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Technologies of Feminist Speculative Fiction

Gender, Artificial Life, and the Politics of Reproduction

Edited by
Sherryl Vint · Sümeyra Buran

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Praise for *Technologies of Feminist Speculative Fiction*

"This is a significant feminist intervention into the many ways in which the lives of women are being impacted across the world by the increasingly intimate technological productions of neoliberal hypercapitalist biopower. Contributors from Canada, France, Germany, Japan, Spain, Turkey, the UK, and the US offer informed and informative readings of a diverse range of speculative fictions across media. In this context, speculative fiction works to defamiliarize a future-present of pervasive automation, increasingly sophisticated assistive reproductive technologies, developments in future-food technologies, robotics and artificial intelligence, bioengineering, and genetic science. Contributors also suggest sites of potential resistance through hybrid figures such as the cyborg, the queer, and the posthuman, and through the insights of non-western epistemologies such as indigenous futurism."

—Veronica Hollinger, Emerita Professor, *Trent University, Canada*

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CHAPTER 1

Introduction: Sociotechnical Design and the Future of Gender

Sherryl Vint

In 1985, Donna Haraway's influential "Cyborg Manifesto" reoriented feminist thought in her call for women to engage with science and technology, to recognize in them, and the changed worlds they might make, new resources for female emancipation and feminist critique. Now, over thirty years later, technology has remade much of the social world, from communications to reproduction to work. Haraway revisions the cyborg as a figuration of subjectivity beyond gender and beyond the nature/culture divide, what she calls a "rhetorical strategy and a political method" rooted in the irony of noting the connections among seeming incompatible, perhaps contradictory things (149). Most importantly for the perspectives collected in this volume, Haraway's cyborg is "a creature of social reality as well as a creature of fiction" (149). This collection begins from this same set of concerns about the relationships among women, technology, sociotechnical practice, lived social relations, and the capacity of fiction to illuminate and shape these entanglements. In the years since

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Haraway published her field-defining manifesto, there has been a myriad of changes in science and technology and in how they impact women's lives. Yet the importance of Haraway's way of framing these issues remains, as the work collected here demonstrates.

Two aspects of Haraway's work warrant highlighting since they continue to be problems that feminists confront in both science and technology studies (STS) scholarship and in speculative fiction. STS is the cultural study of science and its cultures, a field that ranges from ethnographic work to the history of science to critical analyses of science's entanglements with issues of gender, ethnicity, and similar cultural ideologies. This collection draws from Haraway's work in the field to examine the relationship between patriarchy and capitalism, perhaps the most important influences on how the history of science developed. Here it bears keeping in mind that "A Cyborg Manifesto" was originally published in the *Socialist Review*, and that part of its intervention was to think about priorities confronting contemporary Marxist-feminists. Although Haraway does not use the term racial capitalism, now commonly used to denote the fact that capitalism arose hand-in-glove with colonialism and is never encountered without a racialized dimension, her work engages the colonial frameworks that were central to then-nascent industries, such as manufacturing circuits for IT industries. The cyborg is positioned as beyond binaries, the second point that bears emphasis, and although the scholarly tradition that followed focused almost exclusively on human/machine and male/female binaries in how Haraway's work was taken up, the scope of her original intervention goes further. She seeks no less than to challenge "what counts as women's experience" (1991, 149) and to promote a figure capable of signifying politics of affinity (contra identity) that would elude the theoretical dead-end of feminist epistemologies that seek "to police deviation from official women's experience" (156). For Haraway, the "we" of feminist practice was always a contingent and multitudinous collective, continuously "disassembled and reassembled," a perspective that shapes many of the chapters collected here (161).

The specter of the nature/nurture binary appears whenever women and technology are imagined simultaneously, a problem that continues to require a feminist response. As the long tradition of feminist STS scholarship has shown, we strive to think beyond simplistic framings such as considering whether technology is "good" or "bad" for women. Even the same technologies—and this is especially true for technological interventions into reproduction, particularly the fantasy of ectogenesis—can have

both beneficial or repressive consequences, as everything depends on the social milieu unto which the technology is disseminated, on the design that informs how the technology will be used, grounded in a sense of the "problems" it is imagined correcting—and for whom. Haraway guides us here as well, arguing that the boundaries between "tool and myth, instrument and concept, historical systems of social-relations and historical anatomies of possible bodies" are as illusory as those between human/machine, human/animal, and virtual/material—i.e., the binaries for which the essay is best remembered (1991, 164). Haraway's contention that "myth and tool mutually constitute each other" enables us to understand why speculative fictions are so important to a feminist, sociotechnical politics. Throughout her career, Haraway has returned to science fiction/speculative fiction (sf) examples as prompts for thinking about new social relations and as sites of critiquing existing ones.

The urgency of addressing these intersections is equally palpable today. Technology, especially biotechnology and IT, continues to have a significant influence on human life, perhaps even more intensely now than thirty years ago. The inevitably gendered nature of many of these practices is most visible in the transnational and highly profitable fertility industry. Control of women's reproductive capacities through techniques that defer reproduction until later in life, "outsource" aspects of the process to others through surrogacy and gamete markets, and intervene in the fetus through selective implantation are both pervasive and marked by differences of ethnicity and class. From one point of view, we might read such innovations as the realization of Shulamith Firestone's (1970) radical vision in *The Dialectic of Sex*, that freedom from the constraints imposed by biological reproduction was necessary for women's freedom; from another, we might take note of the fact that technology and science are always embedded in specific social contexts to observe that biological reproduction thus limits women due to how it is conceptualized within patriarchy, not due to its biological configuration. The same technologies that now give women more options regarding reproductive choices are simultaneously utilized by the Christian Right to agitate for regressive legislation that would limit reproductive options even more.

The politics of reproduction are significantly inflected by race, and it is arguable that the obsessive concern with outlawing abortion that began to shape the American Right roughly contemporary to Haraway's manifesto can be understood as part of the resurgence of white supremacist nationalism, which has become increasingly visible in the last decade. As Melinda

Cooper (2019) carefully charts in *Family Values*, this fusion of neoliberal economics and fundamentalist Christianity since the 1980s was also a project to eliminate social welfare systems that were reducing economic inequality across class and race divisions. Social programs such as Aid to Families with Dependent Children (AFDC), for example, lost support as they became increasingly associated with African American families, or, even more alarming for traditionalists, "those elements at the margins of the New Left that questioned the very premise of the family wage—the notion, that is, that income redistribution should be linked to the normative policing of legitimate childbearing and sexual morality" (Cooper 2019, 51). A similar fusion of economic and imperialist ideologies informed global politics of reproduction as well, as Michelle Murphy (2017) documents in *The Economization of Life*. For Murphy, the entire Cold War project of "developing" nations must be understood as simultaneously a project of state management of women's bodies and their reproductive capacity, creating "population" as a problem of Third-World excess that required management, putatively for reasons of ensuring economic stability, but more nakedly "animated by fear of a future with too many of 'them' that would derail the American good life of capitalism and white supremacy" (44).

Feminists must take on these imperial legacies—and their ongoing afterlives—in any politics of reproductive choice, and thus the issue of who controls technology, and to what ends, remains an urgent one. Moreover, as feminist theorists increasingly recognize, the projects of reproductive justice, environmental justice, and racial justice must be understood in intersectional terms as linked, indeed, and as the *same* project of ensuring a viable future for all. In a more recent essay on this topic, Murphy (2018) uses the term "alterlife" to capture necessary shifts in feminist strategy, a term that resonates with the history of feminist speculative fiction as rhetorical practice. For Murphy, alterlife is "a project aimed at summoning new forms of humanity, not preserving the human that histories of deep violence have created," and draws on antiracist and postcolonial frameworks, such as activism around indigenous land sovereignty and the work of scholars such as Franz Fanon and Sylvia Wynter (2003). Alterlife insists that the politics of reproduction are not merely about the right to choose, but also about the demand for a world in which children may thrive, and thus is about entanglements with land, water, soil, ecosystems, and other species. Murphy does not evoke speculative fiction in their theorization as Haraway once did, but this project of imagining our species and its

lifeways differently resonates strongly with traditions of feminist sf, especially by writers such as Sheri S. Tepper, Joan Slonczewski, and N.K. Jemisin, who have similarly explored how colonialism, patriarchy, and capitalist extraction mutually damage women's life and planetary ecosystems.

In IT technology, as AI assistants proliferate, they too reinscribe and intensify patriarchal understandings of gender difference. The all-but-ubiquitous feminine gendering of programs such as Siri (Apple), Alexa (Amazon), and Cortana (Google) demonstrates how deeply gendered assumptions shape the design of technology, as Anne Balsamo (2011, 27) powerfully argues in *Designing Culture*. She opens her reflections on the technological imagination by reviewing, to contest, the common prejudice that women lack an "intrinsic aptitude" for STEM fields, a statement made by Lawrence Summers in his role as president of Harvard University in 2005. For Balsamo, the design of technology directly creates the future, that is, the world that will unfold from the consequences of how any technology reshapes material life and social relations. Thus, she argues that "cultivating and shaping the technological imagination is a cultural imperative of the highest order," but also that women have historically been excluded from significant roles in this project of design (7). Despite recent efforts to diversify STEM fields, women and people of color often remain underrepresented in these fields, a fact that Balsamo contextualizes by exploring how the gendered and racialized assumptions that shape many sociotechnical histories continue to make many professions inhospitable, despite explicit calls for more diversity. What is needed, then, is not merely more women but a "gendered makeover" of the technological imagination itself (31). Technologies come embedded with systems of values that have been built into their design, often without one consciously reflecting on this fact because the hegemonic values present themselves as if there were no alternatives to them. Balsamo calls for a feminist intervention into the terrain of design, suggesting that design is akin to a worldmaking practice that materializes the cultural assumptions which inform it. Thus, diversifying the range of people involved in design is not simply a matter of better industry optics, but it presages fundamental change: "Diversity among design participants is generative, not because of some innate biological or ethnic quality, but because people embody different sets of assumptions" (36). Here, too, feminist STS meets feminist sf, both interested in the possibilities of what might be otherwise and what better futures might grow from these seeds.

The design of AI and robots specifically is deeply entrenched in racialized and gendered assumptions. The fact that digital AI-assistants are ubiquitously gendered females—and that many systems do not enable the option of changing this default to a male voice—shows how thoroughly such gendered assumptions have saturated this space of design. Jennifer Rhee (2018) calls this the "robotic imaginary," and argues that the history of robotics, from labor-saving devices through to drone warfare, is premised on dehumanizing erasures. Scholars such as Despina Kakoudaki (2014) and Gregory Hampton (2015) have examined the history of sf representations of artificial beings as metonyms for racialized others, and Rhee's work extends this analysis to consider sf and the history of robotics in tandem. She points out that, in the robotic imaginary, labor that can be replaced by automation is imagined as unskilled and inherently devalued, "mindless," that is, the kind of labor performed by marginalized subjects in capitalist patriarchy, such as household labor (Rhee 2018, 77). Yet this imaginary exists in historical tension with the fact that many of the manufacturing jobs central to the masculine scaffolding of the Fordist family wage were among the first to be eliminated. Rhee further points out the connection between sf images of domestic robots and capitalism's reliance on unpaid labor in the home to sustain the work force engaged in the so-called productive economy. Such relations between production and social reproduction are one of the most fruitful areas of Marxist feminist analysis, and there remain urgent questions for political economy today, a fact perhaps now more visible to the wider public given the economic strain caused by school closure during the COVID-19 pandemic in western industrialized countries.

Other scholars have focused more directly on the racialized assumptions that are equally constitutive of technological design. Ruha Benjamin (2019, 8) refers to the racialized assumptions buried in many automated algorithms as "the new Jim Code," as she explains how "tech fixes often hide, speed up, and even deepen discrimination while appearing to be neutral or benevolent when compared to the racism of a previous era." Benjamin's work offers a distressing example of why the issues of design highlighted by Balsamo (2011) remain sites of urgent political struggle: technology is as much imagination as materiality in terms of its cultural significance and effects. In *Surrogate Humanity*, Neda Atanasoski and Kalindi Vora (2019) similarly contend that "questions about what kind of tasks are replaceable, and what kind of creative capacities remain vested only in some humans, indicate that humanity stands in a hierarchical

connected relationship to artificial intelligence," which they term techno-liberalism (4). Through this social imaginary, technology has a "surrogate relation to human spheres of life, labor, and sociality that enables the function and differential formation and consolidation of the liberal subject—a subject whose freedom is possible only through the racial unfreedom of the surrogate" (5). In their analysis, then, the human/machine binary intensifies and extends the pre-existing and racialized binary of liberal modernity between the free subject of liberal political tradition and the unfree laborer—enslaved, indentured, and always racialized subjects—whose compulsory labor forms part of the conditions that enabled this free, liberal subject to emerge. When we imagine utopian futures of robotic labor freeing us from drudgery, then, we participate in a racialized, colonial imaginary; and indeed, Vora and Atanasoski point out that "human intelligence" systems such as Amazon Turk are designed to give end-users the sense that they are already interacting with an intelligent system, even though the labor is done by economically marginalized subjects made invisible by the Turk's design (98–100).

In *Ghost Stories for Darwin*, Banu Subramanian (2014) explores how gendered and racialized assumptions shape not only technology but the very practice of scientific research itself. Insisting the nature and culture must be studied simultaneously, she draws on the Bollywood representation of ghosts as the marginalized, neglected, and dispossessed, to reconsider the science of evolutionary variation from a feminist perspective. A trained evolutionary biologist, Subramanian proposes new ways of conducting research if one starts from feminist rather than modernist framings, arguing that many of the anxieties about environmental change and species variation, such as concerns about invasive species, are often informed by a panic that "misplaces and displaces anxieties about globalization, labor shifts, and a fast-changing world onto a problem about the geographic origin" (loc. 394–395). Drawing on the long history of feminist STS which shows that ideas about difference are rooted in the structuring binaries of modernity (man/woman; white/black; center/colony; heterosexual/homosexual; elite/working poor), Subramanian shows how this language of difference is co-produced by political struggles and by the science of variation. Once more, we see that sociotechnical knowledge and social relations cannot be thought of separately, but must always be understood as two iterations of the same materiality. Of additional note in this context is the fact that Subramanian combines feminist STS scholarship with her own innovations in botanical research, which is derived from

perspectives that use storytelling as a tool for creating knowledge. *Ghost Stories for Darwin* exemplifies how feminist STS and feminist sf are engaged in entwined projects, one of the main ideas animating this collection.

As this brief overview suggests, science and technology are important sites of feminist intervention today, and there is a need to update and expand our conversation to engage with novel technologies and their impact on women's lives—the very idea, as Haraway (1991) suggested long ago, of what should be counted as women's experience. And indeed, there has been a plethora of sf texts published over the last decade that use fiction to interrogate the complex entwining of women, technology, and politics in twenty-first-century life. These recent texts build on a long history of women writing speculative fiction, which was embraced as an important tool during the second-wave feminist movement of the 1970s. The wide range of texts that have recently been published suggests that today marks a moment of equal significance to the 1970s for feminist sf. They examine themes such as using technology to control women's agency, in Hilary Jordan's *When She Awoke* (2011) and Christina Dalcher's *Vox* (2018); how gender roles are changing, evident in Maggie Chen's *An Excess Male* (2017) and Sarah Hall's *The Carhullan Army* (2007); futures of infertility that result in oppressive social orders, such as Meg Ellison's *Road to Nowhere* trilogy (2014–2019) and Bina Shah's *Before She Sleeps* (2018); and futures premised on refusing patriarchal divisions, which imagine a changed relationship to technology and the environment, such as in Carrie Vaughn's *The Wild Dead* (2018) and Annalee Newitz's *The Future of Another Timeline* (2019). The twenty-first century has seen films that explore social relations with feminized AI, such as Spike Jonze's *Her* (2013) and Alex Garland's *Ex Machina* (2014), as well as those which imagine women in central roles in technological futures, such as Alfonso Cuarón's *Gravity* (2013) and the all-female research expedition in Garland's *Annihilation* (2018). Several contributors take up these and other recent texts, but many essays also return to earlier works and read them in light of more recent conversations about gender and technology.

This collection seeks to make two related interventions. The first is to establish by example the importance of speculative fiction as a feminist cultural response to how technology is reshaping women's bodies, the politics of social reproduction, and the cultural order of gender. Second, the collection highlights how these themes are taken up by feminist sf in a range of national contexts, demonstrating the importance of the genre as a place of feminist theorizing and alternative worldbuilding across a range

of national and technoscientific cultures. Several themes and foci of interest recur across chapters and parts, including:

1. The importance of thinking about biological production beyond essentialism and in concert with social structures that enable—or fail to provide—support systems for healthcare and childcare.
2. The related centrality of understanding and revising structures of the family, especially motherhood as an often sentimentalized and essentialized identity.
3. The related and indeed over-represented focus on technologies of assisted reproduction, especially those that imagine severing gestation from women's bodies, as one of the most recurrent speculative innovations in recent sf. As the range of examples explored in this volume attest, biological reproduction is perhaps the most fraught topic at the intersection of feminism and technology, offering as it does both the possible liberation of women from the sole responsibility for childbearing.
4. The undertheorized place of trans, lesbian, and other non-binary gender identities in the histories of both sociotechnical culture and speculative fictions, work that returns us to the often-forgotten politics of cyberfeminism, now newly revitalized for an age of social media.
5. The importance of recognizing the household itself and the so-called private spaces of women's lives as significant sites of technological change, a point Lisa Yaszek (2008) makes when framing *Galactic Suburbia*, her book on women's sf of the 1950s.
6. The intersections among colonialism, capitalism, and patriarchy, and especially their role in the design and implementation of technology. As noted above, any technology can be used to either liberate or oppress women, and the fact that technology has been embedded in relations of power structured by colonialism, patriarchy, and capitalism means that the history of technology as we know it has largely been to oppress women. Yet as STS theorists and sf authors frequently demonstrate, this need not write the future of technology.
7. The closely related and parallel point that in thinking the future of technology, feminism must begin from an intersectional premise, to ensure that the category of "we" remains open and fluid, and that historically narrow definitions of women and women's concerns do not continue to shape future prospects.

In "The Carrier Bag Theory of Fiction," sf author Ursula K. Le Guin (1986) recasts human history through a gynocentric frame: hunter/gatherer life relied far more on gathering for ongoing nutrition and wellbeing, and thus the first technology invented was unlikely to have been the spear or club, as per *2001: A Space Odyssey* (1968), but instead the humble container. Such a theory of technology, of culture, and of civilization requires different kinds of stories and a different notion of the hero—indeed, a different notion of what we mean by "human" at all, a perspective that, as noted above, informs recent feminist STS theory. Focusing on the utility of carrier bags—which enable one to store food for later or for sharing, which might hold infants safely and free the hands for other work—Le Guin finds another way to narrate the history of our species. We have become all too accustomed to the hunter story, "about bashing, thrusting, raping, killing, about the Hero" (1986, 152), so much so that perhaps we struggle to imagine what story might be without it—just as we might also wonder how sociotechnical history might have unfolded without the familiar motivations that link knowledge with "progress"—understood as imperial expansion and the domination of nature (and women, and racialized peoples). And yet are other stories and other ways to tell stories, and Le Guin suggests that novels are themselves a kind of carrier bag of ideas and people: this can be the case for science fiction as well, despite the affinity of some earlier examples within the genre for that old-story of the Hero and his conquest and mastery. Le Guin continues:

> If, however, one avoids the linear, progressive, Time's (killing)-arrow mode of the Techno-Heroic, and redefines technology and science as a primary cultural carrier bag rather than weapon of domination, one pleasant side effect is that science fiction can be seen as a far less rigid, narrow field, not necessarily Promethean or apocalyptic at all, and in fact less a mythological genre than a realist one. It is a strange realism, but it is a strange reality. (153–154)

This collection is a carrier bag of the strange science fiction of such a realism, charting the strange realities of how sociotechnical culture has shaped women's lives and how women's activism and knowledge shape possibilities for technology into the future.

The volume is divided into four parts. Part I, "Reproductive Technologies," brings together chapters that explore a range of texts, including Anna Charnock's *Dreams Before the Start of Time* (2017) and

Helen Sedgwick's *The Growing Season* (2017), and how they imagine the consequences of assisted reproduction, including ectogenesis, might play out for women. In "Ectogenesis on the NHS," Anna McFarlane shows that access to reproductive technologies is entwined with cultural attitudes about motherhood and state assistance. Far from necessarily liberating women from responsibility for the biological continuation of the species, some fictions suggest, ectogenesis could give cover to the neoliberal withdrawal of social security, stigmatizing motherhood as the abdication of work and making the cost of reproduction prohibitively expensive, save for the wealthy. One of the novels she analyses projects that the withdrawal of the NHS would open "space for pro-life organizations to move into childcare, running care centers for unwanted fetuses which are grown, using the pouches, into unwanted children living in group orphanages." The fuller context for the fiction's technology thus urges us to think capaciously about the impact of these ectogenesis pouches not simply on gestation, but also on social roles and economic hierarchies, demonstrating that technology alone cannot liberate women or overcome gender biases, whatever their affordances. Sümeyra Buran's chapter in this part, "Being an Artificial Womb Machine," uses Charnock's novel to further consider how ectogenesis would change our sense of the family, potentially enabling men to become more involved in parenting or for non-heterosexual partners or single individuals to become parents, and potentially stigmatizing those who choose to reproduce without technological intervention.

Finishing this part, Pelin Kümbet's chapter "Environmental Sterilization through Reproductive Sterilization in Sarah Hall's *The Carhullan Army*" considers how reproduction and environmental protection are entwined in this novel. While seemingly a feminist separatist novel on its surface, Hall's work defies our expectations of this subgenre by interrogating a capacity for eco-fascism to infiltrate feminist thought. Even a matriarchal and eco-topian society, then, can fall into the power relations of domination that have defined history thus far. Julia Gatemann's "Groomed for Survival: Queer Reproductive Technologies and Cross-Species Assemblages in Larissa Lai's *The Tiger Flu*" concludes the part by thinking through reproduction beyond the human and in the context of colonial histories. She shows how Lai "questions the sustainability of a Western, patriarchal, neoliberalist system that, if left unchecked … will lead to the destruction of our planet and all life on it."

Part II, "Reimagining the Woman," expands out from the specificity of women's connection to reproduction to ask how "the woman" is itself a

cultural construction, open to reinvention in relation to technology and how it might remake social roles. In "A Housewife's Dream?" Caroline Edwards considers the history of household automation within the context of feminist and other utopian texts that project freedom from domestic labor as part of their vision, from William Morris' *News from Nowhere* (2004) to Ursula K. LeGuin's *The Dispossessed* (1974). While the nineteenth century may have seen the automation of work as a dream, the looming reality of ongoing job loss due to automation indicates how our relation to this vision of technology has changed. Edwards argues that "simply automating the hard work, or drudgery, *in and of itself* doesn't address the underlying economic and gender inequalities that comprise the division of labor." Putting this history in dialogue with Marxist feminism and its theorization of domestic labor as part of the social relations of capital, Edwards suggests that fear of what women might do with their free time is part of what explains why labor-saving devices that have routinely entered our homes have not necessarily lightened women's domestic responsibilities.

Considering the essentialized relationship between motherhood and womanhood, Jimena Escudero's chapter analyzes Netflix's provocative film *I Am Mother*, directed by Grant Sputore (2019), which imagines a robot as primary caregiver to a generation of artificially gestated children meant to restore humanity. Noting the near absence of images of mothering in most mainstream sf, Escudero suggests that, despite any sincere commitment to its nurturing program, a machine cannot replicate mothering, a bond that requires a mammalian, affective connection. The robot mother can replicate the social labor of mothering, but its failure beyond that points to the reality that human sociality is more than what capitalism and technology imagine. Chiara Sautto's following chapter, which considers the work of Japanese novelist Sayaka Murata, considers how technology might remake social relations in even more dimensions—gestation and motherhood, but also sexuality, filial relations, the relationship between life and death, and coupling. Arguing that Murata's experimental fictions respond to contemporary Japanese feminist debates, Sautto suggests that the end of normative heterosexual reproduction would not necessarily benefit women. Across these strange and haunting tales, the real monsters that consistently emerge are "those who blindly accept the 'normal' without questioning it."

Finally, Chikako Takeshita's "Cyborg Separatism" considers how *Athena's Choice* (2019), a novel that imagines an egalitarian future based

on matriarchal rule, betrays the ideals of intersectional feminism despite its surface commitment to women's autonomy. Putting this novel in dialogue with the wealth of feminist separatist works that flourished in sf during the 1970s, this chapter shows how much the conversation about women's bodies and female-led societies has changed in the intervening years, as feminist scholarship responded to critiques of canonical second-wave positions articulated by women of color, queer, and trans women. Reminding us again of the centrality of colonial histories in these attests, Takeshita critiques the novel for relying on depictions of violence against women committed by brown men as its justification for perpetuating an all-female society.

Part III, "Queering Gender," includes several chapters that emerge from these debates, either contemporary to the original critiques or articulated as part of intersectional feminism in the years since. It opens with "Drowning in the Cloud," written collaboratively by the Beyond Gender collective, a group of scholars whose collaborative practice mirrors the values of their analysis. In an experimental and dialogic mode, they consider technology as a medium of amniotechnics that resists the patriarchal and capitalist technologies of "borders, ranks, and pipes that seek to contain it"—explicitly evoking Le Guin's carrier bag. Amniotechnics considers technology through queer and indigenous notions of science, creating space for other subjects, histories, and sociotechnical orders. Discussing a number of feminist sf works, beginning with Mary Shelley's *Frankenstein* and ending with Raphael Carter's (1996) cyberpunk novel *The Fortunate Fall*, this chapter suggests that the imagery of fluidity can reinvigorate queer praxis in ways that transform our understandings of the digital.

Sasha Myerson's "Making the Multiple" turns to cyberpunk specifically to reconsider what is often seen as a masculinist and white genre in terms of how some texts are also informed by the cyberfeminist ideas celebrated during the early days of internet cultures. Drawing on trans theory in particular, Myerson considers how cybercultures open a space to conceptualize bodies as capable of holding multiple identities and genders. Focusing on cyberpunk written by women, such as Laura Mixon's *The Glass House* (1992) and Nalo Hopkinson's *Brown Girl in the Ring* (1998), Myerson revises our understanding of the gender politics of cyberpunk. She argues that cyber multiplicity can be an important cultural space that can "bring back different forms of thinking and language to help redescribe and reinscribe experiences and ways of being that are at present struggling to differentiate themselves in the face of a more powerful common language."