From Cybernation to Feminization: Firestone and Cyberfeminism

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The first wave of cyberfeminism—various projects, publications and debates—came in the 1990s. The artist group VNS Matrix, inspired by Donna Haraway's 1985 "A Manifesto for Cyborgs," authored their own cyberfeminist manifesto in 1991;[1] Sadie Plant first theorized the feminization of culture through digital networks and complex connections;[2] artists, scholars and activists investigated the meanings of bioengineering and technoculture[3] and the three biannual Cyberfeminist Internationals (1997–2001) organized by the Old Boys Network (OBN) brought together a mix of people interested in such developments. Combining theoretical speculation, science fiction and artistic experimentation, cyberfeminism became a "brand name" and an umbrella term for a range of practices that did not necessitate identification with feminism. In fact, the cyberfeminists of the 1990s often defined themselves through their differences from and rupture with, rather than connections to or legacies of, the "second wave" as well as the general category of feminism.[4] With the exception of Haraway, whose manifesto has been well remembered, this tended to involve a certain lack of critical dialogue with the traditions of feminist thought, and feminist investigations into computer cultures and digital technologies in particular.

The cyberfeminist terminology of "internationals," "manifestos" and (digital) "revolutions" might seem to resonate with Shulamith Firestone's theorizations of cybernation (namely, the end of labor brought forth by intelligent machines freeing people to play and create), as outlined in her 1970 *The Dialectic of Sex*—a book animated by

socialist theory and visions of cybernetic feminist revolution. However, on closer inspection both the cyberfeminist irony of the recycling of nineteenth century revolutionary rhetoric, and the articulations of feminist agency (or the impossibility thereof) within cyberfeminist texts, contrast starkly with Firestone's suggestions. Reading *The Dialectic of Sex* in relation to cyberfeminist texts—most notably the work of Sadie Plant, the most widely known and read of the cyberfeminist authors of the 1990s—this chapter considers the different legacies, both implicit and explicit, of Firestone's work in and for cyberfeminism against the backdrop of changing conceptions of cybernetics, embodiment, materiality, computing, and feminism since the 1970s.

Enter Cyberfeminism

Discussing cyberfeminism as a singular entity or movement is admittedly difficult as the term has been used to describe drastically different political positions, practices, and conceptual stances. An interdisciplinary field of investigation, cybernetics is most commonly explained as "the science of control and communication in animal and machine systems." It was initially developed in the Macy conferences in the 1940s and expanded in the writings of Norbert Wiener,[5] including the 1943 "cybernetic manifesto" that he co-authored with Julian Bigelow and Arturo Rosenblueth.[6] As a broad discursive field, cybernetics has enabled the conceptualization of humans, animals and machines as cybernetic systems (characterized by self-organization, performance built on feedback mechanisms, the storage and processing of data) that are analogous to one another in their functions (if not structure). Since the 1940s, cybernetics has influenced a range of disciplines from the computer sciences to robotics, informatics, anthropology, sociology, psychology and media studies, although its legacies are perhaps most evident in theorizations of complexity, in studies of new media, digital culture and biotechnology.

The term "cyberfeminism" refers to "cybernetic feminism," yet to the degree that the prefix "cyber" was floating rather freely in the early 1990s (most notably in the plethora of references to cyberculture and "cyberspace" in journalism, fiction, advertising and research alike), cyberfeminism can also be seen as referring to feminist activities situated either online or in various immersive electronic environments. Cyberpunk author William Gibson coined the term "cyberspace" in his 1982 short story "Burning Chrome" to describe a disembodied digital parallel reality reached via neural connections where all the world's data is stored. The term was widely adopted as

descriptive of online communications and virtual reality experiences in the course of the 1990s and, as has been the case with cyberfeminism, its definitions have been both broad and diverse.

Jenny Sundén divides cyberfeminism into theoretical and practice-based variations: the former are characterized by philosophical sophistication whereas the latter stand for more hands-on and activist initiatives, with the two coming together in cyberfeminist art projects.[7] Considering cyberfeminism in terms of the relationship between "cyber" and "feminism," it can be categorized in at least three overlapping ways. First, I define it as feminist analyses of human-machine relations, embodiment, gender, and agency in a culture saturated with technology. As machines have become increasingly "prosthetic," both literally and metaphorically, it has become necessary to rethink the categories of the organic and the machine, as well as the implications of conceptualizing human embodiment in terms of genetic data. The use of "cyberfeminism" in this sense, as a broad tactical term, can be found in Haraway's manifesto, Sadie Plant's and Rosi Braidotti's[8] work, the projects of the VNS Matrix and the Old Boys Network. A second possible definition of cyberfeminism implies critical analyses of cybernetics in relation to feminist thought—that is, cyberfeminism as a critical position that interrogates and intervenes in technoculture. Cyberfeminism understood in this way encompasses Haraway's writings, Sarah Kember's work on artificial life, Alison Adam's historical analyses of artificial intelligence, N. Katherine Hayles's research on the histories and paradigms of cybernetics,[9] as well as to the projects of the subRosa (artist and activist) collective that has been working with reproductive technologies, genetics, discourses of race, organ traffic and cell research for the past decade.[10] Third, "cyberfeminism" stands for analyses of the gendered user cultures of information and communication technologies (ICTs) and digital media, their feminist uses, as well as the social hierarchies and divisions involved in their production and ubiquitous presence.[11] This is the sense in which cyberfeminism has been most commonly understood in the Anglophone academy, as synonymous with feminist studies of new media. Whereas European (and Australian) articulations of cyberfeminism have tended to be closely connected to media arts and creative practices (workshops, projects and exhibitions), this has perhaps been less evident in North America where cyberfeminism has been appropriated as a scholarly point of identification. In a slightly broader framing, 1990s online riot grrrl projects and bitch manifestos with their politics of parody can be seen as constituting the most public and "popular" of cyberfeminist interfaces.[12]

To the degree that the "cyber-" prefix remains undefined, it is exceedingly slippery. Standing equally for things computer generated or computer mediated, cybernetic views of the human and postfeminist thought, and seldom explained or contextualized as such, its implications for feminism remain unclear. (Indeed, the manifestos of the Old Boys Network exhort everyone to define their own cyberfeminism, since, according to them, more collective or general definitions are impossible.[13]) Even so, a brief history of the field is possible. According to an often-quoted narrative, cyberfeminism was born in Adelaide, Australia in 1991, as VNS Matrix, a group of four female artists—Virginia Barratt, Julianne Pierce, Francesca di Rimini, and Josephine Starrs—"decided to have some fun with art and French feminist theory."[14] The VNS Matrix produced "A cyberfeminist manifesto for the twenty-first century" in homage to Haraway's cyborg manifesto, creatively combining references to Luce Irigaray and cyberpunk fiction in a large billboard that has since become a staple reference in texts on cyberfeminism:

> We are the modern cunt
> positive anti-reason
> unbounded unleashed unforgiving
> we see art with our cunt we make art with our cunt
> we believe in jouissance madness holiness and poetry
> we are the virus of the new world disorder
> rupturing the symbolic from within
> saboteurs of the big daddy mainframe
> the clitoris is a direct line to the matrix
> VNS MATRIX
> terminators of the moral code
> mercenaries of slime
> go down on the altar of abjection[15]

With their playful appropriation of theorizations of gender difference, the feminist tradition of cunt art and cyberpunk imageries, VSN Matrix's projects (such as *All New Gen* and *Corpusfantastica MOO*) attracted considerable attention within the digital arts in the early- and mid-1990s. Sadie Plant, who has also been credited with coining the term "cyberfeminism," used the manifesto's line "the clitoris is a direct line to the matrix" as the motto for her own cyberfeminist manifesto, "Feminisations: Reflections on Women and Virtual Reality."[16] In this manifesto and other cyberfeminist texts published mainly between 1995 and 1997, Plant outlined a broad and metaphorical narrative of women and networks from prehistory to the era

of computing. She tied women and machines together as instruments of masculine culture and envisioned complicated and intertwining webs as eventually overturning the current phallogocentric hegemony. Toronto-based media artist Nancy Paterson is the third main figure associated with the term, her 1992 "Cyberfeminism" emphasizing gender diversity and cultural subversion.[17] In fact, Carolyn Guertin sees cyberfeminism as emerging simultaneously in three different (Anglophone) parts of the world: Australia, the United Kingdom, and Canada.[18] Such spontaneous co-emergence would certainly be in line with the cybernetic principles of autonomous systems and self-organization.

In 1996, VNS Matrix published their less well known "Bitch Mutant Manifesto," perhaps best remembered for the line "suck my code," reproduced on stickers at the First Cyberfeminist International (held at the Hybrid Workspace of the Documenta X in Kassel) the following year. The First (1997), Next (1999), and Very (2001) Cyberfeminist Internationals provided platforms for artists, activists and theorists to meet, explore and critique digital technologies as well as the discourses in which they have been embedded. In addition to the internationals, there was cyberfeminist activity and networking in different continents, notably Eastern Europe (the Cyber-Femin Club of St. Petersburg, for example, started operating as early as 1994).[19] Similarly, listservs such as the women-only FACES (est. 1997) provided networked forums for the exchange of thoughts and resources.[20] These networks were centrally about creative practices: media art projects, provocations, interventions, and (often considerably poetic) manifestos. And while scholars and researchers took part in cyberfeminist activities, their playful nature and ironic rhetoric resisted confinement in academic discourse.

The cyberfeminist projects of the 1990s appropriated the terminology of revolutions, internationals and manifestos with gusto, yet these practices and strategies had very little to do with the cybernetic socialism outlined by Firestone. Cyberfeminists invoked "revolution" as metaphor for the cultural transformations brought forth by digital technologies. Their strategies were ironic and parodic, their emphasis was on differences and complexities, and the revolutions they proposed were conceptual rather than material or structural. And indeed in cyberfeminist texts of varying theoretical, conceptual, and political frameworks, references to Firestone have been notably scarce. Debora Halbert is unusual in conceptualizing Firestone as the precursor to Haraway's cyborg manifesto and contemporary cyberfeminist activities.[21] Yvonne Volkart notes in passing that "there were feminists

back then [in the 1970s] who strongly believed in the liberating impacts of new technologies," implicitly acknowledging Firestone;[22] Susan Hawthorne and Renate Klein, in their introduction to *CyberFeminisms*, see Firestone's views of reproductive technology as ungrounded in their optimism.[23] Given that cyberfeminist projects—both scholarly and artistic—have been very much concerned with reproductive technologies, biotechnologies and the female body, the omission of Firestone is noteworthy. More specifically, it is telling concerning the paradigmatic shifts that have occurred in ways of thinking about embodiment, gender, and technology since the 1970s.

Rational Cybernation

In the 1970s, *The Dialectic of Sex* stood somewhat alone in its faith in the feminist possibilities of technology and cybernetics.[24] While radical and cultural feminists (such as Mary Daly) emphasized connections and alliances between women and nature (as opposed to men and technology), Firestone wanted to overcome such distinctions in her model of socialist cybernation. Firestone's argument was for a cybernetic feminist revolution involving the subversion of work, family structure, gender, and sexuality. This would lead to a cybersociety based on women's control over technology, ecological responsibility and a radical redefinition of society (labor, family, love, leisure) both on the level of production and reproduction.[25] The contemporary work most closely related to Firestone's book was Marge Piercy's 1976 science fiction novel *Woman on the Edge of Time*, which depicted a technologically advanced hippie commune of the future. Firestone was writing a year after the launch of ARPANET (the precursor of today's Internet), a network connecting governmental and research institutions in the United States and before the invention of e-mail or the microcomputer. Her work was more strongly influenced by Marxist theory (and re-readings of Friedrich Engels in particular) and cybernetic discourses of the late 1960s than the emerging discourses on networked communications or prosthetic human-machine relations that became central to later cyberfeminist projects.

The discussion of cybernation and cybernetic socialism in *The Dialectic of Sex* is indebted to the social cybernetic experiments in countries such as the Soviet Union, GDR, and Allende's Chile.[26] In these socialist countries, cybernetics was embraced for its ability to provide a theory for operating, governing, and controlling centrally planned economies.[27] Seen as a rational scientific theory of the world

and society, cybernetics—which had initially been a relatively contro-
versial and limited field of investigation—grew in the Soviet Union in
the course of the 1960s. Slava Gerovitch points out how cybernetic
concepts "acquired the degree of generality characteristic of ultra-
flexible categories of dialectical materialism," and "cybernetics" itself
becoming something of a buzzword, a fashionable trend.[28] This ten-
dency—combining cybernetics with Soviet Marxism—gained popu-
larity internationally in the social sciences as well as in the social
movements of the 1960s and 1970s.[29]

In studies of media and society, cybernetic terminology was
employed in discussing not only computer technology or the emerg-
ing information society, but also electronic media such as television
and video. Marshall McLuhan's widely read and translated
Understanding Media (1964) was particularly influential in media
studies and contemporary popular discourses.[30] Drawing on cyber-
netics, McLuhan saw an analogy between human nervous systems
and electronics, and defined electronic media as "extensions of man"
eventually giving rise to the technological simulation of conscious-
ness. David Tomas notes how "it was a short step from invoking a
functional analogy between machines and human organisms in the
1940s to the 1960s and Marshall McLuhan's influential notion of a
technology that functioned as an 'extension or self-amputation of our
physical bodies'."[31] The extended feedback models employed by
McLuhan erased differences between automated machines and living
organisms, and helped in disseminating cybernetic principles and
vocabulary to a non-specialized general public.[32] McLuhan's influ-
ence is evident, for example, in the American video movement of the
late 1960s and early 1970s, which made extensive use of cybernetic
metaphors to describe the possibilities of video technology for trans-
forming not only the field of mass media but also forms of human
consciousness. In works published in the *Radical Software* journal
(1970–1974), people and video technology were seen as forming
cybernetic systems, a fundamentally novel, intimate and interactive
relationship between the user and the new medium.[33] The semanti-
cally flexible use of the "cyber-" prefix began in the 1960s. By the
early 1970s, critic David Antin was already referring, in a rather
fatigued way, to "cybernetic media" and "cybernation" as "cyberscat."[34]
Cyberscat resurfaced three decades later, with some modifications, in
the context of computer networking, as the "cyber-" prefix was added
to a range of phenomena and practices, (cyber)feminism included.

Writing on the video movement, Deirdre Boyle points out that in
the early 1970s there was a general belief in the forthcoming cybernetic

society, as well as in the need for and possibility of human evolution through control over the development of computer technology and electronic media.[35] With its vision of an ultra-rationalized, goal-oriented, and automated socialist cybersociety, *The Dialectic of Sex* seems to share these beliefs and to participate in the spread of a generalized cybernetic discourse.[36] Firestone's treatment of cybernetics was inspired by contemporary theories of social planning and the reorganization of society with the aid of technology and science, yet her suggestions were speculative and vague at best: domestic work was to be automated, computers were to serve as information reserves, most work was to be carried out by machines and, once traditional nuclear family units were destroyed, people were to live in shared accommodation with collective social spaces for leisure and for learning. In a cybernetic society, electronic media would function as memory and data banks, and learning would shift from remembering facts to learning the skills of programming and media use.[37] In other words, Firestone envisioned cybernetic futures broadly, with relatively little attention to nuances.

Firestone's sketchy model of future society is a highly rationalized one in the sense of drawing on centralized planning and advances in the natural sciences. Once the laws of nature have been uncovered and nature has been mastered, humankind can be freed, but only through a feminist revolution that overturns society, eliminates sexual classes (as well as those based on class or race), breaks down biological family structures based on ownership and rigid power relations, and redefines the concept of labor. At the core of this reorganization lie reproductive technologies capable of disrupting familiar practices of procreation and kinship. All in all, technology is crucial to the social transformations envisioned by Firestone: "the new science of cybernetics [develops] machines that may soon equal or surpass man in original thinking and problem-solving."[38]

In addition to its relation to social cybernetics, *The Dialectic of Sex* connects with cybernetic discourses in its rethinking of "the natural" and the technological, especially in the context of female embodiment and procreation. Firestone's embrace of biotechnology gives rise to hybrid embodiments detached from notions of the natural body. In fact *The Dialectic of Sex* has been mostly remembered (as well as criticized) for its discussion of reproductive technology.[39] Kathryn Woodward notes that while studies of information society and communications technology became part of academic debate in the 1970s, this was less the case with the cultural implications of biotechnology. These were taken up mainly by feminist thinkers concerned with

body politics, and Firestone was one of the few writers to address developments such as in vitro fertilization, surrogate mothering, or birth control and their meaning for gendered social relations and the politics of biological reproduction.[40]

From Cybernation to Feminization

Susan Hawthorne and Renate Klein, defining their CyberFeminism in a radical feminist paradigm, see Firestone's attitude to technology as similar to Sadie Plant's "uncritical" and "libertarian" approach.[41] This critique is justified in the sense that Firestone saw technology as progressive and liberating unless improperly used, yet misleading inasmuch as hers was certainly a claim for feminist agency, social change, and political struggle. Her faith in the transformative potential of technology was conditional and based on women's ability to gain control over it.[42] In contrast, Sadie Plant has argued for the impossibility of female agency and seen the process of feminization as both automatic and spontaneous. Plant's theory of feminization assumes an intimate affinity between women and increasingly complex technology, both of which have been instruments and tools for (male-dominated) culture. However, women and machines are growing out of control: "tools mutate into complex machines which began to learn and act for themselves [...] As media, tools and goods mutate, so the women begin to change, escaping their isolation and becoming increasingly interlinked."[43] For Plant, feminization is a process parallel to the history of women's liberation, but one foreclosing intentional agency: "*Cybernetics is feminisation*. When intelligent space emerges alongside the history of women's liberation, no one is responsible. That's the point, the fold in the map, where architects get lost in the pattern. *Self-guiding systems were not in the plan*."[44]

According to Plant, increasing cultural complexity and the ubiquity of intelligent machines spell the collapse of the phallogocentric economy.[45] Since feminization is an organic process independent of any activism, the cyberfeminism surfacing in its course "may not be feminism at all."[46] In opposition to Firestone's model of cybernation, which frames technology as purely instrumental, facilitating a new kind cybernetic socialism and freeing people from wage labor and the dictates of biology if properly deployed, Plant understands technology as an active agent of cultural transformation, part and parcel of feminization as a tendency toward disorder, rhizomatic connections, and the erosion of tidy systems.[47] Since feminization assumes the shattering of the ideals of rational subjectivity and human control over nature, its

logic is antithetical to that of the cybernation that assumes rational planning and complete mastery over nature and its secrets. And whereas for Firestone cybernation involves a dialectical process destroying both the "female" aesthetic mode and the "male" technological mode of culture that will result in androgynous existence, feminization implies the victory of the feminine over the masculine. Firestone's one-sided aesthetic mode, defined as "subjective, intuitive, introverted, wishful, dreamy or fantastic, concerned with the subconscious (the *id*), emotional, even temperamental (hysterical)"[48] closely resembles the soon-to-be-victorious feminine, celebrated by Plant as unpredictable, multiple and complex.

In the framework of feminist thought, Firestone and Plant represent the different, even opposing, positions of one kind of gender theory versus a certain sexual difference theory. According to Rosi Braidotti, the former sees the feminine as "a morass of metaphysical nonsense" that should be abandoned in favor of androgyny, while the latter celebrates the feminine pole of the sexual dichotomy.[49] Importantly, the two authors represent opposite stances on the question of embodiment and the materiality of the body. For Firestone, biology is the crux of women's oppression and can only be overcome with the aid of technology. For her, it is necessary to "free humanity from the tyranny of its biology. Humanity can no longer afford to remain in the transitional stage between simple animal existence and full control of nature."[50] Women's reproductive capacity is the cause of the original division of labor, an "oppression that goes back beyond recorded history to the animal kingdom itself."[51] However, as science and technology move toward uncovering the laws of nature, it becomes possible to fight back: through control over technology, women can assert the ownership of their own bodies. For Firestone, a socialist feminist future requires the overcoming of the limitations of biology and the materiality of bodies. For Plant, however, the irreducible complexity of the biological represents a way *out* of masculine culture as the feminine finds its equivalent in rhizomatic cybernetic communications.

Reading Firestone and Plant in parallel the differences in their ways of thinking about gender, cybernetics, and cultural transformation are strikingly evident. While Firestone proposes cybernetics as a rational theory of social planning and control, Plant considers self-organizing systems as autonomous becomings and complexities; Firestone considers embodiment primarily as limitation and constraint, while Plant emphasizes bodily pulsations and diverse sensory pleasures; Firestone envisages cultural transformation based on

political action, while Plant imagines automatic, evolutionary developments. These differences are not merely a question of altering theoretical appetites but rather paradigmatic shifts in ways of thinking about materiality and human-machine relations. As cybernetic theory has evolved, considerations of self-organization and complexity in particular have challenged the role (and possibility) of centralized planning, control and organization.[52] Meanwhile, the view of biology and embodiment as limitations to be overcome remains rather unpopular in feminist theory that has been preoccupied with the possibilities of "thinking through the body" since the 1970s. This is also the case with new materialist thinkers such as Plant who, drawing on the work of Gilles Deleuze, are interested in the potentiality of bodies while distancing themselves from a focus on the individual and the subjective. In this framework, people and machines become conceptualized as assemblages in a perpetual stage of becoming. Computer technology is not something one merely uses but something that transforms ways of being in the world and opens up unpredictable forms of experience.

Whereas Firestone's feminist revolution aimed at changing the material conditions of life, in the 1990s the rhetoric of revolution became circulated in relation to information and communication technology and digital culture. Here it was technology that was seen to revolutionize culture and society. In Plant's work, information networks are seen as emancipatory in themselves, subversive in terms of gender structures and gendered power relations. Whereas in Firestone's model, access to computers was enabled by collective computer centers, for Plant the digital revolution is something one buys into (aided by the plummeting prices of hardware and software). This widening access to technology, like feminization in general, is automatic.[53] Indeed, revolution, in the sense discussed by Firestone, is plain impossible: change can not be regulated or determined by any single factor or group, as "cultures and the changes they undergo are far too complex to be attributed to attempts to make them happen or hold them back."[54] There are no longer centers of operation, defining causes, bases, starting points, reasons, or explanations for cultural change. Ultimately, "revolution has been revolutionized" and women's liberation has become dependent on digitization rather than political action.

Cyberfeminist Irony

Debora Halbert sees *The Dialectic of Sex* as a precursor to Haraway's manifesto in its "attempt to move beyond biology," to break down

traditional gender relations and divisions of labor.[55] Haraway's cyborg manifesto aims to bridge differences and borderlines drawn within feminist theory concerning sexuality, "race" and class, and suggests irony and alliance as alternatives to celebrations of a "natural" unity and generalizations about the category of women. The cyborg stands as a metaphor for the feminist subject, a boundary figure that moves across the hierarchical categories of the natural and the artificial, the organic and the technological without positioning technology as the masculine other of women and nature, as was the case in some cultural feminist writings. While there are some points of contact between Firestone's and Haraway's articulations of postgender technological embodiment, the latter's understanding of biology as endless variation certainly differs drastically from the former's view of biology as fixed and limiting. Haraway's is a "fleshy world" where "human histories are always and everywhere enmeshed in the tissue of relationship where all relators aren't human" and in which the division of nature and culture represents a form of violence.[56] The figure of the cyborg does not represent human mastery and control over biology or technology so much as the fundamental intertwining of the organic and the inorganic, and the impossibility of marking nature apart from culture. Haraway proposed the figure of the cyborg to counter stories of fixed origins and natural states. Firestone was equally irreverent concerning things defined as natural, but differs from Haraway in conflating the natural with the biological and seeking mastery over both. According to Haraway, Firestone's lack of a vision of a feminist body politic led to her "reducing social relations to natural objects, with the logical consequence of seeing technical control as a solution. [...] That is, she accepted that there are natural objects (bodies) separate from social relations. In this context, liberation remains subject to supposedly natural determinism, which can be avoided in an escalating logic of counterdomination."[57] In the end, its emphasis on political agency, socialist planning, rational cybernetics, control over nature and belief in progress do not seem to have made *The Dialectic of Sex* very appealing to subsequent cyberfeminist thought. Haraway's cyborg manifesto, on the other hand, has become something of an iconic reference—even, as Nathalie Magnan put it at the 2001 Very Cyberfeminist International, a "holy text."

Cyberfeminist politics has been scattered and practiced on the micro level in networking, women's technology workshops, and various kinds of critical interventions. And while cyberfeminists have tended to share a certain enthusiasm toward new technologies and

their possibilities, there is an equal, if not more prominent emphasis on irony and difference (as already elaborated on in Haraway's manifesto). In her presentation at the first Cyberfeminist international, artist Corrine Petrus explained that she did not identify as feminist "but maybe I want to call myself a cyberfeminist. There is one thing I like very much about Cyberfeminism and this is, that nobody knows what it is exactly. It has no boundaries yet."[58] Here, the "cyber-" prefix stands for novelty, opposed to a feminism assumed to lack flexibility and semantic openness. And as María Fernandez and Faith Wilding have pointed out, many cyberfeminists have felt ambivalent and uncomfortable toward feminisms.[59] This may partly be a consequence of an unfamiliarity with feminist histories and paradigms, but it is articulated only in terms of the supposed fixity of second wave feminism. In her introduction to the proceedings of the first Cyberfeminist International, Cornelia Sollfrank defined cyberfeminism as alternative to "same-old feminism" and "traditional feminist theory and practice."[60] In other words, the diversity and freedom of cyberfeminism was figured at an early stage against a "feminism" seen as inaccessible in its academic forms and monumental, essentialist, anti-technology, and anti-sex in its second wave incarnations. It is perhaps ironic, then, that cyberfeminist practices have involved tactics so familiar from the 1970s, such as separatism or cunt art.[61]

The cyberfeminist internationals encouraged cyberfeminists to articulate their own personal agendas and politics. For those drawing on Sadie Plant's work, this meant poetic and "agentless" versions of feminism, whereas for others cyberfeminism was essentially a form of grassroots activism and struggle over technological agency; others still understood it as feminist media studies. Such customized definitions mean that "cyberfeminism" is a term of unusually flexible application. The common nominators of cyberfeminism have been found mainly in irony and opposition to a variety of targets. Cornelia Sollfrank (of the OBN) sees irony as the quintessential cyberfeminist strategy, enabling the coexistence of contradictory views. Suspended in productive tension, ironical cyberfeminism "is not just a rhetorical strategy, but also a political method."[62] This irony is certainly evident in the cyberfeminist appropriations of nineteenth century socialist terminology, from manifestos to internationals. The First Cyberfeminist International of 1997 agreed not to define cyberfeminism and produced instead "The 100 anti-theses of cyberfeminism" (100 things that cyberfeminism is not). According to these, cyberfeminism is not—among other things—a fragrance, separatism, for sale, abject, a picnic, caffeine-free, anti-male, or a banana.

Irony was also an essential element of Haraway's cyborgs, the art projects of VNS Matrix and OBN's politics. Targeting "old boys networks," male dominance in gaming and cyberpunk imagery (VNS Matrix), as well as stereotypes attached to feminism (as with the French group Chiennes de garde), cyberfeminist irony has assumed a critical stance against the social divisions and hierarchies related to new technologies. Irony is a matter of interpretation, of recognizing something as ironic, and there is little guarantee that the views of people producing and reading the texts meet. Indeed, irony involves moments of misunderstanding and messy meaning[63] and it may well function as a kind of boomerang if ironic distance is erased and things are read literally. Saying one thing and meaning another is a means of joining contradictory views but it also has the effect of creating distance. In the case of cyberfeminism, this may mean distance toward cyber/technoculture and feminism alike. It may also be that irony functions more efficiently in the context of experimental media art projects than in the genre of academic writing.

The Cyberfeminist Internationals may be history, but cyberfeminists workshops are still being organized at electronic arts events. Cyberfeminist writings are still being published, broadening investigations into specific geographical regions,[64] daily practices,[65] and body politics.[66] Cyberfeminism has an important legacy in media art and activism, and the term continues its viral existence in scholarly writing. As computer technology and networked communications have become increasingly mundane and ubiquitous, cyberfeminism has lost a large part of its utopian and futuristic orientation. Rather than writing manifestos, or investigating virtual spaces or future embodiments, cyberfeminists have become concerned with specific location-based practices, social hierarchies, and global inequalities, a development that was already visible in the last Cyberfeminist International (2001).[67]

In Conclusion: An Affective Voice

Feminist readings of and references to earlier research often tend to be rather ungenerous. Writing in the late 1980s, Teresa de Lauretis argued that feminist theory had already become narrated as a tale of progress.[68] As texts are situated in a reductive opposition toward each other, the more recent ones can be posed as the "new and much improved" version of feminist theory—or, as de Lauretis ironically remarked, as the "dark horse and winner of the feminist theory contest."[69] Eve Kosofsky Sedgwick and Adam Frank have pointed to

a similar problem in their discussion of "the moralistic hygiene by which any reader of today is unchallengeably entitled to condescend to the thought of any moment in the past"[70]: as theory formation has gone through paradigmatic shifts, earlier work easily appears quaint.

Something of this kind seems to be at play in the ways that numerous cyberfeminist authors have detached themselves from the "second wave" while largely failing to engage in a productive dialogue with previous feminist analyses of nature, culture, gender, and technology. As connections to earlier feminist research are cut or ignored, it may become difficult to see what is meant with "feminism" as well as how exactly it connects with the prefix "cyber." Pointing out the assumed lack of theoretical sophistication in older texts may be an easy sport but it is not a particularly helpful one in terms of feminist knowledge production and its disciplinary histories.

Reading feminist work on gender and technology produced during the past four decades, *The Dialectic of Sex* continues to stand out. Engaging with the book as an intellectual challenge, one may begin to see "What it was possible to think or do at a certain moment of the past that it no longer is."[71] For me, this is where the continuing value of the work lies: in an ambitious view of a future society that is not confined to negative critique of existing conditions but tries to think differently about the very fundamentals of society in terms of labor, family, and work.

In comparison with cyberfeminist texts rife with irony, gynocentric metaphors, and poetic references to cultural theory, Firestone's book has an appeal of its own, something that could, following Melissa Gregg, be conceptualized as Firestone's affective voice. Gregg refers to a particular contagious affect in the forms of address adopted by an author that has the power and effect of engaging readers and activating them into critical practices—be these textual or other.[72] Sarah Franklin has suggested that the importance of *The Dialectic of Sex* lies in its analysis and critique of gender and discrimination more than in the concrete solutions that it proposes. The appeal of Firestone's affective voice could well be added to the list: committed to rethinking culture, technology, gender, and society, it is occasionally blunt, seldom ironic, incessantly passionate, and contagious in its urgency.

Notes

1. VNS Matrix, "Cyberfeminist manifesto for the 21st century" (1991), OBN Reading Room, http://www.obn.org/reading_room/manifestos/html/cyberfeminist.html; Haraway's manifesto, originally published in *The Socialist Review,* was reprinted as "A Cyborg Manifesto,"

in Donna J. Haraway, *Simians, Cyborgs, and Women: The Reinvention of Nature* (London: Free Association Books, 1991), 149–81.

2. Sadie Plant, "The Future Looms: Weaving Women and Cybernetics," in Mike Featherstone and Roger Burrows, eds., *Cyberspace, Cyberbodies, Cyberpunk* (London: Sage, 1995); Sadie Plant, "Feminisations: Reflections on Women and Virtual Reality," in Lynn Hershman Leeson, ed., *Clicking In: Hot Links to a Digital Culture* (San Francisco: Bay Press, 1996), 37–8; Sadie Plant, "On the Matrix: Cyberfeminist Simulations," in Rob Shields, ed., *Cultures of Internet: Virtual Spaces, Real Histories, Living Bodies* (London: Sage, 1996); Sadie Plant, *Zeros + Ones: Digital Women and the New Technoculture* (London: 4th Estate, 1997).

3. subRosa, http://www.cyberfeminism.net/.

4. See Faith Wilding, "Where's the Feminism in Cyberfeminism?," *n. paradoxa, international feminist art journal* 2 (1998); Mariá Fernandez and Faith Wilding, "Situating Cyberfeminism," in María Fernandez, Faith Wilding, and Michelle M. Wright, eds., *Domain Errors! Cyberfeminist Practices* (New York: Autonomedia, 2003); Susanna Paasonen, *Figures of Fantasy: Internet, Women and Cyberdiscourse* (New York: Peter Lang, 2005), 200–207.

5. Norbert Wiener, *The Human Use of Human Beings: Cybernetics and Society* (New York: Da Capo, 1954/1988); Norbert Wiener, *Cybernetics: or Control and Communication in the Animal and the Machine*, second edition (Cambridge, MA: MIT Press, 1948/1999).

6. N. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University of Chicago Press, 1999), 93–94.

7. Jenny Sundén, "What Happened to Difference in Cyberspace? The (Re)turn of the She-Cyborg," *Feminist Media Studies* 2 (2001); also Jenny Sundén and Malin Sveningsson Elm, "Introduction," in Malin Sveningsson Elm and Jenny Sundén, eds., *Cyberfeminism in Northern Lights: Digital Media and Gender in a Nordic Context* (Cambridge: Cambridge Scholars Publishing, 2007), 3–8.

8. Rosi Braidotti, "Cyberfeminism with a Difference" (1996), http://www.let.uu.nl/womens_studies/rosi/cyberfem.htm; Rosi Braidotti, *Metamorphoses: Towards a Materialist Theory of Becoming* (Cambridge: Polity, 2002).

9. Haraway, *Simians, Cyborgs, and Women*; Donna J. Haraway, *Modest_Witness@Second_Millennium. FemaleMan©_Meets_OncoMouse™: Feminism and Technoscience* (New York: Routledge, 1997); Sarah Kember, *Cyberfeminism and Artificial Life* (London: Routledge, 2002); Alison Adam, *Artificial Knowing: Gender and the Thinking Machine* (London: Routledge, 1998); Hayles, *How We Became Posthuman*. It should be noted, however, that scholars such as Adam have deliberately distanced themselves from cyberfeminism; see Alison Adam, "What Should We Do with Cyberfeminism?," in Rachel Lander

and Alison Adam, eds., *Women in Computing* (Exeter: Intellect Books, 1997). This tentative categorization of the three meanings of cyberfeminism and the writers who exemplify them are therefore my own.

10. On their Web site, subRosa introduce themselves as "a reproducible cyberfeminist cell of cultural researchers committed to combining art, activism, and politics to explore and critique the effects of the intersections of the new information and biotechnologies on women's bodies, lives, and work." See also subRosa, María Fernandez, Faith Wilding, and Michelle M. Wright, "Introduction: Practicing Cyberfeminisms," in María Fernandez, Faith Wilding, and Michelle M. Wright, eds., *Domain Errors! Cyberfeminist Practices* (New York: Autonomedia, 2003).

11. See, e.g., Judith Squires, "Fabulous Feminist Futures and the Lure of Cyberculture" (1996), in David Bell and Barbara M. Kennedy, eds., *The Cybercultures Reader* (London: Routledge, 2000); Claudia Springer, *Electronic Eros: Bodies and Desire in the Postindustrial Age* (Austin: University of Texas Press, 1996).

12. Sundén, "What Happened to Difference in Cyberspace?," 222–23; Paasonen, *Figures of Fantasy*, 207–25.

13. Cornelia Sollfrank, "Editorial," in Cornelia Sollfrank and Old Boys Network, eds., *First Cyberfeminist International* (Hamburg: OBN, 1998), 1; also Claudia Reiche, "Editorial," in Claudia Reiche and Verena Kuni, eds., *Cyberfeminism: Next Protocols* (New York: Autonomedia, 2004), 9.

14. Julianne Pierce, "Info Heavy Cyber Babe," in *First Cyberfeminist International*, ed. Cornelia Sollfrank and Old Boys Network (Hamburg: OBN, 1998), 10.

15. VNS Matrix.

16. See Plant, "Feminisations."

17. Sundén, "What Happened to Difference in Cyberspace?," 221–22.

18. Carolyn Guertin, "Gliding Bodies: Cyberfeminism, Interactivity and Slattery's Collabyrinth" (2003), *Art Women*, http://www.artwomen.org/cyberfems/guertin/index.htm.

19. Alla Mitrofanova, "How to Become a Cyberfeminist?," in Cornelia Sollfrank and Old Boys Network, eds., *Next Cyberfeminist International* (Hamburg: OBN, 1999), 12.

20. See Wilding, "Where's the Feminism in Cyberfeminism?"

21. Debora Halbert, "Shulamith Firestone: Radical Feminism and Visions of the Information Society," *Information, Communication & Society* 1 (2004).

22. Yvonne Volkart, "The Cyberfeminist Fantasy of the Pleasure of the Cyborg," in Claudia Reiche and Verena Kuni, eds., *Cyberfeminism. Next Protocols* (New York: Autonomedia, 2004), 98.

23. Susan Hawthorne and Renate Klein, "CyberFeminism: An Introduction," in Susan Hawthorne and Renate Klein, eds., *CyberFeminism: Connectivity, Critique + Creativity* (Melbourne: Spinifex, 1999), 2–3.

24. Hilary Rose, *Love, Power and Knowledge: Towards a Feminist Transformation of the Sciences* (Cambridge: Polity, 1994), 1.

25. Shulamith Firestone, *The Dialectic of Sex: The Case for Feminist Revolution* (originally New York: William Morrow, 1970; this edition New York: Farrar, Straus and Giroux, 2003), 184–186.

26. Slava Gerovitch, *From Newspeak to Cyberspeak: A History of Soviet Cybernetics* (Cambridge, MA: MIT Press, 2002); Benjamin Robinson, "Socialism's Other Modernity: Quality, Quantity and the Measure of the Human," *Modernism/Modernity* 4 (2003); Eden Medina, "Designing Freedom, Regulating a Nation: Socialist Cybernetics in Allende's Chile," *Journal of Latin American Studies* 3 (2006).

27. Stuart Umpleby, "A History of the Cybernetics Movement in the United States" (2006), www.gwu.edu/~umpleby/cybernetics/2005_WAS_History_of_Cybernetics_Movement.doc.

28. Gerovitch, *From Newspeak to Cyberspeak*, 261.

29. Heikki Mäki-Kulmala, *Anti-Ahmavaara: Yrjö Ahmavaara yhteiskuntatieteen mullistajana* (Tampere: Tampere University Press, 1998), 127–30.

30. Marshall McLuhan, *Understanding Media: The Extensions of Man* (London: Routledge, 1964); Sydney Finkelstein, *Sense and Nonsense of McLuhan* (New York: International Publishers, 1968), 7.

31. David Tomas, "Feedback and Cybernetics: Reimaging the Body in the Age of Cybernetics," in Mike Featherstone and Roger Burrows, eds., *Cyberspace, Cyberbodies, Cyberpunk* (London: Sage, 1996), 34.

32. Tomas, "Feedback and Cybernetics," 34.

33. All the volumes of *Radical Software* are available online, at http://www.radicalsoftware.org/e/index.html.

34. Chris Hill, "'Attention! Production! Audience!' Performing Video in its First Decade," in Chris Hill, Kate Horshfield, Maria Troy, and Deirdre Boyle, eds., *Rewind: Video Art and Alternative Media in the United States 1968–1980*, draft manuscript (Chicago: Video Data Bank, 1996), 18; Deirdre Boyle, *Subject to Change: Guerrilla Television Revisited* (New York: Oxford University Press, 1997), 29; Paasonen, *Figures of Fantasy*, 57.

35. Boyle, *Subject to Change*, 31.

36. See Squires, "Fabulous Feminist Futures and the Lure of Cyberculture," 366.

37. Firestone, *The Dialectic of Sex*, 211–12.

38. Firestone, *The Dialectic of Sex*, 182.

39. Sarah Franklin, "The Dialectic of Sex: Shulamith Firestone Revisited" (1998), Department of Sociology, Lancaster University, http://www.comp.lancs.ac.uk/sociology/soc050sf.htm; Kathryn Woodward, "From Virtual Cyborgs to Biological Time Bombs: Technocriticism and the Material Body," in Jenny Wolmark, ed., *Cybersexualities: A Reader on Feminist Theory, Cyborgs and Cyberspace* (Edinburgh: Edinburgh University Press, 1999), 285; Kathryn Woodward, "Introduction to Part Three," in Gill Kirkup, Linda Janes, Kathryn

Woodward, and Fiona Hovenden, eds., *The Gendered Cyborg: A Reader* (London: Routledge and Open University, 2000), 166.

40. Woodward, "From Virtual Cyborgs to Biological Time Bombs," 285.
41. Hawthorne and Klein, "CyberFeminism: An Introduction," 2–3.
42. Firestone, *The Dialectic of Sex*, 182.
43. Plant, "On the Matrix," 173–74.
44. Plant, "Feminisations," 37 (emphasis in the original).
45. Plant, "On the Matrix," 172–73.
46. Plant, "On the Matrix," 182.
47. Plant, *Zeros + Ones*, 42–46.
48. Firestone, *The Dialectic of Sex*, 157.
49. Rosi Braidotti, *Nomadic Subjects: Embodiment and Sexual Difference in Contemporary Feminist Thought* (New York: Columbia University Press, 1994), 115.
50. Firestone, *The Dialectic of Sex*, 175–76.
51. Firestone, *The Dialectic of Sex*, 4.
52. See Hayles, *How We Became Posthuman*.
53. In Rosie Cross, "Interview with Sadie Plant" (1995), *GeekGirl* 1, http://www.geekgirl.com.au/ geekgirl/001stick/sadie/sadie.html.
54. Plant, *Zeros + Ones*, 45.
55. Halbert, "Shulamith Firestone: Radical Feminism and Visions of the Information Society," 129.
56. Donna J. Haraway, *How Like a Leaf. An Interview with Thyrza Nichols Goodeve* (New York: Routledge, 2000), 106.
57. Haraway, *Simians, Cyborgs and Women*, 10.
58. Corrinne Petrus, "Webgrrls," in *First Cyberfeminist International*, ed. Cornelia Sollfrank and Old Boys Network (Hamburg: OBN, 1998), 75.
59. Fernandez and Wilding, "Introduction: Practicing Cyberfeminisms," 18–20.
60. Sollfrank, "Editorial," 1.
61. Wilding, "Where's the Feminism in Cyberfeminism?," 7; Fernandez and Wilding, "Introduction: Practicing Cyberfeminisms"; Faith Wilding and Critical Art Ensemble, "Notes on the Political Condition of Cyberfeminism," in *First Cyberfeminist International*, ed. Cornelia Sollfrank and Old Boys Network (Hamburg: OBN, 1998), 20–23.
62. See Cornelia Sollfrank, "Female Extension," in Cornelia Sollfrank and Old Boys Network, eds., *First Cyberfeminist International* (Hamburg: OBN, 1998), 61.
63. Linda Hutcheon, *Irony's Edge: The Theory and Politics of Irony* (London: Routledge, 1994), 14.
64. Malin Sveningsson Elm and Jenny Sundén, eds., *Cyberfeminism in Northern Lights: Digital Media and Gender in a Nordic Context* (Cambridge: Cambridge Scholars Publishing, 2007).
65. Kristine Blair, Radhika Gajjala, and Christine Tulley, eds., *Webbing Cyberfeminist Practice: Communities, Pedagogies, and Social Action* (Cresskill: Hampton Press, 2008).

66. subRosa et. al, "Introduction: Practicing Cyberfeminisms"; Claudia Reiche and Verena Kuni, eds., *Cyberfeminism: Next Protocols* (New York: Autonomedia, 2004).

67. See Helene von Oldenburg and Claudia Reiche, eds., *Very Cyberfeminist International* (Hamburg: OBN, 2002).

68. Teresa de Lauretis, "The Essence of the Triangle or, Taking the Risk of Essentialism Seriously: Feminist Theory in Italy, the U.S., and Britain," *Differences* 1 (1989), 6–8.

69. de Lauretis, "The Essence of the Triangle," 7.

70. Eve Kosofsky Sedgwick and Adam Frank, "Shame in the Cybernetic Fold: Reading Silvan Tomkins," in Eve Kosofsky Sedgwick, *Touching Feeling: Affect, Pedagogy, Performativity* (Durham: Duke University Press, 2003), 117.

71. Sedgwick and Frank, "Shame in the Cybernetic Fold," 118.

72. Melissa Gregg, *Cultural Studies' Affective Voices* (Houndmills: Palgrave Macmillan, 2006), 1.

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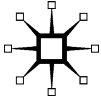# FURTHER ADVENTURES OF *THE DIALECTIC OF SEX*

Critical Essays on Shulamith Firestone

Edited by

Mandy Merck and Stella Sandford

Contents