

Feminist Responses to the Disembodiment of New Reproductive Technology and the Future of Feminism

Women's shared and diverse reproductive experiences are key to their responses to new reproductive technologies¹ (NRTs), which I explore in this paper. In an article about "Feminism and Motherhood: O'Brien vs. Beauvoir," Reyes Lázaro pins down the crux of the issue regarding women and NRTs: "Feminist theory faces the task of dismantling the works of patriarchy within reproductive consciousness while, at the same time, pointing out the feminist potential within it – for example, the potential for a non-patriarchal kind of thought." Importantly, she also warns us that: "[f]emale reproductive consciousness ... is not feminist per se" (1986, 101), but I would argue, it is built on an experience common to women, to the exclusion of men. It is for this reason that women have been subjugated on the basis of their sex/gender, and also why it has been a rallying point for feminist politics and the women's movement. It furthermore explains, following Mary O'Brien's framework, why new reproductive technologies represent a "moment" of world historic significance.

Part of the appeal of O'Brien's theory of male and female reproductive consciousnesses based on the potential ability to bear children or not, is its antidote to the current fragmentation of women's identities, *qua* women, in this time and place. Unlike O'Brien, however, we must incorporate the understanding that part of this fragmentation is women's diverse experiences of their reproductive capacity. O'Brien's perspective over-privileged the shared dimensions of women's corporeality and consciousness, and the tendency of much current feminist theorizing of the body is to endlessly fragment women's experiences, but we must see both shared and diverse experiences to reassert a viable feminist movement. At this time in history, therefore, "reproductive consciousness" is significantly more complicated than O'Brien's singular phrasing would suggest. "Feminine reproductive consciousness" does not simply involve the corporeal capacity to be pregnant and give birth (though it does include it), nor just the considerably fraught "choice" to *not* birth that contraceptive technology offered. Greater technological and social intervention provides the potential platform for the "choice" to specify what kind of children to have and how. Our capacity to impose social and cultural norms on biological continuity and process has never been greater. For example, the application of NRTs to allow lesbians, gay men and women with disabilities among others previously unable to reproduce biologically, represents a significant socio-cultural and political shift as well as a bio-medical one. Although the process of human reproduction is not altogether disembodied, in the sense of taking place fully outside the female body as some feminist theory (Firestone 1970) and literature (e.g. Piercy 1976) envisioned, it is more so than it has ever been before. Although women's wombs are still necessary to gestate a fetus capable of surviving, both conception and early birth are processes that are accommodated and managed technologically and extra-corporeally. In

¹ "New reproductive technologies" are those techniques, instruments and practices which "assist" in the development of a human embryo, rather than prevent its development (contraceptive technology). They include in vitro fertilization, genetic testing such as pre-natal diagnosis, and embryo transfer.

a time when the material base of women's particular role in reproduction is so eroded, it is unsurprising that the feminist² response has been so great and so diverse.

In this paper I explore the different forms of feminist discourse that have emerged in response to NRTs, which represent the disembodiment of reproductive processes, as well as analyzing the notion of liberation which underlies each. I identify three major categories of feminist response to NRT: resistance feminism, embracing feminism and equivocal feminism. I evaluate each on the basis of its ability to transcend patriarchal dualism in various guises, i.e. I explore how they draw on or subvert the man/technology over woman/nature value dualism. I am primarily concerned with radical feminist's varying discursive responses to the western paradigm of birth appropriation³ understood in the postmodern context of NRTs as direct patriarchal and techno-scientific control over the creation of human life outside of the female body. Feminists who embrace the technology, and are rooted in the second wave radical feminism of Firestone, respond quite differently from the feminist resisters of NRTs who are linked to the third wave radical/eco feminist movement. Feminists who are equivocal regarding NRTs comprise a hybrid of the other two forms.

Ultimately all feminists approach NRTs with the belief that women must be able to "control"⁴ their own reproduction, but they differ in their definitions of such control. Their ideas are inevitably framed by the discourse of "choice" which has dominated the feminist abortion debates. The resistance feminists oppose control and choice, arguing for the "right to control our reproductive bodies rather than freedom of individual choice" (Rebeck in Basen et al. 1993, 89). They comment on the power of the "choice" discourse to discipline feminist opinion by positioning anyone who opposes NRTs as "against a woman's right to choose" (Basen et al 1993, 169 also see Vandelac). Resisters are particularly vociferous in arguing that the notion of "choice" itself is socially constructed and that "the new reproductive technologies actually restrict the range of choices available to women with disabilities specifically and non-disabled women generally" (Ibid, 154). Alternately, the embracers conflate control and choice, meaning that women's control over their reproductive bodies requires choice, including the choice *to bear children* or not. This issue is of greater significance to women with disabilities, lesbians and infertile women who, without the NRTs, may not be able to bear children and/or have less control over the variables affecting their decisions. For example, although the most visible position on NRTs by persons with disabilities is characterized by concerns about their eugenic potential, many women at a higher risk of conceiving children with disabilities welcome pre-natal diagnostic technologies that allow them to choose whether or not to birth such a child, or to better prepare for its arrival. Ultimately, control, for the feminists who embrace the NRTs, requires women's ability to use the technology to better meet their reproductive needs.

² I understand feminism to be a movement fundamentally concerned with the sex/gender dimensions of women's difference from men, specifically the patriarchal signification of women's reproductive differences from men.

³ Birth appropriation is a term I developed in previous work which refers to the patriarchal construction of institutions and symbol systems (e.g. Eve made of Adam's rib) to appropriate the significance and power of female reproductive experience, sometimes in direct mimicry, e.g. couvades, and often in much less explicit ways, which include socio-legal and philosophical contexts.

⁴ For a history of competing feminist uses of "control" see Vanderwater 1992 and Petchesky 1980.

Finally, for equivocal feminists, who approach the technology from a combination of the prior two positions, control over reproduction involves choice within reason. For them, the only way for women to have control over their reproduction is to have choices to do what is needed on an individual basis, while prohibiting what is clearly detrimental for the social collective. The diversity of women's experiences means a diversity of women's reproductive needs including various uses of NRTs. For the equivocal feminists, preventing choice by banning all NRTs is taking control out of the hands of women who are differently socially located, hence have very different reproductive needs that may require the use of NRTs.

Resistance Feminism

Feminists who argue against new reproductive technologies (NRTs), those I call resistance feminists, believe that there is something powerful about women's "natural" (i.e. non-technologically mediated) reproductive bodies that is lost with NRT.⁵ In other words, they recognize in women's sex/reproduction not only a source of oppression in patriarchal cultures, but also of liberation and power *if women control it*. For resistance feminists this requires a rejection of NRTs perceived as an extension of the patriarchal desire to control nature and women. This impulse they believe to be rooted in male reproductive alienation from nature, i.e. the male's limited role in reproduction, which ends in ejaculation, rather than birth. Techno-science, in this framework, is a birth appropriative technology designed and used by men to overcome their reproductive alienation from nature. Ultimately, men can claim the powers of reproduction for themselves by manipulating female reproductive processes and recreating them outside the human female body. This womb-envy argument is the foundation of the political theory of feminists such as O'Brien and Pateman and is a defining feature of my thesis.

In accord with this argument, most resistance feminists believe that even if women were in control of NRTs, they could not "purify the technology out of its political base" (Rowland: 292). Furthermore, through discourse analysis of the NRTs, resistance feminists reveal the socio-political inequalities in which it is rooted, and which are masked by its various benevolent representations. For example, they deconstruct the discourse of NRT as presenting *the* "choice" for the infertile in light of the reality of a culture marked by power differences and control. Ultimately, resistance feminists argue that women's liberation requires their collective control over their own sexuality and reproduction (rather than individual "choice"), and freedom from NRT as a patriarchal technology that further consolidates control over women in the hands of patriarchal authorities, be they medical, scientific, capitalist or state technocrats (or a combination thereof). It must be noted that in arguing that NRT is an (inherently) patriarchal tool used to intervene in women's natural reproductive processes to control them, the resistance feminists invoke the language of patriarchal dualism, i.e. they end up simply inverting the essentialized *woman and nature* versus *man and culture* patriarchal value dualism. In other words, they simply invert the value dualism that privileges man/technology/culture over woman/nature, while leaving the dualism intact.

⁵ Since few reject contraceptive technology on the same basis, this leads to a fundamental contradiction of their discourse, and of feminist discourse more generally. This dilemma will be explored throughout this paper.

Resistance feminists begin from the premise that women's "natural" reproductive processes are a source of female/feminist identity, a bulwark of women's power and solidarity that is uniquely and exclusively theirs. Greer, in *The Whole Woman*⁶ articulates the resistance position by contrast: "Refusing to be defined, discriminated against and disadvantaged because of our female biology should not be confused with a demand to be deprived of it. Women (like Vietnamese villages) cannot be liberated by being destroyed" (1999, 325). According to Greer, women's biology (i.e. embodied female reproductive processes) is a source of power and political mobilization. She equates women and female biology here, which is tantamount to a conflation of cultural and biological categories. This can be dangerous for, as many feminists have noted, conservative and anti-feminist arguments have taken root from the same logical foundation. This has led some to call for political coalitions based on shared values, rather than shared identities.

Similarly, Spallone invokes a familiar slogan, assuming it as foundational for feminist politics. "Our Bodies ourselves is so obvious yet so revolutionary that it is a contemporary feminist statement. This is radical in a male-centred reality, where women's bodies have long been the site of reproductive control, where woman alone is anathema, and where the term 'Man' still defines the generic human"(1989, 32/33). Spallone, exemplary of the resistance position here, is reclaiming the body as site of feminist identity and female power. The image is one of the body as feminist terrain that resistance feminists are unwilling to cede to patriarchal authorities.

The underlying assumption of these expressions of women's resistance and power as rooted in their bodies is that to alter women's bodies, as NRT does, is to destroy or alter women. The intervention of NRT into women's bodies and natural reproductive processes somehow threatens women's power, autonomy and control over their bodies. The implicit association of women with their biology or "nature" is the basis of the main critique of the resistance position, i.e. that they reify patriarchal dualism while arguing against it. It is further highlighted when paired with the belief that technology is a continuation of patriarchal science that destroys and disparages nature, and by association, women.

The ecofeminist position at the core of the resistance argument, draws most explicitly from the woman-nature, and man-culture analogy to explain and motivate regarding NRTs. Shiva in *Bioporacy* warns that the colonization of Columbus' era is still upon us, only now that nature has been plundered, the "new colonies are the interior spaces of the bodies of women, plants, and animals" (1997, 5). Her argument, writing from the vantage point of the late twentieth century, is that since nature has been all but conquered, it is now nature's embodied faces, i.e. women, people of color and animals that are to be further exploited (1997, 45). Similarly, Mies indicts reproductive technology for its "inherent *sexist, racist and ultimately fascist bias,*" since its basic principles "are based on exploitation and subordination alike of nature, women and other peoples (colonies)" (Mies and Shiva 1993, 175/6). In the resistance feminist literature, if women are "natural," men are "technological."

Diamond further reinforces the women-nature connection, but inverts the focus by linking environmental degradation to infertility and reproductive problems. She argues that a polluted earth is reflected in sick women and children and that a continued fixation

⁶Greer's *The Female Eunuch* was also a key feminist text of the 2nd wave.

on human reproduction (in the form of a preoccupation with fertility and infertility) without recognition of the related environmental problems, will prove counterproductive. She warns: “The conception and birth of a healthy child on a thoroughly poisoned earth is likely to be so problematic that the choice of nonintervention will be totally lost” (1994:97). Ultimately, she draws a direct analogy between the nature and women because of women’s prominent role in human reproduction as gestators and birth-givers.

This theme of fertility/infertility and birth defects as an indicator of the condition of the natural world, is a recurring one in feminist science fiction, theory and literature more broadly. For example, Atwood’s dystopic novel, *The Handmaid’s Tale*, is predicated upon a future society of reproductive fundamentalism, which results (at least in part) from the pollution that has caused mass infertility and the one-in-four odds of giving birth to a deformed child. The handmaidens of the title are the class of women who exist as “a womb with two legs” for the purpose of breeding children for the rich infertile wives of commanders. In the republic of Gilead of Atwood’s tale, women are categorized by their reproductive capacities, their social status reflecting the possibility of a live birth.

Women’s bodies in Diamond’s and Atwood’s writing become symbolic and material indicators for the state of nature/the earth. Diamond uses women’s supposed special connection to nature to make a case for a renewed environmentalism, by warning that what happens to nature will surely happen to us (and vice versa) interlinking the fates of women (as thresholds of humanity) and the earth. In Atwood’s futuristic nightmare, one witnesses how a reverence for “natural” maternity could ultimately become distorted into the ultimate legitimization for a reproductive fundamentalism that controls every aspect of women’s existence. As such it reveals the paradoxical character of the woman-nature association.

Exemplary of the resistance argument, Shiva notes that NRT further displaces the power of nature from women to male doctors. “[w]ith the introduction of new reproductive technologies, the relocation of knowledge and skills from the mother to the doctor, from women to men will be accentuated” (1997, 58). Underlying the resister’s position is distrust for the western scientific paradigm which, they argue, is based on the domination of nature, and women by association. Scientific knowledge, it is argued, is inherently androcentric in that it espouses values that are culturally masculine, i.e. objectivity, hierarchy, and a desire to control and dominate nature and women. Spallone writes: “The common denominator of reproductive technology (sic), whether high-tech or low tech, new or old, in the clinical setting or in the laboratory, is a scientific approach to women’s reproduction. This approach imposes an aggressive confrontation relationship to nature, in this case to women’s reproduction ...” (1989, 187).

Similarly, Corea in *The Mother Machine* explicitly states that: “Reproductive technology is a product of the male reality. The values expressed in the technology – objectification, domination – are typical of the male culture. The technology is male-generated and buttresses male power over women” (1985, 4). The root of this line of thought can be traced to Merchant’s *The Death of Nature*, where modern science is depicted as the epitome of the paradigm, Man versus Nature (conceived as female). Merchant provides a comprehensive history of conceptions of nature, explaining how dominant nature metaphors shifted from the more organic in pre-modern times, to that of nature as machine in the context of the scientific revolution. She concludes that the

“death of nature” coincided with a mechanistic metaphor for nature, which was itself the result of the triumph of empirical science and the development of technology to disembowel and dissect “mother nature.”

While the mentioned feminist theorists describe a patriarchal techno-scientific paradigm that is rooted in ancient conceptions of women/nature, as well as Enlightenment science (as Merchant reveals), the “new” reproductive technologies represent new tools for a continuing paradigm. What’s new about NRTs is that they are highly technological, even if they do partake of an old andro-centric scientific paradigm based on a disdain for female/nature – a gendered dominator model of science/doctor over nature/the body. The NRTs are further institutionally entrenched and commercialized hence further from feminist access/regulation (require the state to regulate and protect women. They allow men to create babies, rather than simply allowing women not to have them, which has the potential to destabilize sexist sex/gender roles, but only in a context where the material and social relations of reproduction were radically altered (Petchesky 1980). Also, with NRTs, physical disembodiment is greater which further entrenches and universalizes patriarchal epistemologies.

New Reproductive Technology and Disembodiment

Resistance feminists argue that the displacement of women’s “natural” embodied power by a patriarchal scientific establishment requires a disembodiment of women. It is accomplished by interrupting the woman-nature connection both symbolically and literally; with NRT⁷ this is accomplished by, 1). A radical reconceptualization of modern western conceptions of nature and culture and the relationship between the two (Lie et al); and, 2). The reduction of women to body parts (both technologically and symbolically), mere matter to be manipulated by the “techno-docs.” These practices are simultaneous and mutually supportive and contribute to the representation of man-the-scientist, as father. Mary Shelley in 1818 captured this will-to-power on the part of a patriarchal science in *Frankenstein*, where the scientist reflects on his motivation for creating a living being: “A new species would bless me as its creator and source; ... No father could claim the gratitude of his child so completely as I should deserve theirs” (1999, 43). As Lie demonstrates, a radical reconceptualization of modern western understandings of nature and culture, is both a pre-requisite as well as consequence of the NRTs.

⁷ Resistance feminists analyze NRT as an extension of an (inherently) patriarchal science that encompasses both ways of knowing, as well as technological apparatuses and techniques. In other words, it is understood as a cultural authority involved in truth-making and knowledge transfer, as well as the more conventional perception of technology as tool. Most importantly, science’s two dimensions are considered mutually supportive, i.e. science is engaged in the process of creating cultural contexts for the reception of new technologies like NRT. Spallone, for example, labored to “show how technology redefines the meaning of reproduction in society to the detriment of women, how technology sets a repressive ethic of reproduction, and in turn how repressive social relations provide the conditions for the technologies to happen” (1989: 4).

Patriarchal Discourse – Re-conceiving Nature

In terms of NRT, scientific knowledge enables the eclipse of a powerful mother metaphor, that of *matrigenesis*, by western science as father. Lie roots these changes in shifting understandings of the traditional gendered western dichotomy of (women)-nature and (man)-culture. Like Franklin, she recognizes the central role of science in new understandings about what “natural” reproduction is. In “Science as Father?” she writes: “The new reproductive technologies affect several of our conceptual distinctions, and most basically the one between nature and culture. This includes the understanding of reproduction as natural, biological processes and of the body as a product of nature” (383). These conceptual distinctions are profoundly gendered. Exploring the “varying cultural theories of reproduction” Lie clarifies that “[t]he dominant western cultural understanding [of reproduction] is that of *matrigenesis*, according to which the woman gives life to a child. Also, the mother-child relationship is conceptualized as a product of nature – the maternal instinct – whereas there is no corresponding concept of fatherhood as a natural phenomenon” (384). According to her argument, this woman-nature connection via motherhood is precisely what is severed with the science of NRT and the narratives that accompany it. Men have replicated women’s unique role in reproduction.

An implicit message of the new stories of procreation is that science has gained insight into the totality of the process. . . .scientific insight implies control over reproduction. Symbolically, woman is no longer ‘the creator of children’ in accordance with the cultural theory of *matrigenesis*, but rather one of several participants in a process (393/4).

Greer reinforces this sentiment, writing: “As reproductive technology pursues its headlong career, the mother dwindles from being essential to the survival of her child to becoming an obstacle to efficient quality control, best out of the way” (82). Thus is the mother, ousted and usurped by scientific rationale in a culture built upon faith in scientific expertise.

Disembodying Women [or Envisioning Motherless Reproduction]

For resistance feminists, scientific epistemology is synonymous with the dissection of women by association with nature, in the name of a patriarchally defined “progress.” In the case of NRTs, Spallone argues that women become the source of various reproductive parts needed for experimentation and creation of a new human life. For example, as conception is taken outside the womb with NRTs, there is a need for women’s eggs to be donated in an arrangement much like that of sperm donation. Burfoot (1995) and others have written about the significance of this kind of new reproductive disembodiment for women in terms of masculinizing women’s reproductive consciousness. Spallone argues that the reduction of women to body parts, is not merely a consequence of the patriarchal science, but is essential to its development. She writes: “the construction of scientific knowledge about women’s reproductive processes *requires* the exploitation of women’s bodies as the raw materials of research” (1989, 6).

One of the most obvious ways in which women’s once central role in reproduction as mothers is eroded is through their being rendered literally invisible by NRTs. Resistance feminists argue that fetal visualization technologies literally take

women out of the picture and make embryos/fetuses seem to be independent beings. Here, the consequences of the intersection between techno-knowledge and women's disappearance are clear. Also, the intersection between the physical and conceptual disembodiment is illustrated.

With fetal visualizing technology, the technology literally enables a reproductive refocus on a previously invisible entity, the fetus; which, as many resistance feminists have documented, becomes a liberal rights-bearing individual threatening the mother's own autonomy, integrity and rights. That is, women are "disembodied" when something which is in their bodies and a part of them, is taken as an independent entity with needs/desires and rights which may be in conflict with their own. This is a form of dissection that allows for patriarchal interests to intervene in women's bodies. Feminists have widely written about the rollback effects of fetal visualization technologies, or ultrasound, for women's rights. The argument is that in direct proportion to the ability to *see* the fetus, is the disappearance of the mother and her rights, as well as the connection once understood as "natural" between mother and child. (Ginsburg and Rapp; Petchesky; Oakley; Stabile; Franklin; Hartouni and others). In the legal and popular contexts, the result of new visualizing technologies and communication technologies has been new fodder for anti-abortion activists, and the imposition of an antagonistic relationship between mother and fetus in a liberal rights framework.

Literal Disembodiment

Analyzing reproductive discourse since the advent of NRTs has provided resistance feminists with further evidence of women's disembodiment. Literary as well as visual texts illustrate the tendency of NRT to disembody women and consequently, to present the opportunity for the usurpation of women's reproductive significance by patriarchal techno-scientists. Regarding fetal visualization technology, Mitchell clarifies the connection: "Arney, Oakley, and I ... and others, have argued that ultrasound transforms pregnant women from embodied, thinking, and knowledgeable individuals into 'maternal environments,' or tissue that may or may not yield a clear ultrasound image" (2001, 20). While resistance feminists recognize that the medicalization of birth/reproduction is not a new occurrence, they believe that the use of conceptive technologies and techniques that NRT represents, will further threaten women's reproductive autonomy.

In an analysis of a U.S. journal article and government publication Spallone found that "there are no women mentioned as the subject of human reproduction. There are eggs and sperm, embryos and fetuses, wombs and scientific techniques, there are body parts and biological processes but there are no women as whole human beings" (16). The problem with this eclipsing of women by men and patriarchal science, this erasure of women's role in reproduction is that it "allows medical scientists with the backing of the state to proceed with reproductive engineering projects without accountability to women" (16). It also, by resistance feminists accounts, ascribes the power and privilege of procreation that is seated in women's bodies, to men, techno-science and medicine and capitalist interests.

Commenting on the changing meanings of motherhood and fatherhood in the wake of NRT, Raymond explains that, "The institution of father-right increasingly

reduces women to ‘alternative reproductive vehicles,’ ‘incubators’ and ‘rented wombs,’ all phrases that have been used by the medical and legal progenitors of reproductive technologies and contracts” (1993:31). To exemplify the same point, Woliver draws attention to the absence of the whole woman in a report on the birth of the first “test-tube” baby. She highlights the sterile and generalized language, with the exception of the male doctors. “After many years of frustrating research Drs. Edwards and Steptoe had succeeded in removing an egg from an ovarian follicle, fertilizing it in a dish, and transferring the developing zygote to a uterus where it implanted and was brought to term ...” (Woliver: 486). The progenitors of the piece, she argues, are clearly the male doctors.

Hartouni finds the ultimate expression of women-as-container for fetus in a *San Francisco Chronicle* headline that reads: “Orphan Embryos Saved” (1997:27). This, together with other headlines such as “Brain Dead Mother Has Her Baby,” she explains, highlight the cultural beliefs that motherhood is a passive process requiring little presence/agency or even sentience on the part of women, and that embryos are autonomous agents with a right to life before being born. The other side of this misconception, is the notion that techno-medical intervention is welcomed, *natural*, and perhaps even *necessary* to sustain life (Franklin in Ginsburg and Rapp 1995). In 1989 Life magazine featured a “fourteen-inch, two-page glossy photo of a disembodied uterus captioned: ‘MOTHERS OF INVENTION: New Ways to Begin Life.’” The story reported on a series of fertility experiments by a team of Italian physicians. The text continued with “‘By the late twenty first century, childbirth may not involve carrying [embryos or fetuses to term] at all—just an occasional visit to an incubator ... There, the fetus will be gestating in an artificial uterus under conditions simulated to re-create the mothers breathing patterns, her laughter and even her moments of emotional stress” (Hartouni, 46/7). As Moore, Franklin and others have noted, this is part of the “naturalization of reproductive technology” (Moore: 1999) by its presentation as an ordinary part of a woman’s life, drawing more women into habitual use.

Commodifying Disembodiment

Those who stand to gain from the reduction of the mother’s role in reproduction to that of donor or body part, are expounded upon in the resistance feminist literature. Resistance feminists generally assert that NRTs cannot be empowering for women, even if women were directing their use, since the patriarchal values, which guided their development, are a part of the technologies themselves. Resistance feminists refer pejoratively to the technicians of NRT, often expressing the marriage of capitalist, patriarchal, medical and scientific interests. Spallone refers to the technicians of NRT as “scientist-eugenicists” (1989, 7). She dismisses the idea that NRTs could be empowering if used by women since “If IVF were taken to its ‘logical’ subversive end, it would change the balance of power from the traditional dominant authorities of patriarchy to a *new dominating authority, the technocrats*” (1989, 178). In her view, it matters little whether it is the state, or technological authority that controls the technology, since both are patriarchal. This view is reiterated throughout the resistance feminist literature.

Corea in *The Mother Machine*, similarly refers to “the physicians, embryologists and others involved [in NRT] as ‘pharmacrats’”(2). Furthermore, she and Bessner indict the state for its participation in the exploitation of female bodies and women’s integrity.

Corea concludes that: “Just as the patriarchal state now finds it acceptable to market parts of a woman’s body ... for sexual purposes in prostitution and the larger sex industry, so it will soon find it reasonable to market other parts of a woman...for reproductive purposes”(2). Corea, like Mies and other resistance feminists, distrusts a medical and scientific establishment with a history of “abusing” women, and others, for material profit and which have proven to espouse patriarchal values.

Feminist Discourse

Despite the discourse surrounding NRTs, resistance feminists argue that it not simply about providing “choice” for infertile women and men, but rather about furthering patriarchal control over female reproduction. They claim that NRT is about making money and masking industrial/social problems under the guise of therapy for the suffering infertile; about social control under the guise of individual choice. They are wary of the NRTs discourse, in part, because it partakes of a liberal rights and liberal individualist framework that is inherently androcentric. Undermining the NRT discourse, resistance feminists propose a focus on social/collective, rather than individual, solutions to reproductive problems such as infertility, and blur the social/biological division by refusing to consider biological problems in isolation from social inequality.

Resistance feminists are wary of dissociating technology from the socio-political context in which it develops and in which it is applied. This is articulated most clearly in the concern that NRT is posed as a technological fix to remedy infertility, considered a biological condition despite its social dimensions. Mies asserts that, “[a]ny movement against the sexism inherent in the new reproductive technologies must start with the recognition that fertility or sterility are not just biological conditions and ‘diseases’ but socially determined” (Mies: 189). This can be taken in two senses; first that the “epidemic” of infertility has been socially constructed, and second, that the problems associated with infertility have social/cultural origins. Resistance feminists examine both.

In *Misconceptions*, the editors examine “The construction of infertility” (1994, V.2, 13). “There are no reliable statistics on the prevalence of infertility in Canada. But numbers ranging from one in six to as high as one in three couples ‘affected’ by infertility are consistently touted by those who have a vested interest in manufacturing an ‘epidemic’” (14). Resistance feminists argue that although infertility itself is not new, the social significance associated with it is; i.e. it has become a medical condition in need of NRT as remedy, whereas in previous historical moments this was not the case. It is because we now believe that NRT can cure it, that we believe it must be cured. As Lie and others have noted, infertility and fertility are designations subject to change depending on the varying conceptions of the natural, which are socially defined. For example, the Canadian Royal Commission on New Reproductive Technologies (RC on NRTs) defined infertility by the lack of conception by couples who have been co-habiting for 2 years without contraception and among whom the woman is between 18 and 44, but this is not a uniform standard and varies over time and place.

Resistance feminists note that the socio-cultural and political power at the root of problems that NRT “fixes” are masked by the “technological fix” approach. Resistance feminists remind us that “[I]t is in the obvious interests of the reproductive industry to sell infertility as a growing individual problem demanding a strictly medical-

technological solution” (14), despite the considerable collective social/cultural problems that threaten fertility and healthy reproduction. For example, they argue that environmental pollution, unsafe workplaces, and medical practices themselves create infertility and reproductive problems (Messing, Ouellette, Davies, Corea, Spallone, Diamond) that are overlooked because of the “beneficiation” of infertility/reproduction. Ecofeminists like Diamond, refer to a culture that devalues and disregards nature and women as a significant source of infertility and reproductive ailments. Most explicitly Mies claims that “[t]he aim of this whole enterprise [genetic modification] is to adapt the human being to survive the destructions which *Homo Faber* [the European model of civilization and progress] and technological progress have wrought on the environment” (185). In this view, NRT becomes a technological fix for very real social problems.

Resistance feminists would argue that were we to recognize the real sexual/reproductive issues from a feminist lens, the solutions would be very different. The real problems are socio-political, material and economic, not biological --- hence, so are the solutions. Lippman, analyzing the “geneticization” of both health and reproduction, provides a “worrisome example...in a recent article in a medical journal describing the identification of a gene associated with susceptibility to lead poisoning” (Basen et al. 1993, 58). Her concerns are that the identification of such a gene detracts from the social and political causes and solution to the problem of lead poisoning. “Do we really need to find newborns (or fetuses) with this susceptibility? ... is not the simplest, and least expensive solution, merely to replace the substandard housing, where lead-based paint is found, with decent accommodations?” (58).

The Social Construction of Infertility and of Choice

NRT discourse appropriates the liberal rights framework that feminists used to win abortion rights. The pro-NRT position becomes about being pro-choice, but as Raymond reminds us, “To be pro-choice... is *not* necessarily to be pro-woman” (1993, 85). Spallone challenges this platform of NRT as purportedly about providing women with “[a]nother reproductive ‘choice’” when really the interests served are “the various needs and desires of medical scientists, research scientists, and the state to further technological ‘progress’ and to aid population control aims....” (1989, 2).

Despite the discourse of liberal rights and choice that surrounds NRTs, some feminists who resist NRT, like Rowland, argue that in a patriarchal culture that defines women by their reproductive function, the “infertile” (women) have no real “choice.” In other words, Rowland, like Raymond and others point out that infertility becomes pathology in a patriarchal culture that defines women by their reproductive function.

Barbara Katz Rothman wrote that what is passed off as “choice” may actually mean less choice for mothers. This is a key example of the way in which the social/cultural infrastructure that accompanies any new technology becomes the most significant aspect of the change wrought by new technologies. “[I]t seems that, in gaining the choice to control the quality of our children, we may be losing the choice not to control the quality, the choice of simply accepting them as they are” (quoted in Rowland, 286). For example, the socio-cultural and historically specific perception of disability, or the possibility of a genetic “abnormality” developing into a “disability” may preclude the real possibility of refusing a test that could prevent the birth of such a child. Mitchell’s work on ultrasound reveals that, in Canada, around 97 percent of all pregnant

women undergo at least one scan, and that physicians do not have to request a woman's consent to perform the procedure (2001, 5). Rowland exemplifies that NRT presents women with a series of unpleasant, patriarchally defined "choices" such as either "having a disabled child with special needs or aborting" when routine amniocentesis reveals an "abnormal" fetus, or, for infertile women, "either to live the life of the infertile with all the social stigma and negativity which is currently attached to that, or to undergo abusive, violent and dangerous procedures in the attempt to have a child" (1992, 278/9). The old problems surrounding "choice" and "consent" within a context of power imbalances, are highlighted when examining NRTs.

Resistance feminists argue that if NRT is really to be about choice, we must first address the context of inequality that prevents genuine choice. They ask: why is choice so limited? Who gets to define our choices, i.e. which options are included and which excluded? Basen, Eichler and Lippman (1994, V.2) criticize the dichotomous and antagonistic parameters of the debate: "...instead of informed public discussion of the causes, treatment and prevention of infertility, public debate has been reduced to arguments for or against IVF and the women who use it" (1994, 13/4). They argue that this kind of framing of the issues precludes any discussion of NRTs usefulness and possible prohibition, hence preventing choices.

Spallone counters the pro-NRT advocacy regarding choice: "It is inadequate to talk simply about 'choice'. Reproductive choices have repeatedly been taken away from women, and women do not control what 'choices' are available..." (1989, 65). Corea reinforces this assertion that regarding NRTs, it is not a question of choice, but of social inequality. "...any discussion of 'rights' and 'choices' assumes a society in which there are no serious differences of power and authority between individuals" (1985, 3). Resistance feminists argue that in a context of inequality, NRTs will exacerbate the same despite the empty liberal rhetoric of choice in which it is cloaked.

Given the difficulties associated with the discourse of individual "choice" for resistance feminists, they abandon it in favor of women's control over their reproductive bodies collectively. They reject the liberal rights framework that they believe merely co-opts the language of women's rights to disguise an individualism that ultimately disbands feminism as a movement for all women. Sarah Franklin concisely notes: "the very term 'individual', meaning one who cannot be divided, can only represent the male" (quoted in Mitchell 2001, 13) since pregnant women subvert that definition. Raymond is particularly critical of "reproductive liberalism defined as feminism" (1993, 88). Ultimately, this could mean that individual women's "choices" to use NRT will have to be sacrificed to the greater cause of preventing women's collective loss of control over their sexuality/reproduction. Rebick, however, sees it differently. "...is feminism really about freedom of choice in all spheres? I think not. Feminism is about achieving equality for all women. In a class and race-divided society, freedom of choice for one woman can mean virtual slavery for another, for example contract motherhood" (88). The need to protect some women from the exploitation that NRTs will inevitably bring, justifies the abrogation of some women's individual freedom of choice. "Feminism seeks to change the power structures in society, to empower those with less power, women, racial minorities, the poor, etc. This can often conflict with individual choice on a given issue" (Basen et al. 1993, 88). In the resistance feminist writing, the benefits of NRT for those individual infertile women who use it, can be sacrificed to the greater cause of

women's well being collectively. Other resources are suggested, but ultimately, as Rowland put it, "[w]omen need to reject the equation of personhood with fertility" (1992, 297).

Infertility, they argue, must be reconceived in its socio-cultural dimensions, and dealt with socially and collectively as a definition rife with patriarchal and capitalist interest. In their analyses, it is as much a social/cultural diagnosis, as a biological one. Resistance feminists believe that the truly oppressive dimensions of womanhood and motherhood come from social and political frameworks, not from women's biology. Resistance feminists advocate for control over their own reproduction, which includes the social and political infrastructure and resources to mother without impoverishment and other socio-culturally imposed barriers.

Rowland, like most resistance feminists, is concerned to reconcile her seemingly contradictory opposition to NRT on the basis of choice, and her support for the use of contraceptive technologies, which often depended in the language of "choice."

What feminists really mean by 'a woman's right to choose' is 'a woman's right to *control*. Women claim the right to bodily integrity, to autonomy and to respect as moral human beings capable of making difficult decisions in this area. Women need access to abortion in order to control their lives in a less than perfect world. We have to ask the same question with respect to reproductive technology: does it necessarily increase the control of women over their lives? (1992, 285).

She answers in the negative. Although she defends the "right to choose" by making it fit within an argument for control, ultimately by denying women the right to "choose" to use NRTs or not, she and other resistance feminists support a notion of women's liberation based on "freedom from" rather than "freedom to" regarding NRTs (Raymond, 1993). In *The Handmaid's Tale*, Atwood cautions us against this attitude revealing its fundamentalist undertones. The lead character, the handmaid Offred, reminisces about a time when women's lives were not regulated by a fundamentalist reproductive regime and recalls the words of her disciplinarian: "[Women] wore blouses with buttons down the front that suggested the possibilities of the word *undone*. These women could be undone; or not. They seemed to be able to choose. We seemed to be able to choose, then. We were a society dying, said Aunt Lydia, of too much choice" (1985, 24). In trying to address the issue of control inherent in questions of women's "choice" in patriarchal societies, resistance feminists are embroiled in a difficult contradiction.

The question of NRT is really about its extension of patriarchal control for resistance feminists. Spallone, for example, notes that "removing technologies will [not] automatically give back to women control over our own bodies" (1989, 4), invoking the *Handmaid's Tale* as evidence. For many resistance feminists this control implies an exclusivity, i.e. the reservation of motherhood for women. "Like all groups who 'own' a capacity such as this, women want to hold onto their exclusivity, ..." (Rowland 1992, 13). This comment draws to mind the character Connie in Piercy's *Woman on the Edge of Time*, who expressed disgust and shock when witnessing men breast-feeding in the futuristic village of Mattapoisette despite its egalitarianism.

Disembodying Maternal Power

This logic is further clarified in Greer's concern about the way that "motherhood is dismembered by the technology" (1999, 80), such that "[a]lready the genetic mother's children may be unknown to her; the gestational mother could be superseded by an electronically controlled and monitored 'ideal' gestational environment; the parental mother can now be male or female" (1999, 84). This is the fear that what is of power to women, perhaps the greatest source of female power in a patriarchal culture, is being taken from them. For resistance feminists, this power is the embodied knowledge that women have of their own reproductive bodies, which requires liberation from technological intervention in the form of women's control. Given that women for so long have been most controlled, yet most revered because of their reproductive difference from men, such a rigorous defense against a technology perceived as its greatest threat, is unsurprising.

Raymond defends the resistance position from its dissolution within the impassable social constructionism versus essentialism debate within feminism:

Radical feminist opponents of the new reproductive technologies do not pit nature against technology, nor do we extol a new version of biology as destiny for women. Opposition to these technologies is based on the more political feminist perspective that women as a class have a stake in reclaiming the female body, not as female nature, but by refusing to yield control of it to men, to the fetus, to the state, and most recently to those liberals who advocate that women control our bodies by giving up control (1993, 91).

In the final analysis, resistance feminists believe liberation to come from a control over their own bodies free from interference (technological or otherwise) by the state, techno-science, capitalism and other interests since technology, they argue, is not the only tool of patriarchal control. Regarding NRT as merely another tool for patriarchal control over female sexuality/reproduction and nature, they advocate its rejection and a moratorium over all NRT because it devalues women and nature, and usurps women's reproductive control, most importantly by disembodiment women⁸. It also requires *freedom from* what they perceive as a sexist technology as distinct from the *freedom to* use it. The underlying impetus is a woman's desire to "hold on to their [reproductive] exclusivity" (Rowland, 13). Resistance to the NRTs, in the end, looks a lot like a call for re-embodiment -- a defense of the body -- even if that means a continued female/nature association that is easily allied with neo-conservative politics.

Embracing Feminists

Feminists who advocate the use of NRTs, the embracing feminists, build upon the argument that female reproduction is inherently oppressive for women (de Beauvoir 1989 and Firestone 1970), and that technologies that disembody female reproductive process will, therefore, liberate them (Firestone 1970). Female embodiment becomes synonymous with historically evidenced patriarchal oppression, and liberation is equated with freedom from the body (which is associated with the devalued side of the Cartesian

⁸ This is most clear in the Feminist International Resistance to Reproductive and Genetic Engineering's (FINRRAGE) declaration of 1989. It is important to note that a number of theorists mentioned in this section are associated with FINRRAGE. Gena Corea is co-founder of the organization, and both Spelman and Rowland are members.

duality). This argument extends to a desire for transgression of all “natural” boundaries of the body. In other words, the embracing feminists’ position is part of a larger pro-technology framework⁹ that transgresses limits beyond those they associate with women’s un-technologically mediated reproductive function. For example, embracing feminists also advocate NRTs on the basis of their ability to offer the infertile, gays/lesbians, transsexuals/transgendereds and persons with disabilities the opportunities to overcome the limits of their “natural” bodies in accordance with their desires to bear biologically related children, or change sex/gender.

Embracing feminists believe that the application of technology (which includes but is not limited to NRT) to the body dissolves boundaries such as those between man/woman, culture/nature, society/biology and human/machine. The cyborg, originally introduced by Haraway in the feminist context, is the iconic embodiment of this new situation. A fundamental part of their argument is that these boundaries are as ideologically, (i.e. socio-culturally) determined, as they are physical/concrete. Nonetheless, embracing feminists argue that since technology in the forms of reproductive technologies and cyberspace enable us to overcome the material base of social inequalities, they ought to be embraced for the liberation they can bring. These feminists celebrate what they perceive as the technologically mediated demise of hierarchical dualism, and the proliferation of identities beyond the boundaries of the physical body’s characteristics (for example, one’s chromosomal and/or biological sex).

The de-feminization of reproduction/birth (in its biological and socio-cultural dimensions) is one outcome of this technology-induced trans-dualism that embracing feminists herald. Contrary to the resistance feminists, this is cause for celebration in the embracing framework. Precisely because embracing feminists believe that female embodied reproduction is the root cause of women’s oppression, they welcome the sci-fi futuristic projections of sex/gender-less reproduction, of second wave feminist guru Firestone, that is shared by all regardless of sex/gender. Marge Piercy’s reproductive democracy in Mattapoisette in *Woman on the Edge of Time* is illustrative.

Firestone¹⁰ is the most famous and one of the earliest proponents of NRT as liberation from the “tyranny of reproduction” (1970, 193). The fact that she wrote her groundbreaking *The Dialectics of Reproduction* in the 1960s before the advent of the more advanced conceptive technologies, and spoke primarily of the “old” or contraceptive forms of reproductive technology, merely highlights the foresight of her early arguments. Firestone explicitly rooted women’s subjugation in their sex/reproductive function, which she believed provided a model for the class system. In other words, she thought that the original oppression was rooted in biological, reproductive differences between men and women. She openly declared “[p]regnancy is barbaric” (1970,188)¹¹ and called for its abolition by any means, but specifically through the use of reproductive technology.

⁹ Characterized as “technophilia” in Lubin (1998), and “technomania” in Stabile (1994).

¹⁰ Shulamith Firestone is a native of Ottawa who is now a Rabbi.

¹¹ It is worth noting that this denunciation of the female sexual reproductive function is not unlike that of the liberal feminist Taylor who argued in 1851 that no woman should be bound to “devote their lives to one animal function and its consequences” (Klosko and Klosko 78). The difference is she, and other early liberal feminists, were making an argument for the socialization of women, hence calling attention to the difference between social role and biological role. This is absent in Firestone’s formulation. In calling for

Drawing from the anti-corporeal undercurrent in Beauvoir's *The Second Sex*, Firestone believed NRTs would bring about the greatest socio-political revolution by destroying the cultural-significance of sex/gender difference. That is, Firestone believed that by destroying the material base of sex/gender difference, utopia could be achieved. In her own words, she advocated "not just the elimination of male *privilege* but of the sex *distinction* itself: genital differences between human beings would no longer matter culturally" (1970, 19). Her materialism led her to abolish the material foundations of cultural/political oppression rather than calling for the redefinition and social reorganization of sex/gender difference – as the ecofeminists, other radical feminists as well as the early liberal feminists have. While clearly aware of the socio-cultural as well as biological dimensions of sex/reproduction, Firestone does not explore the former but targets the latter as the biological foundation of the class system.

In direct contrast to resistance feminists, Firestone believes in the inherent threat of women's reproductive capacity, and the inherent potential of technology to empower: "...like atomic energy, fertility control, artificial reproduction, cybernation, in themselves, are liberating – *unless* they are improperly used" (1970:187). Here she supercedes the technology-as-neutral-tool argument, claiming that NRTs and cybernation are liberating unless proven otherwise. This positive disposition towards technology, displays her status as founder of the embracing feminist or technophilic position.

On the other hand, Firestone believed physical reproduction to be the ultimate degradation of women; it is "the temporary deformation of the body of the individual for the sake of the species" (1970, 88). It was her hope that technological intervention into reproduction would provide, at least, the critical distance from women's "natural" position of immanence (to use Beauvoir's words) to make an "honest re-examination of the ancient value of motherhood" (1970, 189). Firestone never questions, but asserts as fundamental, that women's natural embodied condition is entirely oppressive.

Firestone's pro-technology position extends beyond NRT, again in contradistinction to the resistance feminists, to advocate for the broader use of the technological fix approach to environmental erosion. That is, while the resistance feminists argued that the techno fix approach would conceal the social, cultural and economic dimensions of problems, including the industrial/technological causes of those problems in the first place; Firestone calls for the application of technology to problems she realizes are technology-generated. In keeping with her overall argument that humanity, not just women, has outgrown its biological constraints, she calls for "the [technological] establishment of a new equilibrium between man and the artificial environment he is creating, to replace the destroyed 'natural' balance" (1970,184). She openly embraces technology, believing in its beneficial role in the evolution of the human species in general, as well as women in particular regarding NRTs.

Firestone's advocacy of the cutting of women's exclusive ties to biological reproduction is, ironically¹², projected in Piercy's *Woman on the Edge of Time*. Of the

the abolition of women's unique biological function for the purposes of social emancipation, she conflates women's biological and social role.

¹² In *The Routledge Critical Dictionary of Feminism and Post-Feminism*, Gamble writes when "Firestone complained in 1970 that there was 'no feminist utopian literature yet in existence', she had not foreseen the influential role feminist theory was to play in the formulation of a pile of feminist utopias published throughout the 1970s ..." (330) which includes Marge Piercy's sci-fi, cyberpunk works. *Woman on the Edge of Time* which was clearly inspired by Firestone's radical-materialist feminist theory.

revolutionary demands Firestone lists, the first is “*The freeing of women from the tyranny of reproduction by every means possible, and the diffusion of the child-rearing role to the society as a whole, to men and other children as well as women*” (1970, 221). In the fictional future society of Mattapoisette, Piercy goes one step further, cutting women’s exclusive biological ties to reproduction (Firestone believed the failure of socialist revolutions to be, at least in part, because of the failure to do this) (1970, 204). In Mattapoisette, children are birthed from machines, people are sexually ambiguous (as represented in the only pronoun “per”) and all children have three “mothers” who nurse them, not all female. Piercy captures the future visitor, Connie’s, initial horror upon discovering a man breastfeeding, before having her futuristic companion, Luciente, explain:

‘It was part of women’s long revolution. When we were breaking all the old hierarchies. Finally there was that one thing we had to give up too, the only power we ever had, in return for no more power for anyone. The original production: the power to give birth. Cause as long as we were biologically enchained, we’d never be equal. And males never would be humanized to be loving and tender. So we all became mothers. Every child has three. To break the nuclear bonding’ (1976,105).

Furthermore, closely allied with the revolutionary demand to free women from childbirth, is Firestone’s call to do away with childhood and integrate children fully into society by socializing childrearing. These aspects, too, are represented in Piercy’s sci-fi future.

Finally, Firestone’s techno-philic manifesto can be situated within a larger call for “cybernetic communism” (1970, 222). Her utopia was constituted of trans-natural bodies, mediated by technologies that would take the ownership and control of production and reproduction out of private hands by divorcing work from wages, and reproduction from women. In her own words, cybernation may be understood as “the full takeover by machines of increasingly complex functions, altering man’s age-old relation to work and wages” (184). Together, cybernetics and reproductive technologies would combine to break “[t]he tyranny of the biological family” (1970, 19).

The dream of a feminist world without sex/gender is signified in embracing feminist literature by an attendant, and extra-NRT, sex/gender-transforming technology that has less obvious links to sex/reproduction. It nonetheless holds out great potential, in embracing feminists’ analyses, to blur the lines between culture/nature, and its related gender dualisms more generally. NRTs may be perceived as inaugurating an era of the “post-natural body,” or the cyborg body, and cyber feminism.

Embracing feminists reject not only the female body, but “the body” as the pernicious and feminized half of the Cartesian dualism. So, this analysis takes a “trans-sex/gender” turn here, so-to-speak. Susan Stryker, a male-to-female transsexual feminist theorist, delivered a keynote address on third wave feminism at a recent conference. Her depiction of the distinctive character of the third wave as “‘post-natural’ body” is illustrative of the embracing feminist’s position. In an interview with Zalewski she notes that:

the critical question for third wave feminism to address is how to deal with questions of embodied difference – whether that is specifically racial difference, sexual difference (including intersex conditions) or the kind of difference reproduced by transsexuals which I see as a precursor to a

whole range of issues around biomedical technology and the 'post-natural' body (2003,121).

In contrast to the resistance feminists, she focuses on women's embodied differences from each other, rather than their corporeal commonalities. Like embracing feminists in general, she is scornful of the woman-nature essentialism of the resistance feminists. Against Greer, she argues that any position that generally rejects techno-science, and can be rallied in favor of conservative politics, is no feminist position. For embracers like Stryker, when "woman" is not considered closer to nature, and oppositionally, "man" closer to techno-culture, the equation of technology and patriarchy is much harder to make.

The image of the cyborg, first introduced by Haraway in the feminist context, embodies the post-dualistic, post "natural" body situation that the embracing feminists theorize. It is *the* feminist avatar of the embracing feminists' movement and is the inspiration behind cybernetic or cyborg feminism. In light of the dissolution of universal "woman" and humanist "man" by postmodern analysis, the cyborg emerged as a metaphor for a non-unified subjectivity. It is a blend of Merchant's (1980) two nature metaphors because it is both organism and "machine," hence exploding the binary structure on which these symbols are predicated. This is the revolutionary, if abstract, principle on which cyber feminism depends.

Donna Haraway introduced the cyborg into feminist currency in her path breaking "A Cyborg Manifesto." Literally, the word is a conflation of "cybernetic and organism" and was coined by research space scientist Manfred Clynes in 1960 (Routledge, 212). In her postmodern treatise, she endorses a vision of a post-human figure for feminists to embrace.

Cyborgs are post-Second World War hybrid entities made of, first, ourselves and other organic creatures in our unchosen 'high-technological' guise as information systems, texts, and ergonomically controlled labouring, desiring, and reproducing systems. The second essential ingredient in cyborgs is machines in their guise, also, as communications systems, texts, and self-acting, ergonomically designed apparatuses (1991, 1).

In her definition, the intimacy between organism and machine is stressed, such that it is difficult to distinguish between the two. The blurring of boundaries between modern, western dualisms such as man/machine, biology/technology and woman/man is the point of her cyborg politics. Haraway argues that this dualistic perception is inadequate to express the current situation of women and men and others, in the new postmodern world order. This place may be better understood in "a network ideological image, suggesting the profusion of spaces and identities and the permeability of boundaries in the personal body and in the body politic" (1991,170).

The cyborg's relevance for feminism lies in its status as a "boundary creature[s]" in which category she also places women. Each has "had a destabilizing place in the great Western evolutionary, technological, and biological narratives" (1991, 2). Haraway means by this, that women are not natural creatures, opposite men as technological ones. Women and cyborgs are hybrids, "non-innocent monsters" implicated in the creation of new "worlds." This is as much a statement about her conception of power as it is about the place of women as within it. Far from the

naturalized women of resistance feminism, “The actual situation of women is their integration/exploitation into a world system of production/reproduction and communication called the informatics of domination” (1991, 163).

For Haraway, no simplistic, homogeneous and naturalized notion of woman is realistic or adequate for the kind of postmodern paradoxes that feminists must embody. “The cyborg is a kind of disassembled and reassembled, postmodern collective and personal self. This is the self feminists must code” (1991, 163). Her work is most significant for its clear statement of desire to cross boundaries while maintaining feminist resistance and identity. She claims that: “Cyborg imagery can suggest a way out of the maze of dualisms in which we have explained our bodies and our tools to ourselves” (181). In other words, the nature trope for women is fully inadequate now. The embrace of the cyborg, and cyber feminism requires the death of nature, in a manner of speaking. In the last sentence of her “Manifesto,” Haraway makes clear that the cyborg redefinition of feminism, is meant to replace, and not join, the organic metaphor used by ecofeminists. She concludes: “Though both are bound in the spiral dance, I would rather be a cyborg than a goddess” (1991, 181).

As Haraway’s theory illustrates, “Cyberfeminism is not about celebrating the feminine [conceived as one half of a false dualism], but the breakdown and disintegration of contemporary gender boundaries” (Brayton 2). Cyberfeminism can be understood as a post-natural body, post-modern approach to feminism that puts the cyborgian boundary-crossing to political use. Haraway holds out the hope that a “‘cyborg’ feminism” would be “more able to remain attuned to specific historical and political positionings and permanent partialities without abandoning the search for potent connections” (1991, 1). Just how this is possible, remains unclear.

Sadie Plant, an academic and foremost “techno-theorist” of cyber feminism uses that term “to indicate an ‘alliance’ or ‘connection’ between women and technology, where ‘women have always been the machine parts for a very much male culture’” (geekgirl interview, 1). More specifically, she describes it as “an insurrection on the part of the goods and materials of the patriarchal emergence composed of links between women, women and computers, computers and communications links, connections and connectionist nets” (Routledge 296). Plant, like Haraway, ascribes agency to technology enabling the sense of a coalition of sorts between “goods and materials.” That is, technology is a partner in this feminist—machine collaboration.

Cyberfeminism is a movement, consciously directed to the subversion of the female technophobic stereotype that resistance feminists endorse. Plant and others decouple woman/nature and man/technology, exposing the connection that women have to computers and communications systems. Woman is seen as fully technologically capable. In this way, she dismantles traditional stereotypes that woman is technophobic. Plant, in “The Future Looms” makes a compelling argument that “weaves” together the histories of women and cybernetics. She claims that women’s techniques, particularly weaving, are synonymous with current computer technology. She tells the story of Ada Lovelace as the first programmer, weaving together women’s history and technology. Plant goes a step further than Haraway in arguing that women and technology have a peculiar affinity for each other; they have a lot in common. That is, women and technology are both “othered” by andro-centric society. They are both tools for men’s use. “Woman cannot exist ‘like man’; neither can the machine” (116). Furthermore,

they are likewise detested in patriarchal culture as “other” even if they act as useful tools. “Misogyny and technophobia are equally displays of man’s fear of the matrix, the virtual machinery which subtends his world and lies on the other side of every patriarchal culture’s veils” (116).

Similarly feminist theorists have analyzed “cyberspace¹³,” which is “the fantasy world that lies beyond the hardware of the [computer] technology,” (Routledge: 212) as a feminine space. Symbolically, this virtual reality is feminine, according to Stone. She writes: “to enter cyberspace is to physically *put on* cyberspace. To become the cyborg, to put on the seductive and dangerous cybernetic space like a garment, is to put on the *female*” (1999: 91). Not only is cyberspace envisioned as a liberatory space, because it enables women and other “others,” for example people with disabilities, the ability to free themselves from the reality of patriarchal space/time¹⁴, but embracing feminists believe that cyberspace is itself feminine. As Stone puts it, while women may remain culturally associated with “nature,” technology has changed that concept. The new “nature” that women may embody incorporates technology in the fashion of Haraway’s cyborg. “In technosociality, the social world of virtual culture, technics is nature” (1999: 92).

Against resistance feminists, cyber feminists like Plant argue that since technology disrupts traditional patriarchal binary codes, it is men who are being disempowered by new reproductive technologies, as well as computer technologies. The argument is that if patriarchy has been contingent upon a gendered dualism that includes technology/biology, the subversion of these dualisms is liberatory. As we’ve seen, however, they always get reconstructed. Stone claims that the struggle to reassert dualistic boundaries such as those between nature and culture, and in which resistance feminists are engaged, is counterproductive. “the project of reifying a ‘natural’ state over and against a technologized ‘fallen’ one is not only one of the industries of postmodern nostalgia, but also part of a binary, oppositional cognitive style that some maintain is part of our society’s pervasively male epistemology” (1999, 85/6). Following this logic, any technologies that are demonstrated to interrupt dualistic boundaries, may be assessed feminist and progressive.

For the embracing feminists, who include but are not reducible to cyber feminists, a feminist movement must also be a technological movement. It must break apart the terms of patriarchal dualism (symbolically and materially) that have made of women technophobes locked into a modern subject position. They also dismiss a romantic association of women and nature based on their “natural” reproductive functions. “Cybernetic feminism does not, like many of its predecessors...seek out for woman a subjectivity, an identity or even a sexuality of her own” (116). The severing of close ties between organic bodies and subjectivities/identities is its hallmark. Women with disabilities, such as Susan Wendell, provide valuable insight in this regard. In “Feminism, Disability and Transcendence of the Body” she argues that: “feminist theory has not taken account of a very strong reason for wanting to transcend the body. Unless we do take account of it, I suspect we may not only underestimate the subjective appeal of mind-body dualism, but also fail to offer an adequate alternate conception of the relationship of consciousness to the body” (118). Wendell’s argument causes feminists

¹³ Gibson’s neologism to describe virtual reality in *Neuromancer*.

¹⁴ In reality, there is a gender gap in computer use/access, and despite the liberatory potential, people with disabilities are also excluded.

to confront their dependence on a particular understanding of “control” over their bodies and to consider the inseparability of a fuller conception of “choice” from “control” for some women. She reminds us that an over-emphasis on patriarchal control over the body (such as with NRTs in the resistance literature) can cause feminists to ignore the position of women with bodies that are chronically painful, or otherwise unavoidably burdensome. She revolutionizes traditional feminist theory on the body by forcing us to recognize that our bodies are never fully under our control (or anyone else’s for that matter), will inevitably “fail” us (we will die) and that women’s bodies differ dramatically in ways that shatter assumptions at the foundation of feminist thought.

With roots in the Firestonian and post-modern embrace of NRTs for their body-transcending potential, there are those embracing feminists who argue more practically for the use of NRTs to have babies that otherwise would be impossible to have. For example, lesbians or gay men, men or women who are infertile and wish to become biological parents, and those people with congenital disabilities (or carriers of same), which they wish to prevent passing on to their offspring. For these women, reproductive “control” requires the option of using the technology to become biological parents. For these people, there is a real sense that the “choice” to use NRTs should be theirs, and not precluded by others (feminists included) who may argue against them. As a lesbian user of donor insemination, Hornstein writes: For lesbians and some heterosexual women, donor insemination represents a new reproductive choice – and one which can remain in our control” (Arditti et al 1989, 373). While recognizing the complex ethical dimensions of NRTs, she uses the language of entitlement: “We have created new and important life choices for many people. We have taken back a little more of what is rightly ours—the chance to make decisions about how we will live our lives” (379).

For many women with disabilities, having true reproductive choice is synonymous with control over their reproductive bodies since they bear a history of forced sterilization, de-sexualization and other forms of denial of their reproductive agency (Finger 1984, 1990; Fine & Asch 1988; Kaplan 1988). As Matthews writes: “The paradox of disabled women and sexuality goes far beyond the sexual act itself. Reproductive rights is the big civil-rights battle being waged... Their demands include the right to have a baby, the right to adopt children, the right not to have children and to have access to abortion clinics” (16) among others. Matthews interviewed 45 women with disabilities to compile *Voices From the Shadows*. In a chapter on “Bringing up Baby” it becomes clear that many of the women interviewed would consider abortion if prenatal diagnosis revealed a congenital defect.

I asked some of the younger women who might possibly face [the dilemma of discovering a genetic defect *in utero*]. Not one said she would *never* consider abortion, but most admitted to mixed feelings. ...they wouldn’t mind having disabled children, but they would be terrified for the children’s sake. They would want to spare their offspring the problems they had faced (1983, 102).

Similarly, Kallianes and Rubenfeld note the counter-intuitive results of a survey on selective abortion.

One might assume that mothers of disabled children oppose such abortions. Yet, a survey on attitudes toward abortion among mothers of congenitally disabled children and mothers of non-disabled children found very similar responses: while some of the mothers of disabled children opposed selective abortions, both groups of mothers also supported abortion at similar rates... (1997, 213).

These embracing feminist positions draw attention to the difficult ethical dimensions of “freedom of choice,” as well as its continuing centrality for women’s reproductive autonomy. Rayna Rapp in a personal testimony reveals her own experience aborting a second trimester genetically diagnosed fetus. She concludes: “I’m suggesting we... explore issues of health care, abortion, and the right to choose death, as well as life, for our genetically disabled fetuses” (Arditti et al. 1989, 326).

Ultimately, since embracing feminists consider choice to be inextricably a part of women’s reproductive control, it becomes impossible to limit women’s technological options within their framework. In the final analysis, although more pragmatic, even the practical consumers of NRTs may be seen to base their arguments on the trans-natural body arguments of Firestone and de Beauvoir. We must ask, can embracing feminism transform feminism’s somatophobic inheritance from Firestone in combination with postmodern anti-essentialism into a more palatable feminist currency? Or perhaps, more importantly, the question should be posed in terms of embracing feminism’s ability to address the patriarchal economies in which its techno-embracing currencies will inevitably be circulated. There are good reasons to be concerned that despite the embracer’s dissolution of the patriarchal categories that make of women technophobes and men, technomanics, in advocating women’s wholesale embrace of technology on the basis of the bestowal of trans-corporeal properties, they simply reassert the prizing of technology over nature. We must ask then, do embracing feminists really transcend patriarchal dualism in their promotion of NRTs and cyberspace, or do they re-assert that dualism?

Equivocal Feminists

Equivocal feminists are those who assess the feminist responses to NRT that I have called the *resistance* and *embracing* positions, and find each, on its own, inadequate. They believe that while women, collectively, have been subjugated on the basis of their bodily reproductive functions, they have been differently oppressed on this basis because of differing racial/ethnic membership, dis/ability, socio-economic class and such. They take a moderate, middle ground position regarding female reproduction and mothering, technology and NRTs, arguing that none of the foregoing is inherently oppressive or liberating. In the cases of Stabile, who assesses the polarized feminist reactions to NRT as “technomania” versus “technophobia”, and Lublin who chooses “technophilia” versus “technophobia, their proposals provide clear-cut examples of the equivocal position. Ultimately, equivocal feminists deny the adequacy of univocal accounts of women and NRT, in favor of developing implementable guidelines by which to make the diversity of women’s reproductive experiences with NRT positive, rather than oppressive. These feminists take a practical approach to the NRTs, recognizing the reality of its widespread application and seeking to regulate it in ways which recognize the diversity of women’s reproductive needs.

In contrast to the biologicistic and dualistic accounts of both technophobes and technophiles who ultimately endorse a woman/nature conflation by rooting women's relationship to technology (NRT) in a flight from, or wholesale embrace of, their "natural" bodies, equivocal feminists promote a bio-social understanding of reproduction and mothering (Stabile); and a feminist strategy that accounts for the diversity of women's experiences and bridges theory and practice (Lublin). The common element is a requirement that the feminist response be rooted in the real, material circumstances of women's (reproductive) lives. In other words, equivocalists often prescribe a materialist feminist account of NRTs that incorporates the diversity of women's sex/reproductive experiences, while at the same time accounting for the corporeal commonalities women share.

Equivocal feminists assess the polarized feminist responses to technology, and find them partial and "inadequate." This critique is implicit in the neologisms that Stabile uses to describe what I have referred to as the resistance feminist position and embracing feminist position, as "technophobia" and "technomania" respectively¹⁵. I will defer to each author's designation when writing about their theories, and retain my wording when referring to my own theory. Stanworth's anthology *Reproductive Technologies*, outlines the common mind of its contributors that: "...none of the three positions outlined... - the uncritical position which defers without question to the advances of science, the pessimistic position which predicts the downfall of civilization and the particular feminist reading which sees in these technologies an unmitigated attack on women – is, in itself, inadequate" (3). Adding the critical dimension of the implications for feminist agency of both positions in terms of women's control and choice, Menzies offers "an attempt to break the dichotomy which positions us either outside the technology with no opportunity to control it, or totally within its control, little more than helpless victims" (Basen, Eichler, Lippman: 1994: 17/18).

The technophobic and technomaniac positions are most significantly rejected on the basis of their inability to transcend the patriarchal dualistic paradigm that orders responses to technology on the basis of a man/woman, culture or technology/nature, anti-essentialist/essentialist, difference/sameness binaric pattern. Despite the seeming distinctiveness between the positions, they have in common their adherence to the established western, dualistic paradigm. Stabile concludes:

...technophobia's essentialism and technomania's anti-essentialism seem to point to very distinct trajectories within feminist theories of the postmodern.... Nevertheless, technophobia and technomania illustrate the continuing dualism at the heart of contemporary feminist thought: an ideology based on gender differences versus an ideology based on the endless and multiple play of difference (1994, 44).

That is, the feminist responses end up conforming to patriarchal dualities that either embrace the technology as good, and conceive of women as not essentially the same despite their shared corporeality (technomanics), or reject the technology as bad for women as a cohesive and homogenous group based on their shared corporeality (technophobes).

¹⁵ Building on Stabile's work, Lublin utilizes the same term "technophobia" for the resistance feminist position, but changes "technomania" to the more subtle "technophilia."

In fact, both the technophobic and technomaniac positions reinforce a sex/reproductive dichotomy that upholds the status quo. Lublin critiques the “basic assumption” of the technomaniac position, especially as represented by Firestone and Haraway: “that sexual (reproductive) dualism, is the sole (or even significant) source of women’s oppression is open to challenge” (1998, 35). She goes on to argue that Firestone’s somatophobic prescription to do away with biological/sexual difference to equalize the sexes is “an overly simplistic approach to such pervasive inequality” (1998, 36) that has bequeathed its biases to the technomaniac branch of feminism. Despite the prominence of the cyborg metaphor in post-modern feminist theory, widely recognized as the inheritance of the Firestonian embrace of technology, Stabile identifies its booby traps. “[A] cyborg has arrived on the scene with a vengeance, but it is a cyborg created out of circumstances distinctly not of our choosing and a cyborg that, in what might be construed as the apex of anti-essentialist thought, threatens completely to overwhelm material female bodies” (1994, 93). Stabile asks, can the cyborg’s playful, theoretical boundary crossing properties adequately address the material issues presented to women in this new techno-cyborg era?

These equivocal feminists are as critical of the technophobic position as they are of the technomaniac. Lublin, Stabile and others, dismantle the uncritical association of an ideological conception of “woman” with an equally mystified notion of “nature” most clearly exemplified in ecofeminist theory. In the ecofeminist/technophobic analogy, if “woman” is considered closer to “nature” by virtue of her greater role in sexual reproduction, it necessitates in their framework, an opposition to technology – considered the negative corollary. As Stabile phrases it, “[w]hen technology stands in opposition to women (who by virtue of their anatomical configuration have special links with nature), technology functions like the term patriarchy” i.e. as a “universalistic trans-historical mode which may shade into biologism” (1994, 52).

The dualism that technophobia most explicitly maintains does not hold up in the face of historical and material realities. The woman/nature and man/culture distinction, equivocal feminists claim, is not true of all women or even of most women over time. “The universalization at the center of ecofeminism’s belief that technology has uniformly and necessarily oppressed women therefore relies on a reductive model of social relations, a model that can neither account for the contradictory aspects of this process at different historical moments nor adequately analyze intersecting yet structurally different forms of oppression” (1994, 52).

In the end, technophobia and technomania are assessed separately by equivocal feminists; but found similarly rooted in traditional understandings of women, technology and nature. Neither provides anything new. That is, neither provides a serious challenge to the status quo because neither questions the old categories of feminist analysis that divide women into *either pro or anti-tech*, whether on the basis of a belief in a “natural” past superior to our technological present, or the fetishism of difference for its own sake that immobilizes feminist organization and movement.

While both the technophobic and technomaniac positions “share the postmodern critique of Enlightenment values” neither is able to transcend other problematic dimensions of modernity such as the tendency toward totalizing metanarrative and the tenacity of a middle-class, white, Euro-centrism subject position that masquerades as universal truth. “For technophobic feminists, the point is neither to interpret nor to accept

reality, but simply to reject it – a position that ... is closely linked to the class interests of its proponents” she continues: “As technomaniac feminists would observe, this hardly offers an approach to contemporary society. Yet in an anti-essentialist, technomaniacal world, the point isn’t to change reality either, but to provide endlessly revolving interpretations of it” (1994, 5/6). Ultimately, because the two dominant feminist responses to NRT are ones of privilege that would be threatened with genuine change, they leave us, essentially, right where we started.

Equivocal feminists argue that because the technophobes and technomanics are tied to a conception of the body that ensures only two reactions to technology, their analyses are essentialist and techno-centric. Stanworth argues that “technological determinism – whether of the variety that claims that scientific-technical progress provides the key to all social problems, or of the kind that seems to target technology as the obstacle to autonomy or freedom –will not do” (4). They propose analyses that are not determined by prescribed, extreme and oppositional responses and not motivated by a preconceived notion of the body dictated by fear of its take over by technology, nor by fear of its essential oppression without technological intervention.

Nonetheless, the equivocal position overlaps with aspects of both the embracers and the resisters. For example, similar to the resisters, equivocalists critique the “techno fix” approach for downplaying the socio-economic contexts and roots of problems that NRTs are intended to remedy. A science and techno-centric focus of the NRT discourse detracts from the greater social dilemmas and frameworks that obstacle women’s reproductive autonomy.

An overemphasis upon technology risks distracting attention from the politics and organization of health care in general, from the legal system which frames our rights over our bodies and our children, from political struggles over the nature of sexuality, parenthood and the family and from the impact of the varied material and cultural circumstances in which people create their personal lives (Stanworth, 4).

This over concentration on technology is facilitated by a problematic analysis of women’s bodies as the sole or predominant defining factor of their oppression. By contrast, equivocal feminists call for the confrontation of real, material conditions of women’s lives that are multiple and only partially defined by their sex/reproductive bodies. For example, Petchesky notes that: “The majority of poor and working-class women in the United States and Britain still have no access to amniocentesis, IVF and the rest, although they (particularly women of colour) have the highest rates of infertility and foetal impairment” (Stanworth 1987, 77). While technophiles celebrate the multiple sites of identification of the postmodern subject, and to a great extent, this is what allows women to interface anew with the technology; the ideological/textual nature of their theory circumscribes and limits their ability to speak to the material conditions of women’s lives. While many women have embraced technology, in this case in the form of NRTs, the socio-economic and other conditions that shape this relationship are not adequately assessed nor understood in the techno fix approach.

Because equivocal feminists are critical of both notions of the female body as inherently oppressive or inherently liberating, they equally reject the notion of NRT as liberating or oppressive; that is, because equivocalists do not espouse a belief in a body in need of technological mediation, or being obstructed by such mediation, they may assess

NRT equivocally. For equivocal feminists, just as there is no one conception of the significance of the female body, there is no universal conception of woman. In the equivocal feminist approach to NRTs differences between women, as well as their commonalities, are stressed on the premise that many of the difficulties of the other positions are rooted in false universalism. In Stabile's and other equivocallists' analyses, the feminist technophobic and technomaniac responses are seen as missing class analysis and the recognition of other forms of oppression beyond gender. Stanworth writes:

no account of the reproductive technologies can be adequate that does not attend not only to the different relation of women and men to reproduction, but also to the differences among women. All women are subject, to greater or lesser degree, to social pressures to regard motherhood as the fulfillment of their lives; but these pressures have different impacts on women in different circumstances and women respond to them in varying ways, depending upon their social circumstances, their health and their fertility, and according to opportunities and meanings derived from ethnic and social class cultures (1987, 3).

For equivocal feminists who start from the premise that "blanket acceptance or rejection is no substitute for informed and critical appraisal" (1987, 3), each technology must be assessed for its merit, and the plethora of women's reproductive experiences and choices taken into account. First and foremost, equivocal feminists would argue, women must engage themselves with techno-science, and its difficult debates, and not avoid it out of hand (Stanworth and Rose in Stanworth 1987). This includes a recognition that NRT is used by some women, and not by others for many different reasons and under innumerable different circumstances; and that therefore, there is no one theoretical framework that can account for and regulate all women's relationships to technology/NRT all of the time.

Instead of a struggle against the technology, such as the resistance feminists exemplify, equivocal feminists realize that NRTs exist, and are being used by women, and must therefore be addressed. Stanworth reframes the terms of feminist debate regarding NRT toward the equivocal approach: "In the feminist critique of reproductive technologies, it is not technology as an '*artificial* invasion of the human body' that is at issue – but whether we can create the political and cultural conditions in which such technologies can be employed by women to shape the experience of reproduction according to their own definitions" (1987, 35).

Equivocal feminists deal with the here-and-now, the present material conditions of reproductive practice when assessing NRTs. This includes the actual technologies that are being used, and the actual women who are using them. Although much theory and talk about reproductive technology inspires science fiction narrative (and vice versa), Rose (Stanworth: 1987) asks feminists to take a cool-headed approach to the fantasy elements of the NRTs. Like the techno-determinists above, she argues that it is important for feminists to concern themselves with the technologies that are a part of women's lives, and those likely to be developed rather than ascribing more power to technology than it has. "...[I]t is important that we distinguish between those technologies of mainly ideological significance which serve to control through moral panic and those grounded in scientific and technological possibility" (1987, 159). Rose makes a case for

discussing the oppressive potential of current NRTs, rather than hypothesizing grandiose risks of future technologies. She argues that the greatest threats are the ones being posed by extant NRTs, not the idealized chimeras often used to support the resistance position; and, albeit in a very different way, fuel the dreams of embracing feminists. For example she notes that genetic screening and gene therapy present greater and more immediate concerns for women right now, yet ectogenesis, cloning and male maternity are prospects that capture a disproportionate amount of attention in popular and political discourse.

Equivocalists recognize that some women are using NRTs, and seek to address their concerns. For example, in contrast to the technophobes, equivocalists legitimize the voices and concerns of infertile women, whose choices and opinions, they believe, are irreducible to the symptoms of social inequalities (as the resistance feminists would have it). For example, Petchesky asks: “Are lesbians to be told that wanting their ‘own biological children’ generated through their own bodies is somehow wrong for them but not for fertile heterosexual couples?” (Stanworth 1987, 77). In the journal *Trouble and Strife*, Pfiffer, as an infertile woman, responded to the proposals in FINRRAGE¹⁶’s *Test-Tube Women*, objecting to “the advocacy of totalitarian policies because they are based on theory, rather than real experience” (quoted in Lublin 1998, 68). Furthermore, infertile women – who are the main targets of the NRTs were, she believed, characterized as weak, “desperate, coerced, or prey to false consciousness” (quoted in Lublin 1998, 68). Inspired by Pfiffer’s response, later Berer agreed in the same publication with Pfiffer’s account. As Pfiffer and Berer exemplify, the false universalizing notion of the “natural” woman that lies at the foundation of the technophobic position, is dismissive of those women who wish to use the technology and is thus engaged in the practice of hegemonic normativity.

Above all, solutions to the dilemmas presented by NRT to women, must be materially grounded in the diversity of women’s lives, which is to say they must transcend patriarchal dualistic categories. To illustrate, in place of technophobia and technomania, Stabile proposes “technopragsmatism that can expose the borders that continue to exclude, condemn, and execute” (1994, 94). Furthermore, she argues, there must be an insistence on the “bio-social” character of both *pregnancy* and mothering. Not only mothering, but pregnancy as well. “Although feminists must insist that pregnancy is not necessarily synonymous with mothering, they must also insist that both are ‘biosocial’ experiences –that pregnancy, like mothering occurs within a specific social, economic, cultural, and historical environment and that the experience of pregnancy, as such, is structured by social relations” (94). She goes on to add that: “A contextualization of pregnancy that functioned in this way would further allow feminists to argue coherently for prenatal care and day care – for supports for women who ‘choose’ to mother – at the same time that they argued for abortion rights” (94). Stabile’s proposal is trans-dualistic in its attempt to convince one of the falsity of the biological and social distinction when it comes to what is most considered “natural”: human reproduction, pregnancy, childbirth. A similar sentiment is expressed when Stanworth argues that the concept of “natural” that is held up as the guide for “good” childbirth in the technophobic account, is rendered meaningless once it is recognized that it is erroneous to place sex/reproduction on one or the other sides of a biology/society distinction that is itself false and irrelevant (1987, 34).

¹⁶ The Feminist International Network of Resistance to Reproductive and Genetic Engineering.

Lublin performs a similar boundary crossing through her proposed “praxis feminism,” which is best represented through materialist feminisms such as those espoused by Petchesky, MacKinnon and Colker. This praxis feminism blends theory and practice, and marries the best of the technophilic and technophobic positions they interrogate. Lublin defines it thus: “Praxis feminism refers to a type of feminist methodology that combines respect for consistent philosophy and the reality of women’s situation: theory and practice” (1998, 119). She goes on to describe materialist feminism as a praxis feminism on the basis of its ability to “bridge[d] the supposed gap” (1998, 118) between, for example, sameness/difference and essentialist/social constructionist – that plague feminist theory. “Because materialist feminisms accept the diversity that characterizes women and, yet, create a transcendent theory of gender oppression and liberation, materialist feminisms are forms of praxis feminism” (1998, 119). Like Stable and other equivocal feminists, Lublin emphasizes the importance of transcending the biological/social boundary to progressive reproductive change for women.

Because equivocal feminists, by definition, reject sweeping judgments about *either* the emancipatory *or* oppressive nature of technology and female sexuality/reproduction, they believe each NRT must be assessed individually. Therefore, equivocalists must come up with a way to evaluate the possible harms and/or benefits a given technology presents to women and their families in specific circumstances. Lublin sums it nicely: “Although a comprehensive feminist framework is needed, it should be a set of standards against which particular technologies can be measured. Accepting or denying the mere idea of technology is as unrealistic as treating women as a ubiquitous class” (1998, 55/6). Eichler provides just such a list¹⁷ in “Some Minimal Principles Concerning The New Reproductive Technologies” (Overall 1989, 226). As the feminist leader of this lobby group, she describes how “the Canadian Coalition for a Royal Commission” came to be in the spring of 1987, and how it authored the list she enumerates in an effort to establish some guidelines for the NRTs in the absence of federal legislation. Each of the eight principles reflects an equivocal, feminist, middle ground position between absolute rejection and unconditional acceptance of NRTs. The first item is quintessential: “1. *Each reproductive technology needs to be evaluated separately with respect to its overall social desirability*” (Overall 1989, 227). She provides the example of sex-preselection techniques, arguing that contrary to popular opinion, there are indeed situations where such procedures would be “desirable” such as “if the gametes of a couple carried a genetic illness that appears in one sex but not in the other” (1989, 227).

Much has happened since Eichler’s article in the way of regulating and governing new reproductive technology. The Royal Commission on NRTs (RC on NRTs) was established in 1989 and, after considerable conflict and controversy, completed a lengthy report entitled “Proceed With Caution” in 1993. It contains elements of an equivocal position on NRTs in that it gives voice to more than one position; however, the intense controversy surrounding the administration, methodology and chairpersonship render suspect its putative feminist and egalitarian character.¹⁸ In brief, incommensurable conflicts between commissioners and the chair led to the unprecedented firing of 4

¹⁷ Lublin (1998) builds on this list in chapter 7.

¹⁸ For more on the controversy see McTeer 2003, Basen et al. 1993 Part 3, Burfoot 1995, Valverde & Weir 1997 and Scala 2002.

Commissioners, and the RC's recommendations and practices were subsequently criticized and rejected by prominent feminist and social science organizations, such as the National Action Committee on the Status of Women (NAC), and the Social Science Federation of Canada. Assessments about the nature of the conflict vary, but most are linked to the manner in which the chair, Patricia Baird, conducted the research and administration. Many feminists argue Baird's "autocratic" (Valverde & Weir 1997) research and management style, in combination with her expertise in genetic epidemiology resulted in a privileging of the techno-medical and commercial interest, to the detriment of all others. Some members of the research staff "focused on personality conflicts among Commissioners arising from the political process of choosing the Chairperson" (Scala 2002, 167). Still others criticized its liberal framework and rhetorical appropriation of feminist terms. Annette Burfoot (1995), for example, criticized the report for appropriating feminist "concerns" while denying "their political origins" (1995, 500) which is perhaps tied to her observation that "[t]he only political approach evident in the Report is liberal, especially in regard to choice..." (501). In likelihood, the truth is a combination of the varying perspectives. Despite its difficult origins, I analyze the appropriately titled *Proceed With Care* in terms of its equivocal position on the NRTs, because it provides an official framework by which to evaluate each technology on the basis of its individual and social consequences.

Although indisputably problematic, the RC on NRTs laid the groundwork for public discourse and policy that incorporates a framework in keeping with equivocal feminism as outlined. This is clear in its discourse, its recommendations and in the new legislation based on its recommendations. For example, the inquiry adopted an "ethic of care" approach (as opposed to implicit liberal individualism), and treated the technologies separately and in a way that attempted to "balanc[e] individual and collective interests" (Baird 1996). Finally, its recommendations reflect an attempt to guard against the commodification of reproduction (especially pertinent for women, as individuals and as a class).

Firstly, the RC conducted its inquiry from the starting point that "reproductive technologies are not a monolith" (1996, 163). Also, however dissociated from its feminist base, the Commission did employ an "ethic of care" approach that arguably influenced the new policy. Baird explains the methodology as "a stance that gives priority to the mutual care and connectedness between people and their communities" (1996, 158). More practically, some techniques will need to be banned, and others regulated since: "Individual decisions regarding use of reproductive technology (such as in vitro fertilization or prenatal diagnosis) may be personally beneficial, yet have undesirable collective consequences" (1996 156). Perhaps the most prominent recommendation of the commission was for the establishment of an independent regulatory body. Furthermore, the royal commissions mandate which includes, "balancing individual and collective interests" (which can be understood in my analysis as individual women's needs versus women-as-a-group's needs) is employed by banning those technologies deemed threatening to the well-being and "dignity" of persons such as cloning and ectogenesis (supporting an embryo outside women's wombs), while allowing for the regulated use of in vitro fertilization and sex-selection for sex-linked genetic diseases. Even though the criterion by which any technology may be deemed beneficial or harmful for an individual or community, is far from universally agreed upon, the

recommendations of the commission represent an attempt to address the concerns of the majority of Canadians, if not the majority of feminists.

Recently, the Canadian government passed a law to regulate the NRTs that may be traced back to the Commission's recommendations. In a recent Health Canada news release, Minister Pettigrew recognized the Commission's recommendations as "fundamental in arriving at the current legislation." The new law "An Act Respecting Assisted Human Reproduction and Related Research" implements all of the major recommendations of the RC, including the banning of ectogenesis, cloning and the sale of gametes, the regulation of surrogacy arrangements, as well as the establishment of the Assisted Human Reproductive Agency of Canada.

Ultimately, for equivocal feminists, women's control of their reproduction involves the ability to choose, within reason, how to govern their reproduction; this includes using technologies which provide options for individual women, and are not harmful to the social whole. It also involves regulating those which could be dangerous and banning others outright. At the same time, they recognize the socio-economic and political dimensions of NRTs and call for social transformations of inequitable circumstances that ensure that not all women will experience the technology as beneficial. What distinguishes the equivocal attempts at regulation from the resistance feminists, then, is that they allow for the assessment of technologies individually, rather than calling for roundhouse moratoriums such as FINRRAGE's and NAC's briefs illustrate. The RC's recommendations, recently made law, represent the equivocal feminist position on NRTs in that they eschew either a wholesale embrace of or resistance to the technologies, promoting an approach that both prohibits and regulates certain technologies based on a liberal reading of an ethics of care.

The intent of this paper was to explore the different forms of feminist discourse that have emerged in response to NRTs, which represent the disembodiment of reproductive processes, as well as analyzing the notion of liberation which underlies each. Having identified three major categories of feminist response to NRT: resistance feminism, embracing feminism and equivocal feminism, I have evaluated each on the basis of its ability to transcend patriarchal dualism in various guises, i.e. it became clear that each position was responding to the man/technology over woman/nature value dualism at the foundation of western liberal societies. Both the embracing feminists and the resistance feminists re-asserted patriarchal dualism, and an essentialized notion of woman associated with "nature" on the basis of her reproductive functions. They differed in their responses with the resisters celebrating women's reproduction and opposing the technologies as patriarchal tools, usurping women's control over their own bodies. For them, women's reproductive control and autonomy – as a collective – justified the subordination of individual women's choices to use NRTs. On the other hand, the embracers, rooted in Firestone's somatophobic embrace of reproductive technology, welcomed NRTs to help women overcome the limits of their natural bodies, thereby granting them control through greater choice. Finally, equivocal feminists, as the name suggests, incorporate elements of both the embracing and resisting feminists responses, presenting an alternative view of women's reproductive control as requiring choice, but guided by certain feminist principles. As we've seen with the conflict-ridden Royal Commission on NRTs, there is no simple formula for deciding upon which (and whose) principles decide the "feminist" criterion by which to judge which NRTs are

acceptable, and which not. In the final analysis, proceeding “with care” may be too weak an order to advance feminist causes which, although irreducibly diverse, remain nonetheless overlapping because of shared biosocial corporeality. The future of feminism may depend on identifying the sites of the overlap, as we assess the changes in material, social and ideational relations of reproduction wrought by new reproductive technologies.

Bibliography

- Arditti, Rita, Renate Duelli Klein and Shelley Minden (Eds.) *Test-Tube Women: What future for motherhood?* UK: Pandora Press, 1989.
- Atwood, Margaret. *The Handmaid's Tale*. Toronto: Seal Books, 1986.
- Baird, Patricia. “New Reproductive Technologies: The Canadian Perspective in *Women's Health Issues*, V.6, No. 3, May/June 1996. 156-165.
- Barr, Marleen S. *Lost In Space: Probing Feminist Science Fiction and Beyond*. USA: The University of North Carolina Press, 1993.
- Basen, Gwynne, Margrit Eichler and Abby Lippman, Eds. *Misconceptions: The Social Construction of Choice and the New Reproductive and Genetic Technologies*. V1 Ontario: Voyageur Publishing, 1993.
- Basen, Gwynne, Margrit Eichler and Abby Lippman, Eds. *Misconceptions: The Social Construction of Choice and the New Reproductive and Genetic Technologies*, V2. Ontario: Voyageur Publishing, 1994.
- Berer, Marge. “Breeding Conspiracies: Feminism and the New Reproductive Technologies.” *Trouble and Strife* 9 (Summer 1986): 29-35.
- Bessner, Ronda. “State Intervention in Pregnancy” in *Misconceptions*. V 2. Eds.
- Braidotti, Rosi. “Cyberfeminism with a difference.”
http://www.let.uu.nl/womens_studies/rosi/cyberfem.htm. Accessed 9/16/03.
- Brayton, Jennifer. “Cyberfeminism as New Theory.” <http://www.unb.ca/web/PAR-L/win/cyberfem.htm>. Accessed 9/17/03.
- Burfoot, Annette. “In-Appropriation---A Critique of *Proceed With Care*: Final Report of the royal Commission on New Reproductive Technologies. *Women's Studies International forum*, V. 18, No. 4. 1995, 499-506.
- Canada. Royal Commission on New Reproductive Technologies. *Proceed With Care: Final Report*. 2 vols. Ottawa: Canada Communications Group --- Publishing, 1993.

- Corea, Gena. *The Mother Machine: Reproductive Technologies from Artificial Insemination to Artificial Wombs*. New York: Harper and Row Publishers, 1985.
- Diamond, Irene. *Fertile Ground: Women, Earth, And the Limits of Control*. Boston: Beacon Press, 1994.
- Fine, M. & Asch, A. (Eds.) *Women with Disabilities: essays in psychology, culture, and politics*. Philadelphia: Temple University Press, 1988.
- Finger, A. "Claiming all of our bodies: reproductive rights and disability", in R. Arditti, R.D. Klein & S. Minden (Eds.) *Test-Tube Women: what future for motherhood?* London: Pandora Press, 1984.
- *Past Due: a story of disability, pregnancy and birth*. Seattle: Seal Press, 1990.
- Firestone, Shulamith. *The Dialectic of Sex: The Case for Feminist Revolution*. USA: Quill William Morrow, 1970.
- Gamble, Susan. Editor of *The Routledge Critical Dictionary of Feminism and Postfeminism*. New York: Routledge, 2000.
- Ginsberg, Faye D. and Rayna Rapp. Eds. *Conceiving The New World Order: The global politics of reproduction*. USA: University of California Press, 1995.
- Greer, Germaine. *The Whole Woman*. Toronto: Doubleday, 1999.
- Haraway, Donna. *Simians, Cyborgs, and Women: The Reinvention of Nature*. USA: Routledge, 1991.
- "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century" in *Simians, Cyborgs, and Women: The Reinvention of Nature*. USA: Routledge, 1991.
- Hartouni, Valerie. *Cultural conceptions: On Reproductive Technologies + The Remaking of Life*. Minneapolis: University of Minnesota Press, 1997, p.p. 381-399.
- Health Canada News Release. Assisted Human Reproduction legislation receives approval of Senate. Accessed 3/20/04. www.hc-sc.ca/english/media/releases/2004/2004_10.htm
- Kallianes, Virginia & Rubinfeld, Phyllis. "Disabled Women and Reproductive Rights" in *Disability & Society*, V. 12, No. 2, 1997, 203-221.
- Kaplan, Ann E. and Susan Squier (Eds.) *Playing Dolly: Technocultural Formations, Fantasies, and Fictions of Assisted Reproduction*. USA: Rutgers University Press, 1999.

- Kaplan, D. "Disability rights perspectives on reproductive technologies and public policy" in N. Taub & S. Cohen (Eds.) *Reproductive Laws for the 1990s: a briefing handbook*. New Brunswick: Rutgers University, 1988.
- Katz-Rothman, Barbara. "The meanings of choice in reproductive technology" in Rita Arditti, Renate Duelli Klein and Shelley Minden (eds), *Test-Tube Women. What future for motherhood?* London: Pandora Press, 1984.
- Klosko, George and Margaret G. Klosko. *The Struggle for Women's Rights: Theoretical & Historical Sources*. New Jersey: Prentice Hall, 1999.
- Lefanu, Sarah. *In the Chinks of the World Machine: Feminism and Science Fiction*. London: The Women's Press, 1988.
- Lie, Merete. "Science as Father? Sex and Gender in the Age of Reproductive Technologies" in *The European Journal of Women's Studies*. V 9 (4): Sage. 2002.
- Lublin, Nancy. *Pandora's Box: Feminism Confronts Reproductive Technology*. USA: Rowman and Littlefield Publishers, Inc. 1998.
- Matthews, Gwyneth F. *Voices From the Shadows: Women with Disabilities Speak Out*. Toronto: The Women's Press, 1983.
- McTeer, Maureen. *In My Own Name: A Memoir*. Canada: Random House, 2003.
- Merchant, Carolyn. *The Death of Nature*. San Francisco: Harper and Row, 1980.
- Mies, Maria. "'Why Do We Need All This?' A Call Against Genetic Engineering and Reproductive Technology" in *Women's Studies International Forum*. UK: Vol. 8, No. 6. pp. 553-560, 1985.
- Mies, Maria and Vandana Shiva. *Ecofeminism*. USA. Zed Books, 1993.
- Mitchell, Lisa M. *Baby's first picture: Ultrasound and the Politics of Fetal Subjects*. TO: University of Toronto Press, 2001.
- Molyneux, Maxine and Deborah Lynn Steinberg. "Mies and Shiva's ECOFEMINISM: a new testament?" in *Feminist Review*, No. 49, Spring 1995, p.p. 86-107.
- Moore, Pamela L. "Selling Reproduction" in *Playing Dolly: Technocultural Formations, Fantasies, and Fictions of Assisted Reproduction*. Eds. E. Ann Kaplan and Susan Squier. USA: Rutgers University Press, 1999.
- Overall, Christine. (Ed.) *The Future of Human Reproduction*. Toronto: The Women's Press, 1989.

Petchesky, Rosalind Pollack. "Reproductive Freedom: Beyond 'a woman's right to choose.'" *Signs – The Journal of Women in Culture and Society*, (Summer 1980) 5, 661-685.

----- "Foetal Images: the Power of Visual Culture in the Politics of Reproduction" in *Reproductive Technologies: Gender, Motherhood and Medicine*. Ed. Michelle Stanworth, US: University of Minnesota Press, 1987.

----- "The body as Property: A Feminist Re-vision" in Ginsburg, Faye D and Rayna Rapp (Eds.) *Conceiving The New World Order: The Global Politics of Reproduction*. USA: University of California, 1995.

Proceed With Care: Final Report of the Royal Commission on New Reproductive Technologies. Canada, Minister of Government Services Canada, 1993. Volumes? Esp. Part III.

Pfeffer, Naomi. "Not so New Technologies." *Trouble and Strife* 5 (Spring 1985): 46-50.

Piercy, Marge. *Woman on the Edge of Time*. USA: Ballantine Books, 1976.

Plant, Sadie. "The Future Looms: Weaving Women and Cybernetics" in Wolmark, Jenny. editor of *Cybersexualities: A Reader on Feminist Theory, Cyborgs and Cyberspace*. Edinburgh: Edinburgh University Press, 1999.

Raymond, Janice. *Women as Wombs: Reproductive Technologies and the Battle Over Women's Freedom*. USA: HarperSanFrancisco, 1993.

Rowland, Robyn. *Living Laboratories: Women and Reproductive Technology*. UK: Lime Tree, 1992.

Ruddick, Sara. "Rethinking 'Maternal' Politics" in *The Politics of Motherhood*, Eds. Jetter, Orleck and Taylor. Dartmouth College, 1997.

Sawicki, Jana. *Disciplining Foucault: Feminism, Power and The Body*. New York: Routledge, 1991.

Scala, Francesca. *Experts, Non-Experts and Policy Discourse: A Case Study of the Royal Commission on New Reproductive Technologies*. Ph.D. Dissertation 2002, Carleton University.

Shelley, Mary. *Frankenstein: Or the Modern Prometheus*. UK: Wordsworth Classics, 1999.

Shiva, Vandana. *Biopiracy: The Plunder of Nature and Knowledge*. Toronto: Between the Lines, 1997.

- Spallone, Patricia. *Beyond Conception: The New Politics of Reproduction*. UK: MacMillan Education Ltd., 1989.
- Squier, Susan Merrill. *Babies in Bottles: Twentieth-Century Visions of Reproductive Technology*. New Jersey: Rutgers University Press, 1994.
- Stabile, Carol A. *Feminism and the Technological Fix*. USA: Manchester University Press, 1994.
- Stanworth, Michelle ed of *Reproductive Technologies: Gender, Motherhood and Medicine*. Minneapolis: University of Minnesota Press, 1987.
- Stone, Allucquere Rosanne. "Will the Real Body Please Stand Up? Boundary Stories About Virtual Cultures" in Wolmark, Jenny. editor of *Cybersexualities: A Reader on Feminist Theory, Cyborgs and Cyberspace*. Edinburgh: Edinburgh University Press, 1999
- Stryker, Susan. "Christine Jorgensen's Atom Bomb: *Transsexuality and the Emergence of Postmodernity*", in *Playing Dolly: Technocultural Formations, Fantasies, and Fictions of Assisted Reproduction*. Eds. E. Ann Kaplan and Susan Squier. USA: Rutgers University Press, 1999.
- Valverde, Mariana and Lorna Weir. "Regulating New Reproductive and Genetic Technologies: A Feminist View of Recent Canadian government Initiatives" in *Feminist Studies* 23, No. 2, Summer 1997.
- Vanderwater, Bette. "Meanings and Strategies of Reproductive Control: Current Feminist Approaches to Reproductive Technology." *Issues in Reproductive and Genetic Engineering*, Vol. 5, No. 3, pp. 215-230, 1992.
- Wendell, Susan. "Feminism, Disability and Transcendence of the Body. *Canadian Woman Studies*, V. 13, No. 4. 116-122.
- Woliver, Laura, R. "The Influence of Technology on the Politics of Motherhood: An Overview of the United State." *Women's Studies International Forum*, Vol. 14, No. 5. USA: 1991, p.p. 479-490.
- Wolmark, Jenny. editor of *Cybersexualities: A Reader on Feminist Theory, Cyborgs and Cyberspace*. Edinburgh: Edinburgh University Press, 1999.

