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In the Womb of Utopia:
Feminist Science Fiction, Reproductive Technology, and the Future

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Abstract: This article explores the ways in which reproductive technology is used as a literary trope to enable or embody a desired social order in a utopian setting. It discusses Ursula Le Guin's *The Left Hand of Darkness* (1969) and "Coming of Age in Karhide" (1995), Joanna Russ' *The Female Man* (1975), and Marge Piercy's *Woman on the Edge of Time* (1976). In these American classics of feminist science fiction, reproduction is a key element, and they are rooted in a feminist understanding of power that sees the organization of both reproductive and child-care labor as central to analyses of patriarchy, as well as to any attempts to re-imagine patriarchal structures. The analysis draws on critical kinship studies that see the forming of kinship and families as a form of "cultural technology" and which thus open these relationships to critical examination. It explores how the kind of change reproductive technologies can effect is not a property simply inherent in the technologies themselves. Rather, these medical technologies intersect with and become part of pre-existing cultural technologies of family and gender. Finally, the article addresses the question of how feminist futurities or feminist conceptions of time can be mobilized to enable resistance and change.

Key words: feminist futurity, reproductive technology, feminist science fiction, utopia

Introduction: Reproductive Technologies and Feminist Futures

Assisted reproductive technologies and the practices they make possible such as sperm donation, in vitro fertilization, and surrogacy have become so common in our 21st century lives that they are increasingly seen as "normal." However, as ongoing debates about these practices testify, feminists are still grappling with how these technologies and practices should be understood. How can the relation between technologies, reproductive practices, and social change be conceptualized and, importantly, how can literary texts become resources in such conceptualizations, allowing us to employ their world-making capacities? This article will explore some ways in which representations of reproductive technologies function in literary texts to promote, enable, or embody a desired social order in a utopian setting. It will engage with four utopian texts that have become classics in the feminist science fiction tradition: Ursula Le Guin's *The Left Hand of Darkness* (1969) and the short story set in the same world "Coming of Age in Karhide" (1995), Joanna Russ' *The Female Man* (1975), and Marge Piercy's *Woman on the Edge of Time* (1976).

For the purpose of this article, I use a shorthand definition of a feminist utopia as a text that portrays a society different from the world as we know it and that has in some way resolved or moved beyond central problems of inequality that feminists have identified in our current construction and organization of gender and society. None of the texts discussed here fit the traditional mold of what Erin McKenna calls "the end-state model of utopia" (3); they are not claiming to offer blueprints of perfect societies where change could only mean deterioration. While one could argue that some earlier feminist utopias such as Charlotte Perkins Gilman's *Herland* (1915) do just this, feminist utopian fiction and feminist science fiction (SF) more broadly are generally oriented towards the possibilities of the future as a site of imaginative resistance, and thus typically value process, continuous change, and critical interrogation of the present over attempts at social perfection.[1] They are thus eminently rewarding as texts to think with and through when conceptualizing and exploring possibilities of social change. Furthermore, insisting on the importance of the future as something different than our present constitutes an important gesture of resistance. As science fiction scholar Sheryl Vint notes, our current dominant perception is that "the future is only more of the present" (12); in Zoe Sofia's words the future is "the

1 Feminist utopian narratives are central to reconceptualizations of utopian thinking that we find in works such as Jameson, *Archaeologies of the Future: The Desire Called Utopia and Other Science Fictions;* Moylan, *Demand the Imposisble: Science Fiction and the Utopian Imagination* and *Scraps of the Untainted Sky: Science Fiction, Utopia, Dystopia.* Feminist theorists, philosophers and literary scholars have also engaged specifically in reconceptualizing utopia. Notable examples are Burwell, *Notes on Nowhere: Feminism, Utopian Logic and Social Transformation;* McKenna, *The Task of Utopia: A Pragmatist and Feminist Perspective;* Wagner-Lawlor, *Postmodern Utopias and Feminist Fictions.* I see my own work, here and elsewhere, as sharing much of the foundational claims of these works, varying as they are, as to the importance of imagining and exploring futures as sites of resistance and change.

bound to be of the ideology of progress" (57) that brings about a sense of "the collapse of the future onto the present" (48). To insist on the future as something which is not already here means constructing a space where something radically different can be thought. Given the pervasive presence of reproductive technologies in our lives today — indeed, this is one way in which popular commentary would have us already inhabiting the future — many feminists' evaluation of these technologies' potential for promoting desirable social change is understandably informed by a sense of a "bound to be," connecting assisted reproductive technologies with exploitation and global inequities. This, then, is an important reason for what might seem a counter-intuitive move: to turn to texts written more than forty years ago when engaging with new reproductive technologies. Written just before these technologies became part of our reproductive repertoire, at a time when their possibilities where not yet inscribed in the language of capitalist logics of consumption and commodification, these utopias, I argue, can help feminists frame their responses to assisted reproductive technologies. Engaging with the role that Mary Shelly's *Frankenstein* and Aldous Huxley's *Brave New* World has played in debates on reproductive technologies, Shannon N. Conley shows how SF supports "creative and imaginative capacities for envisioning possible futures" and "serves as a mechanism for engagement with both desirable and undesirable scientific and technological futures" (245). While important, this approach to the roles that SF can play in our understanding of reproductive technologies can become unnecessarily limited. In an article published in 1997, bioethicist Kathy Rudy makes a related argument, turning to two of the texts discussed here: *The Left Hand of Darkness and Woman on the Edge of Time.* She recognizes the importance of feminism's struggle with reproductive technologies and, in line with Conley's position, claims that "[b]y envisioning what tomorrow might be, these novels help us reset the terms of the debate for today" (24). Rudy focuses on how these novels can help move us into a better tomorrow, exploring ideas such as male pregnancy or ectogenesis and what changes the novels suggest we need to make to society for these options to be viable. In contrast, then, I hold that their usefulness does not lie in providing blueprints for feminist uses of reproductive technologies. Rather, as will be explored in what follows, it lies in the specific connections these texts make between utopianism, reproduction, and feminist social change. Thus, my primary interest is not their respective attractiveness or feasibility as feminist worlds, but rather how forms of reproduction help constitute these worlds, how they are, indeed, central to what is utopian about each of these worlds.

The ethical and political implications of reproductive technologies are contested, both in American society at large and among feminists. This can in part be explained by the variety of methods and procedures — such as sperm or egg donation, in-vitro fertilization, or surrogacy — that the term encompasses. However, they primarily elicit such diverse and frequently fraught responses because of

the multiple and contradictory ways in which they intersect with current practices and discourses that help constitute both family and gender. For conservative defenders of family values, technologies such as IVF and insemination can be seen as weapons in the hands of liberals and homosexuals aimed at the nuclear family, but they can also be understood as tools to help women become mothers, and thus as enabling that same nuclear family. Equally conflicting positions can be inhabited by progressive groups, including feminists who tend to be wary of the way in which women's bodies become objects for medical and corporate interests in these reproductive processes. In *Pandora's Box: Feminism Confronts Reproductive Technology (*1988), Nancy Lublin attempts to summarize and categorize feminist responses to reproductive technology, identifying both what she calls "technophilic" and "technophobic" responses, as well as a response based on liberal individualism, which does not engage with the technologies as such. Feminists fundamentally critical of reproductive technologies are so either based on a celebration of the natural and a rejection of technology generally, or because these technologies are seen as inextricably bound in patterns of patriarchal control over women's bodies and inequitable national and global gender, race, and class relations. Since the publication of *Pandora's Box,* there has been a wealth of feminist research on reproductive technologies, particularly in the emerging field of critical kinship studies. Many studies focus specifically on aspects such as consumption and commodification of reproduction in a globally inequitable world, examining for instance infertility tourism, surrogacy factories, and emerging bio-economies.[2] As this research shows, there is good reason to be critical of many of the practices that have been made possible by new reproductive technologies. Even feminists who primarily see the use of these technologies in the context of a desired move away from the hegemony of the nuclear heteronormative family recognize the risks and challenges involved in employing them.[3]

Many commentators in the media seem to assume that the new technologies in and of themselves will change the way reproduction and family are not only understood, but also lived, whether that change is welcome or not. This assumption is often accompanied by a juxtaposition of reproductive technologies with what is posited as natural conception and natural familial practices; we are seen as leaving the natural order behind and moving into technological and futuristic terrain. This understanding is fundamentally flawed in that while the creation of a child is a biological

2 See for instance Scheper-Hughes and Wacquant, eds., *Commodifying Bodies;* Krolokke et al., *Critical Kinship Studies; Pande,* "Commercial Surrogacy in India: Manufacturing a Perfect Mother-Worker." As Rosi Braidotti points out, the feminist position that is most unqualifiedly positive toward reproductive technologies in their current use in the US and Western Europe are neoliberal feminists that do not sufficiently recognize the local and global power imbalances at play (53-4) that the scholarship referred to here illustrates.

3 See for instance Cutas and Chan, eds., *Families Beyond the Nuclear Ideal.* For a good overview of the state of what is often called new kinship studies, which includes an engagement with reproductive technologies, see Bamford, ed., *The Cambridge Handbook of Kinship.*

process, the creation of family is not. Family comes into being through forms of cultural technology that use different social, political, and cultural tools and practices to construct this reality of relatedness. As Carol Singley aptly summarizes feminist anthropologist Marilyn Strathern's argument: "kinship is a hybrid formed of nature and culture, a cultural technology that naturalizes relationships as well as turns natural relations into cultural forms" (6). Cultural technologies can be understood here as the ways in which a society uses discursive and material tools to shape our relations to and understanding of crucial identity categories and processes, making us conceive them, and the roles we play in them, as natural.

As I will explore further in the analysis below, the kind of change reproductive technologies bring with them is thus not a property simply inherent in the technologies themselves. Rather, these medical technologies intersect with and become part of pre-existing cultural technologies of family and gender. These cultural technologies include discursive practices as well as material ones, and the ways in which reproductive technologies enter dominant discourses on family affect the kind of transformative potential they might have, not least because our very understanding of their potential is shaped by these discourses. What Helena Ragoné calls "American kinship ideology" (343) which privileges biological relatedness and emphasizes the naturalness of heterosexual desire for biological offspring has been shown to have enduring power, even among participants in surrogacy procedures, structuring how these participants understand their own actions.[4] As Sarah Franklin observes, "IVF technology is embedded in a naturalized and normalized logic of kinship, parenthood, and reproduction: it is pursued in the hope of alleviating childlessness. It has come to be viewed as normal and natural…" (4). However, as these technologies and practices enter dominant discourses, a process of unsettling takes place. As Franklin argues concerning IVF, its "ambivalence" lies "in its promise of delivering children who are 'just like' other offspring, but through a process of mimicry that is not quite the same as the original process on which it is based. This ambivalence of mimicry lies at the heart of the paradox IVF presents … as both a confirmation of the norms it relies upon and a disruption to their authority and authenticity" (34).

Written during the decade prior to the birth of the first "test-tube baby" in 1978, the novels discussed here imagine the future rather differently from how things have unfolded until the current moment in history. Importantly, their shared engagement with utopian reconceptualization of reproduction insists on a future not already colonized by the present. They all make reproductive technologies strands in the warp of their utopian tapestries and thus provide a rich material

4 See also, for instance, Thompson, "Strategic Naturalizing: Kinship in an Infertility Clinic;" Graham "Choosing Single Motherhood? Single Women Negotiating the Nuclear Family Ideal."

for critical exploration at this point in time. Furthermore, against the backdrop of the discussion above, these novels bring to the fore important ways in which reproductive technologies are by necessity dependent on and become meaningful through the cultural technologies of kinship or family and gender.

The Left Hand of Darkness and "Coming of Age in Karhide:" Heterosexual Reproduction Contained

The Left Hand of Darkness is set on the planet Gethen, in a future or alternate universe where the Ekumen, an egalitarian interstellar organization promoting cooperation and exchange between planets, has just contacted the planet to invite them to join. The population of Gethen are hermaphroditic in the precise meaning of biological reproduction, that is, they each have the reproductive organs and gametes of both male and female and can take on either of these roles in the reproductive process. In the text, they are referred to by the representatives of the Ekumen as ambisexual androgynes, a term used to encompass both reproductive properties and personality. They are also sexually inactive, in a phase known as somer, for most of the month, with a cyclically recurring sexually active male or female phase called kemmer. The same individual can enter kemmer as a man one time and as a woman the next time. Consequently, the same person can be the father of one child and the mother or "parent in the flesh" (83) of another. The first representative of the Ekumen to visit the planet believes that Gethenian physiology is the result of genetic engineering performed by the people that once colonized large parts of space and "seeded" many planets with human life: "It seems likely they were an experiment. The thought is unpleasant. … will anything else explain Gethenian physiology? Accident, possibly: natural selection, hardly." (81). Thus, what is natural to Gethenians could be the result of genetic engineering performed in a long-forgotten past, putting into question the idea of "natural" itself, a recurring theme in all three novels discussed here.

Be it because of evolution or genetic engineering, on Gethen people are sexed – and sexual– only a few days a month. Even if the reproductive system of the people of the planet Gethen is the core novum[5] of *The Left Hand of Darkness,* the focus is not on biological reproduction or even the cultural technologies of family, but on the impact that this mainly asexual life has on identity, psyche, or spirituality. The Ekumen representative speculates on the possibility of the Gethenians being the result of an experiment, wondering if "the experimenters" wanted "to see whether human beings lacking continuous sexual potentiality would remain intelligent and capable of culture," or, if perhaps their aim could have been ending war, based on the hypothesis that "continuous sexual capacity and organized social aggression, neither

5 "Novum" is a term coined by Darko Suvin in his seminal 1979 *Metamorphoses of Science Fiction: On the Poetics and History of a Literary Genre* as a distinguishing characteristic of a science fiction text. It signifies an important way in which the world of the narrative is different from what we recognize as reality.

of which are attributes of any mammal but man, are cause and effect?" (86). Central to the story is the evolving friendship between the second Ekumen representative, Genly Ai, a man, and Gethenian former politician, Estraven. Through their relationship, the novel explores these kinds of questions on a personal level; Genly Ai struggles to understand the spiritual and moral life of the Gethenians, and to accept Estraven as fully human and, thereby, trustworthy. Only when the two of them are isolated in extremely cold weather and dependent upon each other for survival, does he manage to accept "what [he] had always been afraid to see ... that [Estraven] was a woman as well as a man" (210). However, it is not only Genly Ai who struggles to recognize the female aspect of the Gethenians in the novel. Since activities typically coded as female or domestic in the social context in which the book was written are left out of the story, it becomes somewhat too easy to read everyday life on Gethen as exclusively male rather than genderless. The use of the male pronoun to refer to Gethenians and the dominating voice of the surprisingly misogynist Genly Ai combine to further emphasize this effect. Consequently, and despite its iconic status in the feminist SF canon, *The Left Hand of Darkness* has received criticism for not challenging existing gender norms enough. Joanna Russ phrases this critique in a straightforward manner, claiming that the novel "has no women in it at all" (*Feminist Utopias* 80).[6] Rudy understands this critique to be based on a "logic" in which "the principles of feminism are dependent on a firm, stable sense of what it means to be a woman; to destabilize that essence by collapsing both genders into one being essentially harms women" (32). However, Rudy crucially misses the point of the feminist criticism that Russ and many others level. It would be more accurate to say that the text is critiqued for not destabilizing gender identity enough. When characters continuously come across as male and little disruption of the reading habits that support this sense occurs, the psychological and spiritual explorations of the characters as well as the readers occur in a world curiously disembodied, evocative of the philosophical traditions that rely on the ideal of the man of reason.[7]

Most central to the way in which reproduction figures in the novel is the construction of heterosexuality as primary and of

6 See also, for instance, Lefanu, *Feminism and Science Fiction;* C Barrow and D Barrow, "*The Left Hand of Darkness:* Feminism for Men"; Parker Rhodes, "Ursula Le Guin's *The Left Hand of Darkness:* Androgyny and the Feminist Utopia." In "Is Gender Necessary? Redux," 1979, Le Guin discusses feminist criticism of the novel and agrees that it might – and perhaps should – have been more radical. Karolin has engaged with the critique against the novel's portrayal of androgyny more recently, finding that the novel is "simultaneously androcentric and feminist," placing the responsibility on the reader "to resist a gendered reading" (24). My argument here has a different focus, centering on how technologies of reproduction and gender function in the text, rather than on narrative perspective or voice.

7 See for instance Lloyd, *The Man of Reason,* for a feminist exploration and critique of this ideal.

heterosexual reproductive sex as the sine qua non of sexuality. While Rudy somewhat surprisingly wants to read Gethenian androgyny as a precursor to Butler's concept of performativity, the nature of kemmer clearly establishes the body as the foundation of heterosexual identity and that identity as complementary. In the early stages of kemmer, the sex a person assumes is decided by the person who brings him or her into kemmer, often someone further along in the process. The body appears to respond instinctively and inevitably assumes the opposite sex, creating a heterosexual dyad, ready for conception. Sexuality becomes synonymous with heterosexuality and primarily understood as designed for reproductive purposes. While contraceptives are used, the outsider's perspective on Gethenian sexuality emphasizes that this more typically mammalian pattern of only having intercourse during the fertile period means that "the chance of conception is high" which "might have adaptive value" (84). No scenes of sexual intimacy are described, and any kind of sexual expression appears to be contained within a reproductive heterosexual matrix.

When Le Guin returns to Gethen in the short story "Coming of Age in Karhide" (1995), she is, in her own words, now freed from "a damned plot" and able to "see how sex works;" to "finally get into a kemmerhouse" and "really have fun" (*Birthday* ix). *In the story,* she thus somewhat addresses the issues caused by the reproductive heterosexual matrix by delving into the private and intimate sphere which went mostly overlooked in the novel. The story is set in a hearth, a private home where children grow up, and centers on the Gethenian narrator Sov's first visit to a kemmerhouse, the place where people in kemmer go to have sex. The story is told in the first person and in retrospect and thus escapes having to assign Sov a gender through the use of a third person pronoun. As Sov's first kemmer approaches, his/her body becomes strange to him/her: "It did not feel like my body, like me. … My clitopenis was swollen hugely and stuck out from between my labia, and then shrank to nearly nothing, so that it hurt to piss. … Deep in my belly something moved, some monstrous growth. I was utterly ashamed" (8). The first appearance of an emergent sexual body in adolescence is experienced as monstrous, as non-human. The echoes here are interesting in that they simultaneously chart misogynous conceptions of the female body with its uterus as a "monstrous growth" and evoke possible reactions to the hermaphroditic body as monstrous in what could be described as an act of unstable mimicry, as the body briefly inhabits one sex and then the other. However, once Sov enters the kemmerhouse, he/she is brought into kemmer as a woman, temporarily stabilizing the gender identity as intercourse becomes central. Despite the mention of threesomes and lesbian sexual encounters, there is a lingering primacy awarded to heterosexual intercourse. The first lesbian sexual encounter comes across mainly as foreplay and when a man reaches out to Sov, saying "I'd like – Your first – Will you –" (20), their encounter is framed as a fairly traditional loss of virginity. The lesbian encounter at the end of Sov's stay

in the kemmerhouse, thus neatly framing the heterosexual intercourse as the main act, is "drowsy, peaceful, blissful lovemaking" (21). While complemented by other sexual activities, heterosexuality remains central and, importantly, fundamentally connected to reproduction. Furthermore, outside of the confines of the kemmerhouse, the sexual body appears threatening and disruptive.

Just as sexuality is based on heterosexual reproduction, parenting is intimately connected to gestation, for childbearing is central to the role of parent. The importance of a child being "of his flesh born" (68) is highly stressed, and, while the expression is challenging in its use of the male pronoun, it simultaneously reinforces the idea of parenthood as biologically based in the process of gestation. The short story gives a more sustained description of life in the hearth, and thus of the cultural technologies of family, than the novel does. Nevertheless, just as with the portrayal of sexuality in the two texts, there is a form of narrative rupture. *The Left Hand of Darkness* assumes the couple as the fundamental unit of both sex and family, emphasizing the prevalence of the custom of vowing kemmering as corresponding to marriage — although without the legal implications. The few scenes set in hearths, the place where an extended family live together, typically focus on the head of the hearth as a person of power, related to the political concerns of the plot. "Coming of Age in Karhide," on the other hand, portrays the communal life of an extended family, including family and work life in the crèche or a furniture shop, respectively, but neither politics, public life, nor couples who have vowed kemmering. In the short story, the hearth comes across as a world of mothers and grandmothers where "getters" (4), as fathers are called, are mainly absent. The absence of getters or long-term partners is explained as a trait of Sov's family, the Thades, who "never keep kemmer" (4). These narrative choices in combination with the continuous use of both mother and grandmother to describe the parent or grandparent "in the flesh" support a reading of parenthood as motherhood and motherhood as predicated on gestation. As if to further underline these connections and separate the getter from maternal roles, Sov only learns who his/her father is when Sov is brought into kemmer as a woman by the "head cook of [Sov's] Hearth, Karrid Arrange" who s/he remembers as "singling [him/her] out in a joking, challenging way, tossing me some delicacy" (18). Karrid presses his naked body against Sov, gives a "hard laugh" when others around them seem concerned and says, "I won't hurt my own get, will I?" (19). Disconnecting Karrid from any parenting role, even though he has been present in the hearth, and then casting him as the male who makes Sov a woman, introduce disruptive notes if this is read as a mimicry of what we conceive of as natural fatherhood. Nonetheless, it simultaneously leaves motherhood un-mimicked, so to speak, true to (its) supposed nature.

Together, the two texts underscore that if the connections between biological sex, heterosexual intercourse, and reproduction are left discursively intact, the biological novum

of an ambisexual people does not in itself cancel out or seriously challenge dominant understandings of reproduction and family. Rather, sexuality and reproduction are put in a narrative parenthesis, separated from the public world, and contained in terms of time and space. The potential of radical changes to the cultural technologies of gender and family in a world where anybody can be a mother and the same person can be both a mother and a father remains largely unexplored. Whereas in the novel, where family is not at the heart of the narrative, mothers and children are virtually non-existent, in the short story, where childhood and adolescence are central, fathers suffer the same fate.

The Female Man: Motherhood Demystified

If the *Left Hand of Darkness* constructs a world where sex, sexuality and reproduction are put in narrative parenthesis, Joanna Russ' *The Female Man* employs the idea of parallel universes to create a utopia where both sexuality and reproduction are demystified but also narratively decentered. This utopia, the all-female Whileaway of the protagonist Janet, is one of four alternative worlds explored in the novel. In each of these worlds, we follow the story of a female protagonist, which, put together, play out four different versions of the same woman. In Whileaway, the men were all killed by a plague several thousand years ago, a fact we are presented with, but later asked to question: did the women perhaps exterminate them? The usefulness and desirability — theoretical or practical — of feminist separatist utopias have been much discussed, primarily as part of debates surrounding radical feminism.[8] While such a vast debate is out of the scope of my analysis, Rudy's critical remarks on separatist utopias and their limitations for reconceptualizing reproductive technologies must be noted. As she has pointed out, unlike *The Left Hand of Darkness* and *Woman on the Edge of Time,* separatist utopias do not offer solutions that include men and thus do not "show us alternative methods of reproduction wherein women's bodies are not the only places babies can grow" (25). While babies in Russ' Whileaway do grow in women's bodies, I read her novel as contributing to feminist understandings of reproductive technologies as well as cultural technologies of gender and family in important ways.

In Whileaway, the all-female population necessitates a reproductive novum. However, this novum is not a narrative focus of *The Female Man* and to the extent that reproduction is discussed at all it is the cultural technologies of gender and family that are primarily engaged. Marriage remains but "[n]o Whileawayan marries monogamously … there is no legal arrangement" (53) and families are larger units created by choice: "By twenty-five [the typical Whileawayan] has entered a family…

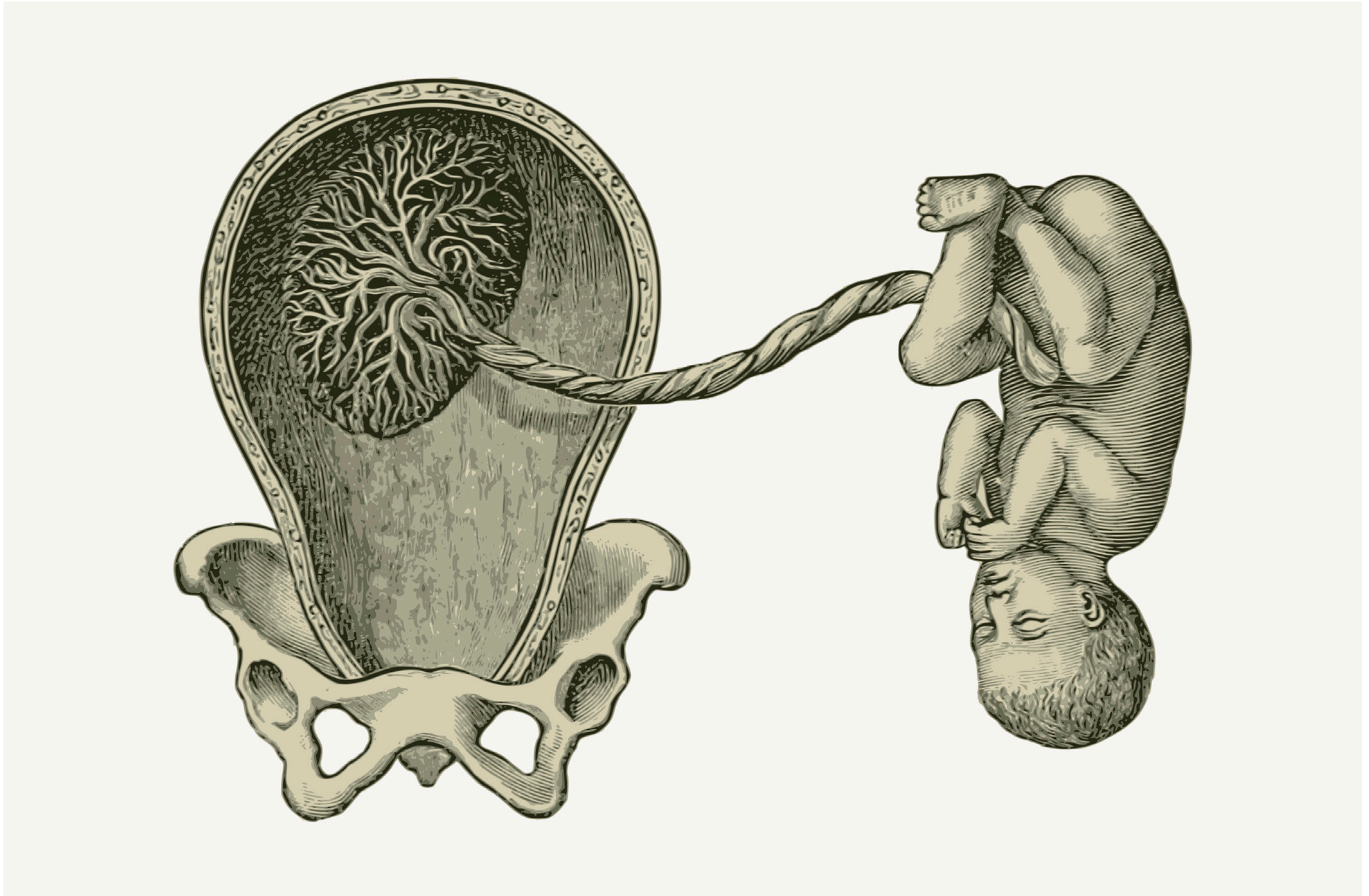
8 Some examples are: Fitting, "Reconsiderations of the Separatist Paradigm in Recent Feminist Science Fiction;" Crowder, "Separatism and Feminist Utopian Fiction;" Relf, "Women in Retreat: The Politics of Separatism in Women's Literary Utopias;" Jones and Webster Goodwin, eds. *Feminism, Utopia, and Narrative;* Rhodes, "Becoming Utopias: Toward a Queer Rhetoric of Instantiation;" Cortiel, *Demand My Writing;* Russ, "Recent Feminist Utopias."

Her family probably consists of twenty to thirty persons, ranging in age from her own to the early fifties" (52). They also re-form: "Families tend to age the way people do; thus new groupings are formed again in old age" (52). The family primarily functions as a system for emotional and practical support; it is not a legal entity.

In contrast to Le Guin's Gethen, Whileawayan sexuality is described as part of everyday life and surrounded by few taboos, except for too great an age difference, and sexual relations "be[gin] at puberty" and "continue both inside the family and outside it, but mostly outside it" (52). Rather than equating sexuality with the act of sex for reproductive purposes, Whileawayan reproduction is disconnected from intercourse and involves the merging of two ova followed by gestation in the uterus of one of the women who provided the ova. Even though this process does not receive much narrative attention, I would argue that the shape this reproductive novum takes embodies, or gives physical reality to, the utopian qualities of Whileaway. The most common form of reproduction in all-female utopias is parthenogenesis. As in Gilman's early and influential *Herland,* this form of reproduction that only involves genetic material from one individual often signals asexuality and carries a potential symbolic value of uniformity and stasis.[9] In *The Female Man,* the reproductive duality of egg and sperm, symbolically as well as factually underpinning heterosexual technologies of reproduction and gender, is replaced by a process that still involves the genetic material from two people but which does not place duality at its center. Instead, the merging of ova takes the difference of individuals as its starting point, thus emphasizing individuality, a trait which is also one of the most striking aspects of Whileawayans.

In both Le Guin's Gethen and Russ' Whileaway, the process of gestation is left mainly unaltered and narratively unexplored. Moreover, both texts emphasize the importance of the parent carrying the child. While each child in Whileaway has two mothers instead of a mother and a getter as in "Coming of Age in Karhide," the mothers are differentiated as "biological mother (the 'body-mother')" and "the non-bearing parent … ('other mother')" (49). Descriptions of motherhood mainly focus on the body-mother: "A family of thirty persons may have as many as four mother-and-child pairs in the common nursery at one time" (50). Motherhood, no matter how differently conceived, seems to rest primarily with the person carrying the child. However, while I see Gethenian motherhood as mainly in line with heterosexual cultural technologies of gender and family, Whileawayan motherhood is fundamentally rescripted. Moreover, Whileawayan cultural technologies of gender and family are central to Russ' feminist project and brought into focus mainly through the dystopian reality of motherhood in the other alternative worlds.

9 As I argue elsewhere, there are other ways of conceptualizing parthenogenesis, as Nicola Griffith does in *Ammonite* (1992).



Medical illustration of a fetus, umbilical cord , womb, and placenta. Illustrations of this kind suggest a simultaneous separation and connection of fetus and womb.

The novel juxtaposes Whileawayan family life with family life in the world of the character Joanna, who inhabits the alternative reality that is closest to the real US of the late 1960s and early 1970s when the novel was written. In doing so, Russ emphasizes the dystopian nature of her contemporary American ideologies of motherhood. In a hilarious TV interview with world-travelling Janet, a male interviewer attempts to make her admit that the absence of men on Whileaway is a problem, a deficiency that needs to be rectified. In the process, he highlights his inability to recognize the reality of these radically different cultural technologies. While the medical technology of merging ova is dismissed as unimportant with a passing admission of Whileaway's superiority in that area, the interviewer struggles to accept, or even recognize, the disconnection of elements that in his understanding are necessarily fused. He refuses to apply the term family to Whileawayan kinship constellations: "we know you form what you call marriages ... that you even have 'tribes' – I'm calling them what Sir --------- calls them; I know the translation isn't perfect" (11). What makes them disqualify as families is the absence of men, or more specifically, the

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absence of heterosexual romantic love as the basis of the unit. Without this basis, family cannot exist. As the interviewer's struggle to recognize the relationships of Whileaway as real suggests, while technologies of reproduction might challenge ideas about gender, it is the removal of certain cultural technologies of gender and family, including practices of childrearing, from the heterosexual economy that poses the most far-reaching challenge. As much of the rest of the novel demonstrates, a central aspect of these heterosexual gender technologies is an ideal of motherhood that makes it incompatible with personhood.

As Russ herself has stated, and as critics such as Jeanne Cortiel and Kathleen Spencer have explored, a central trope in her writing is "the rescue of the female child" (Russ, *Feminist Utopias* 79) by an older woman. Cortiel's reading highlights the ways in which these "rescue operations" are never "unequivocally successful" and that to the extent that they lead to a "utopian space" this space should be understood in terms of "a process rather than a stable state of being" (139). As I have suggested elsewhere, the relationship between girl and woman itself can usefully be seen as constituting the utopian space (2005, 130). Furthermore, the girl is typically rescued not just from patriarchy in general, but from the crippling life that the construction of motherhood as the primary or even sole meaning of a woman's life entails. In *The Female Man,* the girl rescued by Janet is Laura, a teenager in Joanna's reality. Laura is furiously attempting to carve out a sense of self in a world that refuses to recognize her as anything else than a potential wife and mother. "Whenever I act like a human being, they say, ''What are you getting upset about?' … of course you're brilliant. They say: of course you'll get a Ph.D. and then sacrifice it to have babies" (66). While Laura resists the discourse of pregnancy and motherhood as "that mystically-wonderful-experience-which-no-man-can-know crap" (67), she struggles to find an alternative through which she can formulate another future for herself. The technologies of family on Whileaway function to make it precisely such an alternative, a space in which motherhood is not only compatible with personhood, but where it has ceased to be a defining feature of female identity. Most importantly, motherhood is stripped of its mystical aura of fulfillment and completeness. Indeed, the absence of any rhetoric of sacrifice or selfless maternal love underlines the discursive strangeness of Whileawayan motherhood. In Russ' characteristically tongue-in-cheek style, motherhood on Whileaway is described as "both… fun and profit, pleasure and contemplation… a slowing down of life, an opportunity to pursue whatever interests the women have been forced to neglect previously…" (49), and the common nursery means that "[f]ood, cleanliness, and shelter are not the mother's business" (50). The narrator then evokes this discourse of a self-less, almost holy motherhood: "Whileawayans say with a straight face that she must be free to attend to the child's 'finer spiritual needs'" only to immediately refute it: "Then they go off by themselves and roar. The truth is they don't want to give up the leisure" (50).

Not only do the cultural technologies of motherhood make possible other ways of being a mother while the child is young. Motherhood is also limited in time and in terms of responsibility for raising a child, seems to end at around the age of five when the children are sent to school and then from there out into the world, first to move around in groups of exploring adolescents, then going through several stages of apprenticeships. These children, we are made to understand, are highly intelligent (genetically engineered to be so) and fully capable from a very young age. While they may choose to return to their childhood home, "neither Mother may be there; people are busy; people are travelling; there's always work," but children in this stage "have the right of food and lodging wherever they go" (50). The communal responsibility for all children is a central characteristic of these cultural technologies of family and while the re-inscription of not only motherhood but also childhood can read as negligence or abandonment to us, I would argue that for Russ the freedom this entails is as much freedom for the child as it is for the mother. The sacrifice of selfless motherhood is also a sacrifice of the independence of daughters, and the disconnection of biologically based, permanent familial ties is crucial for the rescue of the female child to potentially succeed.

In the dystopian world of Jael, there is a war between gender-segregated Womanland and Manland. Here, childbearing is a woman's business, even though conception is not through intercourse, and babies have become a business, for males are sold to Manland. There is little information on how the girls of Womanland are raised, but the brief descriptions of Manland practices delineate a twisted version of a Whileawayan model: they "keep them in city nurseries until they're five, then out into the country training ground, with the gasping little misfits buried in baby cemeteries along the way" (167). The training grounds are then intended to make them "real-men" (167), with those who fail to live up to these standards of masculinity undergoing sex-change surgery to function as women in the heterosexual logic Manland insists on maintaining. Thus, even in Manland, "child care is woman's business" (170). If Jael's violent reality is in some ways a twisted mirror image of utopian Whileaway, it thus also draws on current dominant discourses of heterosexually framed cultural, but also medical, technologies of gender and family. It is thus noteworthy that neither Janet nor Jeannine, the women from worlds closer to the present of the author, have children or seem to desire them. Motherhood in *The Female Man,* then, appears to be an option for only one of the four women protagonists, one of the four possible versions of the same woman: Janet in utopian Whileaway where it is possible to be both fully human, and a mother too, not simply because reproduction is no longer a heterosexual process, but more importantly, because the cultural technologies of gender and family of the US of the 1960s and 1970s—cultural technologies that still resonate in Western discourses on family—have been rendered obsolete and meaningless.

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***Woman on the Edge of Time:* Reproductive Technologies as Means of Liberation**

Thoroughly changing both reproductive and cultural technologies of family and gender is explicitly presented as the direct means to creating an equal society in Marge Piercy's *Woman on the Edge of Time.* To achieve such a shift, the novel employs ectogenesis as its central novum. As scholars such as Joan Haran and Lucy Sargisson have noted, Piercy's novel enters into close dialogue with Shulamith Firestone's *The Dialectic of Sex* (1970), in which Firestone posits the sexual division of reproductive labor as the basis for all sexual (and other) oppression. The "seizure of control of *reproduction* … as well as all the social institutions of child-bearing and child-rearing [italics in original]" is necessary for a future in which "the sex distinction *itself* [italics in original]" is eliminated (11). In the village Mattapoisett in the year 2137, babies are gestated in artificial wombs, in an environment that is "more like a big aquarium than a lab," and that includes music, the sound of voices and heartbeats, and tanks "painted over with eels and water lilies" (94). Importantly, the environment in which ectogenesis takes place is framed to come across as both reflecting an emotional investment, a sense of care, and as evoking nature rather than science or technology. The reference to a laboratory evokes as its other Huxley's well-known descriptions of ectogenesis in *Brave New World,* where the "Fertilizing Room" is lit by "harsh thin light … finding only the … bleakly shining porcelain of the laboratory" and the workers are dressed in white, "their hands gloved with a pale corpse-coloured rubber" (1). Other critics have noted the parallels between the two texts. Rudy even claims that "Piercy's novel is in many ways a feminist rewriting of … *Brave New World"* (26). Bioethicist Evie Kendal comments that Huxley's linking of ectogenesis with eugenics in the service of a totalitarian state has been much more widely used in ethical discussions of ectogenesis than Piercy's Firestone-inspired vision of ectogenesis as a means of eliminating the basis for sex-based oppression (67). Both Rudy and Kendal recognize the largely negative response to ectogenesis among feminists, citing amongst others Andrea Dworkin, Robyn Rowland and Gena Corea, who see this technology primarily as an expression of a misogynistic agenda seeking to control reproduction and perhaps even replace women (Kendal 65; Rudy 27). In contrast, both Rudy and Kendal appear to view Piercy's Mattapoisett as a viable possibility, embracing the potential of the technology. I suggest that rather than taking sides for or against the technology itself, the juxtaposition of *Brave New World* and *Woman on the Edge of Time* should serve to highlight the inextricability of reproductive technologies from the cultural technologies of gender and family and from the dominant discourses through which we make sense of these technologies. *Woman on the Edge of Time* thus underlines the importance of the power relations of the context in which reproductive technology is used.

The primary narrative device to explore the impact of gendered power relations on our understanding of reproductive technologies is the narrator Connie, a poor Chicana

woman of the 1970s, who spends most of her time committed against her will to a psychiatric ward and visits the future of Mattapoisett in dreamlike episodes. She finds it hard to accept their version of motherhood and her resistance to it is rooted in her own experiences. Rudy sees Connie as mediating Mattapoisett to the reader, helping us appreciate its utopian futurity in stark contrast with the abusive present which confines Connie, claiming that although the babies in the tanks of the brooder are "frightening to Connie, when compared to her experience in the real world, they begin to seem like a more attractive and viable option" (26). However, Connie's reaction of feeling physically sick at the sight of the brooder and her flashback to seeing an aborted fetus rather bring to the fore the ambivalent role that motherhood plays in feminist thought. Sam McBean notes that there has been a "critical blindness to Connie's resistance" (17) and points out that having been forced to go through both a non-consensual hysterectomy and forced adoption, "Connie sees control over mothering as a desirable future for women" (18), thus joining feminist critics of ectogenesis. Connie finds the idea of disembodied motherhood both untenable and an expression of privilege: "How could anyone know what being a mother means who has never carried a child nine months heavy under her heart, who has never born a baby in blood and pain, who has never suckled a child. Who got that child out of a machine the way that couple, white and rich, got my flesh and blood. All made up already, a canned child, just add money. What do they know of motherhood?" (98). Connie thus expresses not only the value she puts on the physical experience of motherhood and the importance of biological and genetic connection, but also how that value is formed by a society where economic and social/political inequality shape our reproductive and familial practices. The people of Mattapoisett see Connie's skepticism as an expression of her being "less evolved" (55), thus adopting the privileged perspective of a future judging its own past, echoing Firestone: "*Pregnancy is barbaric* [italics in original]" (180). However, Connie refuses Mattapoisett's claim to superiority, seeing the rural lifestyle as past rather than future; "we're back to the dark ages to start it all over again" (65). McBean argues that Connie's "resistance to the discourses of motherhood" in Mattapoisett should be read as a "challenge to Mattapoisett's narrative of progress" (19). While this reading is worthwhile in highlighting the importance of troubling straightforward narratives of progress or reading strategies that posit Piercy's novel as a utopian blueprint, it also downplays the importance of Connie's development over the course of the story. The text charts her acceptance of the possibility that there is a future where the inequality of her present is not a natural fact and where rescripting motherhood might be a sacrifice worth making.

If giving up biological motherhood is a high price from Connie's perspective, the narrative as a whole is more ambivalent. As we have seen, reproductive technology is represented as breaking the connection not only between the act of sex and reproduction, but between reproduction and biological sex. While in both

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The Left Hand of Darkness and *The Female Man* the gestational parent – however differently conceived – is seen as having a special role or relationship with the child, in line with Firestone's analysis of sexual oppression, the people of Piercy's future insist that human gestation and "live birth" is something that must be given up. "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" (97). However, the passage continues in a way that emphasizes the ambivalence of the text to biological motherhood: "Cause as long as we were biologically enchained we would never be equal." (97). That which gives women power is also what subjugates them, a paradoxical bind that runs through the novel's construction of Connie's present as well. The ambivalence towards the role reproductive technologies play in *Woman on the Edge of Time* is rooted, I believe, in the warning that Firestone, too, conveys: "the new technology ... may be used against [women] to reinforce the entrenched system of exploitation" (11). Reproductive technologies, then, are not in themselves carriers of social change. Instead, just as in the other narratives discussed here, cultural technologies of gender and family are thoroughly restructured to embody social change.

An important aspect of these changed cultural technologies has to do with the positioning of males in relation to motherhood. The passage cited above continues: "And males would never be humanized to be loving and tender" (97). What males need to be humanized, however, is not the experience of gestation. Rather, they need the experience of mothering, an experience that appears to be necessarily connected to gestational motherhood as long as it exists. Moving gestation out of the body thus makes motherhood available to everyone, which includes another biological component. While gestation is moved out of the female body, the biological process of lactation is hormonally induced in all parents who wish to breastfeed. This physical closeness is seen as something all parents should share and as important for the development of the infant. Neither Russ nor Le Guin discuss breastfeeding, and Piercy's emphasis on the biological changes needed—both in terms of removal and in terms of addition—to achieve equality is worth noting. However, all three novels in their different ways emphasize a biological equalization as a necessity for the termination of gender-based oppression. Just as in the other utopian narratives, reproductive technology is not enough, a cultural technology is also needed—a re-formation of the basic structure of the family. The passage cited above ends: "So we all became mothers. Every child has three. To break the nuclear bonding" (97). This radical break with the nuclear family also entails a rejection of heterosexuality as well as of romantic love as the basis for parenthood. Additionally, there is no genetic connection between the child and its three mothers. Motherhood is in all ways a matter of choice, thus taking the concept of families by choice that contemporary kinship theory uses to a length rare in contemporary

family constellations. Just as in Whileaway, Mattapoisett has a common nursery, and children are encouraged to be independent at an early age. Motherhood thus becomes an activity that is limited in time, as Connie's contact in Mattapoisett explains: "I'm mother to Dawn. I was also mother to Neruda … I no longer mother Neruda, not since naming. No youth wants mothering" (66). While emotional attachment can remain, the relationship is seen as going through distinct stages. Importantly, motherhood is also seen as communal. When Connie asks why people would want to see the artwork of children who are not their own, she is met by "puzzlement:" "But they are all ours" (70). Again, this communal responsibility for children is similar to Whileawayan practices. In Karhide, this communal responsibility is limited to the extended family of the hearth, but here too, the nuclear family is rejected as the primary context for childrearing.

Motherhood, then, is central to *Woman on the Edge of Time,* both in terms of Connie's obsession with her own failed motherhood and in terms of biological motherhood as what needs to change to enable equality. However, the narrative also asks us to perceive this future as one in which motherhood no longer is the most vital part of women's existence. "Birth! Birth! Birth! Luciente seemed to sing in her ear. That's all you can dream about! Our dignity comes from work! Everyone raises the kids, haven't you noticed? Romance, sex, birth, children—that's what you fasten on. Yet that isn't women's business anymore. It's everybody's" (245). Interestingly, this is an apt description of life on Russ' Whileaway, underlining that both texts belong to the same feminist tradition and both, to different extents and in varying ways, draw on Firestone's vision of a future without "the sex distinction."

Coda: Conceiving Feminist Futures

These three novels weave reproductive technologies into their utopian tapestries in different ways yet have many concerns in common. Undoubtedly formed by the feminist projects of their time, their attempts to re-conceptualize not only reproductive technology, but also cultural technologies of gender and family through the construction and organization of family life, childcare, and sexuality nevertheless remain highly relevant. They all illustrate that while reproductive technologies have the potential to change understandings as well as realities of reproduction and of family and gender constructions, this potential is not inherent in the reproductive procedures themselves. It can only be developed, supported, and continually renegotiated through reconceptualizations of cultural technologies of family and gender that work to challenge both material realities and discursive practices of dominance to allow for new realities of relatedness.

Let us conclude by returning to the idea of the future as a space of feminist resistance. As McBean notes, the first decade of the 21st century saw many feminists engaging the narrative of timelines of feminism, its past, present, and future. Citing Sarah Ahmed and

Clare Hemmings among others, McBean identifies "models that resist narrating feminism's time as cohesive, linear, and singular" (1). The texts I have discussed here all resist such linear or cohesive narratives. The universe in which Le Guin's Gethen exists is not placed in a temporal relationship with the present in which it was written, and consequently not with the current time either. This complete temporal and causal disconnect means that while it certainly works as a space in which we can imagine differently, in which current dominant discourses of gender, family, and reproduction can be examined and moved out of the interpretative binary framework of natural – unnatural, the question of feminist time itself, of how moves between present, past, and future can be used to mobilize resistance and effect change is foreclosed. In *Woman on the Edge of Time*, reciprocity in temporal movement between future and present is established, as Connie uses her experiences in the future to gain a sense of self and agency in her presence, while Mattapoisett is dependent on revolutionary action in the presence for its future existence, emphasizing the future as something created in the present. Even though an alternative dystopian future is briefly introduced as a possibility, the direct causal relationship between present and future remains dominant. This serves to emphasize agency and revolutionary potential, while simultaneously framing feminism as something which must leave both past and present practices behind to avoid foreclosing its future.[10] None of the four alternative worlds of *The Female Man* is identical to ours, nor can they be placed in a straightforward temporal or causal relationship with each other. Since, as Cortiel notes, Russ "shares the radical materialist feminist premise" of Firestone, discussed above as inspiring Piercy's work (76), Cortiel chooses to read the relationship between the four worlds as potentially staging a "disrupted and disruptive chronology" of a historical dialectic process that moves from alienation via "the feminist revolution" (Jael's world) to a "woman conscious of herself and able to act" (Janet) (77). While this reading does well in placing *The Female Man* in its contemporary feminist context, to resist linear narratives that place the novel itself in feminism's past and Whileaway as its imagined, desirable endpoint, we would do better to note how the two protagonists in the fictional worlds closest to the present in which the novel was written draw on both Janet's and Jael's realities to reinterpret their own presents and mobilize resistance. In a time when both our present and our future appear increasingly precarious, I would suggest that a feminist understanding of time needs to allow the present to proliferate, enabling realities of relatedness across time and space that are built on multiple and shifting intimate connections. Feminist utopias, and feminist

10 At the same time, as Bussière argues in "Feminist Future: Time Travel in Marge Piercy's *Woman on the Edge of Time,"* by placing a woman minority character as the time traveler, the novel disrupts the notion of the future as inevitable progress, witnessed (and furthered) by white males.

SF more broadly can help feminists do such conceptual work, allowing us to read reproduction outside heteronormative matrices of futurity as descent.

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