In October 1986, the first official European FINRRAGE conference took place in Mallorca, Spain, organised by Verena Stolke, a professor of Anthropology at the University of Barcelona, and Leonor Taboada, who was president of the Asociacion de Mujeres para la Salud (AMS), a Spanish women's health organisation. As in Sweden, women were asked to supply biographical information when they applied for the limited number of places, but this time, controversially, willingness to actively work for FINRRAGE was part of the application and everyone was expected to present. Some affiliates at the Brussels strategy meeting had objected to these conditions on the grounds that it would deter women who might be interested in just knowing more from attending. Ultimately, the decision appears to have been largely economic, based on the limited scope for funding at short notice and the need to provide translation and to support women travelling from the Third World while still keeping conference costs down. This suggests that the original knowledge strategy was already beginning to pull in two directions, one towards consolidating the network's reputation as authoritative experts, and one towards the original stated purpose of educating as many women as possible on a grassroots level so that they could be active in their own countries. Whether deliberate or not, the need to demonstrate

[101] Memo, RK and Debbie Steinberg to NCs, 16 May 1986: FIN 06/03.

some form of credentials when applying to attend would construct the event as a community of experts, in both a positive, and a negatively exclusive sense. To try to limit the negative interpretation that women from the lay public were not welcome to apply, it was decided to advertise Mallorca as a planning meeting for an upcoming Tribunal of Medical Crimes Against Women, similar to the International Tribunal of Crimes Against Women which Hanmer had been part of in 1976, and which had been discussed before as a possible event.[102] The hope was that this would self-select women who were in agreement with the assertion that IVF was a new form of medicalised violence against women, and who wanted to work towards a concrete demonstrative event.[103]

Because it was co-organised by someone within the health community, the Mallorca conference had a significant appeal to feminist doctors, with probably the highest attendance of medical professionals of all the FINRRAGE conferences. It was also the only time men from the 'official' epistemic community concerned with NRT, such as Marsden Wagner of the World Health Organisation,[104] the Chairman of the Spanish Parliamentary Commission for IVF, and the director of the largest maternity hospital in Madrid were invited as speakers. These three appeared as part of the plenary discussion panel, chaired by Klein and Taboada as the representatives of FINRRAGE and AMS, which closed the conference. Whereas the Lund conference had a much more grassroots feel, with all the panels and workshops presented as plenaries and the women helping translate for each other, Mallorca ran more like the large, well-sponsored feminist congresses like Women's Worlds, with official translators and parallel sessions. Much of the work focussed on Spain, with panels by doctors on the delivery of IVF services and by lawyers assessing the Spanish Parliamentary Commission's report on Human IVF and AI (Spain. Congress of Deputies 1986), which had been passed through Congress with little debate in April (Varela and Stolcke 1989: 232). There were also a number of papers from the German and British women on strategies for resistance, and several of the PhD students (Burfoot, Crowe, Franklin, Steinberg, and Wilkens) presented papers based on their research. Loosely, the activities could be grouped into four areas: courses on the basic science of genetics run by biologists, papers on the technoscientific state of the IVF industry delivered by doctors and scientists, non-technical papers on ELSI aspects including a half-day on population control and a full day on motherhood mostly delivered by academics, and strategic activist information. The informal 'country reports' of Lund were now delivered more like conference papers --

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[102] This meeting, organised by Diana Russell, covered everything from medical crimes, to rape, to abuse of lesbians, and spawned the first Take Back the Night March (Klein, comments to draft).
[103] Minutes, Brussels strategy meeting: FIN 03/01/03.
[104] Wagner later sent a letter to Klein thanking her for sending him her 'outstanding' *Exploitation of a Desire*, and enclosed the draft of his highly critical WHO report on IVF for early circulation to FINRRAGE members. He also mentions giving a plenary address at the 6th World Congress on IVF, which created 'quite a storm' and being 'delighted' that Corea was also there to offer support. (Letter with attached draft 'Is IVF Appropriate?', 24 April 1989: FINDE 03/G.1.2.4.)

Hanmer's report on Britain, for example, was titled *Political Issues and Problems in Organising Opposition to Reproductive and Genetic Engineering*. Each day concluded with a long, open-ended strategy session which began after dinner at 7pm and sometimes lasted well into the night.

In some aspects, the conference marked a further step towards mainstreaming a feminist critical perspective through the involvement of 'insiders' – a marked difference from the forms of expertise of the women who attended Sweden, most of whom had only a popular understanding of the issues at the time. This was also the first conference at which the question of professionalizing as an NGO was seriously discussed, although no clear answer emerged. Organisationally, Brussels had shown that there was a possibility of creating resistance at a legislative level, and that there was indeed a tiny space for many elements of their critique within the fledgling epistemic community around NRT which could be made larger if FINRRAGE had the authority of NGO status. This was reinforced by the quasi-professional aspect of the Mallorca conference.

However, for reasons which are not entirely clear, the strong trajectory of FINRRAGE International appears to have slowed after Mallorca. This may be a natural consolidation phase in which the network, now firmly established, settled into a process of using the infopacks for collective communication, while individual women and groups were busy focussing their attention on their own countries, most of which were now entering a critical stage of public debate. Amongst the founder group, there also appears to have been a definite feeling that the network now had a life of its own, and their own attention had moved towards securing funding for an academic journal, *(Issues in) Reproductive and Genetic Engineering* (IRAGE), which they received at the end of November 1986, and which took up most of their energies throughout 1987 and 1988. The next international meeting was therefore not a FINRRAGE conference per se, but rather several strategy days attached to the very large conference organised by the German network as a successor to Bonn.

Frankfurt: Frauen II 1988

The question of whether to become an NGO was still unresolved two years later, having come up again during the planning for the European FINRRAGE meeting which would take place in Frankfurt in late October 1988.[105] This would be just before the second German Congress, at which it was hoped to repeat the success of Bonn. This second conference was indeed slightly larger, and according to Klein, reporting in the inaugural issue of *(Issues in) Reproductive and Genetic Engineering* (IRAGE), the academic journal which was started by the founder group in 1987, firmly rejected any 'wishy-washy statements' about choice (Klein 1989b:

[105] See discussion in Minutes, Brussels strategy meeting: FIN 03/01/03.

91). In addition to debating the various bills regulating embryo research which were being drafted in different parts of the country (see Robertson 2004: 101-103), the conference was also overtly billed as a response to the new German law on terrorism which had allowed the raids of the year before, and which sought to criminalise all left-wing activity by association. Although Ingrid Strobl was at this point still in jail awaiting trial, there was an enthusiastic heroine's welcome for Ulla Penselin, who had been released without charge in August, and made a plenary address demanding Strobl's release (*ibid:* 93). The main focus, however, was on the eugenic implications of controlling women's reproduction, repeating the emphasis on uncovering the connections to contraceptive testing in the South, particularly through researching German pharmaceutical organisations producing hormonal drugs.[106]

The FINRRAGE meeting was a two day event, with the first day devoted to reports about the legal situation in each country, and a discussion about strategy. The question of NGO status was considered important enough to be allotted a two-hour slot all its own, and Hanmer had prepared a paper delineating pros and cons, which was circulated before the event.[107] One major con was that they would need an office, as they would need to liaise with UN agencies, which meant substantial funding would need to be found. The positives would be access to information, the right to attend certain meetings, and the right to submit responses to proposed policies. Hanmer's conclusion suggests that this would be useful for fund-raising (a constant problem) and with 'making our position known and acceptable, and having the chance to influence national policies through international intervention'[108] -- in other words, validating FINRRAGE as part of the international epistemic community forming at UN level around biotechnology and related issues. Despite this preparation and the time allotted for discussion, there was still no clear mandate either way. Much the same fate would befall the plans made in Brussels to hold an International Tribunal of Medical Crimes Against Women.[109] Both point to two clear problems of resources – that of money and of time/energy which the women did not have beyond what they were already contributing. Becoming an NGO was likely to solve the first, but only by exacerbating the other. However, the inability to come to a decision would also become its own problem in light of increasing pressure from the outside in terms of dwindling funding streams and the end of the kind of large-scale protest actions from which new energy and a next generation of participants could be drawn.

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[106] Plenary address by Women's Centre, Bochum, in the conference reader: FIN 03/01/05.
[107] Letter, Isel Rivero (UN NGO Affairs Officer) to JH, 21 Sep 1988, and attached JH notes: FIN 02/04/02.
[108] JH notes, *ibid.* Emphasis mine.
[109] UBINIG, along with several other organisations, would eventually organise an 'International Public Hearing on Crimes against Women Related to Population Policies' as part of the NGO forum at the United Nations International Conference on Population and Development (ICPD) in Cairo in 1994 (see Klein 2008: 164).

Bringing the West East: Comilla

Much of the information on new contraceptives (particularly Norplant and Depo-Provera) which would be used by FINRRAGE affiliates in the West had its origins in research carried out by UBINIG and other loosely affiliated women's health groups in Bangladesh and India. However, there had long been a sense that, as Akhter later wrote, the 'intensity of experience' which women from the third world tried to bring into the population arena was lost in the Western settings of most conferences, however sympathetic the women tried to be. [110] The choice of Comilla was therefore strategic, to allow the Western women to experience the realities of Bangladesh, one of the world's poorest developing nations, and to allow activist women from across South Asia, normally unable to participate in international conferences unless they held positions in well-funded NGOs, to attend and to be the majority group. This was considered essential to strengthening the network's arguments about the connections between contra- and conceptive technologies, by learning from Southern organisations resisting population control, and explaining how NRT was likely to affect poorer women, so that their spread into poorer countries[111] could be better monitored and resisted at both local and international levels. After being postponed for a year due to red-tape from the Bangladeshi authorities, the second international conference finally took place at the end of March 1989, at a small agricultural college near Comilla, about 60 miles south of Dhaka.[112] Unlike the other conferences, there was a roving population at Comilla, with a number of delegates coming down from Dhaka by bus for only one or two days, including several men from UBINIG.

As shown in Chapter Four, the network had originally incorporated resistance to prenatal diagnostic techniques such as amniocentesis, partly because they were increasingly employed to serve the purpose of sex selection in son-preference countries such as India (Kishwar 1985; Patel 1989; Lingam 1990), and partly because of the increasing pressure in the West to screen all fetuses for disability as a routine part of prenatal care (Bradish 1987; Leuzinger and Rambert 1988). Prenatal diagnosis was still a key concern, particularly amongst the German and Japanese groups, both of which were extremely sensitive to issues of eugenics (Satzinger, Feyerabend, Tsuge, Nagaoki, interviews), and had members who were also disability rights activists, such as the German law professor Theresia Degener, whose mother had been given Thalidomide, causing her to be born without arms.[113]

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[110] *Women's Declarations on Reproductive and Genetic Engineering*, pamphlet prepared by UBINIG for the 2004 World Social Forum, donated to researcher by Farida Akhter.

[111] The first 'official' IVF baby in India was born in 1986 (Kumar 1997), and first private IVF clinic opened in 1989 (Jaslok Hospital 2006).

[112] See FIN 03/01/06, also conference proceedings published as *Declaration of Comilla* (FINRRAGE-UBINIG 1991).

[113] Thalidomide, prescribed for morning sickness in the late 1950s, caused severe limb defects in thousands of children before finally being removed from the market in 1961. It was developed by a West

In an international setting such as Comilla, however, the question of being able to screen pregnancies for disability could become extremely complex. This came to a head in a panel around the issue of Bhopal, where a gas leak from a Union Carbide plant in 1984 had killed at least 20,000 people, and exposed approximately 200,000 to varying levels of toxicity over the next several years (Varma and Varma 2005: 38). Of the exposed women who were pregnant at the time of the leak and survived, 40% either miscarried or delivered stillborn children (*ibid:* 43). In the years directly after, the spontaneous abortion rate remained an estimated four to ten times the Indian average, and about half the exposed girls who had been pre-adolescent, including those still in utero, were experiencing what was termed 'menstrual chaos' in that their cycles were heavy, painful, irregular or non-existent (Sarojini, Chakraborty, Venkatachalam, *et al.* 2006: 72). In February of 1989, a highly controversial final settlement between the government of India and Union Carbide had been reached, reducing compensation from $3bn to £489m, very little of which would actually go directly to the victims (Varma and Varma 2005: 43). In activist circles, there was a great deal of protest around the issue, both locally and internationally, particularly amongst women's groups in nearby Bombay. One activist from FINRRAGE India, Nalini Bhanot (1991), gave a paper on Bhopal at Comilla, requesting that the conference pass a resolution condemning the settlement, which it did. However, the more contentious issue was that some Indian women's health groups also wanted the international network to support their campaign for ongoing free access to amniocentesis and other forms of prenatal diagnosis for women who had been affected by the gas leak. This ran counter to the position of many in FINRRAGE, both Northern and Southern, who were adamantly against any form of prenatal testing. As the major outcome of the Comilla conference was the establishment of an Asian hub of FINRRAGE, with approximately 80 women from Japan, the Philippines, Malaysia, India and Indonesia as well as a large contingent from all over Bangladesh attending the FINRRAGE-UBINIG Regional Meeting the following year,[114] it is difficult to assess the true scope or impact of the disagreement. Akhter, as organiser, did not feel that it had disrupted the conference (Interview 3), however, some of the European women interviewed felt very strongly that it had, and that this pointed to deeper problems within the network's knowledge practice. While most felt quite strongly that FINRRAGE as a network did have a position, others did not feel that this was something that had ever been formally decided:

> …there never was a position. Even if some people thought there was a position. Um, there never was. And I mean there were debates about that, as I recall…and probably the outside world thought there was *A* position. But that never was the case…It certainly didn't mean, you know, acceptance. I mean, obviously acceptance wasn't going to be, you know full acceptance wasn't going to be the option. But certainly for

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German company which now markets a birth control drug which it claims also benefits skin and hair (Grünenthal GMBH 2012).

[114] Held in the same place on 10 May 1990: FINDE G.1.6.

> someone like Theresia Degener, um, who was adamant that genetic screening and diagnosis for certain genetic ailments, she was, if I remember correctly, would have said that we shouldn't be having this at all. And there were other women who were saying I think we should be making a critical stance on this, but I don't know about the 'at all' um, business…we never had a hands up you know, in vitro fertilization. Is everybody, is everybody saying that all in vitro fertilization should be ended now?...You know, the word wasn't opposition, the word was resistance. (Pat Spallone, Britain).

Spallone's quote is similarly echoed throughout the interviews in the sense that where 'the FINRRAGE position' was interpreted as a singular political position held by the international network, it was considered to be – as Feyerabend referred to it – a 'radical no' (Interview 3), which most of the women did indeed share. However, others felt more ambivalent, or at least questioned how far that could be operationalised as a tactic (Crowe, Interview). 'Resistance' therefore, could be interpreted as delineating a fuzzy border of 'like-mindedness' around the 'radical no' which allowed for different personal positions to exist as long as they did not stray so far as to become the opposite. For example, writing about Comilla in *off our backs,* Alice Henry – a member of the Women's Reproductive Rights Information Centre in London, and a longstanding reporter on the issues – echoed the strongly egalitarian discourse which was beginning to produce a similar split within the larger women's health movement in which FINRRAGE was embedded:

> I'm a simple feminist, and always operated on the principle of a woman's right to chose as a basic idea...if that makes me a bourgeois liberal, so what? (Henry 1989: 5)

Henry's critique may have been a direct response to the paper given by Akhter at the opening plenary (see Akhter 2005: 67-74), which states that FINRRAGE has a 'distinctive philosophical position' and that the conference had a 'transformative' intent; the implication being that it was designed to directly problematise the discourse of 'reproductive rights' which Henry, who had long argued for IVF and surrogacy to be paid for by the NHS (see Henry 1984; 1985), and others in the Women's Global Network for Reproductive Rights (WGNRR) espoused. The WGNRR, which had grown from the 1984 Amsterdam conference, was an expansion of the abortion rights agenda to a more global reproductive rights framework (Maiguashca 2001: 143). Structured similarly to FINRRAGE as an umbrella network of organisations, networks and individuals, it does in general lie much closer to the egalitarian model of greater access to the political economy pursued through existing institutions and does accept funding from development agencies (WGNRR 2012), which UBINIG adamantly did not (Akhter, interview). More important perhaps, the WGNRR had been successful in establishing itself within international population policy circles during the same time frame as FINRRAGE, largely helped by its significantly better financial position during the period 1984-87. However, by 1987 this first tranche of funding appears to have run out (WGNRR 2012). Although some of

the FINRRAGE women belonged to organisations which were part of the WGNRR, and some in the WGNRR have positions on IVF and prenatal diagnosis similar to FINRRAGE, many of the interviews communicated a sense that by the end of the 1980s, the two networks had become increasingly hostile.

Within the British group in particular, there was also a legacy of personal antipathy towards certain individuals within the WGNRR as a result of the 1986 dispute in *Trouble and Strife*, as well as towards the network's extension of a rights-based approach to IVF and related technologies. This was also part of the political context of the dispute at Comilla. Although both networks shared the position that poverty and underdevelopment were not a result of overpopulation, but of the First World over-accumulating the resources of the Third, the solutions proposed were directly antagonistic, with WGNRR pursuing the idea of a feminist population policy, and FINRRAGE International standing with Ahkter, who argued that all population policy was enacted upon women's bodies and therefore could never be made 'feminist' (Interview 2) . This will be discussed in greater detail in the following chapter, however this larger antagonism does seem to have formed a key underlying element of the dispute at Comilla. In a letter sent to Hanmer during the planning phase for the conference, Akhter had expressed the need to maintain a strongly resistant stance, not only against population control, but also against Southern groups expressing a more Western-liberal tradition:

> It is extremely important, Jalna, that the philosophical position of FINRRAGE should be clear to all women. It is true that we have not contemplated on such vital question. As a result, much confusion is still existing between two important women's international bodies, FINRRAGE and Global Reproductive Rights. To me, it is completely two different trends in women's movement and have enormous significance for the future. Our difference must be articulated clearly and precisely. So that the necessity of two organisation becomes clear. I fully belong to FINRRAGE because I have known from my experiences and research that this is the only best alternative for the third world women.[115]

Akhter here is calling on direct forms of knowledge which would not be available to most of the Western women, who had never lived in the developing world, nor understood the specificity of its patriarchal systems. In this she was strongly backed by Maria Mies, who had taught at the Goethe Institute in Pune, India for many years as a young academic, and by Klein and Hanmer, all of whom were close friends and – not accidentally – shared Akhter's strongly liberatory-alternative consciousness, which advocated for empowerment for the poor through

[115] Letter, Farida Akhter to JH, 10 March 1988: FIN 07/07 box 2.

the traditional subsistence economy and resisting capitalist appropriation of rural farmland and forcible inclusion in the market.[116]

It is possible, therefore, that the younger members of the network, having been children in the 1960s, would be less likely to utilize alternative forms of consciousness than some in the older generation who were able to draw on their experiences in neo-Marxist movements against imperialism, in the consciousness-raising era of the WLM, and on their academic identities as pioneers in women's studies. Perhaps more importantly for some, there had been an enormous epistemological shift between the academic generations represented within the network:

> I'm pretty sure that there became an intellectual difference, or a perspective difference…wanting to look at women's experiences not necessarily as…victims. And I think that started a, a, a difference within FINRRAGE. And I think that came to a head at the conference in Bangladesh. So there was a very anti-poststructuralist feeling from others in FINRRAGE at the time…I think that was the intellectual foundations of some people leaving FINRRAGE. Including myself. (Crowe, Australia)

In addition, many of the PhD students, being relatively unencumbered by family and career and having access to travel funding to attend conference through their universities, had formed a strong friendship network through the international meetings. In this sense, the confrontation at Comilla can also be seen as a conflict between what was essentially two close-knit circles of friends -- a not infrequent occurrence in structureless organisations, where one group will be experienced as dominating in the absence of a hierarchical leadership, whether or not it means to take control (Freeman 1972). Moreover, as Davis (2007) argues, with reference to similar arguments within the editorial group of *OBOS* taking place at about the same time, women outside the founder group who had also been with the network since Sweden may have felt that denial of their analysis was also a denial of what they saw as their rightful part in the origin story of FINRRAGE. However, suggesting that the differences were *merely* generational would be far too simplistic. Some of the youngest members, such as the Austrian NC Aurelia Weikert, did agree with the position of 'strictly no' (Interview), and some of the WLM generation women did not. Penny Bainbridge, a longtime women's health activist with York WRRC, felt quite strongly that the position put forward by the founder group at Comilla was 'hardline and inflexible…like a fundamentalist approach to things, and all the down sides of that.' Comilla had been Bainbridge's first experience with the international network, although she had been with the British group for some time, and seems to point to a significant difference in praxis between this and the local meetings, which Sarah Franklin, another member of group, described as:

[116] UBINIG at this time was developing a theory of preserving biodiversity in life styles, as well as knowledge systems and farming techniques, which has now become a major movement in Bangladesh. Pamplets for Nayakrishi Andolon, donated to researcher by Akhter: FIN 13, (see also UBINIG 2010).

> …a model of feminist education. Each one was like a teach-in, everybody would bring stuff, everyone would bring their perspectives, everyone had their own expertise that had been honed in both their professional and their political life which for all of us would overlap a fair amount anyway. I wouldn't say there were any particular leaders in those discussions at all, I would say that they were very strikingly egalitarian…

Franklin also differentiates the style of the local group from meetings of the international network, which could be 'quite hierarchical' (Interview), suggesting that within such a broad international context, where there would always be a host of new faces, there was more of a feeling that the fuzzy borders were being pushed too far towards the 'choice' perspective and that the identity of the network as 'resistance' needed to be more vigorously defended than in local groups, where everyone's individual position was known, and a collective praxis had many instances in which to form.

The argument over Bhopal also appears to have dovetailed with a dispute over the book contract for the publication of papers from the Comilla conference, which also came to a head at the FINRRAGE strategy session, and which had far more significant consequences. Three of the women in British FINRRAGE had negotiated a contract for the conference proceedings with Zed Press, but others argued it had already been agreed that UBINIG would publish it in Bangladesh.[117] Although Zed voided the contract, and the British group all attended Comilla as planned, the two disagreements seem to have drawn together at the strategy meeting, and left many of the attending women with extremely strong negative feelings, even years later when recounted during the interviews. The unfortunate, and very visible, result for FINRRAGE was that the British group became unable to function, and by July of 1989 all the women who had been at Comilla save for Hanmer had left the network entirely.

What is perhaps most important about this story from the point of view of the network's cognitive praxis is that up until this point, all twenty-four narratives are extremely positive. It is in recounting the events at Comilla that fundamental tensions around the concept of 'the FINRRAGE position' begin to emerge. Whatever the external and internal causes, what is apparent is that the inherent tensions over what 'the FINRRAGE position' was and how it was produced which came to a head at Comilla had been embedded in the network's knowledge practice from the start. Nor were these arguments unique to FINRRAGE, but rather they appeared to be part of a broad shift in the character of activist consciousness being echoed not only throughout feminism, but across the spectrum of movements which had their roots in the strongly liberatory-alternative consciousness of the 1960s.

[117] Minutes, FINRRAGE International Meeting, Comilla 26-27th March 1989: FIN 03/01/06.

Conclusion

This chapter has concentrated on the expansion of FINRRAGE as an international network through tracing its knowledge practices through its regional meetings and international conferences. A series of events took place between the Groningen panel in 1984, which culminated in the formation of an international network *on* reproductive technologies. This transformed at the 'Emergency Conference' in Sweden in July 1985, to The Feminist International Network of *Resistance* to Reproductive and Genetic Engineering. The incorporation of resistance into the network's name was a signature part of its cognitive praxis, shaping it into a form of action, rather than a mere knowledge-sharing mechanism, as well as adding genetic engineering to its knowledge interests. Although it is difficult to determine the exact size of a network with no formal membership, internal documents suggest the network grew from approximately twenty-five countries to approximately thirty-seven during this time, with extremely high levels of education amongst participants from all regions.

In addition to the FINRRAGE meetings, there were also two larger conferences in Germany in 1985 and 1988, both gathering over two thousand women, and a number of smaller local conferences across the world, particularly in the year just after Lund. Meanwhile, the network was developing not only its knowledge base, but its international reputation as a source of credible expertise through taking advantage of members' access to institutional resources such as the European Parliament. While most of the international activity took place in Europe in the 1980s, the network sought to remedy this by holding an international meeting in Bangladesh, organised in connection with UBINIG. However, a number of longstanding issues came to a head at Comilla, which would significantly reshape the network. In the next chapter I shall continue to trace the history of the network from Comilla onward, including a discussion of the network's publishing projects, which peaked during this time.

CHAPTER 6 – ABEYANCE

> *What can politics actually do in these powerful, in these times of big, big powers, which aren't just dramas?... So, there is a success, I mean, is just to keep a voice up there in the debate maybe.*
>
> *(Helga Satzinger, Berlin group, Germany)*

Abeyance of a social movement is a difficult process to pin down to a starting point. Organisations which either do not have a single issue, or which are able to quickly identify another concrete goal which would appeal to the same constituents are more likely to survive between waves of mass activism. These, according to Taylor (2007), go through a particular process of abeyance which sustains them until the political landscape is more amenable to large-scale action. This requires that at least some part of the original group remains committed in some form of organisation stable enough to preserve the movement's culture for long enough that a resurgence of activism around the issue will provide the movement with new blood. This chapter will consider changes in the knowledge practices of FINRRAGE as an international organisation as it attempted to preserve an oppositional consciousness around NRT towards a possible future wave of feminist mobilisation.

FINRRAGE post-Comilla

While the breakup of the British group marks a significant change in the network's structure, the other major change was the movement of the international co-ordination to Germany. This had been planned since 1988, as Klein was now permanently in Australia, and Deborah Steinberg, who had taken over as IC, was finishing her PhD and had asked to be replaced. The move, therefore, was not the direct result of the argument at Comilla, although it may have been a subtle contributor to the breakup of the British group, as without the research archive and the role of IC, the British members may have felt that disbanding would not endanger the international network, which does not seem to have been anyone's desire.

As the largest and strongest national network, the German women now had affiliates and groups in Köln, Berlin, Frankfurt, Essen and Hamburg. Seven women from these groups formed an International Co-ordinating Group (ICG), along with Linda Wilkens from the Netherlands. This group was also able to take advantage of longstanding connections with the Green Party to apply for a grant towards the next international conference, which was to be organised by Thais Corral and Ana Regina Dos Reis of the Brazilian affiliate organisation Rede de Desenvolvimento Humano (REDEH) to take place in Rio in 1991. Dos Reis, who had been an affiliate since Lund, knew the German women well and was on the Editorial Advisory Board

for the network's peer-reviewed journal, *(Issues in) Reproductive and Genetic Engineering* (IRAGE), which had published its first issue in 1988. She also had connections with the Health Ministry, which – as in Mallorca – gave the conference an air of being associated with the medical profession, which helped legitimate it as an event of national interest. As a first order of business, therefore, the ICG called a European meeting, hosted by women from the Swiss groups Antigena and Nogerete, to discuss the direction of the network, and begin planning for the Rio conference.

Boldern 1990: Europe regroups

Several new women came to the European meeting in Boldern, Switzerland in October of 1990, representing Poland, East Germany and Hungary for the first time. Although the women from the former Soviet bloc were themselves interested in the discussions around conceptive technologies, their key concern was rollbacks on access to abortion, which had been legal in the first trimester under the former socialist governments.[118] These women all felt that the longstanding hatred of the state meant that people in their country were 'not ready for this kind of sophisticated debate' about NRT, a technology which no one really understood, and which was still hardly used, when the right to abortion was under threat from the new regimes.[119] The main focus of this meeting, however, centred around the problems which had arisen at Comilla. This was somewhat disconcerting for the new women, who had not been there, and reflects one of the inbuilt difficulties in a worldwide network which met face to face infrequently, as there was no other time such matters could be discussed. For those who had been with the network since Lund, however, the question of conflict resolution was an issue which urgently needed resolution:

> How do we solve conflicts along democratic lines? When you have a network it's very difficult. I mean everybody can throw herself out as a leading person because you don't have an organisation and a hierarchy. That is a good tradition from the feminist movement, but that also means that some people can use their resources, their strength, their intelligence to carry through decisions that are perhaps not democratically carried through…this really is the major problem because I think FINRRAGE cannot have a position on anything. I think we agree on intentions and analysis and understandings of particular technologies. But the discussion on prenatal diagnosis [at Comilla] clearly shows that even though most of us agree on the basic analysis that this is a eugenic technology with great danger for women, many disagree on the practical applications…

[118] Transcripts of strategy meetings, Boldern, 11 Oct 1990, "new countries" transcript: FINDE 03/G.1.2.4.
[119] The first Polish IVF baby was born in 1987, and the first in Hungary in 1989. Hungary is now a major destination for cross-border reproductive services (Knoll 2012).

> we have an analysis on prenatal diagnosis but we don't have a position on it "yes" or "no" (Lene Koch, meeting transcript).[120]

The points raised here are all important aspects of the network's cognitive praxis. First, there is the question of the implicit, often unacknowledged power which is likely to accrue to the founder group of any organisation, however non-hierarchical its structure (Freeman 1972). The desire to remain non-hierarchical, however, meant that up until this point there had been a tendency to avoid developing the protocols which would be necessary to negotiate a collective group-level position on specific technologies across diverse cultures. Instead, there had been a tacit reliance on the declaration from Lund as a kind of border beyond which only those who agreed in principle – who were 'like-minded' -- would want to pass. It does not set out specifics, and in fact this had been seen as a strength, allowing the network's analysis to develop through empirical research and collective debate, what Mies called her postulate of 'action then reflection' (Interview 1), or theorising from experience, which was the methodology for producing knowledge which most of the women shared. The distinction Koch makes between analytic tools and political positions describes the central problem of applying theory to political practice, particularly in the absence of procedures for negotiating a consensus position. One of the difficulties of a liberatory epistemology of 'knowledge derived from women's experience for women's empowerment' is that all members of the category do not always have the same experiences, nor do they agree on what will be empowering – in the particular case of NRT, the counter-claim that 'women want it' was doubly powerful since the dominant culture(s) also claimed that a women's true purpose was only fulfilled by having babies, creating an impression of 'feminists against women' (Franklin, Interview). However, this is not a tension found only in feminism. Any strongly liberatory consciousness in an identity-based movement will inevitably produce tension between a collective analysis and individual lives, so that sometimes positions which are analytically consistent can wind up feeling morally wrong. This is a problem which even a strongly egalitarian political consciousness, rooted as it is in the promotion of structural conditions which facilitate individual liberty to pursue personal aspiration, must still negotiate in terms of which conditions are most likely to benefit which individuals to take which actions. However, because this consciousness also tends to produce more traditionally structured organisations with codified decision-making processes, the question tends to be tactical, rather than strategic. It is not that these two forms of political consciousness are inimical, rather that they overlap in an inherently unstable manner, subject to broader social changes, and can be found on every level from the larger society to the individual. A case such as that presented by the women of Bhopal illustrates the tension of the liberatory consciousness in a way that is

[120] Transcripts of strategy meetings, Boldern, 11 Oct 1990, "clearinghouse" transcript p.2 : FINDE 03/G.1.2.4.

relatively unproblematic within the egalitarian one: a class-level rejection of amniocentesis on the grounds that it was a technology whose sole purpose was to control women's reproductive decision-making processes through imposing a regime of validating who was worthy of being born, could mean devastating individual consequences for poor women and their disabled children in a society with no access to basic health care and no state support. However, agreeing that prenatal diagnosis should be allowed in cases like Bhopal or Chernobyl undermined the fundamental analysis that these technologies were shaped to facilitate eugenic control of reproduction, and could be interpreted to suggest that some babies with impairments should indeed not be born. Moreover, sensitivity to embodied and cultural forms of knowledge, while essential, could not necessarily help solve such dilemmas because many of the Indian activists had long been trying to have the government ban the technology altogether because of its widespread and increasing use for sex selection, and were also divided as to its use in Bhopal.

In other words, what Koch appears to be questioning is the network's cognitive praxis, in that the argument at Comilla had thrown open the question of what range of positions could be expressed as a *FINRRAGE* (not an individual) position. In the same meeting, Ana Regina Dos Reis, the Brazilian NC who had been with the network since Lund, also felt that it was time to consider this a problem which needed urgent action:

> In Bangladesh other women or other networks were always asking us: What is the position of FINRRAGE regarded to…And I came up answering: I have an information packet. I think this is one level of the problem. I think we have to decide finally to have not dogma but some minimal points because one thing is to resist to something, another thing is to be "for" something (Ana Regina Dos Reis, meeting transcript).[121]

Dos Reis's statement reflects another key point of tension after Comilla. If some people were no longer comfortable representing FINRRAGE because they didn't know what range of positions beyond the 'radical no' the international network did in fact support, this would mean that they would cease to speak as FINRRAGE and the network would effectively become invisible to all but its members. To be *for* something, to advocate a particular solution beyond a general 'stop', however, would require that the network transform its cognitive praxis completely, setting up some kind of structure to agree an official position on each group of technologies, and adopting strategies of advocacy and lobbying rather than simply generating and sharing knowledge for resistance. Some women had indeed already gone the advocacy route -- in 1987, in the wake of the Whitehead case,[122] Raymond and Corea had created the National

[121] Transcripts of strategy meetings, Boldern, 11 Oct 1990, "clearinghouse" transcript p.4-5 : FINDE 03/G.1.2.4.

[122] Contract surrogacy became a focal point for feminist critique in 1987-8 during a widely covered battle in which a New Jersey woman, Mary Beth Whitehead, lost custody of the biological child she'd refused to surrender to the commissioning father. While the contract was ruled illegal and Whitehead's legal parentage restored on appeal, the judge decided that reversing custody was not in the best interest of the

Coalition Against Surrogacy along with Jeremy Rivkin of the Foundation on Economic Trends, and several women who had given up genetic children, including Elizabeth Kane, the first US surrogate, who had since become an activist against the practice.[123] The group had introduced itself at a major press conference in Washington, DC which had been carried on C-SPAN, the US congressional and policy television network, and Raymond and Corea had testified at several state hearings in the US, which did lead to the banning of surrogacy contracts in some states. Raymond also testified at a 1991 US congressional hearing on fetal tissue transplantation research, where she used the same woman-centred analysis to question where the fetuses were coming from, how abortion practice is altered for fetal tissue procurement, and the potential use of this for genetic engineering.[124] Rowland had been invited to join the Family Law Council, which had produced a set of recommendations for clarifying the legal status of children born through NRT at Commonwealth level (Australia. Family Law Council 1985), and several women from FINRRAGE-Australia – Rowland, Lariane Fonseca, and Ramona Koval – are listed as having given written and oral testimony before the Senate Select Committee on Human Embryo Experimentation in 1985 (Australia. Senate 1985). Louise Vandelac, who had been the francophone NC in Montreal, and Annette Burfoot, a Canadian post-graduate who was part of British FINRRAGE and returned to Toronto after obtaining her PhD in 1989, were both invited to join the Royal Commission on New Reproductive Technologies enquiry, a massive undertaking including discussion with at least 15,000 individual Canadians, obtained through a variety of mechanisms such as interviews, questionnaires, and focus groups (Chenier 1994), which was finally published as *Proceed With Care* (Canada 1994). The report recommended banning surrogacy and the sale of gametes, and required the licensing of clinics by a body similar to the UK's HFEA. According to Burfoot:

> Who I was, and my contact, the result of my contact with FINRRAGE certainly fed into that report. I was critical of the technologies, I argued that there were health concerns, that there were other implications, social implications of what was going on here. And if you read the report -- I'm not saying I was responsible for the report, but my voice in a very very small place is there. And if you read the report, there is a lot of concern for women in the report (Interview).

However, the presence of women known to be FINRRAGE on ethics committees and taking part in government consultations was not necessarily unproblematic. As Erika Feyerabend, now a member of the new ICG, put it:

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child and awarded visiting rights instead (see Raymond 1989 for an analysis of the legal decision). Just recently, a bill attempting to separate surrogacy from adoption law was vetoed by the Governor of New Jersey (ASRM 2012).

[123] In a speech given to the NWSA in 1988, Kane notes that although she had campaigned against surrogacy in England in 1985, 'the American press was not interested in any anti-surrogacy speeches until the tragic story of Mary Beth Whitehead began to unfold' (Kane 1989: 108).

[124] Information supplied by Raymond in comments to the thesis.

> I think the price for being in the public debate without having an organization like a political party is that women from FINRRAGE are not always arguing in the common sense of FINRRAGE…For me this is politically a bigger problem…Even if they don't use the name FINRRAGE, they form the public picture of our network. What we need are more deeper discussions and more disputes or fights to find out which picture we want to have and which positions could be presented as FINRRAGE positions…such positions are no[t] dogmas or the result of a fight who has the authority in our network, but a part of a learning process among us all. [125]

In Feyerabend's formulation, therefore, while the praxis of negotiating positions was the real work of the network, the process itself needed purpose. This would seem to be a key difference between producing social knowledge about an issue, and producing knowledge in order to ground a politically actionable belief system in evidence.

Additionally, who individuals could work with if they were FINRRAGE members, with or without calling themselves FINRRAGE, was becoming a significant matter. There were now a number of European networks engaged in ecological and social justice campaigns against agricultural genetic engineering, the human genome project, environmental illness, and other issues which FINRRAGE as an international network could become involved with, both as support and to get their own knowledge claims into the activist arena beyond the women's movement. This seems to have been a strategy which some of the women wanted to pursue, but others did not want to align themselves with groups which allowed men, or whose ultimate agenda might be against the general stance FINRRAGE had about using the 'technological fix' for social problems, as outlined in the conference declarations. However, many of the women now intensely involved in the network had not been present for those discussions, and not all were necessarily in agreement with the declarations, or were uncomfortable with some of the language used. The real problem was that there was no mechanism for resolving differences in either political position or political strategy.[126]

Another illustration of this problem can be seen in the planning session for an upcoming contra-conference in Paris, where the World Congress on IVF and the annual European Society of Human Reproduction and Embryology (ESHRE) meeting were both scheduled to take place at the end of June, 1991. While everyone was enthusiastic about the idea of finally mounting a formal conference to directly challenge the IVF establishment on its own turf (or at least next door), there were fears that labelling it a FINRRAGE conference would limit the participation of scientists, doctors, and policymakers – in other words, qualified experts and those with the power to carry out political decisions – as both speakers and audience. It was therefore agreed that the two national contacts in Belgium and France would organise the conference under their

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[125] *Ibid*, "clearinghouse" transcript, p.6.
[126] *Ibid*, "clearinghouse" transcript, p.6.

own names as academics, but FINRRAGE women would still come and give papers, and organise a round-table debate.[127]

All of the above suggests that speaking as FINRRAGE had become uncomfortable for some women, particularly in countries such as Denmark, France and Belgium, which had no chapters to speak of, only individual women acting as national contacts, who would not have the authority conferred by the presence of a national chapter, although they did have access to the international network's name if it was useful, and its collective expertise. However, the FINRRAGE position -- or what Feyerabend called the 'radical no' which is usually associated with that term – was not always a reflection of their own analysis. To claim oneself as FINRRAGE was to implicitly claim that position, however, *not* to claim oneself to be a member of an international group of like-minded women was possibly to stand alone against what could be very strong opposition. The initial shaping of the network as a group of like-minded women who could all use the name FINRRAGE to take whatever form of resistance made sense in their context was becoming an unproductive tension in a network which had grown increasingly international, and had a method of communication which was largely a one-way dissemination of information through the infopacks. Whereas knowledge could be collectively produced and a technology-by-technology position negotiated to consensus (or at least amicable agreement to differ) in a small local meeting, the international conferences were too sporadic, and the participants were not always the same. More importantly, perhaps, the increased diversity of geographic context meant increasing friction between strongly held positions, as had been the case with prenatal diagnosis at Comilla, and there was still no organisational methodology for negotiating a middle ground that would not echo the individualism and structures of a more egalitarian praxis. This would become the central issue of the next international conference in Rio.

Rio: the last FINRRAGE International conference

The third, last, longest, and largest international conference, 'Women, Procreation, and Environment', took place in Rio from 30 September to 7 October 1991, with the FINRRAGE working meeting following from the 8th to the 10th. The conference was largely funded by a grant of DM 900,000 disbursed by the feminist organisation *Frauenanstiftung*,[128] which like GRAEL (which had hosted the Feminist Hearing in Brussels in 1986) was funded through the Green Party (Feyerabend, Interview). This was granted to the ICG,[129] who passed it to REDEH,

[127] *Ibid*, "alternative conference" transcript.
[128] The name is a play on *anstifter*, so loosely translates to Women Troublemakers.
[129] The full name given in Corral's conference report is Rede de Defensa de Especie Humana, literally Defence of the Human Species. In recent documents, this is now Rede de Desenvolvimento Humano / Network for Human Development (REDEH 2012).

which was meant to function as the FINRRAGE affiliate in Brazil in the same way Akhter's organisation effectively functioned as FINRRAGE-Bangladesh. Thais Corral, who had attended Comilla along with her colleague Ana Regina dos Reis, who had been with the network since Lund, were the organisers. In addition to paying for six full-time staff for twenty-six months to organise the conference, the grant was also meant to establish a permanent regional office, the only time FINRRAGE ever had funding on this level. However, in terms of travel and accommodation for the conference itself, because the money had originated with the German Ministry of Development, it could only be used to fund 40 participants, most of which had to be from Latin America. This presented difficulties as many of the Western women could not, in fact, afford to fly all the way to Rio, including some who had been invited to present plenary speeches.[130] In addition, the timing of the conference, which had been shifted from its original dates, now meant that many of the academics could not attend.

Overall, the conference was meant to create a declaration for presentation at Earth Summit[131] in Rio in 1992, where environmentalists would be gearing up for a massive campaign for population reduction on ecological grounds as part of the preparations towards the United Nations International Conference on Population and Development (ICPD) to take place in Cairo in 1994. This shifted the overall focus from IVF and related technologies to a much wider agenda of different forms of women's activism, such as dance, film and radio, and a stronger focus on women's basic health, and resistance to coercive population control measures.[132]

For the women of the ICG, the meeting was difficult and stressful. Increasingly, the work of maintaining the international network, as well as the responsibility for making decisions was falling to this group as the visible centre, but without an actual mandate – or the time and money necessary – to actually be the decision-making body.[133] A significant time was therefore set aside at the strategy meeting to confront the continuing questions about structure, allocation of work, funding, and position papers, for which there was an increasing demand by other organisations. A suggestion to form working groups coordinated by various women across the network according to their own areas of expertise had been agreed at Comilla, but this had largely not happened and several of the group leaders seemed to have disappeared. The ICG itself was now down to four very overworked members, leading one to complain that the network was becoming 'a monster that *auffressen* [gobbles up] women.'[134] Therefore, on a number of levels, the question of moving towards professionalization through seeking NGO status was crucial to the agenda for the strategy meeting, as not only would this determine

[130] Letter, ICG to Ana Dos Reis/Rita Arditti/JH/RK/JR, 2 June 1991: FINDE 02/02.
[131] Formally, the United Nations Conference on Environment and Development (UNCED).
[132] Program, "Women, Procreation and Environment", 30 Sep – 6 Oct: FINDE 02/02.
[133] Letter, ICG to Linda Bullard and Francoise Laborie, 7 July 1991: FINDE 01/02.
[134] Minutes, FINRRAGE strategy meeting, 7 October 1991: FINDE 02/02.

whether FINRRAGE could be represented at the NGO forum at Cairo, but also whether it could continue at all, as it could no longer survive on volunteer labour.[135]

A plan for structural reorganisation did emerge from this meeting. It was agreed that national groups could write papers and create actions under the name of FINRRAGE where their position agreed with one already discussed in the international meetings. On an organisational level, although there was still no agreement about paid positions or NGO status, it was agreed that the network was now so large that a formal, decentralised structure was needed. Regional coordination groups would be created in Australia, Asia and Latin America to take some of the burden off the ICG, particularly with regard to the expense of distributing the infopacks, still the network's primary means of communication. The ICG would continue to function as the European regional group when the international co-ordination moved to another part of the world. An advisory board would be created which would include the ICG and one woman from each regional co-ordinating group. National reports would be submitted on a yearly basis by each NC, to continue the job of monitoring developments in years where there were no large conferences. The next international conference was set for Australia in 1993.[136]

Although Rio seemed to end on a concrete note, with some longstanding issues finally addressed and a plan for the future in place, very little actually went as planned. The Australian conference never happened, nor did the Medical Tribunal which had first been suggested in Brussels in 1986 and which the network had agreed to pursue at Boldern in 1990. The yearly reports did not arrive, nor did the position papers, apart from two on genetics written by the ICG. Instead, the following years saw the international network slowly drifting into inactivity. Some of this was certainly due to the internal problems which came to a head in Comilla. However, much more appears to have been determined by external events, such as lifecycle changes in the women who were most involved. Those who had been PhD students had by now submitted and moved into the early stages of careers, leaving them with significantly less time. The dissolution of the British group had meant the loss of some of the most visible and productive members, and as with Anglo-European feminism as a whole, younger women did not seem interested in taking over the work. This meant that some internal publications, such as FINRRAGE News, a quarterly compendium of scientific abstracts which had been compiled by the Swedish NC, Cindy de Wit, since Lund, ceased to be produced. By 1992, Ana dos Reis had left REDEH, which also left Brazil without a NC and Latin America as a whole without a regional co-ordinating group as a replacement could not be not found.[137] Personal life was overtaking all four members of the ICG by 1994, funding opportunities had ceased as German

[135] Letter, ICG to all NCs, undated, c. early July 1991, see also item VII of Material for Working Meeting, sent by ICG to all registrants, 30 September 1991: FINDE 02/02.
[136] Minutes, FINRRAGE strategy meeting, 7 October 1991: FINDE 02/02.
[137] Letter, ICG to REDEH, 29 February 1992: FINDE 02/01.

organisations concentrated on problems created by unification,[138] and there were increasingly bitter tensions in the German women's movement over professionalisation (Mies 2010). Hanmer was largely concentrating on her work against violence against women, and Raymond and Corea, while still active in the US, had never really been involved in the day-to-day co-ordination of the network after Lund, nor had there ever been an American FINRRAGE chapter. Louise Vandelac had gracefully bowed out of the NC position for francophone Canada when she was invited onto the Royal Commission, and had not been able to find a replacement. Annette Burfoot did remain NC for Canada, and as in the US, there were several women she worked with from time to time, but there was no consistent national chapter (Burfoot, Interview). FINRRAGE-Australia became largely dormant as a network after its national co-ordinator, Chris Ewing, who had taken over from Lariane Fonseca in 1988, moved to the US in 1992, although there was still a small group in Melbourne working with Klein and Rowland, who continued to be active until she was diagnosed with breast cancer in 1996 and gave up all activist work (Rowland, Interview 1). While the Melbourne group was not large enough after Rio to take on the work of organising a major conference, and funding for women's organisations overall was becoming problematic in Australia as well (Maddison and Martin 2010), it did continue to produce a newsletter until 2000.[139] At the same time, what had been a reasonable amount of circulation-worthy material published in both scientific and ELSI journals on NRT in the mid-1980s was now an absolute deluge, which made selecting material for the infopacks, as well as the expense of mailing them to a much larger list of recipients, impossible to manage. In December 1997, the ICG sent a formal letter to all the national contacts, asking for suggestions for continuing FINRRAGE and stating that if no offers were forthcoming, the group would disband, and the international network would be considered dissolved.[140] No response to this final letter appears to have been received.

FINRRAGE goes south

While the European part of the network appears to have drifted into abeyance after Rio, the Southern network which had been built up after Comilla continued to grow. In 1990, a UBINIG-FINRRAGE regional follow-up meeting was held at BARD in Comilla, in the same agricultural college where the international conference had taken place the year before. By this time, Bangladesh had several FINRRAGE affiliated groups and networks, including Protiroadh/Resistance Network, which was directly engaged in research around the abuse of

[138] Letter, ICG to NCs, 24 February 1994: FINDE 02/01 (circulated with infopack on population policy)
[139] Archive available at http://www.finrrage.org/newsletters.html.
[140] Letter, ICG to NCs, 15 December 1997: FINDE 01/02.

reproductive technologies.[141] India also had a number of women and women's health organizations which had contact with FINRRAGE, some of whom, such as Saheli, had long been involved in a campaign against technologies for sex selection, and who had been the source of some of the research which had helped FINRRAGE create the connections between contra- and conceptive technologies in the 1980s. The Shakti Collective in Bombay had also issued a collection of papers from a workshop on Feminist Perspective on Women and Health Reproduction in India in 1987, convened precisely for the purpose of developing a women's health movement not dictated by Western understandings, but responsive to the particular conditions in India (Bhate, Menon, Gupte, *et al.* 1987). Some of the women attending this meeting also attended the series of Comilla meetings in 1989, 1990 and 1993, and some, such as Vibhuti Patel and Malini Karkal, had come to the Frankfurt meeting in 1988 and remained affiliated with FINRRAGE. However, overall, the Indian women's movement had not really taken up NRT as an issue at this time. Surveying a number of women from different grassroots Indian organizations fifteen years later, Sama, an autonomous women's health research group in Delhi, found that in general conceptive technologies were not felt to be an appropriate site for intervention as they were still seen by most health activists as affecting only a small, rich, urban sector of the population and could not be used without consent, whereas contraceptives affected 90% of the population and were frequently forced upon women without information or agreement (Sama 2006).[142] A seventy-five page dossier of clippings compiled and published by one of the Indian affiliates, Lakshmi Lingam, after Comilla, however, was prefaced by an essay which noted that there was a 'slow importing of NRTs which are whipping up strong patriarchal anti-women attitudes by predominantly viewing women as 'mothers' and 'objects' for experimentation' (Lingam 1990: 9). One of the excerpts, in fact, quoted Anand Kumar, the IVF doctor who would go on to verify Mukerji's success in creating the second child born after Louise Brown (Kumar 1997), as saying that one of the 'many opportunities' IVF provided was learning 'how to induce infertility in fertile couples as a means to family planning' (Times of India, Bombay, 13 August 1997, in Lingam 1990: 3). Along with earlier research which showed that many Indian doctors also found the use of amniocentesis for sex selection an effective method of birth control through fewer females being born (Patel 1987: 73), these provided great concern for those who opposed the imposition of Western concepts such as choice and autonomy in the South Asian context:

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[141] FINRRAGE-UBINIG Regional Meeting Khabar, Bulletin No 1, 10 May 1990: FIN 03/01/09.

[142] Sama (2006; also see Sama 2012) itself is quite active around the area, particularly around the draft regulations which have been under development by the Indian Medical Research Council since 2008 (for discussion of this, see Palattiyil, Blyth, Sidhva, *et al.* 2010). Sama held their most recent conference on the issues in January 2010, at which Klein, Akhter, Gupta and Lingam were all invited to speak. The FINRRAGE position stressing the continuum between contraceptive and conceptive technologies is evident throughout the collected proceedings (Sama 2010), as is the renewed call for a global movement (Srinivasan and Gupta 2010).

> [F]rom my own research what I see, you know, and other research is that the same ideas of autonomy cannot apply in the Indian context, where there are, it's not just the state which can impinge on your autonomy, but in India in particular the family. Autonomy vis-à-vis the state is one thing, but autonomy vis-à-vis you know your own husband and your mother-in-law for instance, that is, that's a very different situation than for women in the west…I mean that's what I would say would be FINRRAGE position because it has often been criticised as sometimes even in terms of you know the Luddites, they reject all progress and modern technology and so on. Whereas I usually subscribe to that position, I do not see it as uh (pause) as something that is just rejecting technology and progress for the sake of rejecting it because it's calling into question older ideas about the body and so on, but arguing very strongly through empirical research how these technologies actually are harmful to women (Gupta, India/Netherlands).

As Maiguashca (2001: 146-147) shows, similar discussions were taking place at the same time in the WGNRR, which agreed at their 1990 International Women and Health Meeting to remain outside the population establishment. Most of the individual groups in the WGNRR shared FINRRAGE's analysis that poverty was the result of overconsumption by the West, not overpopulation of the poor, and that population policy was by its nature coercive, particularly if women did not have the cultural, educational or economic means to make fully informed choices about how many children they wished to bear (see, for example, Hartmann 1988, which both groups recommended). However, by 1993 there was a broad adoption of the choice perspective in the WGNRR's definition of 'reproductive rights'. While they might have similar positions on coercive use of birth control and contraceptive testing in the developing world, the reproductive rights analysis tends to view both contra- and conceptive technologies as neutral tools which are essentially 'liberating', expanding choice and control (Turshen 2007: 154). This would mean that as women's health activists began to generate knowledge about the prevalence of post-infection infertility amongst women in developing nations, the rights-based approach would also come to argue that infertile women in poorer nations should have the same right to self-determination through greater access to NRT as those in the West (Turshen 2007: 181). Although NRTs were very slow to take hold in most developing countries, there was already some evidence of interest in the development community in their potential for generating economic growth. For example, a letter circulated through the infopacks in 1989 shows the Agency for Integrated Development-Bangladesh, an NGO which at the time was working with forest communities to protect them from wild animals and moneylenders, wrote to the British government's Overseas Development Administration[143] asking for funding to start an IVF centre in Dhaka, which it predicted to be self-reliant within one year, based upon a projected success rate of 100%.[144] Although this proposal was obviously unsuccessful, it shows

[143] Now the Department for International Development.
[144] Letter, Nasiruddin Khan (AID-Bangladesh) to Feona Duby (ODA), 29 July 1989: FIN 07/07 box 2. Although the letter claims NGO status from 1985, the NGO Affairs Bureau, Bangladesh (http://www.ngoab.gov.bd) lists it as active from November 1990 to October 2010.

that the development community was already aware of the potential for creating new markets for IVF even in very poor countries, such as Bangladesh.[145]

As with the argument over amniocentesis in Comilla, this was not as simple as a split between North and South, because women in the developing world were themselves divided. These arguments came to a head within the reproductive rights movement around the preparations for Cairo. In her paper given at WGNRR's International Women and Health meeting in Manila in 1990, Akhter argued that by extending the concept of 'reproductive rights' to cover all of women's health and social needs, feminists were effectively reducing women to their reproductive organs in their own discourse, and it was therefore unsurprising that the mainstream population establishment was now using the term to describe their own policies, in much the same way as the positive aspects of birth control had been appropriated by the eugenics movement in the 1930s (Akhter 2005: 89-100, see also her plenary speech to the 1989 FINRRAGE conference, 67-74). The declaration on feminist population policy which WGNRR and several other organisations funded by the population establishment were developing under the umbrella of the *Women's Alliance* for use in Cairo in 1994 was uncomfortable for some of the groups, such as GABRIELA, which belonged to both networks, to sign (Maiguashca 2001: 150). While most of the organizations in the WGNRR would eventually agree to the document, there were still many others who felt that the WGNRR had moved too far into the mainstream population discourse, and who did not believe a feminist population policy was possible. UBINIG proposed an alternative congress to develop an counter-document, so that these groups could also be represented at Cairo, and challenge WGNRR's claim that the *Women's Alliance* represented the entire global women's movement.

People's Perspectives: Comilla 1993

In December 1993, Akhter and UBINIG, along with the Research Foundation for Science and Ecology and the People's Health Network, two Indian organizations, and the Third World Network from Malaysia, organized an 'International Symposium of People's Perspectives on "Population"'. The quotes were deliberate, to make it clear that the word itself was being problematised (UBINIG 1993: 32). In addition to several of the FINRRAGE women (Nagaoki, Klein, Mies, Corral, Burfoot and Corea), the meeting mainly attracted Southern activists, writers and scholars, including Nawal El Saadawi, Mira Shiva, Nelia Sancho Liao, and Gayatri Spivak, and activists from twenty-three countries representing all six inhabited continents. In addition to

[145] The eventual "pioneer" in Bangladesh was a gynaecologist who had invested all her money in opening the first private facility in 1999, related in press accounts as a triumph of local determination to master a technology she did not know how to use, in a country with so little interest and expertise that she had to draft her paediatrician husband to become her embryologist (Salahuddin 2003). The clinic's first babies were triplets, born in 2001. According to Akhter, the surrogacy industry which proliferated in India in the 2000s has now also begun to move into Bangladesh (Interview).

rejecting the idea of a feminist population policy, the *Declaration of People's Perspectives on 'Population' Symposium* addressed matters of environmental degradation, exploitation of cheap labour under the new General Agreement on Tariffs and Trade (GATT), and rejected all long-acting contraceptives, amniocentesis, sex predetermination, and IVF (Symposium 1993). The *Declaration* argued that the entire concept of 'population' was inherently anti-feminist as it supported a notion of state control of women's procreative capacity in the name of economic growth. Women's rights and women's health needs – including but not limited to reproductive functions – had to be addressed separately, and not through promoting the West's interests in capitalist models of economic growth.

And the beat goes on?

Overall, although the international network went into abeyance in Europe and the US during the 1990s, there are structures in place which indicate that to some extent, FINRRAGE continues to exist in other parts of the world, and continues to respond to current developments. Klein and a small group in Melbourne have continued to submit to committees under the name of FINRRAGE-Australia (1997; 2002; 2006b),[146] and in 2006 were also involved in Hands Off Our Ovaries, a groundbreaking single-issue coalition of prominent pro-life and pro-choice feminists – women such as Josephine Quintavalle, Jennifer Lahl, Abby Lippman, Diane Beeson and Tina Stevens – calling for a global moratorium on egg extraction for research purposes on the grounds that the medical and scientific establishment had never engaged in research into long-term effects of the hormones used, and until they did, informed consent could not be given.[147] The representative women from Soshiren (Satoko Nagaoki), FINRRAGE-no-kai (Azumi Tsuge), and UBINIG (Farida Akhter) all still consider their organisations to be part of the international FINRRAGE network, although Nagaoki jokes that she receives no more packets (Interview). Jyotsna Agnihotri Gupta, who works with several women's groups in India, also conceives of FINRRAGE as a mostly dormant, but still-existing network (Interview).

For those with no organisation affiliation, there are still personal connections. Aurelia Weikert, who had a small group in Austria from 1985, was a PhD student at the time, and continues to do research on population policy, ART, genetic engineering and women's health. For her, the network appears to have much more the quality of an intellectual community than a physical substance, as evidenced in this exchange:

[146] A full list of all FINRRAGE-Australia submissions is available at http://www.finrrage.org.
[147] The campaign's website still exists at http://www.handsoffourovaries.com, although it does not appear to have been updated since 2010.

> WEIKERT: You know there were several ways or paths I hear again and again about women I know from FINRRAGE and I think that's interesting oh where is she working about now and what is she working about now, and so on. Yes.
>
> Q: Does it still exist for you in your mind? Do you feel—
>
> WEIKERT: Yes, in my mind, of course. FINRRAGE?
>
> Q: Yes.
>
> WEIKERT: Yes, of course. I mean who or what was FINRRAGE? It was a network and I think a network, well what are the characteristics of a network? Well, if you ask me like that I don't know whether I would say there *was* a network called FINRRAGE or there *is* a network called FINRRAGE.

While there has been some work on the role of loyalty and affection for the group in the formation of collective identity (Polletta and Jasper 2001), the history of FINRRAGE illustrates another area which appears to be little studied in social movements theory: how the close interpersonal relationships which form during periods of intense movement activity may become the basis of a new action because of a simple desire to do something productive together. Raymond, for example, has argued that while it is certainly possible to do politics with those for whom one holds no affection, political activity which 'proceeds from a shared affection, vision and spirit [can have] a more expansive political effect' (Raymond 1986: 8). This is not to suggest that political action with close friends is unproblematic, but as these three chapters show, close friendships do appear to have played a significant part in both the formation and maintenance of the international FINRRAGE network. It can be argued that as long as at least some of the participants still feel that the network exists, it does, and this too may be part of the process of abeyance.

The identity of FINRRAGE as a network, however, seems to have been constructed as resistance not only to the technologies, but also to the general trend towards professionalisation of activism in large, corporate-style structures, with a headquarters and local branches, as the WGNRR had done. Raymond, comparing this with her present organisation, the Coalition Against Trafficking in Women (CATW), which has a funding base and offices around the world, suggests that FINRRAGE was indeed trying to preserve a form of politics which was much more commensurate with the WLM, and which became progressively more difficult to maintain:

> FINRRAGE was organised much more in the, what I like to refer to as the old style of political activism? You did it on a nickel and a dime? We didn't get invited to a lot of the key places where our perspectives would be represented…And you know, I was all part of that as well, but one of the things I became convinced of, which was certainly an evolution in my own thinking, but in order to be a real activist in the 1990s and the 21st century, you have to have an institutional impact. And that means you really have to slog through, you know some of the institutional settings in which you'd prefer not to

> be…There are many sympathetic groups out there, who you might not identify with in other circumstances, but who you can utilise to get your perspective out there and to get legislation passed. And I think, I know I for one have been much more successful at that in the prostitution and sex trafficking realm than I was in the reproductive technologies realm. (Interview)

This appears to be a key point of difference between individual and organisational expertise. Independently, many of the women were able to construct themselves as expert knowers through their professional associations, through invitations to prestigious speaking engagements, media appearances, and publication. However, during a time of increasing professionalisation of activism overall, a grassroots group which did not have a permanent office, a properly designed letterhead, and relatively attractive informational materials would have a much harder time being taken seriously by the policy community than those which did, all else about their politics being equal. This may help explain why FINRRAGE as an organisation remained largely on the margins of the epistemic community which had developed around the ELSI implications of reproductive technologies by the 1990s, even as some of its individual members were successfully carving out spaces for critical feminist positions within it.

However, in addition to the impression many women conveyed that FINRRAGE still exists, all of the women – even those who left the network in disappointment or anger – felt that it had been some of their best work, and that they had achieved significant impact. In Australia, for example, the knowledge generated by the women had achieved a level of credibility which, while not stopping IVF, had contributed to significant changes in the way it was practiced. For Rowland, who was one of the few who agitated quite steadily for legislation from within the system, this was only a partial success, as regulations have continued to loosen since 1984. For her, the issue of real importance was not so much stopping IVF as changing the experience of women who did chose to use it:

> The other thing that we really made an impact with was the impact on women who are in infertility programmes. I mean they were treated like *shit* at the beginning. They're not now, I mean they're still taking the drugs we think are bad and all the rest of it. But, you know, they're treated a whole lot better, and there are support systems in place. (Interview 1)

Others in Australia have also credited FINRRAGE directly with creating significant change in policy and practice. Speaking to another researcher who conducted a more comprehensive set of interviews amongst the various interested parties in Victoria in the early 1990s, a member of the Victorian Standing Review and Advisory Committee on Infertility (VSRACI) agreed that she had been 'affected and influenced' by FINRRAGE and had supported the issues raised by the group in her work with the Committee (Woll 1992: 25). The Victorian Minister for Health, Caroline Hogg, mentioned Klein's monograph about the experiences of

women on IVF programmes as 'some of FINRRAGE's most effective work' (*ibid:* 29). Nicholas Tonti-Fillipi, who appeared on many panels with FINRRAGE members over the years, credited the various feminist voices with shifting his focus from the moral status of the embryo to the 'intrusion' of IVF on women (*ibid:* 29) and though Ian Johnston, head of the RWH team which had produced Candice Reed, considered FINRRAGE 'a nuisance' (*ibid:* 31) because of their success in exposing the clinical practice of IVF to public scrutiny, Woll also reports that several practitioners in her study agreed that their renewed interest in natural cycle IVF was 'very much because of the fuss the feminists were making about superovulation' (*ibid:* 31). Woll also noted that where respondents who were fertility professionals had accused FINRRAGE of not having their medical facts correct, none could actually point to an instance where they were wrong (*ibid:* 33). Although such scrutiny was uncomfortable for most of the doctors, Jan Aitken, an IVF counsellor at QVMC who had been to the *Liberation or Loss?* conference admitted that 'their sort of loudness…may in fact improve systems here' (*ibid:*32). Overall, there seemed to be a general consensus amongst all of Woll's respondents that FINRRAGE had made three key issues visible (whether they were happy with that fact or not): lack of counselling for infertility overall, misleading success rates, and inattention to the emotional and physical difficulties of going through IVF.

However, even in Australia, where self-identified radical feminists were embedded in the institutions of the state, and where individuals such as Klein and Rowland had developed a significant media presence, some of the FINRRAGE women still perceived the group as having been too far outside the system to have any real effect:

> I think it did have some influence in the beginning, definitely. I think it made the scientists, the doctors more alert and they had to respond to those, to those charges. Um…but I think it didn't work as a long term strategy…we were working outside the political structures of the state…I think there could have been another strategy going on at the same time to actually change the institutions, through for example the use of feminist lawyers like Jocelynne Scutt.[148] So, I think a dual or a multi-pronged strategy may have been more successful…So maybe I have become more post-structuralist in that you know, you work within the system, but the system corrupt- the system influences you as well…I can see from colleagues that sometimes you just get crunched up, you get, you identify with the system after awhile. (Crowe, Australia, Interview)

Crowe's statement reflects the ambivalence towards professionalisation of activist work which exists even in Australia, where it was the movement's strategy. FINRRAGE's apparent success in Australia appears to have been enabled by a political configuration in which feminist voices were routinely taken into account on a range of issues, so that institutional representation

[148] A prominent jurist, who wrote a legal column for *IRAGE* and was editor of *The Baby Machine* (Scutt 1990), an Australian version of *TTW*.

on ELSI committees was much greater than elsewhere. It also appears to have been a matter of it being exactly the right time:

> Everything was on in Victoria [in the 1980s] because of the Waller [committee], because the law was just coming in and it was going to be the first in the world, so there were public forums and (pause) it always struck me as interesting that Max Charlesworth[149] said in a public meeting that women, that feminists were 'quite properly' concerned about the effects of IVF on women…that was when there was still a period of accommodation and of course he was a colleague of Robyn's at Deakin. (Sarah Ferber, Australia, Interview)

Rebecca Albury, a political scientist who was a colleague of Charlesworth's at the National Bioethics Consultative Committee (NBCC), also agrees that their influence was substantial in pushing the boundaries within which feminist voices, including those which were not wholly oppositional, such as her own, could debate different aspects of the technologies without polarising between absolute no and absolute yes, as had been largely the case in England:

> I think they probably formulated often enough and wrote submissions that were taken seriously. They weren't necessarily, they didn't necessarily get *their* way, but I think that it was a part of the mix in a way that it might not have been without them. Yeah. That they opened a space for conversation (Albury, Australia, Interview).

This, according to Eyerman and Jamison, is precisely what a successful social movement should be seen to do. Although a stated goal of FINRRAGE may have been to stop IVF, even Renate Klein admits they were 'never naïve enough to think that we could really actually stop it' (Interview 3), what they had realistically hoped to do was reshape the debate by bringing knowledge about the practice, experience, and larger significance of IVF into the public sphere from a woman's point of view, and perhaps influence women not to use it. For FINRRAGE, therefore, the various conferences can be seen as providing a similar measurement of activity as protest activity might in feminism-at-large. While trying to avoid a narrative of loss (Hemming 2011), it does appear that feminism worldwide entered a transitional period in the late 1980s, although this took a very different form in different places. In Britain, where many of the local branches of the Women's Reproductive Rights Campaign began to fold (Marilyn Crawshaw, Britain, Interview), the 1980s was a time of transformation from autonomous oppositional groups into providers of services for women, funded by local councils as a serendipitous side-effect of Thatcher's drive to privatise the welfare state (Radford 1995). In Australia, there was still a close association in the early 1990s between radical feminists in grassroots organisations and women in positions of power, although this would change after the

[149] Charlesworth was a noted philosophy professor at Deakin, and a member of the National Bioethics Consultative Committee and the VSRACI. Ethically, his work tended towards a strongly liberal view.

Conservative Howard government ousted Labor in 1996 and began to roll back the movement's gains (Andrew and Maddison 2010). In academia, this period also saw the transformation of women's studies into gender studies (Robinson and Richardson 1996; Hemmings 2006), and the mainstreaming of gender as a category of analysis in policy-making at the international level, particularly obvious in the transition from the 1970s configuration of 'women IN development', which concentrated on adding women to development policy, to the 1990s concept of 'gender AND development', which considered the impact of policy on men and women in specific cultural contexts as well as criticising the gendered nature of the policy process itself (Pearson and Jackson 1998). In general, while there was still considerable feminist activity throughout the 1990s, because there were fewer street-level manifestations -- mass demonstrations and major congresses, women-only spaces and grassroots publications – and gender was becoming an institutionalised category of analysis, some feminists began to argue that the women's movement had entered a 'post-feminist' phase (Whelehan 1995; Robinson and Richardson 1996) in which politics was less important than personal expression, and pursuit of the lifestyle choices the women's liberation movement had earned (Curthoys 1997). Thus, while women who came of age in the later part of the century might speak and act in many ways that were recognisably feminist, fewer and fewer – particularly inside the academy – seemed to want to identify themselves as such (Amsler 2012).

All of the processes outlined above are also what have been referred to as signs that a movement is entering an 'abeyance' period in which certain organisations which survive tend to harden and contract to their most loyal members in the hopes of preserving their epistemological project until a new phase begins (Taylor 2007). According to the cognitive praxis model, this may even be interpreted as evidence of the movement's success, as oppositional forms of consciousness are no longer needed when the movement's knowledge interests have been sufficiently institutionalised. However, Eyerman and Jamison's model really only describes the success of an egalitarian consciousness around the issue, much as Taylor considers mainly organisational survival. Bagguley (2002) also suggests that more formal organisations may function better as abeyance structures than networks, which are more reliant on retaining individual actors. However, I would like to reverse both propositions and suggest that abeyance can also be seen as a process of preserving the more 'radical flank' (Sawyers and Meyer 1999, in Bagguley 2002: 173) of a movement, and that perhaps a network of 'like-minded' individuals with affective ties produced in a more active period is precisely the right organisational form to hold open liberatory and alternative spaces within a dwindling movement field.

However, looking more closely at the case of FINRRAGE suggests that while the network itself appears to have taken on some of the characteristics of a movement in abeyance in the 1990s – becoming less visible, working within existing institutions and not necessarily under the organisation's name, looking inward for 'purity' and picking over internal divisions

(Bagguley 2002: 174) – the resistance to professionalisation means that in other ways it did not. Additionally, the area of feminism in which FINRRAGE is embedded was not itself moving into abeyance; rather it was the opposite. In the women's health arena, the decision by the US government in 1984 to cease USAID funding to any organisation in the developing world which provided abortion as part of its services appears to have served as a galvanising force for the reproductive rights movement, particularly among Southern organisations which had learned to use the UN NGO system to get women's issues onto the international political stage during the United Nations Decade for Women (Eager 2004; Turshen 2007). While funding for the WGNRR appears to have dried up entirely between 1987 and 1990 (WGNRR 2012), it resurged as the network coalesced around preparing the Action Plan for Cairo (Maiguashca 2001: 149). Likewise, the foundational project of the women's health movement, *OBOS*, struggled with problems of finance, diversity, and professionalisation which resulted in resignation of the entire staff as it sought to revise the US text in 1997, even as the book was being eagerly translated and adapted, often for the first time, elsewhere (Davis 2007). Although street-visible feminist activism in the West did decline considerably throughout the time of FINRRAGE, these three cases all suggest that viewed globally feminism does not appear to have been so much moving into backlash or abeyance through the late 1980s and 1990s, as into other parts of the world, changing and developing to suit the needs of different milieux, perhaps developing other forms of political consciousness which are not accounted for here.

Conclusion

As this and the previous two chapters show, the problems which came to a head at Comilla had been contested parts of FINRRAGE's cognitive praxis from the start. The continuing discomfort with what had happened in Bangladesh was exacerbated by the fact that there was no forum in which such things could be discussed as a group apart from the international meetings, where it would inevitably involve all the new women in a complicated negotiation to which they, ignorant of the history, would have little to contribute. A great fear was that this would be so alienating that they were quite likely to walk away from the network feeling they had no place. Indeed, even some of the longstanding members were beginning to question their involvement or had already walked away. However, while these arguments may have become explicit for this particular organisation at Comilla, the trajectory of FINRRAGE appears on many levels to be a reflection of arguments which were taking place across Western feminism as a whole. In particular, the tension between grassroots and professional activism, and around the egalitarian concepts of reproductive rights and freedom of choice could be seen in other international networks. A key demonstration of this was the division of women's health

groups at the 1990 WGNRR conference in Manila over questions of professionalisation, donor funding, and the question of co-optation of the reproductive rights agenda by the mainstream population establishment (Maiguashca 2001: 146-7).

However, acceptance and resistance to these norms is not neatly divided between North and South. Looking at the overall history of the network, while its activity in Europe ceased almost entirely after 1997, the Asian part of the network, in Japan, Bangladesh, India and Australia, has continued to be active under the name of FINRRAGE. While FINRRAGE was not successful in stopping the fertility industry, if looked at from the perspective of cognitive praxis, the women do appear to have created a space for an oppositional feminist analysis which questioned the scientific basis of claims to efficacy, safety, and rates of success, as well as social discourses around motherhood, and linked promotion of fertility 'treatment' in the richer nations to promotion of fertility control in poorer ones. They also helped open up the actual experience of undergoing IVF to public scrutiny, highlighting the need for effective independent counselling on issues around infertility, and better treatment of women on the programmes.

I would therefore conclude this section of the thesis by suggesting that rather than thinking of it as an organisation of the 1980s, FINRRAGE is best approached through considering it as an ongoing cognitive praxis. The continued existence of parts of the network identifying as FINRRAGE, as well as the continued presence of the academic professionals in the network producing research for conferences and publication suggests that as an epistemic community FINRRAGE still exists, whether or not it goes by that name. Having examined its history, in the next chapter, I will explore this claim through deepening my analysis of the movement as a cognitive praxis.

CHAPTER 7 – FINRRAGE AS A COGNITIVE PRAXIS

> *I guess for me it would be the political stance opposing genetic and reproductive technologies. And it would be an activist movement to both raise awareness and analyse the relationship between science and technology and women and the feminist movement…I think it was more than just a resistance.*
> *(Lariane Fonseca, Australia)*

Throughout this thesis, I have tried to approach social movements as cognitive processes. I have also used the idea of different political consciousnesses (although, as noted in Chapter Four, I suspect the word cons*cience*ness would be more accurate) in order to try to avoid the trap of assigning specific modes of action to specific groups of feminists, all of which, like FINRRAGE itself, exhibit far more variation than the standard ideal-types allow. Instead, I have argued that developing some form of oppositional consciousness is an inherent part of partaking in any collective political action. I have further suggested that there are at least three forms of oppositional consciousness which exist in variable, overlapping relationship to each other, depending upon the specific movement, organisation, or individual, and that these should be thought of as cognitive meta-frames which guide the development of a group's knowledge practices, rather than corresponding to fixed political ideologies.

In the last three chapters, I have tried to present a case study of FINRRAGE as the women themselves saw it, and to shape my narrative to capture as much of the experience of being part of FINRRAGE as possible, despite my own distance in time and space. In this chapter I will use this distance as a way of engaging with a larger perspective, looking more closely at the ways in which 'the FINRRAGE position' describes a particular cognitive praxis. The quote above perhaps best illustrates the complexity which emerges around the women's use of the phrase: as a political position of 'radical no' to all NRTs, including prenatal diagnostics and long-acting contraceptives; as a network of 'like-minded' individual activists; as a woman-centred analysis drawing from feminist critiques of science and medicine; and as a form of protest heavily reliant upon the production of knowledge through dialogue, empirical research, and publication.

As discussed in Chapter Two, the purpose of the cognitive praxis paradigm is to make sense of social movements by 'reading' them as texts. Eyerman and Jamison (1991: 61) consider their own epistemology as social, after Fuller (1988/2002), and encourage interrogation of the social and political forces surrounding the production of scientific knowledge, but they do not actually follow Fuller as far as his formulation of facticity being a matter of the credibility of the knower. In this, the cognitive praxis paradigm seems much closer to Goldman (1999), who argues that groups can also be knowing agents, and that knowledge must have a material, universal component outside the experience of the knower in order to be true. My own

formulation of the paradigm, which I will discuss here, accepts the former proposition, but remains agnostic about the latter. In the following section I will briefly reiterate the key points of the cognitive praxis paradigm which I intend to develop.

Cognitive praxis: paradigm revisited

As discussed more fully in Chapter Two, the cognitive praxis paradigm is largely concerned with emergence, and with 'reading' a movement's knowledge practice through analysing its texts. Theorists which have looked at collective behaviour on an individual, psychological level have suggested that movements appear when a significant number of people are experiencing psychological strain due to rapid social change (Blumer 1951/1969; Turner and Killian 1957/1992), producing a form of cognitive dissonance (Geshwender 1968, in Gurney and Tierney 1982) where evidence conflicts with expectation. However, others have argued that strain is always present, as is the failure of expectation. Freeman (1973), for example, argued that no particular strain was evident at the emergence of the WLM, and that the conditions for its emergence had existed for the previous 20 years. According to Eyerman and Jamison, who drew on Smelser's value-added model of steps required for movement emergence, strain and dissonance must be present as a motivating factors, but not every strain significant enough to produce a cognitive dissonance actually produces a *social movement* (2001: 56). For a movement to emerge requires a context and individuals already placed to take up the issue when it becomes visible through some form of illustrating event. These individuals use the event to translate theory into action, which opens a cognitive space for new ideas. The paradigm focuses on three forms of knowledge: cosmological, technological and organisational, which I have discussed more fully in my presentation of the case, looking at these three broad areas to answer my questions about the ways in which FINRRAGE emerged, developed and operationalised its 'position', the tactics used to develop and disseminate its knowledge, and the function of expertise in legitimating the women as credible knowledge-holders. However, the case study shows that while the context of emergence and the formation and operationalisation of knowledge interests can be theorised very well from within the paradigm, forms of expertise tend to be more difficult to clarify, and therefore on its own, the cognitive praxis paradigm does not answer the third question particularly well. For this, I found it necessary to construct a more specific framework in order to make visible the forms of expertise the women brought into the network and developed within it.

In this chapter, I will look more closely at the explanatory potential of my own interpretation of the cognive praxis paradigm for answering my research questions. In the first part I will consider what it reveals about the emergence of FINRRAGE and the development

and operationalisation of its position and the creation of 'movement intellectuals' , before moving on to look more closely at two of the tactics, research and publication, used to develop and disseminate the network's knowledge. In the second part, I will present my own framework of expertise and use it to uncover the different forms of knowledge available to the network's 'movement intellectuals' and the ways these were utilised to construct FINRRAGE affiliates as credible experts in the public sphere.

Foundational texts

In addition to a political context, what FINRRAGE as a case reveals is the importance of at least one central, foundational text as another form of illustrating event, one which clarifies and publicises the problem in a way which urges collective forms of redress. I would also suggest that in order to become a *social* movement, rather than the kind of intellectual movement described by Frickel and Gross (2005), the illustrating text has to be placed outside of academia. Although overall, the network produced an enormous amount of formal and informal writing, for the purposes of this question, Chapter Four suggests that the 'key' literature from which FINRRAGE *emerged* is actually only two books – *Test-Tube Women* and *The Mother Machine*.[150] Both of these are unashamedly polemical; they are written precisely for the purpose of inspiring social action. However, *Test Tube Women* is more of a survey of possible arguments, an exploration of the connections between different elements of reproductive control. As the second wave of feminism is largely characterised as being 'ignited' by *The Feminine Mystique*,[151] or the environmental movement by Rachel Carson's *Silent Spring* (Eyerman and Jamison 1991: 102), it is *The Mother Machine*, as a piece of research carried out by a single writer, rather than a mix of voices, which provides the foundational text not only for FINRRAGE, but, I would argue, for feminist engagement with NRT as a whole.[152] Love or hate, as the first truly comprehensive treatise on the subject, anyone interested in questions around NRT from any perspective would have to engage with it (see, for example, Birke 1986; Stanworth 1987; Cohen and Taub 1989; Birke, *et al.* 1990), at least until a significant enough

[150] Most literature reviews considering this work as a body includes Rowland's *Living Laboratories*, and Raymond's *Women as Wombs*, however, these were not published until the early 1990s. Likewise, although the papers from Groningen and Lund were collected and published, these were less widely available, and unlike the other two books, have not been translated into numerous languages.

[151] See Fox (2006), and other testaments around the time of Friedan's death. However, Friedan's feminism took the form of professionalized organisations such as the National Organisation of Women (NOW), which were largely concerned with issues around equality in the workplace; very different from the movement of younger women described by Jo Freeman (1973), which Friedan viewed with some anxiety (Henderson 2007: 165). NOW's cognitive praxis, to the extent that it focussed on passage of an Equal Rights Amendment, may actually be said to be as old as the suffragettes, preserved in abeyance by Alice Paul of the National Women's Party (Taylor 2007).

[152] This is not to deny the contribution of books such as *The Experience of Infertility* (Pfeffer and Wollett 1983) or *The Politics of Reproduction* (O'Brien 1981), however these do not urge the formation of a movement, as the other two do, and therefore do not seem to have provoked the same energy of response.

canon had developed so that it could either be ignored or set aside with a brief mention. However, unlike the books written by Friedan and Carson, it cannot really be said that *The Mother Machine* was the *spark* for FINRRAGE, as it was not published until after the network first emerged at Groningen. Therefore, Eyerman and Jamison's (1991: 102-3) assumption that the text must be produced before the movement can emerge may be incorrect. What may be more important is the *kind* of text, and the way it explains the illustrating technoscientific event.

Although the conference at Amherst was a key event leading up to the formation of the network, it combined both normative and oppositional responses, and although it ended with declarations and recommendations, these were of a largely professional nature. It was not designed to launch a grassroots response. *Test-Tube Women*, which was, was created within a pre-existing political context, but also exhibited too diverse a range of topics and views, and so was unlikely to launch a movement on its own.[153] However both events helped build the friendship network of intellectuals who would intentionally create a political opportunity by presenting a panel calling for action to a room full of activist-scholars. This became the proto-network, FINRRET, but it was *The Mother Machine*, which was published just before Lund, which consolidated the knowledge interests of the network by clearly setting forth the key points of the analysis FINRRAGE wanted to pursue. These were 1) that the technologies were being developed through experimentation on women's bodies with little regard for their present or future health, or that of their children; 2) that control of reproduction through hormonal manipulation was inherently eugenic, encouraging the 'right' women to have more children while 'encouraging' poor ones to have fewer, and therefore contraceptive and conceptive technologies were two sides of the same coin; 3) that as an industry IVF opened the way to complete commodification of the body, and to a factory approach in human reproduction, complete with methods of product improvement and quality control; 4) that NRT was a reification of social control through valorising certain kinds of motherhood as fulfilling a woman's 'true destiny', while simultaneously dismissing the maternal links of gestational surrogates, generally poor women who again become reified as 'naturally' prolific breeders; 5) that the nature of the technologies actually reduced women's choices through social pressures, making it difficult to refuse or to stop once started, and 6) that IVF was a gateway technology which would lead not only to ever more inventive technologies of procreation, increasing the definition of 'infertile' to cover larger and larger 'markets', but that it would also become the basis of technologies of violence, such as biowarfare, when combined with genetic engineering.

A citational analysis is unfortunately beyond the scope of this thesis, however, read retrospectively, it can be seen that these six knowledge interests have now diffused widely

[153] It did, however, turn the translation group in Tokyo into an infertility self-help group, FINRRAGE-no-kai, after hundreds of women wrote to Soshiren to share their own experiences of infertility after it was published in Japan (Nagaoki, interview).

beyond the FINRRAGE women, and are taken seriously even by many who argue that NRT should be used to make babies for anyone who wishes, however they wish to use it. In fact the third point appears to be one of the most presently active areas of scholarship in the social sciences generally, having evolved into studies of cross-border reproductive 'care' (see Collins and Cook 2010; Ferraretti, Pennings, Gianaroli, *et al.* 2010; Smith-Cavros 2010; Connolly 2011; Franklin 2011 as a mere fraction of this work in recent years), body markets (Andrews and Nelkin 2001; Scheper-Hughes 2004; Dickenson 2008), and bioeconomics (Rajan 2002; Waldby and Mitchell 2006; Cooper 2008). It is actually only the liberatory polemic of 'the FINRRAGE position' that tends to be widely rejected, particularly by those writing from an egalitarian consciousness: that NRT was a medicalised form of violence against women which had been developed to achieve complete patriarchal control of reproduction, the success of which would produce an overall devaluation of the social status of women, particularly in societies where they continued to have little social value compared to men and there were already fewer women being born; and that NRT made infertile women emotionally and physically vulnerable to exploitation because they would agree to any kind of experimental technology or drug in the hope of a result.

This is not to argue that critical discussion of NRT would not have happened without this book and this network, but rather that it required *a* text and *a* group which considered developing a feminist critique to be in and of itself a political action, to create the opportunities which allowed a *movement* around resistance to NRT to emerge through the cognitive space created at Lund. In addition, much of what gives 'the FINRRAGE position' its unique cognitive praxis is its dual focus on population policy, developed through the embodied and experiential knowledge of women such as Gupta, Akhter, and Dos Reis, who were with the network from the outset, and continued to be active as the network became more Southern-focussed. Although few women from the South were ever able to attend more than one international meeting, so that the extent of their involvement is difficult to describe, they did represent a range of countries from Asia, Africa and South America, bringing with them their own topics, consciousnesses, and interpretations of feminism(s), which (re)shaped the FINRRAGE position away from its more academic constructs, and into the more action-oriented forms found in the arena of the reproductive rights and global justice movements, in which it continues to play a part.

Movement intellectuals in an intellectual movement

Eyerman and Jamison (1991: 101) claim that it requires socially legitimated intellectuals – either academics or writers known as public intellectuals – to at least lay the groundwork for emergence. Chapter Four suggests this appears to apply very well to FINRRAGE. The original founder group of FINRRET included four well-known women's

studies academics (Hanmer, Klein, Rowland and Raymond) and a well-established feminist journalist/researcher (Corea). Mies and Akhter, part of the founder group of FINR*RAGE* after Lund, were also, respectively, a women's studies academic and a public intellectual from the population community. Eyerman and Jamison (*ibid*: 106) also argue that one of the hallmarks of 'new' social movements is that all activists are movement intellectuals in some form at some times. However, their real interest is in the 'individuals who, through their activities articulate the knowledge interests and cognitive identity of social movements' (*ibid*: 98). Because I am studying a network, rather than a mass movement, it would appear that in some very real sense all the women in the international group, meaning those who regularly attended network meetings and were known to other affiliates outside their country, qualify as 'movement intellectuals', and it is this group I would like to consider further.

Although this thesis largely concentrates on generation of different forms of evidence-based knowledge – whether scientific/academic, embodied or experiential -- the norms of participation within which activist discussion happens is also considered by some theorists to be a form of knowledge practice in and of itself (Maiguashca 2005; Casas-Cortes, *et al.* 2008). The praxis of the local groups was oriented towards study and discussion mixed with sociality, which had much to do with the development of enduring friendship networks amongst the women involved. To a large extent, this form of knowledge generation may be considered a legacy from the early WLM, reflecting the consciousness-raising process of informal mutual education, albeit amongst a group in which many had some form of contributory knowledge, if not to the science itself, then to the study of its social, legal or ethical aspects.

This last was perhaps the most enduring and visible part of FINRRAGE's cognitive praxis, as it was the most likely to add to formal knowledge. Opportunities for more formal knowledge-exchange amongst the women mainly took place at the conferences, but there were also opportunities for informal teaching, such as the sessions on genetics given at the pool in Comilla by one of the network's few qualified specialists, a molecular biologist. (Crowe, Interview). However, because the particular epistemology which most of the women followed indicated that *feminist* knowledge is generated from women's lived experience (Klein 1983; Mies 1983), the knowledge work done in the local groups was not necessarily a matter of the academics teaching non-academics, although the presence of academics and qualified scientists in the local groups, at the large conferences, and within the transnational friendships which continued in the intervals between conferences, meant that through these various discussions there was a capacity for the women to develop forms of interactional expertise (Collins 2004; 2007) which would not have been available to them outside a collective knowledge project. As Klein, Franklin, and others suggested in their interviews, it does not really require years of formal medical education to learn enough about the basic processes of IVF or genetics to begin to read the medical or scientific literature in order to develop what Collins would call primary

source knowledge, or that derived from reading the core-set's texts. To interpret it, however, requires contact with those who have experiential knowledge of the culture of science, as well as its claims. This form of 'decoding the science' was an activity which could only be done by those who had worked, even briefly, as natural scientists, but any woman who could gain access to the fertility industry conferences could witness the culture of science as performed *outside* the laboratory, and report back, formally or informally, and the group could use different forms of expertise to interpret the experience. Similarly, those with embodied forms of knowledge, particularly those who had undergone investigations for infertility, or been confronted with choices over prenatal diagnosis for their own pregnancies, had very particular forms of expertise to share. Through these processes, primary source and popular knowledge could be contextualised and deepened with the esoteric background information available only to the expert, thus helping the non-credentialed speaker(s) speak with greater authority when making claims in the public sphere.

According to the conference programmes and other outward-facing activities the different women spoke of, the academics were also not necessarily the leaders in external workshops, meetings or other activities aimed at educating the general public. Although their professional credentials were often emphasised as a tactic of legitimation, these activities were not their sole province, as it was part of the FINRRAGE position to claim that all women were experts, by virtue of being women. Although on an individual basis there would inevitably be knowledge-hierarchies within the network which are not visible in the documents, and about which my respondents did speak, within the *cognitive* praxis of FINRRAGE all the women were constructed as equally capable of producing knowledge to contribute to the collective, whether it was from their own anecdotal experience or from a sophisticated understanding of the biomedical model of the body and how it would construct gametes, embryos and uteri as isolated, exchangeable parts.

Studying it up

The main impetus for the action of forming an activist network around NRT, as discussed earlier, was that in all streams of the debate – the medico-scientific, the moral, the ethical, the legal and the political – women's voices were not being heard, and that the information now being produced for the public by the 'experts' (see, for example, Wood and Riley 1983/1992; Wood and Westmore 1984; Winston 1986) failed to adequately describe the reality of the process, let alone give accurate attention to the risks involved for both woman and child, or the real probability of success. However, there was actually very little known about the experience of being on an IVF programme in 1984. Corea (1985b) had largely relied on news articles and scientific journals for *The Mother Machine*, but it was talking to a woman at an IVF

clinic which had never produced a baby who believed she had a 20% chance of success[154] that prompted Corea to do the survey of US clinics which revealed widespread manipulation of statistics discussed in Chapter Five. Rowland and Klein used their academic expertise to write a postdoctoral grant for Klein to come to Australia to do a research project with women who had left IVF programmes, recruited through widespread advertisement, which became *Exploitation of a Desire* (Klein 1989a), a monograph published by Deakin University which was then widely circulated as a political document, in effect opening the black box of clinical practice of IVF. Despite the clear polemicism of both texts, their findings were repeatedly -- and not only by women of FINRRAGE, or even only by feminists -- quoted in submissions and in further research, which created credibility for the evidence, if not the political demands which went with it. Other texts with a more scholarly tone, including much of the work published in *IRAGE*, were also widely cited, legitimating the journal despite its low academic ranking, as well as the writers as having credible knowledge.[155] *IRAGE* is also a good illustration of the strongly liberatory consciousness which characterises the founder group: knowing that there would be little space for what they wanted to write in the largely male-run disciplinary journals, the women simply used their contacts with other women in the academic publishing world to create their own topic-specific woman-only journal.

Research projects also provided the documentation needed for women to challenge the specialists' claims that IVF was safe, reasonably effective, and that the women had given fully informed consent, which occasionally goaded even the scientists to examine their own practice (see, for example, Soules 1985). All of this was used to bolster credibility not only for formal testimonials, but also for media appearances, especially in Australia, where FINRRAGE members, particularly Rowland, were often panelled directly with Wood or Trounson on talk shows as well as at conferences. However, women without academic credentials who did not publish, such as Lariane Fonseca, were also presented as experts, for example, through being invited to lecture medical students on reproductive ethics (Interview). Particularly in the example of Australia, where – as Albury put it – FINRRAGE was a very visible 'part of the mix' in a public debate which stretched on for several years, it is also possible to see ideas put forth in their writings and public media statements be taken up by professionals who were not part of the group, but did use elements of their critique to further their own knowledge interests.

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[154] 'Report on a Survey of IVF clinics in the US' given by Corea and Ince, in Lund proceedings circulated to participants: FIN 03/01/02/02. This story does not appear in either of the published versions of the article.

[155] Mulkay (1997), for example, draws on work from Corea, Klein, Spallone, Koch, and Crowe, in his study of the debate in Britain, and makes the interesting observation that, in fact, women on both sides of the debate were arguing from a standpoint of women speaking on behalf of women, rather than from their professional qualifications, even when these were parliamentarians (*ibid:* 90-94). Lee and Morgan (2001: 34-36) also draw on the work of the same authors, not purely as an example of feminist response, but for the insights into the experience of IVF their research produced.

This can be seen in members of the political establishment who used FINRRAGE literature such as *Exploitation of a Desire* to inform their own arguments against IVF (Woll 1992),[156] or among social workers, such as Jan Aitken, who were demanding that mandatory infertility counselling be real and meaningful, provided by themselves as autonomous professionals who were members of the clinical team as representatives for the patients' interests, not the clinics'.[157] In Britain, where infertility counselling remained voluntary, Marilyn Crawshaw, one of the British affiliates, was also one of the founders of the British Association of Social Workers' Project Group on Assisted Reproduction (PROGAR), which was central to the battle to legitimise social workers' expertise in carrying out this function (Machin 2008). Crawshaw also went on to help found UK Donorlink, which provides DNA-based matching for donors and donor-conceived adults (Crawshaw and Marshall 2008).[158]

FINRRAGE can also be seen as partly influencing the political take-up of the demand for accurate reporting of success rates, although this could also be seen as desirable by the better clinics as a way of bolstering their reputation in an atmosphere of intense competition (Thompson 2005: 104). The demands for follow-up studies on health effects from fertility drugs, which would have to be carried out by the clinicians, and which were taken up by women on the programmes as well, took a very long time to be answered,[159] and are still more often centred on IVF children (Winston and Hardy 2002; Kurinczuk, Hansen and Bower 2004; Hansen, Bower, Milne, *et al.* 2005). This suggests that a movement's knowledge interests are taken up by the larger society only inasmuch as they advance other groups' agendas, not always on their own merits, or because a new cognitive space has opened. In tracing the history of abortion activism, for example, Joffe, Weitz and Stacey (2004) show how the technical expertise of the Jane collective, a group of feminists who had successfully provided over 11,000 illegal abortions in the years before *Roe*, proved to physicians that the procedure could be safely administered in a non-hospital environment. Some of these women were later able to professionalise their expertise through demanding a new role of 'abortion counsellor', or through shaping provision of services into free-standing clinics more closely aligned towards women's needs (*ibid:* 786-788). However, according to Joffe (*ibid:* 781), the reason for the medics' involvement in the battle for legal abortion was predicated on retaining control over who should be allowed to perform the procedure, a position eventually enshrined in *Roe v Wade*, [160] which

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[156] As did Marsden Wagner of the WHO, as discussed in Chapter Five.
[157] See Jan Aitken's workshop and paper in *Liberation or Loss?*: FIN 13/Disk/AUS, also Machin (2008). Aitken, who was attached to RWH, was not an affiliate of FINRRAGE, but did attend some of their meetings and was regarded as highly sympathetic by Rowland and Klein (Interview).
[158] This programme will be defunded by the coalition government as of October 2012 and its future is now uncertain.
[159] Perhaps because of the early death of an Israeli woman from hyperstimulation syndrome, Israeli clinics have led the way in this regard (the earliest long-term study appears to be Potashnik, Lerner-Geva, Genkin, *et al.* 1999).
[160] (410 US 113 1973).

accorded doctors, not women, final authority over the decision. Therefore, while fulfilling the political goal of making first trimester abortion legal, it did not fulfil the feminist goal of gaining complete control over the decision whether or not to bear a child, and left *Roe* open to continual challenge. A similar adverse effect occurred through problematising gamete donation, with most NRT legislation dictating that both egg and semen donation came under its provisions, thus removing control of what had been a low-tech do-it-yourself form of conception from women's hands and placing it under the jurisdiction of the clinic. In fact, several women expressed ambivalence about the fact that by doing research which ultimately helped make the experience of women undergoing IVF less unpleasant in terms of the way they were treated by the clinics, they may have inadvertently increased willingness to attempt the procedure, rather than lessened it.

Writing the revolution

Although I have largely constructed my presentation of the case on the story of the network-at-large as told through its international meetings, the history of FINRRAGE would not be complete without at least an overview of its most visible legacy, which is its large body of published work. Tracing the evolution of what could be called the FINRRAGE canon – the books, chapters, journal articles, theses, conference papers (not to mention the informal writings) – in the same way as I tried to trace the origins of *Test Tube Women* would be another, and very different PhD. While I have tried in this thesis to concentrate on materials not otherwise easily available to other researchers, such as archival documents and the stories the women told me directly, any assessment of the network's knowledge practice would obviously be incomplete without some overview of their published writings.

Thinking of the writings as a phase 1 and phase 2, marked by the temporal period between 1984 and 1991, as Thompson (2001) suggests, is tempting, as these dates – coincidentally, although as the case suggests, possibly not without external reason – also correspond with the period between Groningen and Rio. However, it should not be assumed that the women writing in this period have not continued to publish, and that the form of analysis they were trying to develop has been supplanted by a rights-based perspective in which the technologies themselves are considered neutral. A significant amount of feminist writing on the issues has also emerged from a social constructionist perspective which is critical, and based in recognisably liberatory, and more frequently alternative (in this case neo-Marxist) frames, but is not politically resistant. It is the emphasis on resistance which I think distinguishes 'the FINRRAGE position' from positions taken by others member of the network, and from other feminists who employ similar arguments in language designed to promote academic scholarship rather than political response. This, I would suggest, has reasons beyond feminists merely

becoming 'increasingly sensitive' (Thompson 2001: 53) to the nuances and complexities of NRT.

One of the distinguishing features of the founder group is their history as activists in the 1970s in areas which were concerned with sexualised forms of violence – Hanmer[161] and Mies had both been involved in the refuge movement, Klein is still involved in the fight against pornography and prostitution, as Raymond is against sex trafficking, and Corea had done extensive research on the medical profession's treatment of women. In the sense that they were originally a self-selected group of friends who embarked on an activist project together, it is not surprising that separately and more strongly as a collective, they would come to the conclusion that the technologies constituted a new form of medicalised violence against women. This is stated most clearly in the two early collections of conference papers, and the books written by this group, *The Mother Machine* (Corea 1985b), *Living Laboratories (Rowland 1992)*, and *Women as Wombs* (Raymond 1993), and appears to be what is meant when both outsiders and insiders speak of 'the FINRRAGE position'. As Raymond put it:

> [T]he FINRRAGE position means, to me, that these technologies were a violation of women's bodily integrity. That they were oppression defined often as freedom for women. That they were violence against women in many ways. Especially in many of the ways in which the technologies really did violate women's bodies. And that they, they did not promote women's liberation, in fact they impeded it. And in many cases they resexualised and re-reproductivised, if that's a word, women's bodies (Interview).

Although as Chapter Five shows, this analysis begins to form before Louise Brown was born, and is already evident in some of the papers from Amherst and from *Test-Tube Women,* it is with the publication of *Made To Order*, the collected papers from Sweden, that the project of 'demonstration in publication' (Burfoot, Interview) as a *network* begins. Several of the papers from that conference were quickly published in *WSIF*, which has a relatively short turnaround for peer-reviewed journals, and would be aimed directly at academic feminists in women's studies departments, where it could be reasonably expected that they would find at least some support. Corea's (1985a) paper on the reproductive brothel was published first, and five others (Arditti 1985; Crowe 1985; Mies 1985; Minden 1985; Rowland 1985a) were collected by Klein, who was the European Editor of *WSIF*, into a special issue which appeared a few months later. Work in *Made to Order* also explored the pharmaceutical and military applications of genetic engineering (Bullard 1987), the growth of an industry around genetic testing, shaping a new profession of genetic counselor (Bradish 1987), and an analysis of committee papers to date (Spallone 1987), as well as editing the country reports into a more formal document. All of these women, with the exception of Minden, would continue to be involved in the network's

[161] Hanmer does ruefully lament the fact that she is now only remembered for her extensive work in this area, and never for her work on NRT (Interview 1).

publication project.[162] Additionally, much of the published writing on eugenics and genetic engineering took place within the Japanese and German groups and has never been translated into English, particularly as much of this appeared in non-scholarly publications.[163] Similarly, the work published by activists in Bangladesh and India in English, although circulated through the network, would not have been easily available to anyone outside of it, as this tended to be through local publications and pamphlets. Last, not all of the FINRRAGE women identified themselves as such in the biographical information of their publications, which would tend to obscure their connection. It is perhaps for these reasons that when feminists consider the FINRRAGE position, they concentrate mainly on the work written by founder women (see, for example, Lublin 1998). What I would actually call the FINRRAGE canon – meaning the full body of work published by women who were strongly affiliated with FINRRAGE – does not always express itself in the same politicized language, and exhibits a range of critical positions. In addition to the collected proceedings from Sweden, a smaller selection of this work, along with several further contributions from Raymond and Corea, appeared in an anthology, *Reconstructing Babylon*, edited by Patricia Hynes (1989), an environmentalist who had been in Sweden, and along with Raymond and Corea started the Institute on Women and Technology in 1987. Hynes' (1987) work actually proposed a concrete solution for regulation along the model of the US Environmental Protection Agency, which many of the women cited, although this was never pursued as a formal political goal. From within the Australian network, *The Baby Machine*, a collection with a forward by Hanmer and articles by Crowe, Corea and Klein, was edited by Jocelynne Scutt (1990), and included contributions based on Crowe's empirical work, as well as first-person accounts of IVF and surrogacy. Overall, by the late 1980s there were enough women (and the occasional man) willing to either speak to researchers or write firsthand accounts of coming to terms with infertility, undergoing IVF, and giving up biological children in surrogacy arrangements, that Klein was able to put together an anthology, *Infertility*, (Klein 1989c) as an international companion to her own empirical research with women who had left IVF programmes (Klein 1989a). Patricia Spallone also produced one book researched during her time in FINRRAGE, *Beyond Conception* (1989), and later, *Generation Games* (1992).

In addition to work published from within the network, scholarship was now burgeoning around the issue, creating other opportunities. Four of the PhD students (Burfoot, Crowe, Franklin and Steinberg) presented papers at a British Sociological Association conference held at the University of Leeds in 1987, which were published as part of a collected volume on NRT (McNeil, Varcoe and Yearley 1990). Theses which had been informed by the work done within the network, often circulated to other network members for comments in draft

[162] Arditti was not active with network, but was the North American Editor for *IRAGE*.
[163] Feyerabend, for example, has written dozens of articles in the popular press and has been the editor of the newsletter, Bioskop, since 1997. It can now be found online at http://www.bioskop-forum.de.

format, were produced in Dutch, German and Danish, as well as in the English language. Some provide excellent detailed case studies of the development of the technologies (Burfoot 1989; Rutnam 1999) and some which were published have now become classic texts, such as *Bodies in Glass* (Steinberg 1997) and *Embodied Progress* (Franklin 1997), possibly the first lab ethnography to focus on IVF. In addition to *WSIF* and other feminist journals, FINRRAGE women did, and continue to, publish in journals concerned with bioethics (Patel 1989; Gupta and Richters 2008; Tsuge and Hong 2011), social sciences (Burfoot 1993; Koch and Stemerding 1994; Burfoot 2003; Koch and Nordahl Svendsen 2005; Satzinger 2005) and more recently within the medical journals (Franklin 2006; Ferber 2007; Crawshaw and Marshall 2008; Franklin 2011). These indicate but a fraction of the collected publications of all the network members.

Just prior to the conference in 1993, UBINIG also created *People's Perspectives*, as a smaller, less formal version of *IRAGE*, to provide a publication platform for writings on the issue of population policy from a perspective that emphasized over-consumption, neo-colonialism, and neoliberal economic policy as the cause of third world poverty. In particular, it devoted an intense scrutiny to the activities of the preparatory committees (PrepComms) for Cairo, and offered an oppositional analysis of the official documents circulating amongst the various bodies that would be represented at the UN conference. The magazine published ten issues over the next two years leading up to Cairo, and many of the European FINRRAGE women published articles there as well. UBINIG also established its own publishing house during this period, Narigrantha Prabartana, which has now evolved into a women's resource centre and bookstore, and which continues to publish its own material, as well as reprinting material published by Klein's and Susan Hawthorne's independent feminist press in Australia, Spinifex Press, in a format which can be priced for the South Asian area.[164]

However, in the mid-1980s, there were few publication opportunities for feminists outside their own journals. Because the founder group were in a professional position to apply for funding, one strategy for creating more opportunities for 'like-minded' women to get into print – particularly those who normally would not be published in academic journals, such as journalists or activists working in the area of infertility counseling – was to start their own journal. In December of 1986, the five original founders received a $15,000 grant from the Skaggs Foundation (who had also funded the Sweden conference) to start an academic journal, which Klein offered to Phyllis Hall at Pergamon,[165] whom she knew as they also published *WSIF*. Pergamon accepted on a three-year basis, with rolling contracts for six months. The journal's first issue was published in March 1988 and it continued to appear three times yearly until 1992. Envisioned as their own project, separate from the international network and

[164] See http://www.prabartana.com.
[165] Letter, RK to Hall, 11 December 1986: FIN 07/07 box 1.

therefore under their own control,[166] the group did draw extensively from the women they knew through FINRRAGE to create the editorial advisory board, and to select regional editors. Although the network never collectively authorised a position paper on any of the technologies, it is possible to read the contents of *IRAGE* as an indicator of the range of positions FINRRAGE actually did support. Having both an activist and scholarly mandate, the journal published formal research, but also published news of political actions (Gen-Archiv 1988; Winkler 1988; Riegler 1989; Rosier 1989; Waldschmidt 1992), essays about embodied experience (Solomon 1988; Kane 1989), and other works written by non-academics, whom the editorial staff coached through the editing process. The journal also published a column called 'At Issue', which was an essay on a pressing question, written for several years by Janice Raymond and later by Jocelynne Scutt; a section on current scientific developments which was an outgrowth of the informal newsletter edited by Cindy de Wit, which had been circulated through the infopacks since 1985; book reviews and conference reports. Although it was not reviewed blind, the work published in IRAGE did have to be written to an academic standard, often teaching the writer the tools in the process. This was an important process of professionalisation which nudged some of the women back to university to take postgraduate degrees:

> So we get something like professionals and are asked to write articles and so on and so forth. So, ja and this kind of political interest brings me up to study once again, and to understand this process to understand how science is working and to understand the structures of this kind of knowledge production and so on and so forth…. And with this kind of shift I also, I mean I wrote also before, but this makes me more, gives me more opportunities, even if I was not educated journalist, to write in newspapers, to write articles in books and so. And I thought oh this is something I'm in favour of, this something, it's something, something like a passion. And yeah, and during the years I professionalizized [sic] myself (Feyerabend, Germany).

Feyerabend's story shows that FINRRAGE also developed new forms of professionalized knowledge amongst its participants, as well as providing impetus and support for opening up a new area of scholarship within the academy. Again, this brings up the question of academia as an essential part of the context of FINRRAGE, not only for its emergence, but also as part of the larger social forces which appear to have produced an abeyance of feminist activism in the Anglo-European countries overall (Bagguley 2002; Taylor 2007; Grey and Sawer 2008; Andrew and Maddison 2010). Organisationally, while institutionalisation was largely rejected by the network through its choice not to seek NGO status, the group's heavily academic focus suggests that it was always and already institutionalised in some sense, and that the changing fortunes of autonomous women's studies may have had an effect on the European part of the network (in which I include Australia) in terms of sustaining and renewing itself. Although by the 1990s research on the ELSI side of reproductive and genetic technologies was

[166] Letter, JR to GC, JH, RK and RR, 8 February 1987: FIN 02/04/01.

becoming far easier to pursue, with funding available for projects on the social implications of biotechnology, reproductive technologies, genomics and regenerative medicine, the spaces for left-wing academics overall were shrinking as quickly as the spaces for left-wing activism in the streets (Sheridan 1991; Clegg 1996; Pravadelli 2011). This was most noticeable amongst the Europeans and Australians, who were never able to find a next generation of students and junior academics who were interested in joining the network, even in Australia where FINRRAGE remained a visible part of the civic landscape throughout the 1990s. Again, it may be no coincidence that the institutional absorption of many women's studies departments back into mainstream disciplines or their reconfiguration into postmodern gender studies also coincides with the dispersal of the European network, as both would have been subject to similar forces of professionalisation, and withdrawal of funding from the entire range of activities promoting oppositional women's interests and autonomous spaces (Pereira 2008). From an activist perspective, therefore, the conflicts occurring between FINRRAGE and the WGNRR, and within both groups, also reflects the mainstream/autonomy debate that had long divided feminist academics (and still is - see Pereira 2009) and which was manifesting itself amongst many other groups in the same frame of argumentation over the need for professionalisation to have enough authority and funding to be effective, versus the need to remain autonomous in order not to be silenced or co-opted by practices too engrained in the institution itself to be challenged.

The question of whether or not to engage in institutional structures was therefore more complex than one of mere efficacy, but rather one of survival of autonomous spaces in which a more radical analysis could be pursued. These spaces were also threatened by one of the byproducts of postmodern theory, which is its ability to effectively dismantle the singular group-level identity required for collective action, resulting in 'lip-service' attention to other axes of oppression without actually producing better strategies for change (Ferguson 1994: 208). To this extent, the argument at Comilla about a singular position for FINRRAGE may have been perceived by the founder group as a fight for the very soul of feminism as a theory of women's liberation.

Constructing experts and expertise

The above discussion shows that while the cognitive praxis paradigm accepts different forms of knowledge, the case of FINRRAGE shows that its definition of 'movement intellectual' may require further refining to truly see the use of expertise beyond broad categories such as scientists, public educators, and counter-experts (Eyerman and Jamison 1991: 106-7). Because cognitive praxis conceptualises social movements as occupying a particular space separate from the institutions it seeks to influence, it is in the matter of expertise that it is weakest. In this

section I will discuss the framework I developed in order to see more clearly the interplay between different forms of movement-relevant knowledge, and the more normative categories of expertise.

Nowotny (2003) suggests that as science has become increasingly immersed in the deliberative processes of civil society (or in her formulation, the modern *agora*, or meeting place), this has meant increasing demands for democratisation and transparency in scientific decision-making, which may mean that the very shape of the agora has changed since the mass protest movements of the 70s upon which the cognitive praxis paradigm is built. Whereas SMT considers 'knowledge' to be largely interpretative (Kurzman 2008) or symbolic (Melucci 1985), my case study suggests that this is only a small part of what some activists do. Considered as rational-reasonable, rather than rational-economic actors, activists within the *agora* may be seen to employ knowledge-producing strategies which are superficially similar to science, or at least to academic disciplines, sans validation by peer-review: there is a textual canon which is used as the basis from which the movement's knowledge is built, evidence-gathering measures are guided by an epistemology (although here deliberately informed by an underlying political consciousness) which serves as a framework for interpretation of evidence, the products of which are continually collectively tested and validated through meetings, talks and other public speech acts (Bakhtin 1986), documented in manifestos, declarations, pamphlets -- a continuum extending all the way to published (even peer-reviewed) articles, papers and books.[167] This is the cognitive praxis which can be seen, according to Eyerman and Jamison, separate from a movement's organisations, goals, or protest actions. While Eyerman and Jamison assign a specific role of 'movement intellectuals' to those who produce these forms of documentation (as opposed to, say, those who produce minutes of meetings) it is not always clear how these 'movement intellectuals' stand in relation to qualified experts on one side and the so-called 'lay public' on the other, partly because, as discussed in Chapter Two, practices of democratisation of science (see, for example, Turner 1990; Irwin 2001; Wakeford 2004), and the rise of health social movements mutually shaped by activist and professional interests (Brown, Zavestoski, McCormick, *et al.* 2004) have significantly troubled these concepts. My study of FINRRAGE suggests a more carefully nuanced conception of expertise in social movements is necessary, one that is a reflection of the topic of the movement, and the knowledge interests of the very narrow group which will comprise the core-set, particularly around contested technoscience. This would allow clearer differentiation of 'movement intellectuals', focussing on relevance of knowledge, rather than merely the possession of formal credentials, which may not be in matters salient to the movement. To build this framework, I first turned to Harry Collins' and Robert Evans' work on various forms of expertise.

[167] According to some literary theorists, published writing qualifies as a 'public speech act' because it addresses an unknown audience (see Bakhtin 1986; also Pratt 1986).

To briefly reiterate my discussion in Chapter Two, Collins and Evans (2007) suggest a framework within which different forms of knowledge may be distinguished on a continuum from that which can be encapsulated on a beer mat, to knowledge derived from popular literature, to studying primary sources, to sustained interaction with practitioners, to contributing to the science. These categories can be applied to the different forms of knowledge movement intellectuals develop, without specifying content. This allows incorporation of a form of knowledge, embodied, which may have its own esoteric language and culture, as inaccessible to outsiders as science is to the lay actor, and which, in their concentration on technical expertise derived through repeated action, Collins and Evans appear to have ignored. For this, I have also incorporated Arksey's (1994) extension of Collins' core-set, or those with contributory knowledge, to those possessing embodied knowledge of a state of being. In her example, these are medical patients who are frequently more able to talk to a medical specialist in his/her own language than those whose qualifications in the field are general, such as may be exhibited by general practitioners. While this resembles Collins' and Evans' category of 'interactional expertise' is it not quite similar. In the framework I will discuss below, I will use the term 'expertise' as defined by Jasanoff (1995 in Jasanoff 2003:159), as 'contingently produced within the very context of disputation', meaning each category is relational to the others, and to the knowledge interests of the specific movement. Formal or professional qualifications are similarly relational, and do not by themselves confer expertise. However, I will not dismiss these entirely, as they are part of the process of achieving credibility.

Expert roles in FINRRAGE

The framework described below should not be taken to illustrate a hierarchy of activist knowledge, as those who were not professional knowledge-producers might possess organisational, artistic, communicative or other forms of expertise upon which the network was equally reliant. The framework is merely meant to help illuminate what forms of expertise are relevant to the movement's knowledge interests. Although developed specifically from this case study, the six categories are flexible and meant to be applicable to any movement.

To illustrate my discussion better, I will first reproduce the table used to develop this framework. This includes only the women I have mentioned by name in the history chapters, so it should be understood as only a partial illustration of the larger network, and the number of women in each category should not necessarily be considered representative of the network as whole. Women who were not part of my interview cohort are in italics, while those who were national contacts in countries with groups that met regularly, or organised the international meetings, are in bold. Assigning the women to these categories has been a process of constant

comparison and revision, through which the qualities of each category were also reconsidered as development of the case progressed. The qualities of the six categories will be explained below:

QS ***Paula Bradish*** *(Molecular biologist)* **Satoko Nagaoki**, Japan (Dev. biologist/Social sci.) *Helen (Becky) Holmes (Geneticist)*	**NQS** *Alison Solomon (Embodied, Women's health)* **Azumi Tsuge**, Japan (Embodied, Social scientist) ***Deborah Steinberg****, GB (Social scientist)* **Erika Feyerabend**, Germany (Journalist) **Farida Akhter**, Bangladesh (Researcher) *Gena Corea, USA (Journalist)* Janice Raymond, USA (Ethicist) Marilyn Crawshaw, GB (Social worker) *Theresia Degener, Germany (Embodied, Lawyer)* *Ute Winkler, Germany (Women's health)*
QG ***Ana Regina dos Reis*** *(MD)* ***Christine Ewing*** *(Immunologist)* *Cynthia de Wit (Environmental scientist)* *Francoise Laborie (Biochemist/Social sci.)* Helga Satzinger, Germany (Biologist) Patricia Spallone, GB (Biochemist/Social sci.) **Renate Klein**, GB/Australia (Biologist/Social sci.) *Sarah Jansen, Germany* (Biologist)	**NQG** Sarah Ferber, Australia (Historian) **Jalna Hanmer**, GB (Social scientist) *Jocelynne Scutt, Australia (Lawyer)* **Lariane Fonseca**, Australia (Women's health) *Leonor Taboada (Women's health)* Maria Mies, Germany (Social scientist)
QNS Annette Burfoot, GB/Canada (Social scientist) **Aurelia Weikert**, Austria (Social scientist) Christine Crowe, Australia (Social scientist) Jyotsna Gupta, India/Netherlands (Social sci.) Lene Koch, Denmark (Social scientist) Robyn Rowland, Australia (Social scientist) Sarah Franklin, GB (Social scientist)	**NQNS** **Annette Goerlich**, Belgium (Politics) *Linda Wilkens (Activist)* **Margret Krannich**, Belgium (Politics) Penny Bainbridge, UK (Social worker) ***Thais Corral****, Brazil (Journalist)* *Ulla Penselin (Activist)* *Verena Stolke (Social scientist)*

Table 1 – Expertise amongst FINRRAGE women mentioned in this thesis

The Qualified Specialist (QS)

The QS would be a practitioner with formal, esoteric knowledge relevant to the specific area under question. This is someone who has been trained to do the science involved, who is likely to be aware of new developments and internal controversies, and is able to evaluate research in the field, even if they have since moved into another. In the periodic table of expertise proposed by Collins and Evans (2007), this would be a person with contributory expertise. In FINRRAGE, these were women who had been trained in molecular or microbiology, genetics, or reproductive science. Within what I have called the international group, or the women most visible to each other and to the network through repeated attendance at the large meetings, there appear to have been only two who fit this description. One, Satoko Nagaoki of Soshiren, was Japanese and did not speak English particularly well, but within the

Japanese women's movement her expertise as a developmental biologist made her quickly in demand to explain reproductive technologies when they began to take hold in Japan in 1983. Through studying the social meaning of NRT, Nagaoki eventually came to be known in Japan as a feminist expert in human reproductive technology, and is now a professor of STS and women's and gender studies (Interview). The second, Paula Bradish of the ICG, was a molecular biologist of German-American parentage and spoke excellent English. It was Bradish who gave the poolside tutorials and the more formal genetics lectures at the international meetings, and who brought specialist knowledge of genetic engineering and its potential applications, particularly biowarfare, into the group's collective knowledge base.

The Qualified Generalist (QG)

The QG has formally acquired qualifications in the larger field in which the issue is embedded, but not in the specific area of contention. They will hold some esoteric knowledge of the specific science being contested, but would not be able to utilise all of its technologies. Both the QS and the QG have some form of contributory expertise, having worked as natural scientists or as clinicians, but while the QG will have been socialised into one of the natural sciences that make up the QS area, their particular area would be only generally relevant. In FINRRAGE, this category included medical doctors and clinical researchers, biologists or biochemists, and environmental scientists. A number of the international group fell into this category, although some had moved into social science. However, because they still drew heavily on their scientific background to help decode both the science and the culture of science for the other women, they remain in this category. Patricia Spallone, for example, is remembered for explaining the significance of culturing embryos as tissue, and had created a glossary of terms, which was also printed, along with extensive bibliographies, in *Beyond Conception* (Spallone 1989: 196-203). Cynthia De Wit translated a range of scientific papers on reproductive matters from infant heath to technological conception, and on genetic engineering of animals, crops, and human tissue into ordinary language for circulation in the infopacks as FINRRAGE News, and later published a similar column in IRAGE between 1988 and 1992. Both the QS and QG groups provided an invaluable resource for women who did not develop the knowledge base to read the scientific and medical literature directly, as they had the tacit knowledge which comes from immersion in scientific culture (Collins and Evans 2007), but also the linguistic skill to translate complex esoteric knowledge into usable information, and to help provide the deeper context which, according to Collins and Evans, tends to be flattened out of popular accounts (*ibid*: 20-21).

The Qualified Non-Specialist (QNS)

Qualified in this category still refers to formal training which leads to the production of knowledge through empirical research (as opposed to law, the arts or the humanities) but in fields outside the area defined for the Generalists. Non-Specialist means that those in this category have a professional research interest in the matter in question, but no direct esoteric knowledge of the science itself. In FINRRAGE, perhaps unsurprisingly, all the women in this category were social scientists who had made reproductive technologies their focus, and had done some form of empirical research, usually with women who were considering, had undergone, or had rejected IVF. Some had carried also out interviews with fertility specialists, and others, such as Robyn Rowland, and Sarah Franklin, whose PhD had been an ethnographic study of an IVF clinic, had the immersive experience that would characterise an interactional expert in that they had spent considerable time embedded within the culture, and could speak its language to its practitioners without intermediary translation (Collins 2004). This group does not have contributory knowledge, but it will always have primary source knowledge, and will be able to call on other forms of academic expertise to utilise this in a more contextualised way, particularly in FINRRAGE where all of these women were also familiar with feminist science studies. The QNS and the three NQ categories I will discuss below all exhibit different aspects of what would normally be lumped together as 'lay' expertise.

Non-Qualified Specialist (NQS)

'Non-Qualified' in this framework does not mean that the activist does not hold formal knowledge credentials – many of the women in these categories hold Masters, PhDs or advanced law degrees. The NQS has acquired a significant level of specialist knowledge not accessible to the lay public, either through intensive independent study or through embodied or experiential knowledge, but they are not formally trained as natural or empirical social scientists. Hence, philosophers, historians, lawyers, social workers, journalists and others with very high levels of primary source knowledge will fall into this category rather than the QNS. This category would also include women who have esoteric knowledge derived from direct, embodied experience, as IVF patients, infertile women, the users of long-acting contraceptives, or in the case of prenatal testing, people living with the kinds of impairments such testing is meant to avoid. Embodied knowers may also have other forms of expertise, however within this framework, this does not include ubiquitous forms of embodied knowledge which belong to the entire group, such as 'being a woman'. Epstein's (1995; 1996) work suggests that it may be possible for someone to display both embodied (as a patient) and interactional expertise (as an activist immersed in the language and culture of clinical research), however, in this framework embodied knowers may also be qualified experts. Azumi Tzuge, for example, is a woman who

has undergone fertility treatment and runs an infertility support group, but she is also a social scientist who does empirical research with women undergoing IVF and prenatal testing. I have placed her here because two of her three forms of expertise belong to this category, and because embodied expertise, unlike the other categories, cannot be learned from other sources. Experiential knowledge in this framework is derived from both primary source knowledge and close, repeated encounters with multiple embodied knowers. This bears some similarities to interactional expertise, in that it produces the ability to speak directly to both the embodied knower and the qualified specialist without translation, and provides a deeper context through which primary sources may be interpreted. While experiential expertise can be produced through some kinds of informal research, in this framework it is more likely to be derived from a non-academic setting such as counselling or social work.

The Non-Qualified Generalist (NQG)

The NQG describes exoteric and experiential knowledges which are more general than that exhibited by the NQS category, although it may cover many of the same occupations. Academics in this category may write papers on the movement's topics, but without the highly specialised focus of the QNS or NQS categories, and often without reference to primary source data. Technical knowledge of the science in this group is generally at the level of well-informed popular knowledge, however, expertise derived from their own field may be put to use, for example analysing a significant legal decision or an ethical dilemma. In FINRRAGE, this category might also include activists who work in the field of women's reproductive rights, women's health, development, or population policy, and so would be much larger than is actually represented here, particularly in the later years of the network.

The Non-Qualified Non-Specialist (NQNS)

Within a social movements framework, this group demonstrates what would normally be thought of as lay expertise, or in Collins' and Evans' periodic table, popular understanding. Across the network as a whole it is also a much larger group than represented here, but not necessarily less formally qualified than any the others: of the ninety women whose expertise levels can be surmised from their activities, education and employment, twenty-six fall into this category, of which there are at least ten women with PhDs and three with advanced law degrees. As with the NQG, in terms of reprogenetic technologies, materials utilised and produced by this group are likely to be written for an educated popular audience, and their professional expertise is likely to be utilised in more organisational ways. Margaret Görlich and Annette Krannich, for example, the two women who organised the Feminist Hearing in Brussels, had both studied political science and were employed as scientific assistants by a foundation linked to the

European Green Party, and Penny Bainbridge worked at a women's health centre. All three felt that reading literature such as *The Mother Machine* provided them with an acceptable level of knowledge. Additionally, in FINRRAGE, all six groups are likely to be at least somewhat familiar with feminist critique of science, and used this as an analytic frame.

The table above also shows that in FINRRAGE at least, organisational experts existed in all categories, and there was no single category which created an elite status of 'movement intellectual' who does not do the boring day-to-day work. Moreover, women in all six groups had given oral testimony before political bodies or consultation committees, sat on ethics and medical committees, been invited to give speeches and presentations to civic groups, talked to the media, or had their particular form of expertise otherwise validated by external invitations to speak. After much careful thought, however, the category of 'beer-mat' knowledge as articulated by Collins and Evans was eliminated from my framework. While it may take very little *factual* knowledge to mobilise someone to protest, it seems unlikely that anyone would continue to engage in activism around an issue without at least a basic popular understanding of the problem articulated by the movement in order to make a reasoned judgment as to whether its belief system appears justified and its underlying consciousness resonates with already-existing ways of seeing the world. My case study showed that those who began with almost no knowledge either entered FINRRAGE precisely because it was a way to learn more, or were already self-educating when FINRRAGE crossed their path.

Eyerman and Jamison also suggest that movements are spaces wherein informal expertise may become formalised. It is possible to extend the framework over time, so that patterns of movement into (or out of) different categories may be seen, which may show the extent and nature of professionalisation or fragmentation. The table above is based on an aggregate of each actor's work in the network, however, as the case showed many of the women, as Feyerabend put it, 'professionalized' themselves through the knowledge they developed. In Feyerabend's case, she returned to university to take an MA in science studies to underpin a shift from social work into science journalism, moving from NQNS to NQS as a direct result of the knowledge interests developed in FINRRAGE. Lene Koch, who came to Lund almost on a whim, went back and obtained a doctoral research grant to study the first group of women to have state-supported IVF; she subsequently became a standing member of the Danish Council of Ethics, a move from NQNS to QNS. Aurelia Weikert, who came into the network while an undergraduate studying for her diplôme, was allowed to do her PhD on NRT because she had already published a short interview with a woman who had sold her eggs in *IRAGE* (Riegler and Weikert 1988), and this impressed her potential supervisor into considering it an acceptable topic; she too moved from NQNS to QNS. Patricia Spallone, a former biochemist in the QG category, actually did so much social research during her time in FINRRAGE that this became a book, *Beyond Conception* (1989), which she later used as the

basis of a PhD. Penny Bainbridge, who remained in the NQNS category, never sought to develop more than a good popular understanding of reprotech, but became the first lay person to agree to vice-chair an NHS ethics committee, because she felt confident enough to consider her expertise to have equal status, despite the committee mainly being made up of medics and academics (Bainbridge, Interview). Because the case was constructed from lifecourse interviews, what the framework also shows is that almost all the professionalisation inspired by network activism went towards academia, and that this was just as likely to take place after active involvement ceased, as during the expansion period.

However, in general it also suggests that one of the reasons why FINRRAGE did not catch on widely with grassroots feminists in most of Europe or the US may indeed have been because the subject matter, or perhaps the image projected by the presence of so many academics was intimidating to women without higher education. Because it did not engage in protest, but in a form of activity more common to academics, ordinary women may have seen it as an intellectual, rather than a political movement. They may have also felt that NRT was a niche issue which did not truly concern them as activists, as Gougon (2008) found when discussing NRT with current leaders of mainstream women's organisations in the US. However, in Germany, where eugenics and the questions surrounding it were indeed deemed to be the province of the whole society, and in the global South, where contraceptive testing and population policy were also experienced as affecting all women of childbearing age regardless of actual fertility, grassroots women did indeed engage with these particular knowledge interests in larger numbers, and FINRRAGE affiliates were likely to be part of multiple organisations and networks. Extended over time, the framework also shows that up until Rio, after which there were no more international meetings, those who professionalized their FINRRAGE work did not drift away from the network, but rather became more involved in it. Where people did actually leave the network, this tended to be due to illness, extreme economic pressure, or in some instances because of a split such as that which took place in the British group after Comilla, but only very rarely because they had lost interest.

As a comparison showing what the framework can reveal, it may also be applied to the Amherst conference. Considering the knowledge interests relevant to FINRRAGE at this conference to be sex selection, prenatal diagnosis and IVF, and drawing from the biographical statements in the second volume of the collected proceedings (Holmes, Hoskins and Gross 1981), four of the presenters were qualified specialists (QS), one each in developmental biology, molecular biology, medical genetics and genetic counselling. Another nine were generally qualified (QG) in the area of biology and medicine. One woman was a non-qualified specialist (NQS) representing a counselling and referral group for infertile couples, RESOLVE, and one was qualified, but outside the specialist area (QNS), as a sociologist studying sex-ratio distribution and male behaviour. Twelve had general expertise (NQG), mostly in bioethics.

Within the largest group of sixteen, representing what is normally thought of as 'lay' expertise (NQNS), several had or were working towards PhDs in other areas, but these were not relevant to the topics of the conference, and if politically active, it was not in the area of women's health or disability support, nor did they have personal experience of the issues. What is perhaps most interesting about what the framework shows when applied to the Amherst conference is that in 1979, almost no one who was not already involved in the natural sciences was writing extensively about the social implications of NRT. This meant that the two groups in FINRRAGE which later developed significant interactional expertise, the QNS and the NQS, were at this time almost unrepresented.

Conclusion

How to grapple with issues based in complex science, from the marginalised position of being mostly non-scientists lacking formal qualifications to challenge qualified knowers, while being largely excluded from political institutions by virtue of being women, was the key strategic issue for the network. Therefore, developing epistemic authority was perhaps the most important activity on an organisational level, as it made everything else – funding, publication in academic journals not their own, invitations to speak to community groups, appearances before and on government committees – possible. In this chapter, I have attempted to clarify the different forms of expertise the women brought into the network and developed within it, and the ways in which these were utilised to create new research projects, and develop a deeper understanding of the practice and culture of science. In order to do this I have devised a framework of categories describing various forms of expertise which the women in the network displayed. I have also looked more closely at the role of movement intellectuals, and of foundational texts. In the next chapter, I will return to the original case, providing a summary of what this framework, added to the cognitive praxis paradigm, helped reveal about FINRRAGE as an activist knowledge-generating project, before coming to my final considerations.

CHAPTER 8 – CONCLUSIONS

> *…FINRRAGE really did make an intellectual contribution, it was not just making a noise. So I think our main thing was the intellectual part of it, the analysis, the scientific part of it. That's why you know FINRRAGE will never die. It may go on hibernation, it may go on maybe we need life support. Some saline, you know. But I think it will never die. It will never die.*
>
> *(Farida Akhter, Bangladesh)*

FINRRAGE is a difficult entity to define. Although comprised of both organizations and individuals, it was not large enough to constitute a social movement in and of itself, yet some of the women I spoke with defined it as such. For the most part it has been portrayed as a radical feminist organization, and as such it fits the radical ideal type model proposed by Fitzgerald and Rogers (2000) – it had no office, no appointed leaders, and no formal membership, yet all of the women considered themselves to have been 'in' FINRRAGE. But FINRRAGE did not engage in the direct action tactics which are part of Fitzgerald and Rogers' model, and which are usually a primary strategy for radical organizations. Similarly, while 'the FINRRAGE position' as a 'radical no' was considered to be a property of FINRRAGE International, which is how many referred to the network itself, most of the women also spoke of the individual diversity of viewpoints within the network.

In creating the case study, however, I have found that the term had multiple meanings that in fact describe the network's cognitive praxis, rather than just its political stance, and that there were distinctly FINRRAGE positions on organisational, tactical and analytic aspects of their collective knowledge project. In this chapter, I will return to my original three questions, considering what each dimension has revealed about FINRRAGE as a case of feminist activism. I will then consider the cognitive praxis paradigm, and my extension of it, as a framework for clarifying some of the fuzzyness in the study of knowledge in social movements. Last, I will reflect on the research experience itself before considering further areas of exploration and concluding the thesis.

FINRRAGE as a case of activist knowledge

My purpose in constructing this case was not to discover the 'real' FINRRAGE, as that would not be possible even had I desired it, but to use the cognitive praxis paradigm to see what kind of knowledge the network had produced, and how. According to Eyerman and Jamison (1991: 55), cognitive praxis describes the 'creation, articulation, formulation of new thoughts and ideas' which define a movement through the shape of its organisation, its knowledge interests, and the spaces and tensions which it produced. In this section I will summarise how

the three dimensions described by the paradigm answer my original research questions: how did FINRRAGE emerge, develop, and operationalise its 'position'? What were the tactics used to develop and disseminate its knowledge? And how were the different kinds of expertise the women brought to, or developed within, the network used to legitimate that knowledge within the public sphere?

Cosmological dimensions

I began my consideration of the ways in which FINRRAGE emerged, developed and operationalised its 'position' by tracing the interpersonal and intellectual links which brought together the five women who were the original founder group. The underlying cosmology, or 'common worldview assumptions' (Eyerman and Jamison 1991: 68), of this group drew from Klein's experience as a scientist, and her distrust of the rhetoric of progress and alleviating human suffering, on Corea's and Raymond's work on biomedicine and its treatment of women, Hanmer's work on violence against women, and Rowland's close association with IVF scientists in Australia and her research on the practice and psychological effects of donor insemination. Combined with an activist background drawn from their earlier years as part of the autonomous women's liberation movement, these five women developed a theory of NRT as a method of consolidating patriarchal control over women through controlling their reproductive functions, a process which they traced from the persecution of midwives during the establishment of the male profession of obstetrics (Corea 1977: 249-261), and projected to end with every part of the reproductive process controlled by technology, until women themselves, robbed of their essential function in procreation, were no longer needed (Hanmer 1983). Part of the evidence for this was found in the new technologies of surveillance of pregnancy, such as amniocentesis, which were being employed in son-preference countries to prevent the birth of female babies. Reading between the lines of medical, scientific, and popular accounts of the development of IVF, they saw a new technoscience being developed through experimentation on the bodies of women, which was not really about making babies for the infertile, but about gaining access to eggs and wombs in order to learn how to control the entirety of reproduction as a means of controlling what kind of children would be born, where, and to whom. NRT, they concluded, was a new, medicalised form of violence against women.

It was through the case study that I developed the idea that the master frames spoken of in SMT (Snow, *et al.* 1986) might be thought of as an underlying political consciousness, returning more closely to Goffman's (1974) formulation of frames as organisers of meaning. Three forms of oppositional political consciousness are readily apparent in Western feminism, largely based on where control is located. To briefly recap: the egalitarian consciousness is closest to what is referred to as the Enlightenment project, seeking a more equitable distribution

of control, and prioritising autonomy and freedom of choice as a matter of self-determination. The liberatory consciousness sees control as a tool of domination which it seeks to avoid or retake from the dominant group. The alternative consciousness argues against control entirely, seeking to minimise the capacity of the dominant group to wield control without appropriating it. All of these exist in some form in all movements and it is the overlaps and gaps which give the different parts of the movement, and the different people within it, their cognitive form.

The case revealed that it was the seven women who constitute the founder group from Lund (Akhter, Corea, Hanmer, Klein, Mies, Raymond and Rowland) who formed the particular shape of the cognitive space, and the framework within which FINRRAGE could develop its knowledge. While all but Akhter identified as 'radical' feminists, this concept had different political meanings and manifestations for each. Rowland, coming from the context of Australia, where radical feminism had an institutional space in the civil service, did not reject the idea of returning some control over NRT to women through restrictive legislation, nor did Corea and Raymond, coming from a context in which NRT was a free-market business from the start. Hanmer, Klein, and particularly Mies were committed to acting outside political institutions, however. Akhter, Mies and Hanmer also came from a strong neo-Marxist background and shared a history in liberatory movements against imperial control in the Third World. Mies and Akhter both also display a distinctly alternative consciousness with regard to technology and nature in general, and in addition to their FINRRAGE activities have worked for the maintenance of local knowledge and traditional forms of agricultural and economic activity (see Akhter's work with Nayakrishi Andolon, also Mies 2010). The combination of these underlying cognitive frameworks was a largely overlapping space of liberatory and alternative consciousnesses, with a very small overlap of liberatory and egalitarian consciousness, largely produced through Corea and Raymond and the historically individualist rights-based culture from which American feminism had emerged. The knowledge FINRRAGE produced within this space appears to mainly draw from a standpoint epistemology in which women were constructed as having authority to speak by the virtue of being women, and used the mechanisms of academia to validate embodied, experiential, and anecdotal forms of knowledge as part of their overall research agenda into NRT.

The two overlapping consciousnesses can be seen in the tactics chosen to operationalise the analysis of NRT as medical experimentation. The alternative consciousness urged the exploration of no-tech and low-tech solutions to infertility, including strategies for finding the positive aspects of childlessness. In terms of population policy, it is most evident in Akhter's complete rejection of the word 'population', and of a feminist version which would still base development on state control of fertility. The liberatory aspects demanded accurate reporting of the procedures required and of success rates; ongoing research into alternatives to hormonal stimulation, its long-term effects, and the prevention of infertility, particularly that caused by the

medical profession itself as a way of returning some measure of control to women undergoing IVF. It also advocated the delivery of independent meaningful counselling in women-run centres. Beyond personal affinity, it was the ability of these two consciousnesses to fit together without substantial friction which guided the early operationalisation of 'the FINRRAGE position'.

Both consciousnesses also resisted the egalitarian tendency towards transforming rights-based discourses of self-determination to a right to a child by any means available, and problematised the commodification of women's bodies encoded in the idea of greater autonomy through greater reproductive 'choice'. However, it was through these two points that the greatest ambivalence and diversity of political stance appears to have been produced through the insoluable contradictions which are an inherent part of applying a group-level liberatory analysis to individual women's lives. Over time, the cognitive space of the movement reshaped itself around its participants, making more room for egalitarian thinking. Visualised this way, Comilla appears to have been a pulling apart of the alternative and liberatory forms, so that a larger and more uneasy overlap of liberatory and egalitarian consciousnesses came to inhabit part of that cognitive space.

Organisational form

Considered as an organisational form, 'the FINRRAGE position' was that feminist activism should take place in autonomous, grassroots groups based around the practice of non-hierarchical structures developed in the women's liberation movement, in which there are no overt leadership positions, meaning the title of national or international contact did not confer any particular power. However, as noted in Chapter Five, an unacknowledged structure of leadership based upon being part of the international group who were able to journey to meetings, take part in strategy sessions, and form face-to-face friendships with women from other countries, did exist. Within this structure, the founder group appeared to have its own authority as the originators of the network, as well as holding a political position of 'radical no' to all forms of reproductive control which was not necessarily shared by all. The tensions between this position and others which may have been more receptive to certain egalitarian arguments about autonomy, agency and choice, existed all through the 1980s, but do not appear to have been at all unproductive until the international conference in Comilla. There, for the first time, it appeared that there had been a profound enough shift in the overlapping consciousnesses which had originally shaped FINRRAGE's cognitive praxis that there was a real question of whether some political positions on individual use of the technologies had moved so far towards the strongly egalitarian consciousness which also infusing the reproductive rights and women's health movements in which FINRRAGE was embedded, that they were now outside

FINRRAGE's cognitive space. The expansion of the group into South America and Asia in the very early 1990s also prompted moves to reshape the organisational form into something more decentralised, through devolving some of the work of the international co-ordinating group to regional hubs, and re-establishing the borders of the cognitive space by creating consensus via position papers. However, the question of whether to professionalise by becoming an NGO was never settled, possibly because this would have meant a complete reversal of 'the FINRRAGE position' in its organisational dimension, and many of the women resisted it on that level. Overall, the increased pressure on individual lives as well as the general withdrawal of funding for activities by small, autonomous organisations diminished the network's ability to sustain its communication functions, and in the absence of any further large international meetings after Rio in 1991, there were no possibilities for creating specific positional documents via consensus meetings. For these reasons, the European part of the network appears to have largely drifted into abeyance.

The technological topics

In addition to procreative and diagnostic technologies, Chapter Five shows the widening of the group's technological, or knowledge interests, through strengthening their analysis of the connections between technologies used for population augmentation in richer countries, and population control in poor ones. Each woman who entered the network also brought her own knowledge interests, with the result that the topics for which the network developed knowledge-for-resistance stretched from the 'death of the female' encoded in sex selection to the race to unravel the human genome. It is this combination of focus on the ideological and technological links between contraceptive and conceptive technologies; the various forms of control over 'life itself' made possible by externalising the human embryo and by manipulating the DNA of animals, plants, and humans; and the impact of these technologies on women's bodies and women's lives on a global level which constitute FINRRAGE's very wide range of knowledge interests.

Knowledge tactics

My second question, that of tactics for development and dissemination of the network's knowledge project, revealed that 'the FINRRAGE position' as a radical no to NRT was considered by most of the women I interviewed to be an organisational property of FINRRAGE International, rather than a political position taken by all the individuals in it. This was operationalised through the tactics of knowledge generation and exchange most common to academic work: reading, writing, teaching, research, conferences, combined with the more

activist forms of political meetings, evidence-giving to official bodies, lobbying, and liaising with the media. Protest tactics were not used by FINRRAGE International, although individual women did take part in local actions, including a small group of German women who were also part of the militant feminist group Rote Zora. As an organisation, FINRRAGE also sometimes lent its support to large campaigns as part of a coalition of groups, particularly against the testing of contraceptive technologies in the South.

Within the network communications were based upon the circulation of internal and external information as thrice-yearly 'infopacks', to which all the women were encouraged to contribute. Collating, copying and sending these out, as well as archiving the information for future research, was the main occupation of the international co-ordinator. Outward communications were generally localised, based upon the access women had to the media and to publishing venues, and to organise national and local meetings. However, the large international meetings and conferences discussed in Chapter Five provided a focal point for the network to speak as a network, and to bring media attention to the issues in geographical areas where it was felt that women's perspectives were generally silenced. There was no central body or mechanism to 'vet' the information women used, and no official position papers, although there was a growing canon of published literature, and the journal *IRAGE*, started and managed by the founder group, was envisioned as a way of both getting their message out, and providing a venue for those without formal qualifications to publish their work, including women from outside the network. This, again, was part of the FINRRAGE position, which insisted that every woman was already an expert. It is here that the three dimensions of the cognitive praxis paradigm offer the least in determining how that claim could be operationalised. For that, an extension to the paradigm needed to be developed.

FINRRAGE and expertise

In Chapter Seven, I looked more closely at the weakest point of the cognitive praxis paradigm, which considers every activist a 'movement intellectual'. While it is true that any activity within a social movement involves the development of factual as well as social knowledge, the cognitive praxis paradigm does not really help to answer my third question, which focussed on the different kinds of expertise the women brought to, or developed within, the network used to legitimate that knowledge within the public sphere. For this, I incorporated ideas drawn from the work of Hilary Arksey (1994) on embodied and experiential forms of specialist expertise, and from Harry Collins and Robert Evans (2007) on linguistic socialisation, or 'interactional' expertise, in order to devise a framework to make different qualities of 'movement intellectual' visible. This divides expertise into six categories which are not related

to hierarchical acquisition of knowledge, but rather reflect the relationship(s) of formal, informal, embodied, experiential, general and specialist knowledges to each other and to the problem identified by the movement. The process of assigning the individual women to these categories showed that in fact, the network's claim to a non-hierarchical dispersal of knowledge-tasks was relatively accurate. Although the international group had few scientists with contributory expertise in the problem area of genetics or of reproductive, developmental or molecular biology (the QS group), it did have several with more general qualifications in the biological sciences (QG) who had done professional scientific research and had insider knowledge of the culture of science which could be shared. Apart from the QS, the other five groups were fairly well balanced in terms of numbers, as was the dispersal of organisational tasks such as collecting and distributing information as national contacts or organising conferences and meetings. While those whose professional and activist knowledge interests overlapped completely through a focus on research in the area were all social scientists (QNS), the forms of professional expertise which appeared in the non-qualified specialist (NQS) and (NQG) generalist categories were extremely varied, ranging from infertile women with embodied and experiential knowledge of the problems IVF is meant to address, to journalists known as public intellectuals for this area, to academic ethicists, to social workers and women's health activists with experiential knowledge of working professionally with those possessing the same embodied knowledge as that identified for the NQS group. This is a point where further work is necessary, applying the framework to other movements in order to see if it is the framework itself which lacks enough diversity to account for these different forms of knowledge, or if social movements themselves work towards a legitimation of specialist expertise in areas which are normatively considered outside the expert range. What the framework suggested is that in fact all six groups displayed vital but different forms of contributory knowledge. This is a difference from Collins' and Evans' assumption that the core-set resides at the top of a hierarchy as the only valid knowledge-producers, a formulation that applies well to science, but perhaps not so well to other forms of knowledge-producing communities.

No single occupation was as widely represented throughout the network as non-science academics, however, suggesting that despite considering themselves a grassroots organisation, the network functioned much more like a dispersed research network. This was less true in the global south, where women were also highly educated, but were more likely to be working within the NGO structure and/or in women's health organisations. Although they did generate much of the data used by network to develop its knowledge around contraceptive testing and population policy, this was presented in a more informal manner. In Europe and Australia, however, FINRRAGE was so closely tied to the academy that it is possible it would not have existed without it. This will be explored further in the next section.

The influence of the academy

One of the main findings of the case study was the significance of the academy with relation to FINRRAGE, both in its formation, and quite possibly as a contributing contextual factor in its difficulty in mobilising European/American/Australian academics.

While the integrationist (egalitarian) model of feminist scholarship pursued restructuring of the methods through which academic knowledge could be produced from inside traditional disciplines, particularly through questioning claims to objectivity and the scientific aspirations of quantitative methodologies (Harding 1992), the autonomous (liberatory) model argued that sexism was an integral part of academia as an institution, and its disciplines were steeped in androcentric paradigms, therefore, feminist academics would have to remove themselves from traditional disciplines and create a 'safe space' in which they could develop their own women-centred ways of producing and validating knowledge (Bowles and Klein 1983b). As Women's Studies departments represent the professionalisation of knowledge originally developed through the liberatory processes of consciousness-raising groups (Sheridan 1990), autonomous women's studies was therefore an extremely important context for the emergence of FINRRAGE. In the absence of fertility doctors and scientists (unlikely to join a movement opposing their own work), FINRRAGE would need women with the institutional means to access the medical and scientific literature and the expertise to decode it, who were also committed to some form of oppositional consciousness, and were experienced in using scholarship itself as a form of activism. Within this context, the 'movement intellectuals' needed to 'formulate the knowledge interests of the emergent social movement' might be more easily found, and it is most likely no accident that Hanmer, Klein, Rowland, Mies and Raymond were all feminist academics committed to the preservation of Women's Studies as an autonomous discipline. In addition to providing an academic space in which to develop courses on reproductive technology, it was also a place to find 'like-minded' women among the students, and indeed Klein and several of her postgraduate students continued to be active as FINRRAGE well into the 2000s.[168]

This returns me to the larger purpose of the case study, which was to clarify a methodology for studying knowledge in social movements. Within SMT, the criteria for the success of a movement is predicated largely on whether it achieves its stated goals, and/or whether it produces stable, enduring organisations. However, in the case of the cognitive praxis paradigm, a movement's success is largely judged by whether it can be seen to have

[168] Most recently, Klein gave oral testimony as FINRRAGE before the Australian Senate on the Lockheart review's recommendation to loosen regulations on stem cell research (FINRRAGE-Australia 2006b), and she and her former student Belinda Morris wrote FINRRAGE's submission to the Victorian parliament on the Infertility Treatment Amendment Bill 2007 (FINRRAGE-Australia 2006a). Both were also involved in the Hands Off Our Ovaries campaign in 2008.

institutionalised its epistemological approach (Eyerman and Jamison 1991). It is not expected that the movement will fully achieve its stated end objective, and the shrinking of visible movement structures – organisations, communicative literature, physical and intellectual spaces – is considered a by-product, if not a measure, of its success, as there are now institutional means through which to pursue these goals. This is what Women's Studies may be seen to have achieved, a carving out within the institution of academia of an autonomous space for new epistemologies which were action-oriented and women-centred.

As Hemmings (2011) suggests, feminist narratives frequently see the shift from Women's to Gender Studies in the 1990s as a loss of political conviction. It is, however, also possible to view this through a cognitive praxis lens, and see it as a second wave of institutionalisation, inescapable within the larger pressures reconfiguring tertiary education ever closer to the demands of the market (Hemmings 2006: 19), and that in fact the survival of Women's Studies in this form could be considered both a triumph and the logical extension of its original programme, which would eventually need to understand more about men, male socialisation and masculinity in order to formulate the next wave of political action. The academics in the founder group were informed by their original struggle to establish Women's Studies programmes, which frequently began as adult education, and they remained committed to the kinds of projects which involved women who did not have access to the academy, a key point for maintaining the epistemological project of women's liberation. Their resistance to the more postmodernist approach of many of the younger women in the network may also be seen as resistance to absorption into mainstream departments, or into the newly emerging discipline of Gender Studies, through their determination to maintain FINRRAGE as part of the autonomous women's movement. It might also be said, in this formulation, that the founder group were not so much determined to maintain FINRRAGE as part of the autonomous women's movement as they were determined to maintain the autonomous women's movement through maintaining FINRRAGE.

FINRRAGE in abeyance

Considered superficially, FINRRAGE does not appear to have been successful. Assisted reproduction has become a largely unregulated global industry, estimated to be worth at least $3bn a year in the US alone (Spar 2006: 3). While people had been travelling for IVF since the very start – as the Rios saga sadly showed – increasing globalisation and the demands of the market have produced an industry packaging holidays abroad with reproductive services (Deech 2003; Blyth and Farrand 2005; Martin 2009), and a burgeoning international trade in gametes, embryos, and gestational services (Sexton 2005; Nahman 2008; Almeling 2009; Ikemoto 2009; Krawiec 2009) as well as tissue for transplantation and research such as bones, organs, marrow,

embryos, aborted fetuses and formerly useless by-products of pregnancy such as cord blood (Andrews and Nelkin 2001; Waldby and Mitchell 2006; Dickenson 2008). In some permutations, such as the Indian government's enthusiastic promotion of the surrogacy industry as a high-growth, high-profit area for international investment (Smerdon 2008; Stephenson 2009; Palattiyil, *et al.* 2010), the predictions which were dismissed by some feminists as 'science fiction [not] analysis of science' (Berer 1986: 33) do not seem to have been very far off the mark. In 1991, Wajcman (1991: 56) noted that the increasing speed of innovation meant that many of the technologies in Firestone's utopia were already 'no longer in the realm of fantasy'; the Internet as a global marketplace for sourcing cheap parts and labour has increased this by an unknown exponential. Documentaries such as *Google Baby* (Brand Frank 2009) create a strong visual statement that the conditions in which surrogacy is carried out in India bear a disturbing resemblance to Corea's (1985c) reproductive brothel, with women carrying babies for rich Westerners housed away from their families in closely-packed dormitories where their behaviour is strictly controlled, and an increasing number of brokers of surrogacy services are directly targetting homosexual, transsexual and single heterosexual men.[169] Research towards complete technological control of gestation continues, with one group of scientists seeking to produce the 'dream machine [of] an IVF lab-on-a-chip', which will mix readily available oocytes and sperm to produce perfect embryos (Meseguer, Kruhne and Laursen 2012: 1285). Other scientists are still working towards the artificial uterus (Bulletti, Palagiano, Pace, *et al.* 2011), while the first experiments in human womb transplantation have already taken place, so far with limited success (Brännström, Diaz-Garcia, Hanafy, *et al.* 2012).[170] Many countries do now have some form of regulation, particularly as regards the legality of surrogacy contracts, although this can vary greatly, and in federations such as the US or Australia has resulted in what Szoke (2003: 75) suggests is either a 'rich tapestry of diversity' or a 'patchwork…lacking cohesion and order', depending upon one's point of view. When considered globally, it seems increasingly clear that the growth potential for the fertility industry and for offshoots produced through access to human embryos – regenerative medicine, cloning and genetic engineering, bioweapons, to name just a few – is limitless, and impossible to regulate.

However, what I found most surprising through the course of my interviews was the strength of feeling that FINRRAGE had indeed had an impact, and that for the most part it continued not only as a cognitive praxis for those still researching in the area, but as an actual and imagined network of like-minded women. For these reasons, FINRRAGE does appear to be

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[169] See, for example, Single Men and Surrogacy at http://www.medical-trip.com/single-men-and-surrogacy or Gestational Surrogate Mother Program for Gay Males at www.fertility-docs.com/gay_surrogacy.phtml. One clinic even sponsors a yearly seminar for men in New York (video available at www.youtube.com/watch?v=XK4QeIE4QL8).

[170] In fact, as I was putting the last touches on this thesis, this team was reported as having 'successfully' transplanted uteri from two mothers to their daughters, although it is not yet known if the grafts will be rejected or be able to sustain a pregnancy (Hall 2012).

in abeyance, rather than defunct. However, because the cognitive praxis paradigm considers that once a movement has begun to diffuse its cognitive praxis into institutional pursuits the ideas have left the movement space, according to the paradigm, this may not be so.

Cognitive praxis as a methodogy

Because its formulation loses interest in what happens to a movement after part of it becomes professionalized, one of the limitations of the cognitive praxis paradigm is that it is best suited for understanding the context of emergence and expansion. According to Eyerman and Jamison, cognitive praxis is a process, and like all processes it takes time to emerge, develop and be refined; they liken this to the discovery process of a cycle of innovation, where certain ideas are selected from the 'pool', then developed through applied research, which allows the best ones to be brought to market, and from there diffused into other innovations (Eyerman and Jamison 1991: 57). Mechanistic and market-oriented, as are most of their metaphors, the study of FINRRAGE also illustrates that as a paradigm it is itself steeped in an egalitarian consciousness that considers movements as a drive towards inclusion in the market. Therefore, it may not function particularly well in analysing movements which are inherently anti-market, or which are based in a completely different knowledge system than science. This is the result of their formulation, derived from the basis of RMT, of movements as 'carriers of what has been called the project of modernity' (*ibid:* 150), leaving no space for movements which actually challenge modernity, or at least some of its precepts, particularly its formulation of science as value-free and neutral. Rather than challenging the intrusion of technological control, as Habermas suggested movements should, their key purpose for Eyerman and Jamison seems to be to prepare the market for new ideas.

However, this iteration of the cognitive praxis paradigm may be an artefact of its time. First, constructivist approaches to science were less developed in the late 1980s than they are now, and even today, SMT and STS do not have a great deal of cross-population, coming as they do from two very different perspectives on the social world. Therefore it is not surprising that the use of science remained a black box in the original outline of the cognitive praxis paradigm, despite its claims to consider science as socially produced. Eyerman and Jamison (1991: 8) also occupy an interesting intellectual space in SMT, as American student activists from the 1960s who emigrated to forge academic careers in Sweden, from where they observed a very different context of emergence for the Swedish environmental movement. They were therefore, by their own admission, more substantially influenced by critical Marxism than they might have been had they remained within the American academy, which allowed their paradigm to be more responsive to constructivist ideas without seeking to develop them further

at the time. Jamison (2003; 2010), for example, has become much more focussed on the interactions between formal and politicised informal knowledge through his work on the climate justice movement. However, his reduction of climate change activism to 'green business' and 'skeptic' models in these papers suggest his essential market-orientation has not changed. More recently, Jamison (2010) has suggested that what each side embodies is actually a battle between Mertonian and constructivist cosmologies of science. However, although he characterises science as socially mediated through the praxis of the movement, he does not go so far as to consider scientific *facts* to be socially produced, and so does not question whether parts of the movement do ask such questions, or what might be the function of cosmologies suggesting the answer to climate change is *no* development, but rather rebalancing of the use of existing resources to maintain or lower levels of consumption. The cognitive praxis paradigm in fact reflects the intellectual tensions of its producers, between its roots in neo-Marxian ideas of using science and technology to produce social justice; and its paradoxical analysis that a movement's 'success' is defined through its ability to pursue that justice inside the political economy. For this reason, the longer a movement goes on, the less the paradigm has to reveal about those parts of it which resist professionalisation.

Second, there have been other large-scale social changes which have not only affected the way knowledge and expertise are demonstrated within social movements, but have also revitalised some of the old ontological questions about what exactly constitutes a 'social' movement. Increasing professionalisation in general has led to increased professionalisation of what would normally be seen as a social movement field. For example, within the environmental movement, large membership-supported organisations such as Greenpeace and Friends of the Earth flourished and institutionalised during the 1980s, while activism in general was in decline (Rootes 2004: 627). According to Blumer (1951/1969: 114), this indicates a successful movement, as it is precisely this sort of 'residue' which should be left when the time of mass protest ends. Jamison (2003: 707-8) argues that professionalisation has created an environmental *sector* (emphasis mine) in which these organisations, now often NGOs, are viewed as essentially 'mainstream' actors by the more radical, smaller groups despite a shared repertoire for tactics for disruptive direct action. This, from my own experience in that movement, is certainly true. Although the smaller, radical groups in the reproductive rights movement are not generally engaged in disruptive action, the case of FINRRAGE showed a similar split in the run-up to Cairo as well. Likewise NGOs, such as advocacy organisations and others with the power to directly influence national and international policy, are generally not considered as part of the social movements field by STS (see, for example, Hess, *et al.* 2007), even though the proliferation of NGOs in the 1990s means that many are small, grassroots organisations (Jasanoff 1997) of exactly the kind which would normally be considered part of the field. According to Eyerman and Jamison, this leaves the movement depleted, but it may be

that we as theorists are depleting it, when activists in NGOs may see their movement as still vibrant, just shaped differently than the 1960s.

The paradigm also sees the epistemology and the knowledge generated by the movement pushed outward, so that the movement gets 'left behind' by its now-professionalised activists, pursuing careers and entrepreneurial opportunities in the new spaces that have been carved out. This may indeed mean that the work of the egalitarian opposition is done. However, the intimation is that what is left, or what I will call -- with apologies to Blumer -- a 'sticky residue' of stubbornly autonomous organisations and individual activists who refuse to be (re)incorporated into the new mainstream, and are not capable of continued influence. It is for this reason that I have preferred to think in terms of consciousnesses, all three of which will exist in any large social movement in varying relationships to each other, overlapping and shifting over time, producing different, sometimes coherent and sometimes incompatible cognitive praxes. What is likely to remain when the time for mass protest ends (or, depending on the knowledge interests of the movement, never exists) will tend to be those organisations and individuals whose consciousness remains liberatory or alternative, and who continue to demonstrate that consciousness in whichever ways are available to them.

Reflections on the research

My choice to theorise different consciousnesses, rather than different ideologies or forms of feminism, I realise now, was subconsciously rooted in my own difficulties in finding an intellectually comfortable place in which to situate myself amongst feminists while an undergraduate in the late 1980s, and my experience as a direct-action activist in the overlap of the anti-nuclear, environmental and native sovereignty movements in both the US and Europe throughout the 1990s. From within, I was operating from the same form of alternative consciousness in all four movements, however, where I fit easily into the latter three as a feminist, I did not fit particularly well into the feminist milieu I was in.

Much was also learned about a very different formulation of feminism from my five days spent sharing a university suite with Farida Akhter during the Women's Worlds conference in Ottawa in July of 2011, but it was not until I was analysing a conversation with Pat Spallone about the labelling of different forms of feminism at the outset of her interview that I was finally able to connect the dots and clarify the nature of my unease. It is perhaps possible to speak of movement actors calculating costs and benefits, devoid of altruistic intent, as some RM theorists have done, but this is based in a political consciousness which believes that the market shapes all human interaction, and enabling market justice is the most desirable outcome of 'progress'. However, the political consciousness I had developed in the direct action movement not only

opposes the hegemony of the market, but renders that kind of discourse literally unthinkable. Although I had not set out to explore political consciousness, the theme kept appearing as I wrote the thesis as something that definitely wanted to be explored.

Future directions

There are several directions in which I believe this work could go. In the first, a citational analysis such as that which Hemming (2011) produced for feminist theory in general, would likely provide some very interesting data as to how far FINRRAGE's cognitive praxis may have actually penetrated by tracing it through different literatures such as law, medicine, bioethics, and reproductive science. In addition, this would provide a further clear grounding of its influence amongst feminist academics, which I did not feel I had the data, nor the time, to pursue. Another direction would be to more fully develop the historical narrative as presented here, less as a case study for a theory of expertise in social movements, and more explicitly as an exploration of FINRRAGE as a microcosm of global feminist history. This would require an effort to trace some of the women I could not reach via email, and quite possibly an extended period of fieldwork in both India and Bangladesh, spending time with organisations such as UBINIG in Bangladesh, and Saheli in India, observing how these function as well as collecting interviews.

In terms of theoretical development of SMT, I feel the framework devised is an interesting first step, but it is only the first, and would need to be tested against other organisations and preferably by others than myself before I could truly claim its usefulness. It may be that it describes FINRRAGE well, having been devised through the case study, but does not reveal much about another organisation or movement, particularly one less organisationally stable and with more tactically radical actors. However, in terms of theorising knowledge in social movements, there are two further directions which would be useful to pursue. One, I have touched on in this thesis, which is an exploration of the formation and interplay of different political consciousnesses in shaping the trajectory of a movement, which in fact the cognitive praxis paradigm does well to reveal. The second, which I have not had the space to explore, but which began to appear towards the end of the writing up period, is a transfer of the tools used to consider epistemic communities to examine to what extent social movements also function in the same manner in terms of providing expertise to debates in the public sphere. These aspects of future research will be discussed in the following two sections.

Consciousness

The use of patriarchy as the primary axis of analysis was part of the context from which FINRRAGE emerged, at a time in which feminism as a political movement was fracturing and even feminists themselves had begun to refer to a 'postfeminist age' (Whittier 1990). Locating themselves as 'radical' feminists when support for radicalism overall was waning was an important part of operationalising, or clarifying, its 'position', holding open an older cognitive space while simultaneously creating a new one in which to talk about specific technologies. However, what the case study revealed was that considering FINRRAGE as a *radical* feminist movement, while not necessarily untrue, paves over far more interesting questions about the kinds of underlying political consciousnesses activists develop and carry with them as part of the cosmological dimension of what movements do. Thinking in terms of activists developing different forms of oppositional consciousness (not all of which are directly tied to biological or social identity) allowed a different kind of question to be asked, such as what does the 'cognitive space' movements are meant to create actually look like in terms of the forms of political, or even normative, consciousnesses which can comfortably operate within it? Where does the new movement lie in relation to the pre-existing context which Eyerman and Jamison claim is essential for its emergence? To the context of the time, place and culture within which it is situated? With particular reference to bringing frame theory back to Goffman's original formulation of a cognitive framework through which information is processed and understood, and controlling the problem of proliferation of master frames, I suggested that 'raising consciousness' is perhaps better thought of as creating a political con*science*ness which is a general and transferable cognitive meta-frame through which all other elements of a movement's knowledge practice – *doxa*, facts, structure, strategy, tactics, rhetoric, etc – are processed, but which also creates a permanent change in the way the individual sees the world.

Movements as epistemic communities

Two significant examples of diffusion were high-profile events like the Feminist Hearing discussed in Chapter Five, and the ability of some of the women to eventually get a seat at the regulatory table. The example of two-way movement of activists drawing on credibility provided by their professional contacts and expertise to enter the policy community as activists, and activists professionalizing themselves through the knowledge and skills gained in the movement suggests that it may, in fact, be useful to think of social movements as a specific form of epistemic community. Haas (1992) uses the term to describe the network of experts – some with scientific credentials, some not – upon which international policy makers rely to provide the knowledge basis for their decisions. According to Haas, what makes this a

community is a shared set of normative value-laden, as well as causal, beliefs, and methods of validation, which creates 'a set of common practices associated with a set of problems to which their professional competence is directed, presumably out of the conviction that human welfare will be enhanced as a consequence' (*ibid*: 3). The term has since come into frequent use in international relations, as well as other disciplines beyond politics and science, but has not yet been extensively employed within SMT, despite bearing a distinct resemblance to Eyerman and Jamison's cognitive praxis. While Haas limits this form of community to professionals within his own international policy arena, he also links it to the analysis of generating scientific agreement through socialisation into 'thought collectives' advanced by Kuhn and Fleck (*ibid*: 3n4), the same antecedent theorists called upon by Eyerman and Jamison. Similarly, while Knorr-Cetina (1999: 1) considers science as the prime example for all 'cultures which create and warrant knowledge', she also accepts that there are other forms of epistemic culture besides Western science. Considering social movements as epistemic communities may be a possible way to both reconfigure what forms of organisation and activities may be called a social movement in the new millennium, and to test the framework I have developed here over a larger field.

Limitations to this project

As was noted in Chapter Three, the most regretted limitation to this project is that despite my best efforts, the cohort I was able to gather were largely white, middle-class Western women. Although I have tried to make up for this as much as possible in the writing of the history, I find the thesis, my own use of concepts like 'consciousness' and 'expertise', and most likely my entire understanding of feminism to be possibly too Eurocentric to accurately describe FINRRAGE on a truly international level. Likewise, it is also possible that my formulation of consciousnesses was limited by the size and composition of my sample, and is based only on forms of oppositional consciousness which directly relate to resistance to the androcentricity and imperialism of the Enlightenment project. However, without direct access to more of the Southern network, and to the networks-within-the network such as the Indian women's health groups, it is impossible to test the limitations of these ideas.

I have also not made a concerted effort within this thesis to review the feminist literature on NRT, nor to try to trace FINRRAGE's influence upon it, although this could be done using tools such as citational analysis, and would likely provide some very interesting data as to how far its cognitive praxis may have actually penetrated. There were two reasons for this decision, the first being that too much weight given to the formally published literature would over-represent a group that was already over-represented in my sample. This would also reinforce the idea of FINRRAGE as an academic movement, or at the very least, a movement of

academics, which did not seem an accurate picture when viewed internationally. Moreover, while writing was an important aspect of the women's activism, it was not the whole of it, and I wanted to explore the other things they did. The published literature is in fact the end product of the processes I was more interested in investigating, and therefore I chose to treat it as data in the same way as the internal documents depicting the life of the network, and the interview texts, rather than critiquing the content. However, this has also limited my ability to trace the diffusion of the network's knowledge beyond the borders of the network, which would have significantly strengthened my analysis.

Final words

In this chapter I have summarised my exploration of FINRRAGE as a case study of activist knowledge, showing how the cognitive praxis paradigm helps illuminate the belief system, organisational forms, and topics a movement will select. I have also reviewed the knowledge tactics FINRRAGE used to legitimate its expertise and considered my own extension of the paradigm through a framework designed to uncover the forms of knowledge a movement will develop in relation to the problem it sets out. I have also reflected on the limitations of the paradigm, and of my own research, setting out two directions for continuing to develop a theoretical basis for the study of social movements.

The aims of the FINRRAGE network as set out in press releases, flyers, declarations, and internal and external documents were set by the conference at Lund and are almost entirely knowledge-based: to monitor developments in NRT, to assess their implications for women, to analyse the relationship between science, technology and society, and to raise public awareness of these concerns through creating an international movement for resistance. To return to the cognitive praxis paradigm, successful professionalisation of the movement's underlying cosmology is seen to be a positive affirmation of its effectiveness. As argued throughout this thesis, there is evidence that FINRRAGE was able to widen the space of discourse around NRT within feminism, within public discourse, and in the policy arena, in that sense succeeding in their aim of legitimising women as expert knowers whose voices needed to be heard regardless of the credentials they held. In so doing, the 'radical no' was one political solution arrived at through this cognitive praxis, it was not the praxis itself.

Similarly, FINRRAGE's refusal to professionalise may be seen as a failure which led to its dissolution in Europe, or it may be seen as contributing to the preservation of its organisational integrity as a much smaller network which could remain responsive to the different forms of feminism evolving in the global South. FINRRAGE, therefore, may also be understood as a microcosm of the global history of feminism in general, including the fact that

by managing to retain some form of public identity and communication between many of the international group of women, it has preserved its cognitive praxis through the research that continues to be carried out in pockets of the West, in the far East, and most strongly in South Asia -- a small, but still autonomous and evolving space for a liberatory-alternative analysis of NRT. The criteria for abeyance may not simply be surviving as an organisational remnant, but surviving as submerged networks of 'like-minded women' who feel that their specific cognitive praxis around an issue is still valid, and their work is still unfinished. FINRRAGE then, can be read as a relic of essentialism, or as a feminist story about women around the world embarking on an epistemological project together. Not always a harmonious story, but one of – as Mies has said – action and reflection. Whether or not this space will enlarge again as the fertility industry expands further into developing nations, and countries like Bangladesh seek to imitate the Indian model of womb-of-the-world advertising, remains to be seen. Rather than a narrative of loss or return, then, this is perhaps one of reiteration, of *reculer pour mieux sauter*, of drawing back to gather energy to jump further.

REFERENCES

ACKER, J., BARRY, K. and ESSEVELD, J. (1983) 'Objectivity and Truth: Problems in Doing Feminist Research'. *Women's Studies International Forum* **6**(4), pp.423-435.

AKHTER, F. (1995) *Resisting Norplant*. Dhaka: Narigrantha Prabartana.

AKHTER, F. (2005) *Depopulating Bangladesh: Essays on the Politics of Fertility, 3rd Edition*. Dhaka: Narigrantha Prabartana.

ALBURY, R. M. (1999) *The Politics of Reproduction: Beyond the Slogans*: Allen & Unwin, St Leonards, NSW.

ALLEN, A. T., DIETRICH, J., LUTFIYYA, M. N. and THERIOT, N. M. (1991) 'Response to Margarete Sandelowski's "Fault Lines: Infertility and Imperiled Sisterhood"'. *Feminist Studies* **17**(1), pp.149-150.

ALMELING, R. (2009) 'Gender and the Value of Bodily Goods: Commodification in Egg and Sperm Donation'. *Law and Contemporary Problems* **72**(3), p.37(22).

AMSLER, S. (2012) 'For Feminist Consciousness in the Academy'. *Politics and Culture*, [forthcoming]. Available from: http://www.gender-studies.leeds.ac.uk/about/events/genderact.php [Accessed 1 May 2012].

ANDREW, M. and MADDISON, S. (2010) 'Damaged but Determined: The Australian Women's Movement, 1996-2007'. *Social Movement Studies: Journal of Social, Cultural and Political Protest* **9**(2), pp.171 - 185.

ANDREWS, K. T. and EDWARDS, B. (2004) 'Advocacy Organizations in the US Political Process'. *Annual Review of Sociology* **30**, pp.479-506.

ANDREWS, L. B. and NELKIN, D. (2001) *Body Bazaar: The Market for Human Tissue in the Biotechnology Age.* New York: Crown Publishers.

ARCHIBALD, M. E. (2008) 'Institutional Environments, Sociopolitical Processes, and Health Movement Organizations: The Growth of Self-Help/Mutual-Aid'. *Sociological Forum* **23**(1), pp.84-115.

ARDITTI, R. (1985) 'Reducing Women to Matter'. *Women's Studies International Forum* **8**(6), pp.577-582.

ARDITTI, R., KLEIN, R. and MINDEN, S. (eds) (1984) *Test-Tube Women: What Future for Motherhood?* London: Pandora Press.

ARKSEY, H. (1994) 'Expert and Lay Participation in the Construction of Medical Knowledge'. *Sociology of Health & Illness* **16**(4), pp.448-468.

ARMITAGE, S. and GLUCK, S. B. (2002) 'Reflections on Women's Oral History: An Exchange' in S. Armitage, P. Hart, et al. (eds) *Women's Oral History*. Lincoln, NE: University of Nebraska Press, pp.3-22.

ARTHUR, M. M. L. (2009) 'Thinking Outside the Master's House: New Knowledge Movements and the Emergence of Academic Disciplines'. *Social Movement Studies* **8**(1), pp.73-87.

ASRM (2012) 'NJ Governor Vetoes Surrogacy Bill', 13 August 2012. *American Society for Reproductive Medicine* [online]. Available from: http://www.asrm.org/NJ_Governor_Vetoes_Surrogacy_Bill/#.UCp9xYuAyqs.wordpress

AUSTRALIA. FAMILY LAW COUNCIL (1985) *Creating Children: A Uniform Approach to the Law and Practice of Reproductive Technology in Australia*. Canberra: Australian Government Publishing Service.

AUSTRALIA. SENATE (1985) *Human Embryo Experimentation in Australia*. Report prepared for Parliament of Australia, Senate Select Committee on the Human

Embryo Experimentation Bill 1985. Canberra: Australian Government Publishing Service.

AUSTRALIAN SCIENCE MEDIA CENTRE (2010) 'Media Briefing: 30 Years of IVF in Australia'. Available from: http://www.aussmc.org/2010/06/media-alert-30-years-of-ivf-in-australia/ [Accessed 22 Jun 2010].

AUTONOMEDIA (1989) 'A Herstory of the Revolutionary Cells and Rote Zora: Armed Resistance in West Germany' at *Spunk Library: The Anarchist Archive*. [online]. Available from: http://www.spunk.org/texts/groups/anm/sp000268.txt [Accessed 21 Oct 11].

BAGGOTT, R. and FORSTER, R. (2008) 'Health Consumer and Patients' Organizations in Europe: Towards a Comparative Analysis'. *Health Expectations* **11**(1), pp.85-94.

BAGGULEY, P. (2002) 'Contemporary British Feminism: A Social Movement in Abeyance?'. *Social Movement Studies* **1**(2), pp.169 - 185.

BAKHTIN, M. (1986) *Speech Genres and Other Late Essays*. Austin: University of Texas.

BALLANTYNE, T. (1980) 'Day One in the Life of Candice'. *Sydney Morning Herald*, 24 June, p.1.

BARBOT, J. (2006) 'How to Build an "Active" Patient? The Work of AIDS Associations in France'. *Social Science & Medicine* **62**(3), pp.538-551.

BARKER, K. K. (2008) 'Electronic Support Groups, Patient-Consumers, and Medicalization: The Case of Contested Illness'. *Journal of Health and Social Behavior* **49**(1), pp.20-36.

BARNES, B., BLOOR, D. and HENRY, J. (1996) *Scientific Knowledge: A Sociological Analysis*. London: The Athlone Press.

BECKETT, A. E. (2006) 'Understanding Social Movements: Theorising the Disability Movement in Conditions of Late Modernity'. *The Sociological Review* **54**, pp.734-752.

BENFORD, R. D. (1997) 'An Insider's Critique of the Social Movement Framing Perspective'. *Sociological Inquiry* **67**(4), pp.409-430.

BENFORD, R. D. and SNOW, D. (2000) 'Framing Processes and Social Movements: An Overview and Assessment'. *Annual Review of Sociology* **26**(1), pp.611-639.

BERER, M. (1986) 'Breeding Conspiracies: Feminism and the New Reproductive Technologies'. *Trouble and Strife* **9**, pp.29-35.

BERG, P. (2008) 'Meetings That Changed the World: Asilomar 1975: DNA Modification Secured'. *Nature* **455**(7211), pp.290-291.

BHANOT, N. (1991). 'The Bhopal Disaster and Update'. *In:* F. Akhter, W. van Berkel, et al. (eds). *Proceedings of FINRRAGE-UBINIG International Conference, 1989, Comilla, Bangladesh*. Dhaka: UBINIG, pp.112-118.

BHATE, K., MENON, L., GUPTE, M., SAVARA, M., DASWANI, M., PRAKASH, P., KASHYAP, R. and PATEL, V. (1987). 'In Search of Our Bodies: A Feminist View on Woman, Health and Reproduction in India'. Proceedings of the conference *Feminist Perspective on Women and Health Reproduction, 1987, Bombay*. Bombay: SHAKTI.

BIGGERS, J. D. (2012) 'IVF and Embryo Transfer: Historical Origin and Development'. *Reproductive BioMedicine Online* **25**(2), pp.118-127.

BIRKE, L. (1986) *Women, Feminism and Biology: The Feminist Challenge*. Brighton: Harvester.

BIRKE, L., HIMMELWEIT, S. and VINES, G. (1990) *Tomorrow's Child: Reproductive Technologies in the 90s*. London: Virago.

BLOOR, D. (1976/1991) *Knowledge and Social Imagery, 2nd Ed*. Chicago: University of Chicago Press.

BLUMER, H. (1951/1969) 'The Field of Collective Behaviour' in A. M. Lee (ed) *Principles of Sociology*. New York: Barnes and Noble,

BLYTH, E. and FARRAND, A. (2005) 'Reproductive Tourism - a Price Worth Paying for Reproductive Autonomy?'. *Critical Social Policy* **25**(1), pp.91-114.

BODMER, W. (1985) *The Public Understanding of Science*. London: Royal Society.

BOOTE, J., TELFORD, R. and COOPER, C. (2002) 'Consumer Involvement in Health Research: A Review and Research Agenda'. *Health Policy* **61**(2), pp.213-236.

BOSTON WOMEN'S HEALTH COLLECTIVE (1973) *Our Bodies, Ourselves*. New York: Simon & Schuster.

BOURN HALL (2011) 'Pregnancy Rates' at *Bourn Hall Clinic*. [online]. Available from: http://www.bourn-hall-clinic.co.uk/pregnancy-rates.php [Accessed 24 May 2012].

BOWLES, G. and KLEIN, R. (1983a) *Theories of Women's Studies*. London: Routledge & Kegan Paul.

BOWLES, G. and KLEIN, R. (1983b) 'Theories of Women's Studies and the Autonomy/Integration Debate' in G. Bowles and R. Klein (eds) *Theories of Women's Studies*. London: Routledge & Kegan Paul, pp.1-26.

BRADISH, P. (1987) 'From Genetic Counseling and Genetic Analysis, to Genetic Ideal and Genetic Fate' in P. Spallone and D. L. Steinberg (eds) *Made to Order: The Myth of Reproductive and Genetic Progress*. Oxford: Pergamon, pp.94-101.

'GOOGLE BABY' (2009) Documentary. Directed by Zippi BRAND FRANK. Israel/USA: Brandcom Productions/HBO.

BRÄNNSTRÖM, M., DIAZ-GARCIA, C., HANAFY, A., OLAUSSON, M. and TZAKIS, A. (2012) 'Uterus Transplantation: Animal Research and Human Possibilities'. *Fertility and Sterility* **97**(6), pp.1269-1276.

BRAUN, S. (2003) 'The History of Breast Cancer Advocacy'. *The Breast Journal* **9**(s2), pp.S101-S103.

BRICK, P. and CAWLEY, R. M. (2008) 'Producing Political Climate Change: The Hidden Life of US Environmentalism'. *Environmental Politics* **17**(2), pp.200-218.

BRITISH SOCIOLOGICAL ASSOCIATION (2002) 'Statement of Ethical Practice' [online]. Available from: http://www.britsoc.co.uk/equality/Statement+Ethical+Practice.htm [Accessed 1 Jun 2011]

BROWN, P. (2007) *Toxic Exposure: Contested Illnesses and the Environmental Health Movement*. New York: Columbia University Press.

BROWN, P., ZAVESTOSKI, S., MCCORMICK, S., MAYER, B., MORELLO-FROSCH, R. and GASIOR ALTMAN, R. (2004) 'Embodied Health Movements: New Approaches to Social Movements in Health'. *Sociology of Health & Illness* **26**(1), pp.50-80.

BROWN, S. (2005) *ESHRE: The First 21 Years*. Report prepared for European Society of Human Reproduction and Embryology [online]. Available from: http://www.eshre.eu/ESHRE/English/Home/History/page.aspx/280 [Accessed 9 May 2011].

BUECHLER, S. M. (1993) 'Beyond Resource Mobilization?: Emerging Trends in Social Movement Theory'. *The Sociological Quarterly* **34**(2), pp.217-235.

BUECHLER, S. M. (1995) 'New Social Movement Theories'. *The Sociological Quarterly* **36**(3), pp.441-464.

BUECHLER, S. M. (2004) 'The Strange Career of Strain and Breakdown Theories of Collective Action' in D. Snow, S. Soule, et al. (eds) *Blackwell Companion to Social Movements*. Oxford: Blackwell, pp.47-66.

BULLARD, L. (1987) 'Killing Us Softly: Toward a Feminist Analysis of Genetic Engineering' in P. Spallone and D. L. Steinberg (eds) *Made to Order: The Myth of Reproductive and Genetic Progress*. Oxford: Pergamon Press, pp.110-119.

BULLETTI, C., PALAGIANO, A., PACE, C., CERNI, A., BORINI, A. and DE ZIEGLER, D. (2011) 'The Artificial Womb'. *Annals of the New York Academy of Sciences* **1221**(1), pp.124-128.

BUNCH, C., CARRILLO, R. and GUINÉE, I. (1985) 'Feminist Perspectives Report of the Feminist Perspectives Working Group to the Closing Plenary'. *Women's Studies International Forum* **8**(4), pp.243-247.

BURFOOT, A. (1989) *The Politics of Innovation: The Discovery, Dissemination and Regulation of in Vitro Fertilization in Britain*. PhD thesis submitted to Science Policy Research Unit, University of Sussex.

BURFOOT, A. (1993) 'DI or DIY (Do It Yourself)? Missing Elements in the Donor Insemination Secrecy/Openness Debate'. *Politics and the Life Sciences* **12**(2), pp.174-176.

BURFOOT, A. (2003) 'Human Remains: Identity Politics in the Face of Biotechnology'. *Cultural Critique* **53**, pp.47-71.

BURTON, B. (1986) 'The Need for Reproductive Control and Self-Determination for Infertile Women'. Paper given at *Liberation or Loss? Women Act on the New Reproductive Technologies, 9-11 May, Canberra.*

BUSTILLO, M., BUSTER, J. E., COHEN, S. W., THORNEYCROFT, I. H., SIMON, J. A., BOYERS, S. P., MARSHALL, J. R., SEED, R. W., LOUW, J. A. and SEED, R. G. (1984) 'Nonsurgical Ovum Transfer as a Treatment in Infertile Women'. *JAMA: The Journal of the American Medical Association* **251**(9), pp.1171-1173.

CALHOUN, C. (1993) '"New Social Movements" of the Early Nineteenth Century'. *Social Science History* **17**(3), pp.385-427.

CALLON, M. and RABEHARISOA, V. (2008) 'The Growing Engagement of Emergent Concerned Groups in Political and Economic Life - Lessons from the French Association of Neuromuscular Disease Patients'. *Science Technology & Human Values* **33**(2), pp.230-261.

CANADA (1994) *Proceed with Care: Final Report of the Royal Commission on New Reproductive Technologies*. Ottawa: The Commission.

CANEL, E. (1997) 'New Social Movement Theory and Resource Mobilization Theory: The Need for Integration' in M. Kaufman and H. Alfonso Dilla (eds) *Community Power and Grassroots Democracy: The Transformation of Social Life*. London: Zed Books, pp.189-221.

CARRAGEE, K. M. and ROEFS, W. (2004) 'The Neglect of Power in Recent Framing Research'. *Journal of Communication* **54**(2), pp.214-233.

CARRITHERS, M., BARRY, A., BRADY, I., GEERTZ, C., KEESING, R. M., ROTH, P. A., RUBINSTEIN, R. A. and WHITTAKER, E. (1990) 'Is Anthropology Art or Science? [and Comments and Reply]'. *Current Anthropology* **31**(3), pp.263-282.

CARROLL, W. K. and RATNER, R. S. (1996) 'Master Frames and Counter-Hegemony: Political Sensibilities in Contemporary Social Movements'. *Canadian Review of Sociology and Anthropology* **33**(4), pp.407-435.

CASAS-CORTES, M. I., OSTERWEIL, M. and POWELL, D. E. (2008) 'Blurring Boundaries: Recognizing Knowledge-Practices in the Study of Social Movements'. *Anthropological Quarterly* **81**(1), pp.17-58.

CASTELLS, M. (2000) 'Materials for an Exploratory Theory of the Network Society'. *The British Journal of Sociology* **51**(1), pp.5-24.

CHALLONER, J. (1999) *The Baby Makers: The History of Artificial Conception*. London: Macmillan.

CHAMAK, B. (2008) 'Autism and Social Movements: French Parents' Associations and International Autistic Individuals' Organisations'. *Sociology of Health & Illness* **30**(1), pp.76-96.

CHENIER, N. M. (1994) *Reproductive Technologies: Royal Commission Final Report. (Mr-124e)*. Summary prepared for Government of Canada, Political and Social Affairs Division. [online]. Available from: http://publications.gc.ca/Collection-R/LoPBdP/MR/mr124-e.htm [Accessed 2 June 2012].

CHONG, D. and DRUCKMAN, J. N. (2007) 'Framing Theory'. *Annual Review of Political Science* **10**, pp.103-26.

CLEGG, S. (1996) 'From the Women's Movement to Feminisms' in C. Barker and P. T. Kennedy (eds) *Studies in Protest and Collective Action*. London: Blackwell, pp.45-67.

CLEMENS, E. S. and HUGHES, M. (2002) 'Recovering Past Protest: Historical Research on Social Movements' in B. Klandermans and S. Staggenborg (eds) *Methods of Social Movement Research*. Minneapolis, MN: University of Minnesota Press, pp.201-230.

COHEN, B. D. (1979) 'Test Tube Baby Experiment at Norfolk School; Doctors Set to Implant Human Embryo'. *The Washington Post*, 28 September, pp.1, Section A1.

COHEN, J., SIMONS, R., FEHILLY, C., FISHEL, S., EDWARDS, R., HEWITT, J., ROWLAND, G., STEPTOE, P. and WEBSTER, J. (1985) 'Birth after Replacement of Hatching Blastocyst Cryopreserved at Expanded Blastocyst Stage'. *The Lancet* **325**(8429), pp.647-647.

COHEN, J., TROUNSON, A., DAWSON, K., JONES, H., HAZEKAMP, J., NYGREN, K.-G. and HAMBERGER, L. (2005) 'The Early Days of IVF Outside the UK'. *Human Reproduction Update* **11**(5), pp.439-460.

COHEN, S. and TAUB, N. (eds) (1989) *Reproductive Laws for the 1990s*. Clifton, NJ: Humana Press.

COLLINS, H. (2004) 'Interactional Expertise as a Third Kind of Knowledge'. *Phenomenology and the Cognitive Sciences* **3**(2), pp.125-143.

COLLINS, H. (2007) 'A New Programme of Research?'. *Studies In History and Philosophy of Science Part A* **38**(4), pp.615-620.

COLLINS, H., EVANS, R., RIBEIRO, R. and HALL, M. (2006) 'Experiments with Interactional Expertise'. *Studies In History and Philosophy of Science Part A* **37**(4), pp.656-674.

COLLINS, H. M. (1983) 'The Sociology of Scientific Knowledge: Studies of Contemporary Science'. *Annual Review of Sociology* **9**(1), p.265.

COLLINS, H. M. and EVANS, R. (2002) 'The Third Wave of Science Studies: Studies of Expertise and Experience'. *Social Studies of Science* **32**(2), pp.235-296.

COLLINS, H. M. and EVANS, R. (2007) *Rethinking Expertise*. Chicago: University of Chicago Press.

COLLINS, J. and COOK, J. (2010) 'Cross-Border Reproductive Care: Now and into the Future'. *Fertility and Sterility* **94**(1), pp.E25-E26.

CONNOLLY, K. (2007) 'Militant Feminist on Trial after 20 Years on Run'. *The Guardian*, 12 April, 2007, [online]. Available from: http://www.guardian.co.uk/world/2007/apr/12/germany.kateconnolly [Accessed 4 Nov 2011].

CONNOLLY, M. (2011) 'Cross-Border Reproductive Care: Market Forces in Action or Market Failure? An Economic Perspective'. *Reproductive Biomedicine Online* **23**(7), pp.817-819.

COOK, J. A. and FONOW, M. M. (1986) 'Knowledge and Women's Interests: Issues of Epistemology and Methodology in Feminist Sociological Research'. *Sociological Inquiry* **56**(1), pp.2-29.

COOPER, M. (2008) *Life as Surplus: Biotechnology and Capitalism in the Neoliberal Era*: University of Washington Press.

COREA, G. (1977) *The Hidden Malpractice: How American Medicine Mistreats Women*. New York: Harcourt, Brace, Jovanovich.

COREA, G. (1985a) 'How the New Reproductive Technologies Could Be Used to Apply the Brothel Model of Social Control Over Women'. *Women's Studies International Forum* **8**(4), pp.299-305.

COREA, G. (1985b) *The Mother Machine: Reproductive Technologies from Artificial Insemination to Artificial Wombs*. New York: Harper & Row.

COREA, G. (1985c) 'The Reproductive Brothel' in G. Corea, R. Klein, et al. (eds) *Man-Made Women: How New Reproductive Technologies Affect Women*. London: Hutchinson, pp.38-51.

COREA, G. and INCE, S. (1985) 'IVF a Game for Losers at Half of US Clinics'. *Medical Tribune*, 3 July, pp.12-13.

COREA, G. and INCE, S. (1987) 'Report of a Survey of IVF Clinics in the USA' in P. Spallone and D. L. Steinberg (eds) *Made to Order: The Myth of Reproductive and Genetic Progress*. Oxford: Pergamon Press, pp.133-145.

CRAWSHAW, M. and MARSHALL, L. (2008) 'Practice Experiences of Running UK Donorlink, a Voluntary Information Exchange Register for Adults Related through Donor Conception'. *Human Fertility* **11**(4), pp.231-237.

CROSSLEY, N. (2002) *Making Sense of Social Movements*. Buckingham: Open University Press.

CROSSLEY, N. (2003) 'Even Newer Social Movements? Anti-Corporate Protests, Capitalist Crises and the Remoralization of Society'. *Organization* **10**(2), pp.287-305.

CROWE, C. (1985) '`Women Want It': In-Vitro Fertilization and Women's Motivations for Participation'. *Women's Studies International Forum* **8**(6), pp.547-552.

CROWE, C. (1987) "Women Want It': In Vitro Fertilization and Women's Motivations for Participation' in P. Spallone and D. L. Steinberg (eds) *Made to Order: The Myth of Reproductive and Genetic Progress*. Oxford: Pergamon Press, pp.84-93.

CURTHOYS, J. (1997) *Feminist Amnesia: The Wake of Women's Liberation*. London: Routledge.

D'ANJOU, L. and VAN MALE, J. (1998) 'Between Old and New: Social Movements and Cultural Change'. *Mobilization: An International Quarterly* **3**(2), pp.207 - 226

DAVIDSON, J. O. C. and LAYDER, D. (1994) *Methods, Sex, and Madness*. London: Routledge.

DAVIS, K. (2007) *The Making of Our Bodies, Ourselves: How Feminism Travels across Borders*. Durham, NC: Duke University Press.

DAVISON, A., BARNS, I. and SCHIBECI, R. (1997) 'Problematic Publics: A Critical Review of Surveys of Public Attitudes to Biotechnology'. *Science, Technology, & Human Values* **22**(3), pp.317-348.

DEECH, R. (2003) 'Reproductive Tourism in Europe: Infertility and Human Rights'. *Global Governance* **9**(4), pp.425-432.

DELLA PORTA, D. (1992) 'Life Histories in the Analysis of a Social Movement' in M. Diani and R. Eyerman (eds) *Studying Collective Action*. London: Sage, pp.168-193.

DENNY, E. (1994) 'Liberation or Oppression? Radical Feminism and in Vitro Fertilisation'. *Sociology of Health & Illness* **16**(1), pp.62-80.

DEUTSCHE WELLE (2007) 'Radical Left-Wing Feminist Given Suspended Jail Term'. *DW-World.de*, 16 April, 2007, [online]. Available from: http://www.dw-world.de/dw/article/0,2144,2444055,00.html [Accessed 4 November 2011].

DEVAULT, M. L. (1996) 'Talking Back to Sociology: Distinctive Contributions of Feminist Methodology'. *Annual Review of Sociology* **22**(1), p.29.

DICKENSON, D. (2008) *Body Shopping: Converting Body Parts to Profit*. Oxford: Oneworld.

DICKEY, R. P. (1986) 'The Medical Status of the Embryo'. *Loyola Law Review* **32**, pp.317-336.

DONCHIN, A. (1989) 'The Growing Feminist Debate over the New Reproductive Technologies'. *Hypatia* **4**(3), pp.136-149.

DONCHIN, A. (1996) 'Feminist Critiques of New Fertility Technologies: Implications for Social Policy'. *Journal of Medicine and Philosophy* **21**(5), pp.475-498.

DOWSE, L. (2001) 'Contesting Practices, Challenging Codes: Self Advocacy, Disability Politics and the Social Model'. *Disability & Society* **16**(1), pp.123-141.

DWORKIN, A. (1983) *Right-Wing Women*. New York: Perigee Books.

EAGER, P. W. (2004) *Global Population Policy*. Aldershot: Ashgate.

EDWARDS, R. (2001) 'The Bumpy Road to Human in Vitro Fertilization'. *Nature Medicine* **7**, pp.1091-1094.

EDWARDS, R., DONAHUE, R., BARAMKI, T. and JONES, H. J. (1966) 'Preliminary Attempts to Fertilize Human Oocytes Matured in Vitro'. *American Journal of Obstetrics and Gynecology* **96**(2), pp.192-200.

EDWARDS, R. and STEPTOE, P. (1980) *A Matter of Life: The Sensational Story of the World's First Test-Tube Baby*. London: Sphere Books Ltd.

EDWARDS, R. G. (1974) 'Fertilization of Human Eggs in Vitro: Morals, Ethics and the Law'. *The Quarterly Review of Biology* **49**(1), pp.3-26.

EDWARDS, R. G. (1981) 'Test-Tube Babies, 1981'. *Nature* **293**(5830), pp.253-256.

EDWARDS, R. G. (2005) 'An Introduction to Bourn Hall: The Biomedical Background of Bourn Hall Clinic' in P. Brinsden (ed) *Textbook of in Vitro Fertilization and Assisted Reproduction: The Bourne Hall Guide to Clinical and Laboratory Practice*. Abingdon, Oxon: Taylor & Francis, pp.1-8.

EDWARDS, R. G. and STEPTOE, P. C. (1983) 'Current Status of in-Vitro Fertilisation and Implantation of Human Embryos'. *The Lancet* **322**(8362), pp.1265-1269.

ELIAS, D. (1984) 'Waller Joins In Vitro Ethics Calls'. *The Age (Melbourne)*, 26 May.

ELIAS, D. and MCINTOSH, P. (1984) 'Committee Was Warned of Embryo Danger'. *The Age (Melbourne)*, 19 June, p.1.

ELLIS, C. and BERGER, L. (2003) in J. Holstein and J. Gubrium (eds) *Inside Interviewing: New Lenses, New Concerns*. London: Sage, pp.467-493.

EPSTEIN, S. (1991) 'Democratic Science? : AIDS Activism and the Contested Construction of Knowledge'. *Socialist Review* **21**(2), pp.35-64.

EPSTEIN, S. (1995) 'The Construction of Lay Expertise: AIDS Activism and the Forging of Credibility in the Reform of Clinical Trials'. *Science Technology and Human Values* **20**(4), pp.408-437.

EPSTEIN, S. (1996) 'Impure Science: AIDS, Activism, and the Politics of Knowledge'.

EPSTEIN, S. (2007) 'Patient Groups and Health Movements' in E. J. Hackett, O. Amsterdamska, et al. (eds) *The Handbook of Science and Technology Studies, Third Edition*. Cambridge, MA: MIT Press, pp.499-539.

EPSTEIN, S. (2008) 'Culture and Science/Technology: Rethinking Knowledge, Power, Materiality, and Nature'. *The ANNALS of the American Academy of Political and Social Science* **619**(1), pp.165-182.

ESTEVES, A. M. (2008) 'Processes of Knowledge Production in Social Movements as Multi-Level Power Dynamics'. *Sociology Compass* **2**(6), pp.1934-1953.

EUROPEAN PARLIAMENT (1989) *Resolution of 16 March 1989 on Artificial Insemination 'in Vivo' and 'in Vitro'; Resolution of 16 March 1989 on the Ethical and Legal Problems of Genetic Engineering (Doc. A2-372/88)*. Official Journal C 96, 17.4.89, pp.165-173

EYERMAN, R. and JAMISON, A. (1991) *Social Movements: A Cognitive Approach.* Cambridge: Polity Press.

FABRICANT, D. (1990) 'International Law Revisited: Davis vs Davis and the Need for Coherent Policy on the Status of the Embryo'. *Connecticut Journal of International Law* **6**, pp.173-207.

FERBER, D. S. (2007) 'As Sure as Eggs? Responses to an Ethical Question Proposed by Abramov, Elchalal and Schenker'. *Journal of Clinical Ethics* **18**(1), pp.35-48.

FERGUSON, A. (1994) 'Twenty Years of Feminist Philosophy'. *Hypatia* **9**(3), pp.197-215.

FERRARETTI, A. P., PENNINGS, G., GIANAROLI, L., NATALI, F. and MAGLI, M. C. (2010) 'Cross-Border Reproductive Care: A Phenomenon Expressing the Controversial Aspects of Reproductive Technologies'. *Reproductive Biomedicine Online* **20**(2), pp.261-266.

FERREE, M. M. and MILLER, F. D. (1985) 'Mobilization and Meaning: Toward an Integration of Social Psychological and Resource Perspectives on Social Movements'. *Sociological Inquiry* **55**(1), pp.38-61.

FINCH, J. and MASON, J. (1990) 'Decision Taking in the Fieldwork Process: Theoretical Sampling and Collaborative Working' in R. Burgess (ed) *Studies in Qualitative Methodology Vol 2: Reflections on Field Experience.* Greenwich/London: JAI Press, pp.25-50.

FINE, M. and ASCH, A. (1985) 'Review: Who Owns the Womb?'. *The Women's Review of Books* **2**(8), pp.8-10.

FINRRAGE-AUSTRALIA (1997) 'Submission on Review of Assisted Reproductive Technology' at *FINRRAGE.org*. [online]. Available from: http://www.finrrage.org/pdf_files/ART_Submission_1997.pdf [Accessed 12 September 2012].

FINRRAGE-AUSTRALIA (2002) 'Submission to the Senate Community Affairs Legislation Committee on the Research Involving Embryos and Prohibition of Human Cloning Bill 2002' at *FINRRAGE.org*. [online]. Available from: http://www.finrrage.org/pdf_files/Submission_Cloning.pdf [Accessed 12 September 2012].

FINRRAGE-AUSTRALIA (2006a) 'Submission to the Scrutiny of Acts and Regulations Committee Regarding the Infertility Treatment Amendment Bill 2007'. Available from: http://www.finrrage.org/pdf_files/Cloning_Submission_2007.pdf [Accessed 12 September 2012].

FINRRAGE-AUSTRALIA (2006b) 'Testimony to Senate Hearings on Legislative Responses to Lockheart Review' at *FINRRAGE.org*. [online]. Available from: http://www.finrrage.org/pdf_files/Senate_Inquiry_Cloning_2006.pdf [Accessed 12 September 2012].

FINRRAGE-UBINIG (1991) *Declaration of Comilla: Proceedings of FINRRAGE-UBINIG International Conference, 19-25 March 1989*. Comilla, Bangladesh: UBINIG.

FIRESTONE, S. (1970/1979) *The Dialectic of Sex: The Case for Feminist Revolution*. London: The Women's Press.

FITZGERALD, K. J. and RODGERS, D. M. (2000) 'Radical Social Movement Organizations: A Theoretical Model'. *The Sociological Quarterly* **41**(4), pp.573-592.

FLEMING, A. T. (1980) 'New Frontiers in Conception'. *The New York Times*, p.SM4.

FOX, M. (2006) 'Betty Friedan, Who Ignited Cause in "Feminine Mystique," Dies at 85'. *The New York Times*, 5 February.

FRANKLIN, B. A. (1980) 'U.S. Clinic for Conception Outside Body Approved'. *The New York Times*, pp.A14-A14.

FRANKLIN, S. (1997) *Embodied Progress: A Cultural Account of Assisted Conception*. London: Routledge.

FRANKLIN, S. (2006) 'The IVF-Stem Cell Interface'. *International Journal of Surgery* **4**(2), pp.86-90.

FRANKLIN, S. (2011) 'Not a Flat World: The Future of Cross-Border Reproductive Care'. *Reproductive Biomedicine Online* **23**(7), pp.814-816.

FRANKLIN, S. and MCNEIL, M. (1988) 'Reproductive Futures: Recent Literature and Current Feminist Debates on Reproductive Technologies'. *Feminist Studies* **14**(3), pp.545-560.

FREEMAN, J. (1972) 'The Tyranny of Structurelessness'. *Berkeley Journal of Sociology* **17**, pp.151-165.

FREEMAN, J. (1973) 'The Origins of the Women's Liberation Movement'. *American Journal of Sociology* **78**(4), p.792.

FRICKEL, S. (2004) 'Just Science? Organizing Scientist Activism in the US Environmental Justice Movement'. *Science as Culture* **13**(4), pp.449 - 469.

FRICKEL, S. and GROSS, N. (2005) 'A General Theory of Scientific/Intellectual Movements'. *American Sociological Review* **70**(2), p.204.

FRIEDMAN, D. and MCADAM, D. (1992) 'Collective Identity and Activism: Networks, Choices and the Life of a Social Movement' in A. D. Morris and C. M. Mueller (eds) *Frontiers in Social Movement Theory*. New Haven, CT: Yale University Press, pp.156-173.

FULLER, S. (1988/2002) *Social Epistemology*. Bloomington: Indiana University Press.

FULLER, S. (2004) *Kuhn vs. Popper : The Struggle for the Soul of Science*. NY: Columbia University Press.

GAMSON, W. A. (1999) 'Social Movements and Cultural Change' in M. G. Guigni, D. McAdam, et al. (eds) *How Social Movements Matter*. Minneapolis, MN: University of Minnesota Press, pp.57-77.

GARDNER, R. L. and JOHNSON, M. H. (2011) 'Bob Edwards and the First Decade of Reproductive Biomedicine Online'. *Reproductive BioMedicine Online* **22**(2), pp.106-124.

GEERTZ, C. (1973) *Toward an Interpretative Theory of Culture*. New York: Basic Books.

GEN-ARCHIV (1988) 'Police Raid on Gene Archive - News from West Germany'. *(Issues in) Reproductive and Genetic Engineering: Journal of International Feminist Analysis* **1**(1), pp.103-105.

GIERYN, T. (1999) *Cultural Boundaries of Science: Credibility on the Line*. Chicago: University of Chicago Press.

GILLON, R. (1984) 'Britain: The Public Gets Involved'. *The Hastings Center Report* **14**(6), pp.16-17.

GOFFMAN, E. (1974) *Frame Analysis: An Essay on the Organisation of Experience.* Harmondsworth: Penguin Books.

GOLDMAN, A. (1999) *Knowledge in a Social World*. Oxford: Clarendon Press.

GOMM, R., HAMMERSLEY, M. and FOSTER, P. (2000) 'Case Study and Theory' in R. Gomm, M. Hammersley, et al. (eds) *Case Study Method: Key Issues, Key Texts*. London: Sage, pp.234-258.

GORELICK, S. (1998) 'Contradictions of Feminist Methodology' in J. Giele and G. Elder (eds) *Methods of Lifecourse Research: Qualitative and Quantitative Approaches*. Thousand Oaks: Sage, pp.23-45.

GOUGON, D. (2008) *Explaining Inaction: Feminist Organizational Responses to New Reproductive Technologies*. PhD thesis submitted to Department of Political Science, Rutgers University.

GOULD, H. (1986) 'The Bioethics of Playing God - an Interview with Robyn Rowland'. *National Outlook*, pp.9-11.

GRASSWICK, H. E. and WEBB, M. O. (2002) 'Feminist Epistemology as Social Epistemology'. *Social Epistemology* **16**(3), pp.185-196.

GREY, S. and SAWER, M. (eds) (2008) *Women's Movements: Flourishing or in Abeyance?* Abingdon, Oxon: Routledge.

GROCH, S. (2001) 'Free Spaces: Creating Oppositional Consciousness in the Disability Rights Movement' in J. J. Mansbridge and A. Morris (eds) *Oppositional Consciousness: The Subjective Roots of Social Protest*. Chicago: University of Chicago Press, pp.65-98.

GROSSMAN, E. (1971) 'The Obsolescent Mother'. *The Atlantic Monthly*, 227 (May), 39-50. Available from: http://www.theatlantic.com/magazine/archive/1971/05/the-obsolescent-mother/4201/ [Accessed 22 Feb 2012].

GRUNDMANN, R. and STEHR, N. (2003) 'Social Control and Knowledge in Democratic Societies'. *Science and Public Policy* **30**(3), pp.183-188.

GRÜNENTHAL GMBH (2012) 'Brief Portrait of Belara' at *Grunenthal Group*. [online]. Available from: http://grunenthal.dk/cms/cda/_common/inc/display_file.jsp?fileID855500526 [Accessed 22 April 2012].

GRUNWALD, A. (2003) 'Technology Assessment at the German Bundestag: Expertising Democracy for Democratising Expertise'. *Science and Public Policy* **30**(3), pp.193-198.

GUNNING, J. and ENGLISH, V. (1993) *Human in Vitro Fertilization: A Case Study in the Regulation of Medical Innovation*. Aldershot: Dartmouth.

GUPTA, J. A. and RICHTERS, A. (2008) 'Embodied Subjects and Fragmented Objects: Women's Bodies, Assisted Reproduction Technologies and the Right to Self-Determination'. *Journal of Bioethical Inquiry* **5**(4).

GURNEY, J. N. and TIERNEY, K. J. (1982) 'Relative Deprivation and Social Movements: A Critical Look at Twenty Years of Theory and Research'. *The Sociological Quarterly* **23**(1), pp.33-47.

GUSFIELD, J. R. (1962) 'Mass Society and Extremist Politics'. *American Sociological Review* **27**(1), pp.19-30.

HAAS, P. M. (1992) 'Introduction: Epistemic Communities and International Policy Coordination'. *International Organization* **46**(1), pp.1-35.

HABERMAS, J. (1969/1987) *Toward a Rational Society: Student Protest, Science and Politics*. Cambridge: Polity Press.

HABERMAS, J. (1981) 'New Social Movements'. *Telos* **49**(4), pp.33-37.

HACKETT, E., AMSTERDAMSKA, O., LYNCH, M. and WAJCMAN, J. (eds) (2007) *The Handbook of Science and Technology Studies, Third Edition*. Cambridge, MA: MIT Press.

HALL, M. (2012) 'Swedish Doctors Carry out First Mother-to-Daughter Womb Transplants' at *ABC News (Australia), 19 September*. [online]. Available from: http://www.abc.net.au/am/content/2012/s3593271.htm?site=brisbane [Accessed 26 September].

HAMMERSLEY, M. (2011) *Methodology: Who Needs It?* London: Sage.

HANMER, J. (1983) 'Reproductive Technology: The Future for Women' in J. Rothschild (ed) *Machina Ex Dea: Feminist Perspectives on Technology*. NY: Pergamon, p.draft.

HANMER, J. (1984) 'A Womb of One's Own' in R. Arditti, R. Klein, et al. (eds) *Test-Tube Women: What Future for Motherhood?* London: Pandora Press, pp.438-448.

HANMER, J. and ALLEN, P. (1980) 'Reproductive Engineering: The Final Solution?' in L. Birke, W. Faulkner, et al. (eds) *Alice through the Microscope: The Power of Science over Women's Lives*. London: Virago, pp.208-292.

HANMER, J., POWELL-JONES, E. and LEONARD, D. (1984) 'Who's Holding the Test-Tube?'. *Trouble and Strife* **3**, pp.44-53.

***HANSARD** (Commons)*, 23 November 1984, Column 560

HANSEN, A. and BELMAS, J. (2009) 'This Is Not a Love Story: Armed Struggle against the Institutions of Patriarchy'. Available from: http://theanarchistlibrary.org [Accessed 27 Oct 2011].

HANSEN, M., BOWER, C., MILNE, E., DE KLERK, N. and KURINCZUK, J. (2005) 'Assisted Reproductive Technologies and the Risk of Birth Defects—a Systematic Review'. *Human Reproduction* **20**(2), pp.328-338.

HARAWAY, D. J. (1996) 'Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective' in E. F. Keller and H. E. Longino (eds) *Feminism and Science*. Oxford: Oxford University Press, pp.249-263.

HARDING, S. (1986) *The Science Question in Feminism*. Milton Keynes: Open University Press.

HARDING, S. (1992) 'How the Women's Movement Benefits Science: Two Views' in G. Kirkup and L. S. Keller (eds) *Inventing Women: Science, Technology and Gender*. Cambridge: Polity,

HARTMANN, B. (1988) *Reproductive Rights and Wrongs: The Global Politics of Population Control*. New York: Harper & Row.

HARVARD LAW REVIEW ASSOCIATION (1989) 'Developments in the Law: Medical Technology and the Law'. *Harvard Law Review* **103**, pp.1519-1976.

HECHT, F. and HECHT, B. (1986) 'Book Reviews: Test Tube Women'. *American Journal of Human Genetics* **38**(2), pp.263-264.

HEITLINGER, A. (1996) 'Framing Feminism in Post-Communist Czech Republic'. *Communist and Post-Communist Studies* **29**(1), pp.77-93.

HEMMINGS, C. (2005) 'Telling Feminist Stories'. *Feminist Theory* **6**(2), pp.115-139.

HEMMINGS, C. (2006) 'The Life and Times of Academic Feminism' in K. Davis, M. Evans, et al. (eds) *Handbook of Gender and Women's Studies*. London: Sage, pp.13-34.

HENDERSON, M. (2007) 'Betty Friedan (1921–2006)'. *Australian Feminist Studies* **22**(53), pp.163-166.

HENRY, A. (1984) 'Fuckless Babies'. *Spare Rib* **144**(July), pp.15-16.

HENRY, A. (1985) 'Feminists Debate Surrogate Motherhood/College Ads for Babies'. *off our backs*, April, pp.12-13.

HEPBURN, L. (1992) *Ova-Dose?: Australian Women and the New Reproductive Technology*. North Sydney: Allen & Unwin.

HERCUS, C. (1999) 'Identity, Emotion, and Feminist Collective Action'. *Gender & Society* **13**(1), pp.34-55.

HESS, D. J. (2007) 'What Is a Clean Bus? Object Conflicts in the Greening of Urban Transit'. *Sustainability: Science, Practice & Policy* **3**(1), pp.45-58.

HESS, D. J. (2011) 'To Tell the Truth: On Scientific Counterpublics'. *Public Understanding of Science* **20**(5), pp.627-641.

HESS, D. J., BREYMAN, S., CAMPBELL, N. and MARTIN, B. (2007) 'Science, Technology and Social Movements' in E. J. Hackett, O. Amsterdamska, et al. (eds) *The Handbook of Science and Technology Studies, Third Edition*. Cambridge, MA: MIT Press, pp.473-498.

HFEA (2012) 'Success Rates - Bourn Hall Clinic' at *Human Fertilization & Embryology Authority*. [online]. Available from: http://guide.hfea.gov.uk/guide/SuccessRate.aspx?code=100&s=l&&nav=2 [Accessed 24 May 2012].

HIRSCH, E. L. (1986) 'The Creation of Political Solidarity in Social Movement Organizations'. *The Sociological Quarterly* **27**(3), pp.373-387.

HOLMES, H. B. (1980) 'Reproductive Technologies: The Birth of a Woman-Centered Analysis' in H. B. Holmes, B. B. Hoskins, et al. (eds) *Birth Control and Controlling Birth: Women-Centered Perspectives*. Clifton, NJ: Humana Press,

HOLMES, H. B. and HOSKINS, B. (1985) 'Prenatal and Preconception Sex Choice Technologies: A Path to Femicide?' in G. Corea, R. Klein, et al. (eds) *Man-Made Women: How New Reproductive Technologies Affect Women*. London: Hutchinson, pp.15-29.

HOLMES, H. B., HOSKINS, B. B. and GROSS, M. (1980) *Birth Control and Controlling Birth: Women-Centered Perspectives*: Humana Press.

HOLMES, H. B., HOSKINS, B. B. and GROSS, M. (1981) *The Custom-Made Child?: Women-Centered Perspectives*. Clifton, NJ: Humana Press.

HOWARD, D. (2009) 'Better Red Than Dead—Putting an End to the Social Irrelevance of Postwar Philosophy of Science'. *Science & Education* **18**(2), pp.199-220.

HUBBARD, R. (1981) 'The Case against in Vitro Fertlization and Implantation' in H. B. Holmes, B. B. Hoskins, et al. (eds) *The Custom-Made Child?: Women-Centered Perspectives*: Humana Press, pp.259-262.

HUBBARD, R. (1984) 'Personal Courage Is Not Enough: Some Hazards of Childbearing in the 1980s' in R. Arditti, R. Klein, et al. (eds) *Test-Tube Women: What Future for Motherhood?* London: Pandora Press, pp.331-335.

HULL, G. T. and SMITH, B. (1982) 'Introduction: The Politics of Black Women's Studies' in G. T. Hull, P. Bell Scott, et al. (eds) *All the Women Are White, All the Blacks Are Men, but Some of Us Are Brave*. New York: The Feminist Press, pp.xvii-xxxiv.

HYNES, H. P. (1987) 'A Paradigm for Regulation of the Biomedical Industry: Environmental Protection in the United States' in P. Spallone and D. L. Steinberg (eds) *Made to Order: The Myth of Reproductive and Genetic Progress*. Oxford: Pergamon Press, pp.190-205.

HYNES, H. P. (ed) (1989) *Reconstructing Bablyon: Women and Technology*. London: Earthscan.

ID-ARCHIV (1993) *Die Früchte Des Zorns: Texte Und Materialien Zur Geschichte Der Revolutionären Zellen Und Der Roten Zora [Grapes of Wrath: Texts and Materials on the History of the Revolutionary Cells and Red Zora]* at Berliner Bündnis für Freilassung / Berlin Alliance for Liberation [online]. Available from: http://www.freilassung.de/div/texte/rz/zorn/Zorn01.htm [Accessed 3 Nov 2011].

IKEMOTO, L. C. (2009) 'Eggs as Capital: Human Egg Procurement in the Fertility Industry and the Stem Cell Research Enterprise'. *Signs* **34**(4), p.763-781.

INGALSBEE, T. (1996) 'Earth First! Activism: Ecological Postmodern Praxis in Radical Environmentalist Identities'. *Sociological Perspectives* **39**(2), pp.263-276.

IRWIN, A. (2001) 'Constructing the Scientific Citizen; Science and Democracy in the Biosciences'. *Public Understanding of Science* **10**, pp.1-18.

JAMISON, A. (2003) 'The Making of Green Knowledge: The Contribution from Activism'. *Futures* **35**(7), pp.703-716.

JAMISON, A. (2010) 'Climate Change Knowledge and Social Movement Theory'. *Wiley Interdisciplinary Reviews: Climate Change* **1**(6), pp.811-823.

JANSEN, S. (1987) 'Resistance and Beyond: Conceiving a Feminist Science' in P. Spallone and D. L. Steinberg (eds) *Made to Order: The Myth of Reproductive and Genetic Progress*. Oxford: Pergamon Press, pp.209-210.

JASANOFF, S. (1996) 'Beyond Epistemology: Relativism and Engagement in the Politics of Science'. *Social Studies of Science* **26**(2), pp.393-418.

JASANOFF, S. (1997) 'NGOs and the Environment: From Knowledge to Action'. *Third World Quarterly* **18**(3), pp.579-594.

JASANOFF, S. (2003) '(No?) Accounting for Expertise'. *Science and Public Policy* **30**(3), pp.157-162.

JASLOK HOSPITAL (2006) 'About Dr. Firuza Parikh' at *Jaslok Hospital*. [online]. Available from: http://www.ivfclinicindia.com [Accessed 19 September 2012].

JASPER, J. M. and POULSEN, J. D. (1995) 'Recruiting Strangers and Friends: Moral Shocks and Social Networks in Animal Rights and Anti-Nuclear Protests'. *Social Problems* **42**(4), pp.493-512.

JENKINS, J. C. (1983) 'Resource Mobilization Theory and the Study of Social Movements'. *Annual Review of Sociology* **9**(1), pp.527-553.

JOFFE, C. E., WEITZ, T. A. and STACEY, C. L. (2004) 'Uneasy Allies: Pro-Choice Physicians, Feminist Health Activists and the Struggle for Abortion Rights'. *Sociology of Health & Illness* **26**(6), pp.775-796.

JOHNSON, M. (2011) 'Robert Edwards: The Path to IVF'. *Reproductive BioMedicine Online* **23**, pp.245-262.

JOHNSON, M. H., FRANKLIN, S. B., COTTINGHAM, M. and HOPWOOD, N. (2010) 'Why the Medical Research Council Refused Robert Edwards and Patrick

Steptoe Support for Research on Human Conception in 1971'. *Human Reproduction* **25**(9), pp.2157-2174.

JONES, H. (1991) 'In the Beginning There Was Bob'. *Human Reproduction* **6**(1), pp.5-7.

JONES, H. W. (1995) 'The Norfolk Experience: How IVF Came to the United States' in A. T. Alberda, R. A. Gan, et al. (eds) *Pioneers in in Vitro Fertilization: The Proceedings of a Symposium Held in Oss, the Netherlands, November 5, 1993*. New York: Parthenon, pp.25-43.

JONES, H. W. (2003) 'IVF: Past and Future'. *Reproductive Biomedicine Online* **6**(3), pp.375-381.

KANE, E. (1989) 'Surrogate Parenting: A Division of Families, Not a Creation'. *(Issues in) Reproductive and Genetic Engineering: Journal of International Feminist Analysis* **2**(2), pp.105-110.

KANNEGIESSER, H. (1988) *Conception in the Test Tube: The IVF Story, How Australia Leads the World*. South Melbourne: Macmillan.

KEENAN, M. (1971) 'Growing Point: Choose Your Child's Sex'. *The Times (London)*, 15 September, p.16.

KELLER, E. F. and LONGINO, H. E. (eds) (1996) *Feminism and Science*. Oxford: Oxford University Press.

KERR, A., CUNNINGHAM-BURLEY, S. and AMOS, A. (1998) 'The New Genetics and Health: Mobilizing Lay Expertise'. *Public Understanding of Science* **7**(1), pp.41-60.

KISHWAR, M. (1985) 'The Continuing Deficit of Women in India and the Impact of Amniocentesis' in G. Corea, R. Klein, et al. (eds) *Man-Made Women: How New Reproductive Technologies Affect Women*. London: Hutchinson, pp.30-37.

KLANDERMANS, B. (1984) 'Mobilization and Participation: Social-Psychological Expansions of Resource Mobilization Theory'. *American Sociological Review* **49**(5), pp.583-600.

KLANDERMANS, B. (1985) 'Individuals and Collective Action'. *American Sociological Review* **50**(6), pp.860-861.

KLANDERMANS, B. and GOSLINGA, S. (1996) 'Media Discourse, Movement Publicity, and the Generation of Collective Action Frames: Theoretical and Empirical Exercises in Meaning Construction' in D. McAdam, J. D. McCarthy, et al. (eds) *Comparative Perspectives on Social Movements: Political Opportunities, Mobilizing Structures, and Cultural Framings*. Cambridge: Cambridge University Press, pp.312-337.

KLEIN, R. (1983) 'How to Do What We Want to Do: Thoughts About Feminist Methodology' in G. Bowles and R. Klein (eds) *Theories of Women's Studies*. London: Routledge & Kegan Paul, pp.88-104.

KLEIN, R. (1984) 'Doing It Ourselves: Self Insemination' in R. Arditti, R. Klein, et al. (eds) *Test-Tube Women: What Future for Motherhood?* London: Pandora Press, pp.382-390.

KLEIN, R. (1989a) *The Exploitation of a Desire: Women's Experiences With in Vitro Fertilisation*. Geelong, Australia: Women's Studies Summer Institute, Deakin University.

KLEIN, R. (1989b) 'German Women Say 'No' to Reproductive and Genetic Technologies'. *(Issues in) Reproductive and Genetic Engineering: Journal of International Feminist Analysis* **2**(1), pp.91-98.

KLEIN, R. (ed) (1989c) *Infertility: Women Speak out About Their Experience of Reproductive Medicine*. London: Pandora Press.

KLEIN, R. (2008) 'From Test-Tube Women to Bodies Without Women'. *Women's Studies International Forum* **31**(3), pp.157-175.

KLEIN, R. and ROWLAND, R. (1989) 'Hormonal Cocktails: Women as Test-Sites for Fertility Drugs'. *Women's Studies International Forum* **12**(3), pp.333-348.

KNOLL, E. M. (2012) 'Reproducing Hungarians: Reflections on Fuzzy Boundaries in Reproductive Border Crossing' in M. Knecht, M. Klotz, et al. (eds) *Reproductive Technologies as Global Form: Ethnographies of Knowledge, Practices and Transnational Encounters*. Frankfurt-on-Main: Campus Verlag GmbH, pp.255-282.

KNORR-CETINA, K. (1983) 'New Developments in Science Studies: The Ethnographic Challenge'. *The Canadian Journal of Sociology* **8**(2), pp.153-177.

KNORR-CETINA, K. (1999) *Epistemic Cultures: How the Sciences Make Knowledge*. Cambridge: Harvard University Press.

KOCH, L. and NORDAHL SVENDSEN, M. (2005) 'Providing Solutions-Defining Problems: The Imperative of Disease Prevention in Genetic Counselling'. *Social Science & Medicine* **60**(4), pp.823-832.

KOCH, L. and STEMERDING, D. (1994) 'The Sociology of Entrenchment: A Cystic Fibrosis Test for Everyone?'. *Social Science & Medicine* **39**(9), pp.1211-1220.

KOLKER, E. S. (2004) 'Framing as a Cultural Resource in Health Social Movements: Funding Activism and the Breast Cancer Movement in the US 1990-1993'. *Sociology of Health & Illness* **26**(6), pp.820-844.

KORNHAUSER, W. (1960) *The Politics of Mass Society*. London: Routledge & Kegan Paul.

KOVAL, R. (1986) 'What Price the Sale of Reproductive Technology?'. Paper given at *Liberation or Loss? Women Act on the New Reproductive Technologies, 9-11 May, Canberra.*

KRAWIEC, K. D. (2009) 'Sunny Samaritans and Egomaniacs: Price-Fixing in the Gamete Market'. *Law and Contemporary Problems* **72**(3), p.59(32).

KUHN, T. S. (1962/1996) *The Structure of Scientific Revolutions*. Chicago, IL: University of Chicago Press.

KUMAR, T. C. (1997) 'Architect of India's First Test Tube Baby: Dr Subhas Mukerji'. *Current Science* **72**(7), pp.526-531.

KURINCZUK, J. J., HANSEN, M. and BOWER, C. (2004) 'The Risk of Birth Defects in Children Born after Assisted Reproductive Technologies'. *Current Opinion in Obstetrics & Gynecology* **16**(3), pp.201-209.

KURZMAN, C. (2008) 'Meaning Making in Social Movements'. *Anthropological Quarterly* **81**(1), pp.17-58.

LANDZELIUS, K. (2006) 'Patient Organization Movements and New Metamorphoses in Patienthood'. *Social Science & Medicine* **62**(3), pp.529-537.

LASCH, C. (1972) 'Birth, Death and Technology: The Limits of Cultural Laissez-Faire'. *The Hastings Center Report* **2**(3), pp.1-4.

LATOUR, B. and WOOLGAR, S. (1979/1986) *Laboratory Life: The Construction of Scientific Facts (2nd Ed.)*. Princeton: Princeton University Press.

LAWS, S. (1985) 'Power and the Right to Choose - Amsterdam 1984'. *Trouble and Strife* **5**, pp.34-42.

LEE, R. and MORGAN, D. (2001) *Human Fertilization and Embryology: Regulating the Reproductive Revolution*. Oxford: Oxford University Press.

LEETON, J. (2004) 'The Early History of IVF in Australia and Its Contribution to the World (1970–1990)'. *Australian and New Zealand Journal of Obstetrics and Gynaecology* **44**(6), pp.495-501.

LENZEN-SCHULTE (2003) 'Test-Tube-Trauma for IVF Babies'. *Spektrum der Wissenschaft*. Available from: http://www.gjga.org/conference.asp?action=all&source=documents [Accessed 12 September 2012].

LEUZINGER, M. and RAMBERT, B. (1988) "I Can Feel It - My Baby Is Healthy': Women's Experiences with Prenatal Diagnosis in Switzerland'. *(Issues in) Reproductive and Genetic Engineering: Journal of International Feminist Analysis* **1**(3), pp.239-250.

LEVIN, L. S. and IDLER, E. L. (1983) 'Self-Care in Health'. *Annual Review of Public Health* **4**(1), pp.181-201.

LEWIS, J. and CANNELL, F. (1986) 'The Politics of Motherhood in the 1980s: Warnock, Gillick and Feminists'. *Journal of Law and Society* **13**(3), pp.321-342.

LEYDESDORFF, L. and WARD, J. (2005) 'Science Shops: A Kaleidoscope of Science-Society Collaborations in Europe'. *Public Understanding of Science* **14**(4), pp.353-372.

LINGAM, L. (1990) 'New Reproductive Technologies in India: A Print Media Analysis'. *(Issues in) Reproductive and Genetic Engineering: Journal of International Feminist Analysis* **3**(1), pp.13-21.

LITYNSKI, G. (1998) 'Patrick C. Steptoe: Laparoscopy, Sterilization, the Test-Tube Baby, and Mass Media'. *Journal of the Society of Laparoendoscopic Surgeons* **2**(1), pp.99-101.

LONGINO, H. E. (1988) 'Science, Objectivity, and Feminist Values'. *Feminist Studies* **14**(3), pp.561-574.

LOPATA, A. (2010) 'IVF History in Australia'. *ABC News*, Jun 23. Available from: http://www.aussmc.org/wp-content/uploads/2010/06/ivf-history-by-alex-zopata.pdf [Accessed 22 Dec 2010].

LOPATA, A., JOHNSTON, I., HOULT, I. and SPEIRS, A. (1980) 'Pregnancy Following Intrauterine Implantation of an Embryo Obtained by in Vitro Fertilization of a Preovulatory Egg'. *Fertility and Sterility* **33**(2), pp.117-20.

LUBLIN, N. (1998) *Pandora's Box : Feminism Confronts Reproductive Technology*. Lanham, Md: Rowman & Littlefield Publishers.

LUKE, T. W. (1995) 'On Environmentality: Geo-Power and Eco-Knowledge in the Discourses of Contemporary Environmentalism'. *Cultural Critique*(31), pp.57-81.

MACHIN, L. (2008) *The Social and Ethical Context of Embryo Donation*. PhD thesis submitted to School of Sociology and Social Policy, University of Leeds.

MADDISON, S. and MARTIN, G. (2010) 'Introduction to "Surviving Neoliberalism: The Persistence of Australian Social Movements"'. *Social Movement Studies: Journal of Social, Cultural and Political Protest* **9**(2), pp.101 - 120.

MAIGUASHCA, B. (2001) *Contemporary Social Movements and the Making of World Politics*. PhD thesis submitted to International Relations, London School of Economics and Political Science.

MAIGUASHCA, B. (2005) 'Theorizing Knowledge from Women's Political Practices'. *International Feminist Journal of Politics* **7**(2), pp.207-232.

MANSBRIDGE, J. J. (1995) 'What Is the Feminist Movement?' in M. M. Ferree and P. Y. Martin (eds) *Feminist Organizations: Harvest of the New Women's Movement*. Philadelphia: Temple University Press, pp.27-34.

MANSBRIDGE, J. (2001) 'The Making of Oppositional Consciousness' in J. Mansbridge and A. Morris (eds) *Oppositional Consciousness: The Subjective Roots of Social Protest*. Chicago: University of Chicago Press, pp.1-19.

MARTIN, B. (1998) 'Strategies for Dissenting Scientists'. *Journal of Scientific Exploration* **12**(4), pp.605-616.

MARTIN, C. (1986) 'A New and Fertile Field for Investment'. *Bulletin (Australia)*, 24 June, pp.60-10.

MARTIN, L. J. (2009) 'Reproductive Tourism in the Age of Globalization'. *Globalizations* **6**(2), pp.249-263.

MAYER, M. (1991) 'Social Movement Research in the United States: A European Perspective'. *International Journal of Politics, Culture and Society* **4**(4), pp.459-480.

MAYNARD, M. (1994) 'Methods, Practice and Epistemology: The Debate About Feminism and Research' in M. Maynard and J. Purvis (eds) *Researching Women's Lives from a Feminist Perspective*. London: Taylor & Francis, pp.10-27.

MCADAM, D. (1982/1999) *Political Process and the Development of Black Insurgency, 1930-1970, 2nd Ed.*: University of Chicago Press.

MCADAM, D. (1996) 'The Framing Function of Movement Tactics: Strategic Dramaturgy in the American Civil Rights Movement' in D. McAdam, J. D. McCarthy, et al. (eds) *Comparative Perspectives on Social Movements: Political Opportunities, Mobilizing Structures, and Cultural Framings*. Cambridge: Cambridge University Press, pp.338-355.

MCBAIN, J. (2010) 'Children of a Fertile Revolution: IVF' at *Melbourne IVF*. [online]. Available from: http://www.mivf.com.au/ivf-latest-news/children-of-a-fertile-revolution-ivf.aspx [Accessed 06 Jul 2010].

MCCARTHY, J. D. and ZALD, M. N. (1977) 'Resource Mobilization and Social Movements: A Partial Theory'. *The American Journal of Sociology* **82**(6), pp.1212-1241.

MCCORMACK, T. (1988) 'Public Policies and Reproductive Technology: A Feminist Critique'. *Canadian Public Policy / Analyse de Politiques* **14**(4), pp.361-375.

MCCORMICK, S. (2006) 'The Brazilian Anti-Dam Movement: Knowledge Contestation as Communicative Action'. *Organization Environment* **19**(3), pp.321-346.

MCCORMICK, S. (2007) 'Democratizing Science Movements: A New Framework for Mobilization and Contestation'. *Social Studies of Science* **37**(4), pp.609-623.

MCINERNEY, F. (2000) '"Requested Death": A New Social Movement'. *Social Science & Medicine* **50**(1), pp.137-154.

MCINERNEY, F. (2006) 'Heroic Frames: Discursive Constructions around the Requested Death Movement in Australia in the Late-1990s'. *Social Science & Medicine* **62**(3), pp.654-667.

MCKAY, S. (1985) 'Test-Tube Women, What Future for Motherhood? (Book Review)'. *Sociology of Health & Illness* **7**(2), pp.275-276.

MCNEIL, M. (1987) 'Being Reasonable Feminists' in M. McNeil (ed) *Gender and Expertise*. London: Free Association Books, pp.13-61.

MCNEIL, M. (1990) 'Reproductive Technologies: A New Terrain for the Sociology of Technology' in M. McNeil, I. Varcoe, et al. (eds) *The New Reproductive Technologies*. Houndmills: The Macmillan Press, pp.1-26.

MCNEIL, M., VARCOE, I. and YEARLEY, S. (eds) (1990) *The New Reproductive Technologies*. Houndmills: The Macmillan Press.

MCNEILL, S. (1978) 'Reproduction Workshop'. *Scarlet Women* **6/7**, pp.3-6.

MELUCCI, A. (1980/2007) 'The New Social Movements: A Theoretical Approach' in J. Goodwin and J. M. Jasper (eds) *Social Movements: Critical Concepts in Sociology, Vol IV*. London: Routledge, pp.34-56.

MELUCCI, A. (1985) 'The Symbolic Challenge of Contemporary Movements'. *Social Research*, pp.789-816.

MELUCCI, A. (1989) *Nomads of the Present: Social Movements and Individual Needs in Contemporary Society*. London: Century Hutchinson.

MERRICK, J. (1990) 'The Case of Baby M' in D. Bartels, R. Priester, et al. (eds) *Beyond Baby M: Ethical Issues in New Reproductive Technologies*, pp.183-200.

MERTON, R. (1942/1973) *The Sociology of Science: Theoretical and Empirical Investigations*. Chicago: University of Chicago Press.

MESEGUER, M., KRUHNE, U. and LAURSEN, S. (2012) 'Full In vitro Fertilization Laboratory Mechanization: Toward Robotic Assisted Reproduction?'. *Fertility and Sterility* **97**(6), pp.1277-1286.

MIES, M. (1983) 'Towards a Methodology for Feminist Research' in G. Bowles and R. Klein (eds) *Theories of Women's Studies*. Londone: Routledge & Kegan Paul, pp.117-139.

MIES, M. (1985) '`Why Do We Need All This?' A Call against Genetic Engineering and Reproductive Technology'. *Women's Studies International Forum* **8**(6), pp.553-560.

MIES, M. (2010) *The Village and the World*. Melbourne: Spinifex.

MILLER, C. A. (2008) 'Civic Epistemologies: Constituting Knowledge and Order in Political Communities'. *Sociology Compass* **2**(6), pp.1896-1919.

MINDEN, S. (1985) 'Patriarchal Designs: The Genetic Engineering of Human Embryos'. *Women's Studies International Forum* **8**(6), pp.561-565.

MOIRA, F. (1984) 'Population Control: No - Women Decide'. *off our backs*, October, pp.2-4, 7.

MONASH IVF (2012a) 'History of IVF' at *Monash IVF Australia*. [online]. Available from: http://www.monashivf.com [Accessed 22 January 2011].

MONASH IVF (2012b) 'Success Rates ' at *Monash IVF Australia*. [online]. Available from: http://www.monashivf.com [Accessed 22 January 2012].

'SOFT CELL' (1987). Directed by N. Mondale. Channel Four, 11 January 1988. 23.00 hrs.

MORGAN, S. (1984) 'Doctor Wants in-Vitro Babies Program Halted'. *Sydney Morning Herald*, 18 May, p.3.

MORRIS, A. and BRAINE, N. (2001) 'Social Movements and Oppositional Consciousness' in J. Mansbridge and A. Morris (eds) *Oppositional Consciousness: The Subjective Roots of Social Protest*. Chicago: University of Chicago Press, pp.20-37.

MOSS, K. E. (1988) 'New Reproductive Technologies: Concerns of Feminists and Researchers'. *Affilia* **3**(4), pp.38-50.

MULKAY, M. J. (1997) *The Embryo Research Debate: Science and the Politics of Reproduction*. Cambridge: Cambridge University Press.

MURDOLO, A. (1996) 'Warmth and Unity with All Women?: Historicising Racism in the Australian Women's Movement'. *Feminist Review* **52**, pp.69-86.

NAHMAN, M. (2008) 'Nodes of Desire'. *European Journal of Women's Studies* **15**(2), pp.65-82.

NAPIER, L. (1986) 'Aims of the Workshop 'Infertility and Feminists''. Paper given at *Liberation or Loss? Women Act on the New Reproductive Technologies, 9-11 May, Canberra.*

NATHANSON, J. (2005) 'Framing Feminism: The Impact of Collective Action Frames on the Second Wave Women's Movement'. Paper given at *the Annual Meeting of the International Communication Association, New York, NY.* [online]. Available from: http://www.allacademic.com/meta/p11779_index.html. [Accessed 17 December 2012].

NATIONAL HEALTH AND MEDICAL RESEARCH COUNCIL (1985) *Embryo Donation by Uterine Flushing: Interim Report on Ethical Considerations*. Report prepared for NHMRC Medical Research Ethics Committee. Canberra: The Committee.

NATIONAL PERINATAL STATISTICS UNIT and FERTILITY SOCIETY OF AUSTRALIA (1985) *In Vitro Fertilization Pregnancies Australia and New Zealand 1979-1984*. Sydney: National Perinatal Statistics Unit.

NATIONAL RIGHT TO LIFE (2012) 'NRLC: How the Nation's Largest and Most Effective Pro-Life Group Began ' at *National Right to Life Committee*. [online]. Available from: http://www.nrlc.org [Accessed 20 March 2012].

NOWOTNY, H. (2003) 'Democratising Expertise and Socially Robust Knowledge'. *Science and Public Policy* **30**(3), pp.151-156.

O'BRIEN, M. (1981) *The Politics of Reproduction*. London: Routledge & Kegan Paul.

OAKLEY, A. (1981) 'Interviewing Women: A Contradiction in Terms' in H. Roberts (ed) *Doing Feminist Research*. London: Routledge, pp.30-61.

OBERSHALL, A. (1973) *Social Conflict and Social Movements*. Englewood Cliffs, NJ: Prentice Hall.

OFFE, C. (1985) 'New Social Movements: Challenging the Boundaries of Institutional Politics'. *Social Research* **52**(4), pp.817-868.

OLIVER, M. (1997) 'The Disability Movement Is a New Social Movement!'. *Community Development Journal* **32**(3), pp.244-251.

OLIVER, M. and SAPEY, B. (1983) *Social Work with Disabled People*. Houndmills, Basingstoke: Macmillan Press.

OLIVER, P. and JOHNSTON, H. (2000) 'What a Good Idea! Frames and Ideologies in Social Movement Research'. *Mobilization* **5**, pp.37-54.

OLSON, M. (1965) *The Logic of Collective Action: Public Goods and the Theory of Groups*. Cambridge, MA: Harvard University Press.

PALATTIYIL, G., BLYTH, E., SIDHVA, D. and BALAKRISHNAN, G. (2010) 'Globalization and Cross-Border Reproductive Services: Ethical Implications of Surrogacy in India for Social Work'. *International Social Work* **53**(5), pp.685-699.

PANICKER, A. (2008) 'New Social Movements and Civil Society: Towards a Framework for Understanding Counter-Hegemonic Collective Action'. Paper given at *American Sociological Association Annual Meeting, Boston.* [online]. Available from: http://www.allacademic.com/meta/p241931_index.html. [Accessed 5 Jan 2012].

PATEL, V. (1987) 'Campaign against Amniocentesis' in K. Bhate, L. Menon, et al. (eds) *In Search of Our Bodies: A Feminist View on Woman, Health and Reproduction in India*. Bombay: Shakti Collective, pp.70-74.

PATEL, V. (1989) 'Sex Determination and Sex Preselection Tests in India: Modern Techniques for Femicide'. *Bulletin of Concerned Asian Scholars* **21**(1), pp.2-10.

PEARSON, R. and JACKSON, C. (1998) 'Interrogating Development: Feminism, Gender and Policy' in C. Jackson and R. Pearson (eds) *Feminist Visions of Development: Gender, Analysis and Policy*. London: Routledge, pp.1-16.

PEREIRA, M. D. M. (2008) 'The Epistemic Status of Women's, Gender, Feminist Studies: Notes for Analysis' in B. Waaldijk, M. Peters, et al. (eds) *The Making of European Women's Studies Vol VIII*, pp.145-156.

PEREIRA, M. D. M. (2009) 'What Counts as a 'Proper' Discipline? Towards a Methodological Framework for a Feminist Ethnographical Analysis of Negotiations of Epistemic Status'. Paper given at *Feminist Research Methods – An International Conference, 4-6 February 2009, Stockholm.* [online]. Available from: http://www.kvinfo.su.se/femmet09/papers/pdf/Pereira.pdf. [Accessed 14 April 2012].

PFEFFER, N. (1985) 'Not So New Technologies'. *Trouble and Strife* **5**, pp.46-50.

PFEFFER, N. and WOLLETT, A. (1983) *The Experience of Infertility*. London: Virago.

PINARD, M. (1968) 'Mass Society and Political Movements: A New Formulation'. *The American Journal of Sociology* **73**(6), pp.682-690.

PLATT, J. (1981) 'Evidence and Proof in Documentary Research 1: Some Specific Problems of Documentary Research'. *Sociological Review* **29**(1), pp.31-51.

POLAND, B. (2003) 'Transcription Quality' in J. Holstein and J. Gubrium (eds) *Inside Interviewing: New Lenses, New Concerns*. London: Sage, pp.267-287.

POLLETTA, F. and JASPER, J. M. (2001) 'Collective Identity and Social Movements'. *Annual Review of Sociology* **27**(1), pp.283-305.

POSTGATE, J. (1995) 'Eugenics Returns'. *Biologist* **42**(2), p.96.

POTASHNIK, G., LERNER-GEVA, L., GENKIN, L., CHETRIT, A., LUNENFELD, E. and PORATH, A. (1999) 'Fertility Drugs and the Risk of Breast and Ovarian Cancers: Results of a Long-Term Follow-up Study'. *Fertility and Sterility* **71**(5), pp.853-859.

PRATT, M. L. (1986) 'Ideology and Speech-Act Theory'. *Poetics Today* **7**(1), pp.59-72.

PRAVADELLI, V. (2011) 'Is There a Feminist in This Class? Academic Feminism and Its Generations across the Atlantic' in K. Davis and M. Evans (eds) *Transatlantic Conversations: Feminism as Travelling Theory*. Farnham: Ashgate, pp.93-100.

RADFORD, J. (1995) 'Rights of Women - Twenty Years of Feminist Activism' in G. Griffin (ed) *Feminist Activism in the 1990s*. London: Taylor & Francis, pp.51-64.

RAGIN, C. (1992) '"Casing" and the Process of Social Inquiry' in C. Ragin and H. Becker (eds) *What Is a Case? Exploring the Foundations of Social Inquiry*. New York: Cambridge University Press, pp.217-226.

RAJAN, K. S. (2002) *Biocapital: The Constitution of Post-Genomic Life*. PhD thesis submitted to Science, Technology and Society, Massachussettes Institute of Technology.

RAMSEY, J. (1986) 'Liberation or Loss? Women Act on the New Reproductive Technologies, Canberra, 9-11 May 1986 [Report]'. *Australian Feminist Studies* **3**(Summer), pp.121-128.

RAYMOND, J. (1984) 'Feminist Ethics, Ecology and Vision' in R. Arditti, R. Klein, et al. (eds) *Test-Tube Women: What Future for Motherhood?* London: Pandora Press, pp.427-437.

RAYMOND, J. (1986) *A Passion for Friends: Toward a Philosophy of Female Affection*. London: The Women's Press.

RAYMOND, J. (1989) 'In the Matter of Baby M: Judged and Rejudged' in P. Hynes (ed) *Reconstructing Bablyon: Women and Technology*. London: Earthscan, pp.103-113.

RAYMOND, J. G. (1993) *Women as Wombs: Reproductive Technologies and the Battle over Women's Freedom*. San Francisco: HarperSanFrancisco.

REISSMAN, C. (2003) 'Analysis of Personal Narratives' in J. Holstein and J. Gubrium (eds) *Inside Interviewing: New Lenses, New Concerns*. London: Sage, pp.331-346.

RETHMANN, P. (2006) 'On Militancy, Sort Of'. *Cultural Critique*(62), pp.67-91.

RICHARDT, N. (2003) 'A Comparative Analysis of the Embryological Research Debate in Great Britain and Germany'. *Social Politics: International Studies in Gender, State & Society* **10**(1), pp.86-128.

RIEGLER, J. (1989) 'IVF Doctor Sues: Update from Austria'. *(Issues in) Reproductive and Genetic Engineering: Journal of International Feminist Analysis* **2**(1), p.251.

RIEGLER, J. and WEIKERT, A. (1988) 'Product Egg: Egg Selling in an Austrian IVF Clinic'. *(Issues in) Reproductive and Genetic Engineering: Journal of International Feminist Analysis* **1**(3), pp.221-224.

RIESSMAN, C. K. (1987) 'When Gender Is Not Enough: Women Interviewing Women'. *Gender & Society* **1**(2), pp.172-207.

ROBERTSON, J., A. (2004) 'Reproductive Technology in Germany and the United States: An Essay in Comparative Law and Bioethics'. *Columbia Journal of Transnational Law* **43**(1), pp.189-227.

ROBINSON, V. and RICHARDSON, D. (1996) 'Repackaging Women and Feminism' in D. Bell and R. Klein (eds) *Radically Speaking: Feminism Reclaimed*. Melbourne: Spinifex, pp.179-187.

ROE V. WADE (1973) '410 U.S. 113'.

ROGERS, A. and PILGRIM, D. (1991) "Pulling Down Churches': Accounting for the British Mental Health Users' Movement'. *Sociology of Health & Illness* **13**(2), pp.129-148.

ROOTES, C. (2004) 'Environmental Movements' in D. Snow, S. Soule, et al. (eds) *Blackwell Companion to Social Movements*. Oxford: Blackwell, pp.608-640.

ROSE, H. (1975/1987) 'Hand, Brain and Heart: A Feminist Epistemology for the Natural Sciencs' in S. Harding and J. O'Barr (eds) *Sex and Scientific Enquiry*. Chicago: University of Chicago Press, pp.265-282.

ROSE, H. and HANMER, J. (1976) 'Women's Liberation, Reproduction, and the Technological Fix' in D. L. Barker and S. Allen (eds) *Sexual Divisions and Society: Process and Change*. London: Tavistock, pp.199-223.

ROSE, H. and ROSE, S. (1972) 'The Radicalisation of Science'. *The Socialist Register* **9**, pp.105-132.

ROSIER, P. (1989) 'The Speculum Bites Back: Feminists Spark an Inquiry into the Treatment of Carcinoma in Situ at Auckland's National Women's Hospital'. *(Issues in) Reproductive and Genetic Engineering: Journal of International Feminist Analysis* **2**(2), pp.121-132.

ROTE ZORA (1984) 'Resistance Is Possible: Interview with Two Members of Rote Zora'. *EMMA*, June 1984. Available from: http://www.freilassung.de/otherl/arm/rzora84.htm [Accessed 21 Oct 2011].

ROTE ZORA (1993) 'Mili's Tanz Auf Dem Eis: Von Pirouetten, Schleifen, Einbrüchen, Doppelten Saltos Und Dem Versuch, Boden Unter Die Füsse Zu Kriegen [Mili's Dance on the Ice: Of Spins, Loops, Dips, Double Somersaults

and the Attempt to Get Some Ground under Your Feet]' at *Berliner Bündnis für Freilassung / Berlin Alliance for Liberation*. [online]. Available from: http://www.freilassung.de/div/texte/rz/milis/milis1.htm [Accessed 3 Nov 2011].

ROTHMAYR, C. (2006) 'Explaining Restrictive ART Policies in Switzerland and Germany: Similar Processes - Similar Results?'. *German Policy Studies* **3**(4), p.595-648.

ROWBOTHAM, S. and MCCRINDLE, J. (1986) 'More Than Just a Memory: Some Political Implications of Women's Involvement in the Miners' Strike, 1984-85'. *Feminist Review*(23), pp.109-124.

ROWLAND, R. (1983) 'Attitudes and Opinions of Donors on an Artificial Insemination by Donor (AID) Programme'. *Clinical Reproduction and Fertility* **2**(4), pp.249-59.

ROWLAND, R. (1984) 'Reproductive Technology [Recording]', Melbourne: Educational Media Services, Deakin University.

ROWLAND, R. (1985a) 'A Child at Any Price?: An Overview of Issues in the Use of the New Reproductive Technologies, and the Threat to Women'. *Women's Studies International Forum* **8**(6), pp.539-546.

ROWLAND, R. (1985b) 'Motherhood, Patriarchal Power, Alienation and the Issue of 'Choice' in Sex Preselection' in G. Corea, R. Klein, et al. (eds) *Man-Made Women: How Reproductive Technologies Affect Women*. London: Hutchinson, pp.74-87.

ROWLAND, R. (1985c) 'The Social and Psychological Consequences of Secrecy in Artificial Insemination by Donor (AID) Programmes'. *Social Science & Medicine* **21**(4), pp.391-396.

ROWLAND, R. (1986) 'Choice or Control? Women and Our Relationship to New Reproductive Technologies'. Paper given at *Liberation or Loss? Women Act on the New Reproductive Technologies, 9-11 May, Canberra.*

ROWLAND, R. (1992) *Living Laboratories : Women and Reproductive Technologies*. Bloomington: Indiana University Press.

ROWLAND, R. and KLEIN, R. (1990) 'Radical Feminism: Critique and Construct' in S. Gunew (ed) *Feminist Knowledge: Critique and Construct*. London: Routledge, pp.271-303.

ROWLAND, R. and KLEIN, R. (1996) 'Radical Feminism: History, Politics, Action' in D. Bell and R. Klein (eds) *Radically Speaking: Feminism Reclaimed*. Melbourne: Spinifex, pp.9-36.

ROYLE, E. (1974) *Victorian Infidels: The Origins of the British Secularist Movement 1791-1866*. Manchester: Manchester University Press.

RUTNAM, V. R. (1999) *Decision-Making on Medical Research Policy in Australia: Lessons from the Development of in Vitro Fertilisation*. PhD thesis submitted to University of Sydney.

RYAN, C. and GAMSON, W. A. (2006) 'The Art of Reframing Political Debates'. *Contexts* **5**(1), pp.13-18.

SAFIR, M. (2005) 'How It All Began: The Founding of Women's Worlds Congress and International Network' at *Worldwide Organisation of Women's Studies*. [online]. Available from: http://www.ww05.org/wows/download/about_IICW_Marilyn_Safir.pdf [Accessed 5 Sep 2011].

SALAHUDDIN, T. (2003) 'IVF in Bangladesh: Ray of Hope for Infertile Couple'. *The Daily Star, Web Edition Vol 4 (144)*, 19 October.

SAMA (2006) *ART and Women: Assistance in Reproduction or Subjugation?* New Delhi: Sama Resource Group for Women and Health [online]. Available from: http://www.samawomenshealth.org/pubs/book.pdf [Accessed 16 June 2012].

SAMA (2010). 'Unravelling the Fertility Industry: Challenges and Strategies for Movement Building: A Report'. *International Consultation on Commercial, Economic and Ethical Aspects of Assisted Reproductive Technologies. Proceedings of the Conference, 22-24 January, New Delhi*.

SAMA (2012) 'ARTs and Women - Assistance in Reproduction or Subjugation?' at *Sama Resource Group for Women and Health*. [online]. Available from: http://www.samawomenshealth.org/ar_art.html

SANDELOWSKI, M. (1990) 'Fault Lines: Infertility and Imperiled Sisterhood'. *Feminist Studies* **16**(1), pp.33-51.

SANDOVAL, C. (2000) *Methodology of the Oppressed*. Minnesota: University of Minnesota Press.

SAROJINI, N. B., CHAKRABORTY, S., VENKATACHALAM, D., BHATTACHARYA, S., KAPILASHRAMI, A. and DE, R. (2006) *Women's Right to Health*. Report prepared for the National Human Rights Commission (India). New Delhi: Commission.

SATZINGER, H. (2005) 'The Chromosomal Theory of Heredity and the Problem of Gender Equality in the Work of Theodor and Marcella Boveri'. Paper given at *A Cultural History of Heredity III: 19th and Early 20th Centuries, 2005, Max Planck Instititute for the History of Science, Berlin.* [online]. Available from: http://www.mpiwg-berlin.mpg.de/Preprints/P294.pdf [Accessed 5 Dec 2010].

SAUNDERS, J. (2000) 'The Practice of Clinical Medicine as an Art and as a Science'. *Medical Humanities* **26**(1), pp.18-22.

SCAMBLER, G. (2007) 'Social Structure and the Production, Reproduction and Durability of Health Inequalities'. *Social Theory & Health* **5**, pp.297-315.

SCHAUBLE, J. (1984a) 'Brighter Babies Come in Glass'. *Sydney Morning Herald*, 17 May 1984, p.1.

SCHAUBLE, J. (1984b) 'Dilemma over Orphaned Embryos'. *Sydney Morning Herald*, 18 June, p.3.

SCHEPER-HUGHES, N. (2004) 'Parts Unknown'. *Ethnography* **5**(1), pp.29-73.

SCHILLER, P. L. and LEVIN, J. S. (1983) 'Is Self-Care a Social Movement?'. *Social Science & Medicine* **17**(18), pp.1343-1352.

SCUTT, J. (ed) (1990) *The Baby Machine: Reproductive Technology and the Commercialisation of Motherhood*. London: Merlin Press.

SEGAL, L. (1983) 'The Heat in the Kitchen' in S. Hall and M. Jacques (eds) *The Politics of Thatcherism*. London: Lawrence and Wishart, pp.207-215.

SELINGER, E., DREYFUS, H. and COLLINS, H. (2007) 'Interactional Expertise and Embodiment'. *Studies In History and Philosophy of Science Part A* **38**(4), pp.722-740.

SEXTON, S. (2005) 'Transforming ‘Waste’ into ‘Resource’: From Women’s Eggs to Economics for Women'. Paper given at *Femme Globale Conference,* Heinrich Boll Foundation, Berlin.

SHAKESPEARE, T. (1993) 'Disabled People's Self-Organisation: A New Social Movement?'. *Disability & Society* **8**(3), pp.249-264.

SHAPIN, S. (1995) 'Here and Everywhere: Sociology of Scientific Knowledge'. *Annual Review of Sociology* **21**(1), pp.289-321.

SHERIDAN, S. (1990) 'Feminist Knowledge, Women's Liberation and Women's Studies' in S. Gunew (ed) *Feminist Knowledge: Critique and Construct*. London: Routledge, pp.36-55.

SHERIDAN, S. (1991) 'From Margin to Mainstream: Situating Women's Studies' in S. Gunew (ed) *A Reader in Feminist Knowledge*. London: Routledge, pp.61-72.

SINGH, J. (2008) 'Polluted Waters: The UK Nanojury as Upstream Public Engagement'. *Participatory Learning and Action* **58**, pp.27-32.

SKILLINGTON, T. (1997) 'Politics and the Struggle to Define: A Discourse Analysis of the Framing Strategies of Competing Actors in a 'New' Participatory Forum'. *British Journal of Sociology* **48**(3), pp.493-513.

SMELSER, N. J. (1962) *Theory of Collective Behavior*. London: Routledge & Keegan Paul.

SMERDON, U. (2008) 'Crossing Bodies, Crossing Borders: International Surrogacy between the United States and India'. *Cumberland Law Review* **39**(1), pp.15-84.

SMITH-CAVROS, E. (2010) 'Fertility and Inequality Across Borders: Assisted Reproductive Technology and Globalization'. *Sociology Compass* **4**(7), pp.466-475.

SNOW, D. and BENFORD, R. D. (1992) 'Master Frames and Cycles of Protest' in A. D. Morris and C. M. Mueller (eds) *Frontiers in Social Movement Theory*. New Haven, CT: Yale University Press, pp.133-155.

SNOW, D., ROCHFORD, E. B., WORDEN, S. and BENFORD, R. (1986) 'Frame Alignment Processes, Micromobilization, and Movement Participation'. *American Sociological Review* **51**(4), pp.464-481.

SNOW, D. and TROM, D. (2002) 'The Case Study and the Study of Social Movements' in B. Klandermans and S. Staggenborg (eds) *Methods of Social Movement Research*. Minneapolis, MN: University of Minnesota Press, pp.146-172.

SOLOMON, A. (1988) 'Integrating Infertility Crisis Counselling into Feminist Practice'. *(Issues in) Reproductive and Genetic Engineering: Journal of International Feminist Analysis* **1**(1), pp.41-49.

SOULE, S. (2004) 'Diffusion Processes Within and Across Movements' in D. Snow, S. Soule, et al. (eds) *Blackwell Companion to Social Movements*. Oxford: Blackwell, pp.294-310.

SOULES, M. (1985) 'The in Vitro Pregnancy Rate: Let's Be Honest with One Another'. *Fertility and Sterility* **43**(511-513).

SPAIN. CONGRESS OF DEPUTIES (1986) *Report*. Report prepared for General Secretariat, Special Commission for the Study of Human In Vitro Fertilization and Artificial Insemination. Madrid: The Commission.

SPALLONE, P. (1987) 'Reproductive Technology and the State: The Warnock Report and Its Clones' in P. Spallone and D. L. Steinberg (eds) *Made to Order: The Myth of Reproductive and Genetic Progress*. Oxford: Pergamon Press, pp.166-183.

SPALLONE, P. (1989) *Beyond Conception: The New Politics of Reproduction*. Granby, MA: Bergin & Garvey Publishers.

SPALLONE, P. (1992) *Generation Games: Genetic Engineering and the Future for Our Lives*. Philadelphia: Temple University Press.

SPALLONE, P. and STEINBERG, D. L. (eds) (1987) *Made to Order: The Myth of Reproductive and Genetic Progress*. Oxford: Pergamon Press.

SPAR, D. (2006) *The Baby Business: How Money, Science and Politics Drive the Commerce of Conception*. Boston: Harvard Business School Press.

SRINIVASAN, S. and GUPTA, J. A. (2010). 'Emerging Perspectives and Challenges: Towards a Global Movement'. In Sama (ed) *International Consultation on Commercial, Economic and Ethical Aspects of Assisted Reproductive Technologies. Proceedings of the Conference, 22-24 January, New Delhi*. pp.41-43.

STAGGENBORG, S. (2001) 'Beyond Culture Versus Politics: A Case Study of a Local Women's Movement'. *Gender and Society* **15**(4), pp.507-530.

STANLEY, L. and WISE, S. (1990) 'Method, Methodology and Epistemology in Feminist Research Processes' in L. Stanley (ed) *Feminist Praxis: Research, Theory, and Epistemology in Feminist Sociology*. London: Routledge, pp.20-60.

STANWORTH, M. D. (1987) *Reproductive Technologies: Gender, Motherhood and Medicine*. Cambridge: Polity.

STEINBACHER, R. (1985) 'Sex Choice: Survival and Sisterhood' in G. Corea, R. Klein, et al. (eds) *Man-Made Women: How Reproductive Technologies Affect Women*. London: Hutchinson, pp.52-64.

STEINBERG, D. L. (1997) *Bodies in Glass: Genetics, Eugenics, Embryo Ethics*: Manchester University Press.

STEINBERG, M. (1998) 'Tilting the Frame: Considerations on Collective Action Framing from a Discursive Turn'. *Theory and Society* **27**, pp.845-872.

STEPHENSON, C. (2009) 'Reproductive Outsourcing to India: WTO Obligations in the Absence of US National Legislation'. *Journal of World Trade* **43**(1), pp.189-208.

STEPTOE, P. C. (1968) 'Laparoscopy and Ovulation'. *The Lancet* **292**(7574), pp.913-913.

STEPTOE, P. C. and EDWARDS, R. G. (1970) 'Laparoscopic Recovery of Preovulatory Human Oocytes after Priming of Ovaries with Gonadotrophins'. *The Lancet* **295**(7649), pp.683-689.

STEPTOE, P. C., EDWARDS, R. G. and PURDY, J. M. (1980) 'Clinical Aspects of Pregnancies Established with Cleaving Embryos Grown in Vitro'. *BJOG: An International Journal of Obstetrics & Gynaecology* **87**(9), pp.757-768.

STILGOE, J. (2009) *Citizen Scientists*. Report prepared for Demos. London.

STOECKER, R. (1995) 'Community, Movement, Organization: The Problem of Identity Convergence in Collective Action'. *The Sociological Quarterly* **36**(1), pp.111-130.

STRAUSS, A. and CORBIN, J. (1998) *Basics of Qualitative Research: Techniques and Processes for Developing Grounded Theory*. Thousand Oaks, CA: Sage.

STURGIS, P. and ALLUM, N. (2004) 'Science in Society: Re-Evaluating the Deficit Model of Public Attitudes'. *Public Understanding of Science* **13**, pp.55-74.

SYDNEY MORNING HERALD (1984) 'Orphan Embryos Face Uncertain Legal Future'. *Sydney Morning Herald*, 19 June, p.3.

SYMPOSIUM (1993) 'Declaration of People's Perspectives on "Population" Symposium'. *People's Perspectives on "Population"* **4&5**, pp.28-31.

SZOKE, H. (2003) 'Australia - a Federated Structure of Statutory Regulation of ART' in J. Gunning and H. Szoke (eds) *The Regulation of Assisted Reproductive Technology*. Hampshire: Ashgate, pp.75-94.

TARROW, S. (1994) *Power in Movement: Social Movements and Contentious Politics, 2nd Ed.* Cambridge: Cambridge University Press.

TAYLOR, V. (2000) 'Emotions and Identity in Women's Self-Help Movements' in S. Stryker, T. J. Owens, et al. (eds) *Self, Identity and Social Movements*. Minneapolis, MN: University of Minnesota Press, pp.271-299.

TAYLOR, V. (2007) 'Social Movement Continuity: The Women's Movement in Abeyance' in J. Goodwin and J. M. Jasper (eds) *Social Movements: Critical Concepts in Sociology, Vol II*. London: Routledge, pp.337-359.

TEMPLETON, A., VAN LOOK, P., LUMSDEN, M. A., ANGELL, R., AITKEN, J., DUNCAN, A. W. and BAIRD, D. T. (1984) 'The Recovery of Preovulatory Oocytes Using a Fixed Schedule of Ovulation Induction and Follicle Aspiration'. *BJOG: An International Journal of Obstetrics & Gynaecology* **91**(2), pp.148-154.

TESH, S. (1999) 'Citizen Experts in Environmental Risk'. *Policy Sciences* **32**(1), pp.39-58.

THE ECONOMIST (1979) 'Test-Tube Babies: Doing What Comes Naturally -- Almost'. *The Economist*, 3 February, p.88.

THE TIMES (1971) 'Scientists Develop Baby Sex Tests'. *The Times (London)*, 5 March, p.1.

THOMPSON, C. (2001) 'Fertile Ground: Feminists Theorise Infertility' in M. C. Inhorn and F. van Balen (eds) *Infertility around the Globe : New Thinking on Childlessness, Gender, and Reproductive Technologies*. Berkeley: University of California Press, pp.52-78.

THOMPSON, C. (2005) *Making Parents*. Cambridge: MIT Press.

THORPE, C. and GREGORY, J. (2010) 'Producing the Post-Fordist Public: The Political Economy of Public Engagement with Science'. *Science as Culture* **19**(3), pp.273-301.

TORRY, H. (2007) 'Germany's Once-Violent Feminist Adopts Quiet Life'. *Women's eNews*, 13 August, 2007. Available from: http://www.womensenews.org/story/the-world/070813/germanys-once-violent-feminist-adopts-quiet-life [Accessed 4 Nov 2011].

TOURAINE, A. (1981) *The Voice and the Eye*. Cambridge: Cambridge University Press.

TOURAINE, A. (2002) 'The Importance of Social Movements'. *Social Movement Studies* **1**(1), pp.89 - 95.

TRAULSEN, J. M. and ALMARSDOTTIR, A. B. (2005) 'Pharmaceutical Policy and the Lay Public'. *Pharmacy World & Science* **27**(4), pp.273-277.

TROUNSON, A., LEETON, J., WOOD, C., WEBB, J. and WOOD, J. (1981) 'Pregnancies in Humans by Fertilization in Vitro and Embryo Transfer in the Controlled Ovulatory Cycle'. *Science* **212**(4495), pp.681-682.

TSUGE, A. and HONG, H. (2011) 'Reconsidering Ethical Issues About "Voluntary Egg Donors" in Hwang's Case in Global Context'. *New Genetics and Society* **30**(3), pp.241-252.

TURNER, J. (1990) 'Democratizing Science: A Humble Proposal'. *Science Technology and Human Values* **15**(3), pp.336-359.

TURNER, R. H. and KILLIAN, L. M. (1957/1992) 'Towards a Theory of Social Movements' in S. M. Buechler and F. K. Cylke, Jr (eds) *Social Movements: Perspectives and Issues*. Mountain View, CA: Mayfield Publishing Company, pp.119-135.

TURSHEN, M. (2007) *Women's Health Movements: A Global Force for Change*. New York: Palgrave Macmillan.

UBINIG (1993) 'Comments on Population Discussions at UNCED '92'. *People's Perspectives on "Population"* **1**, pp.30-32.

UBINIG (2010) 'About Nayakrishi Andolon' at *Policy Research for Development Alternative*. [online]. Available from: http://www.ubinig.org/index.php/campaigndetails/showAerticle/6/13 [Accessed 28 August 2012].

UNITED STATES. HEW (1979) *Report and Conclusions: HEW Support of Research Involving Human in Vitro Fertilization and Embryo Transfer, May 4*. Report prepared for Ethics Advisory Board. Department of Health, Education, and Welfare (HEW). Bethesda, MD: The Board.

VARELA, M. J. and STOLCKE, V. (1989) 'The New Spanish Law: A Model for Europe?'. *(Issues in) Reproductive and Genetic Engineering: Journal of International Feminist Analysis* **2**(3), pp.233-238.

VARMA, R. and VARMA, D. (2005) 'The Bhopal Disaster of 1984'. *Bulletin of Science, Technology & Society* **25**(1), pp.37-45.

VEITCH, A. (1982) 'Test Tube Baby Pioneers Fear Restraints'. *The Guardian*, p.4.

VEITCH, A. (1984) 'Orphan Embryos Adoption Plea by Doctor'. *The Guardian*, 5 September, p.6.

VICTORIA (1982) *Interim Report*. Report prepared for Committee to Consider the Social, Ethical, Legal Issues Arising from In Vitro Fertilization. Melbourne: Victorian Government Printing Office.

VICTORIA (1983) *Report on Donor Gametes in IVF*. Report prepared for Committee to Consider the Social, Ethical, Legal Issues Arising from In Vitro Fertilization. Melbourne: Victorian Government Printing Office.

VICTORIA (1984) *Report on the Disposition of Embryos Producted by in Vitro Fertilization*. Report prepared for Committee to Consider the Social, Ethical and Legal Issues Arising from In Vitro Fertilization. Melbourne: Victorian Government Printing Office.

WAGNER, S. R. (2002) 'Oral History as a Biographical Tool' in S. Armitage, P. Hart, et al. (eds) *Women's Oral History*. Lincoln, NE: University of Nebraska Press, pp.115-124.

WAJCMAN, J. (1991) *Feminism Confronts Technology*. Cambridge: Polity Press.

WAJCMAN, J. (1995) 'Feminist Theories of Technology' in S. Jasanoff, G. Markle, et al. (eds) *Handbook of Science and Technology Studies*. Thousand Oaks, CA: Sage, pp.189-204.

WAKEFORD, T. (2004) 'Democratising Technology: Reclaiming Science for Sustainable Development'. Paper given at *Public Good or Private Gain, on behalf of Practical Action, Regent's College, London.* [online]. Available from: http://practicalaction.org/docs/advocacy/democratising_technology_itdg.pdf. [Accessed 22 Jan 09].

WAKS, L. J. (1993) 'STS as an Academic Field and a Social Movement'. *Technology in Society* **15**(4), pp.399-408.

WALDBY, C. and MITCHELL, R. (2006) *Tissue Economies: Blood, Organs, and Cell Lines in Late Capitalism*. Durham, NC: Duke University Press.

WALDSCHMIDT, A. (1992) 'Against Selection of Human Life: People with Disabilities Oppose Genetic Counselling'. *(Issues in) Reproductive and Genetic Engineering: Journal of International Feminist Analysis* **5**(2).

WALTERS, L. (1987) 'Ethics and New Reproductive Technologies: An International Review of Committee Statements'. *The Hastings Center Report* **17**(3), pp.3-9.

WALZ, K. (1980) 'Woman to Bear Son of Single Man'. *The Associated Press*, 15 October.

WAN, V. (1989) 'The Australian Venture Capital Market'. *Journal of Small Business Management* **27**(3), pp.75-78.

WARNOCK, M. (1985) *A Question of Life: The Warnock Report on Human Fertilisation and Embryology*. Oxford: Blackwell.

WARREN, M. A. (1988) 'IVF and Women's Interests: An Analysis of Feminist Concerns'. *Bioethics* **2**(1), pp.37-57.

WATSON, J. (1971) 'Moving toward the Clonal Man'. *The Atlantic Monthly*, 227 (May). Available from: http://www.theatlantic.com/magazine/archive/1971/05/moving-toward-the-clonal-man/5435/ [Accessed 22 Feb 2012].

WAUGH, J. (1986) 'Breeding Money'. *Business Review Weekly (Australia)*, 9 May, pp.52-62.

WEINEL, M. (2007) 'Primary Source Knowledge and Technical Decision-Making: Mbeki and the AZT Debate'. *Studies in History and Philosophy of Science* **38**, pp.748-760.

WEST, R. (1984) 'IVF Researcher Quits over 'Reprehensible Techniques''. *The Age (Melbourne)*, 18 May 1984, pp.1-2.

WEST, R. (1986) 'A Growing Sense That We Are No Longer Safe'. *The Age (Melbourne)*, 14 May.

WESTBY, D. (2002) 'Strategic Imperative, Ideology, and Frame'. *Mobilization: An International Quarterly* **7**(3), pp.287 - 304.

WGNRR (2012) 'Funders' at *Women's Global Network for Reproductive Rights*. [online]. Available from: http://www.wgnrr.org/funders [Accessed 26 May 2012].

WHELEHAN, I. (1995) *Modern Feminist Thought: From the Second Wave to "Post-Feminism"*. Edinburgh: Edinburgh University Press.

WHITLOCK, F. (1984a) 'Test-Tube 'Miracle Workers' Attacked'. *The Australian*, 25 May.

WHITLOCK, F. (1984b) 'Test Tube Babies Are Smarter and Stronger'. *The Australian*, 17 May.

WHITTIER, N. (1990) *Feminist Generations: The Persistence of the Radical Women's Movement*. Philadelphia: Temple University Press.

WIEVIORKA, M. (1992) 'Case Studies: History or Sociology?' in C. Ragin and H. Becker (eds) *What Is a Case? Exploring the Foundations of Social Inquiry*. New York: Cambridge University Press, pp.159-172.

WILLIAMSON, C. (2008) 'The Patient Movement as an Emancipation Movement'. *Health Expectations* **11**(2), pp.102-112.

WILSON, P. M., KENDALL, S. and BROOKS, F. (2007) 'The Expert Patients Programme: A Paradox of Patient Empowerment and Medical Dominance'. *Health & Social Care in the Community* **15**(5), pp.426-438.

WINKLER, U. (1988) 'New U.S. Know-How in Frankfurt: A 'Surrogate Mother' Agency'. *(Issues in) Reproductive and Genetic Engineering: Journal of International Feminist Analysis* **1**(2), pp.205-207.

WINSTON, R. M. L. (1986) *Infertility: A Sympathetic Approach*. London: Optima.

WINSTON, R. M. L. and HARDY, K. (2002) 'Are We Ignoring Potential Dangers of in Vitro Fertilization and Related Treatments?'. *Nature Cell Biology* **4**, pp.S14-S18.

WOLL, L. (1992) 'The Effect of Feminist Opposition to Reproductive Technology: A Case Study in Victoria, Australia'. *(Issues in) Reproductive and Genetic Engineering: Journal of International Feminist Analysis* **5**(1), p.20.

WOOD, C., LEETON, J., TALBOT, J. M. and TROUNSON, A. O. (1981) 'Technique for Collecting Mature Human Oocytes for in Vitro Fertilization'.

BJOG: An International Journal of Obstetrics & Gynaecology **88**(7), pp.756-760.

WOOD, C. and RILEY, R. (1983/1992) *I.V.F. In Vitro Fertilization (Revised 1992 Ed.)*. Melbourne: Hill of Content.

WOOD, C. and WESTMORE, A. (1984) *Test-Tube Conception*. Englewood Cliffs, NJ: Prentice-Hall.

WOOLGAR, S. (1988) *Science: The Very Idea*. London: Tavistock Publications Ltd.

WYNNE, B. (1992) 'Misunderstood Misunderstanding: Social Identities and Public Uptake of Science'. *Public Understanding of Science* **1**(3), pp.281-304.

WYNNE, B. (1993) 'Public Uptake of Science: A Case for Institutional Reflexivity'. *Public Understanding of Science* **2**(4), pp.321-337.

YEARLEY, S. (1988) *Science, Technology and Social Change*. London: Unwin Hyman.

YEARLEY, S. (1992) 'Green Ambivalence About Science: Legal-Rational Authority and the Scientific Legitimation of a Social Movement'. *The British Journal of Sociology* **43**(4), pp.511-532.

ZALD, M. N. (1996) 'Culture, Ideology and Strategic Framing' in D. McAdam, J. D. McCarthy, et al. (eds) *Comparative Perspectives on Social Movements: Political Opportunities, Mobilizing Structures, and Cultural Framings*. Cambridge: Cambridge University Press, pp.261-274.

ZHAO, Y., BREZINA, P., HSU, C.-C., GARCIA, J., BRINSDEN, P. R. and WALLACH, E. (2011) 'In Vitro Fertilization: Four Decades of Reflections and Promises'. *Biochimica et Biophysica Acta (BBA) - General Subjects* **1810**(9), pp.843-852.

ZOLLER, H. M. (2005) 'Health Activism: Communication Theory and Action for Social Change'. *Communication Theory* **15**(4), pp.341-364.