Zoë Sofoulis

Cyberquake: Haraway's Manifesto[1]

The overused term „ground-breaking" always invokes for me images of pickaxes and bulldozers churning up undeveloped land. This is not quite the right word for Donna Haraway's „A Manifesto for Cyborgs" (1985), which behaved more like the seismic center of an earthquake that jolted many out of their categorical certainties as it shifted the terrain of debate about culture and identity in the late 20th century. This chapter is concerned with the earthquake effects of the Cyborg Manifesto[2] in academia and cyberculture more generally. I cannot claim any overarching objectivity: I was a student of Haraway's during the 1980s, and have been familiar with the essay from its pre-history (Haraway 1991a, 244 n.1) to its breakthrough with the notion of the cyborg, following its career through various published, republished, and re-edited versions, not to mention spin-off interviews and elaborations. Rather, I practice what Haraway (1988) calls a „situated knowledge": partial, with inevitable blind spots, and very much part of the field it examines (in a very practical way as well, since my career has directly benefited from Haraway's renowned generosity in citing her students' works).

The longer version of this chapter looks first at key ideas of the Manifesto itself, concentrating on the first section of that work, but in the context of a colloquium on cyberfeminism I assumed familiarity with Manifesto and concentrate on the contexts in which the work was received, and an evaluation of some of its effects, which I liken (via a familiar Californian metaphor) to an earthquake with aftershocks. This is not an attempt to provide a comprehensive and detailed survey of just how widely the ideas in Haraway's essay have been disseminated and how deeply they have influenced feminist and cybercultural scholarship. Instead, my more modest aim is to identify some of the theoretical and metaphorical features which made the Manifesto particularly valuable and relevant both to feminist scholars and a diversity of creative participants in the computerized world of the late 20th century.

The one part of the Manifesto I would remind the reader of is the chart below, which is an important framework for Haraway's distinctions between cultural and scientific formations in the earlier and later parts of the 20th century. A key argument in the Cyborg Manifesto was that feminists couldn't hope to analyse the lifeworld and political possibilities represented on the right hand side of the chart — the 'informatics of domination' — with feminist terms solely based on the formations of the left hand side — 'white capitalist patriarchy'.

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[2]   Haraway's Manifesto was also published in German. See: Haraway, Donna (1995): Ein Manifest für Cyborgs. Feminismus im Streit mit den Technowissenschaften. In: Haraway, Donna: Die Neuerfindung der Natur. Primaten, Cyborgs und Frauen. Hrsg. und eingeleitet von C. Hammer und I. Stieß. Frankfurt/New York: Campus Verlag, S. 33-72.

Representation	Simulation
Bourgeois novel, realism	Science fiction, postmodernism
Organism	Biotic component
Depth, integrity	Surface boundary
Heat	Noise
Biology as clinical practice	Biology as inscription
Physiology	Communications engineering
Small group	Subsystem
Perfection	Optimization
Eugenics	Population control
Decadence, Magic Mountain	Obsolescence, future shock
Hygiene	Stress management
Microbiology, tuberculosis	Immunology; AIDS
Organic division of labor	Ergonomics/cybernetics of labor
Functional specialization	Modular construction
Reproduction	Replication
Organic sex role specialization	Optimal genetic strategies
Biological determinism	Evolutionary inertia, constraints
Community ecology	Ecosystem
Racial chain of being	Neo-imperialism, United Nations humanism
Scientific management in home/	Global factory/electronic cottage
Family/market/factory	Women in the integrated circuit
Family wage	Comparable worth
Public/private	Cyborg citizenship
Nature/culture	Fields of difference
Cooperation	Communication enhancement
Freud	Lacan
Sex	Genetic engineering
Labor	Robotics
Mind	Artificial intelligence
Second world war	Star wars
White capitalist patriarchy	Informatics of domination

The earthquake effects of the Manifesto

Something that becomes a „cult text", as Constance Penley and Andrew Ross called it (Penley and Ross 1991, 1), a text read widely beyond the usual feminist and academic circles, does so not just because it shakes things up (which it did), or because it contains pearls of universal wisdom (which it surely does), but also because in certain ways it fits in with the preoccupations of its times: there is a context that makes it relevant and meaningful; there are readers sharing questions with the text and ready to be moved by it; there are foundational concepts already shaky and ready to crumble. Exuberant, expansive, perhaps over-responsible, and certainly ambitiously synthetic, with its own suggestive flaws and fissures, the chimerical assemblage of elements that is Haraway's Manifesto was capable of bearing many readings by highly divergent audiences.

Haraway's ironic dream of a common language of technologically mediated hybridity and a politics of perverse affinity eventually became almost *de rigeur* reading for anyone within the growing field of „technocultural" studies and especially what some have called „cyberstudies" or „cybercultural studies," as well as cultural studies of technoscience (Penley and Ross 1991; Aronowitz et al 1996). Appealing to a wide range of readerships, the Manifesto's cyborg managed to insinuate itself into diverse discursive spaces, from feminist political theories of anthropology,[3] ethnic identities, and lesbian and queer sexualities (for example, Sandoval 1991, 1995a, 1995b; Morton 1999), to studies of science fiction literature and film (for example, Bukataman 1993, Springer 1996, McCaffery 1991, Csisery-Ronay 1991); she is invoked in papers on postmodern pedagogy (Bigum 1991, Green and Bigum 1993); in studies of cosmetic surgery, reproductive technologies, and female body building (Balsamo 1996), in relation to architecture (Vidler 1992), postmodern war (Gray 1995, Edwards 1995) and feminist theology (Graham 1999 and forthcoming).

The vocabulary of cyborgism was found relevant for discussing a range of cultural and technological phenomena, from mundane computer and videogame interactions, or human interactions mediated by computers and the Internet, to more extreme examples of anything involving physical and virtual intimacies between humans and machines, especially where the latter were seen to exert some type of agency. This included artworks involving bionic bodies such as Stelarc's third arm and more recent gestures towards the „posthuman" (Dery 1996, especially 153--167, 229--256), or interactions between human and nonhuman elements (such as in interactive artworks in digital media or installations fitted with responsive sensors). The cyborg could be invoked in relation to engineering and biomedical advances that produced new genetic hybrids (a favorite theme in cyberfiction and its precursors), or which coupled humans to bionic components, whether to prolong life beyond its „natural" term (as in Gibson's example of the „posthuman" person connected to all kinds of life-support systems), or to allow existence in inhospitable environments like the inside of a nuclear reactor, outer space, or the deep ocean (one of Haraway's favorite cyborg images was of a deep sea diver in a pupa-like casing), or to afford entry into virtual worlds (like the „jacked in" hackers of Gibson's and Cadigan's cyberfictions, directly interfacing their brains with cyberspace; see Balsamo 1993). Itself a science-fictional creature emergent at the interface of theory and imagination, the mythic figure of the cyborg was at home in the blurred boundaries between present reality and the heralded near-future presaged in the boosterist discourses around IT, the „technohype," and „cyberbabble."

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[3]   See the articles on cyborg anthropology in Gray 1995.

The Manifesto was predictably of interest to feminists in the fields of labor studies as well as the already established area of feminist science and technology studies, with people interested in a range of matters from the history of women scientists, gender and computer education, nontraditional trades for women, and international divisions of labor by race and gender, to issues of gender, epistemology, and ontology in science. It helped clarify differences between techno- and eco- oriented feminists, and those who didn't subscribe to cosmic feminism could find in Haraway a voice that validated a range of other approaches to studying, interpreting, dreaming, and mythologizing about the woman -- technoscience -- world relation.

Haraway's manifesto also spoke to the (mainly academic) feminists who were getting bored with the old critiques of dualisms, dissatisfied with the essentialisms of identity politics and strictures of political correctness, pained by the impasses between white women and their many „others," intrigued by the „bad girls" of the radical sex movement, and in search of political and intellectual affinities that didn't depend on shared natural origins, victimhood, or oppression. The term „patriarchy" seemed pretty well past its use-by date for those theorists looking for new ways to frame feminist cultural critique of the globalized capitalist world. Just when the (mainly white male) postmodernists were proclaiming the death of the subject and the end of metanarratives (Jameson 1984), the Cyborg Manifesto -- offering its own myths along with the various utopian and US Third World Women's writings it drew upon -- celebrated a different vision of a new kind of fractured subject, for whom partiality, hybridity, and lack of a single smooth identity or wholeness did not imply death, but on the contrary, invoked the possibility for connectedness and survival beyond innocence in an impure world.

Foucault was big and getting bigger in the US in the 1980s, and the Foucaultian dimensions of Haraway's work, including ideas of how the operations of power could involve resistance, pleasure, and perversity were legible to this broader academic readership. Perhaps because she labels the Manifesto „socialist feminist," thus putting the reader off the Foucaultian scent, Haraway is not lined up with „the usual suspects" of Foucaultian feminists. Arguably she deserves to be, since she takes Foucault on board, and critically develops his notions of biopower and biopolitics into her (post)Foucaultian notions of the „informatics of domination" and „technobiopower" (Haraway 1997, 11--12). Moreover, she does actually undertake a complex discourse analysis of a particular science -- primatology (Haraway 1989a) -- which is more than many a credentialed Foucaultian feminist!

The Manifesto's publication coincided with the peak of textual studies and the linguistic turn in cultural theory.[4] Its descriptions of cyborg as a kind of etched surface, and its notions of information and coding, fitted in well with some of the feminist psychoanalytic-textual analysis that understood gender in terms of language, codes, and signs. Hence the Manifesto's cyborg gained a life within feminist theories of gender and representation. For example, Judith Halberstam interprets this cyborg as something that „posits femininity as automation, a coded masquerade" (1991, 449) . With reference to Turing's theories of computer intelligence, Halberstam argues that gender is also not innate or essential, but „a learned, imitative behavior that can be programmed" (443), so that both femininity and masculinity are „always mechanical

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[4]   For example, in the History of Consciousness PhD program at the University of California, Santa Cruz (where Haraway has been since 1980), students of the 1981 Theory and Methods seminar had to read Josué V. Harari's *Textual Strategies: Perspectives in Post-Structuralist Criticism* (Ithaca, NY: Cornell University Press, 1979) which in view of its woman-free line-up of post-structuralists we renamed *Sexual Tragedies.*

and artificial" (454), forms of simulation or masquerade that become lived realities. The female cyborg figure offers resistance to „static conceptions of gender and technology":

> The intelligent and female cyborg thinks gender, processes power, and converts a binary system of logic into a more intricate network. As a metaphor, she challenges the correspondences such as maternity and femininity or female and emotion. As a metonym, she embodies the impossibility of distinguishing between gender and its representation. (Halberstam 1991, 454)

Similar themes are explored by Sadie Plant (1994, 1995, 1998), who links women to machines, especially computers, not only in terms of metaphors of weaving, networks, and the matrix, but importantly in terms of their shared capacities for simulation (*pace* feminist philosopher Luce Irigaray's notion of mimesis): „it is always as machinery for the reproduction of the same that women and information technology first sell themselves" (Plant 1995, 59). Although she shares Haraway's interest in the libratory and subversive potentials of an alignment between women and the powerful communications and networking machines of the information age, Plant is also Irigarayan, and manages at once to be both more „machinic" and more „essentialist" than Haraway, linking the automatic qualities of intelligent machines to the experiences of species being and reproduction which have traditionally defined women. Haraway was looking for empowering metaphors that didn't rely on birthing and definitions of women as natural. In a related paper, Plant writes that while man may be shattered by the revelation of multiple and machinic intelligences after „two and a half thousand years of sole agency," woman is „already in touch with her own abstract machinery" for she:

> ... has never had a unified role. Mirror, screen, commodity, means of communication and reproduction, carrier and weaver, carer and whore, machine assemblage in service of the species, a general purpose system of simulation and self-stimulation. While man connected himself to the past, woman was always in touch with the virtual matter of her own functioning. This is the connection which has constituted her so-called missing part: the imperceptible necessity of every machine (Plant 1994, 6--7; see also Plant 1995, 58).

Thus the historical denial of agency and subjectivity to women, their relegation as machinic apparatuses obeying species imperatives, is seen to give them an „edge" with respect to the emergent future of cyborg life where both machines and women evade control by the men who have become peripheral to their functioning.

Whereas Plant's cyberfeminism celebrates the machinic agency of both woman and nature („species" as mechanism), and Halberstam (1991) emphasizes the automated character of the feminine identity (gender and information as masquerades, codes), „environmental feminist" Stacey Alaimo (1994) rejects Haraway's cyborg metaphor as „inimical not only to an environmental feminism but also to any politics that opposes the military industrial complex"; she prefers Haraway's figure of nature as a witty agent like the Native American trickster figure, „the wily Coyote and an artifactual nature seem more effective agents for an environmental politics" (Alaimo 1994, 149). In Alaimo's post-Harawayan ecofeminism, women and nature are to be aligned again, not as passive victims, but as active agents in political affinity with each other (150) -- though how exactly this happens is not spelled out.[5]

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[5]   For a variety of other views and the cyborg/goddess issue see Lykke & Braidotti 1996; for a view on Haraway as an ecofeminist, albeit of a non-essentialist, non-goddess worshiping variety, see Sturgeon 1997.

Although Haraway's account of the cyborg and cyborg politics is amenable to a textualist reading, it also, as Alaimo emphasizes, disrupts and goes beyond textualism because of its insistence on a real and material dimension to the world that evades and often tricks language: for Haraway the world is emphatically *not* a *tabula rasa* which can be written on and reshaped any way we want it. Nonhuman entities set their own limits to their inscribability. Kathleen Woodward describes the Manifesto as „the most seminal [piece] in articulating the importance of biotechnology in contemporary cultural criticism" which achieved this by „smuggling, as it were, the subject of biotechnology into an essay that deals with communication technology" (Woodward 1999 , 286). This seems to me an awkward oversimplification of the previously discussed perspectives on the centrality of communications metaphors in post--World War II biology, as well as the ANT notions of „material-semiotic objects." These perspectives understand entities to be shaped out of contingent interactions with heterogenous others, in what John Law describes as a „ruthless application of semiotics" (Law 1999, 3) to the material world, whose constituents, analogously to phonemes and morphemes of language, are not essentially given, but shaped in their distinctions from other elements. I attribute the „earthquake" effect of the Cyborg Manifesto (and its close relatives, Haraway 1988, 1989b, 1991b, 1992) as arising in large part from the way it introduces terms and ideas from social studies of science, especially actor-network theory, into debates in feminist theory and political struggles for identity and subjectivity (especially by US Third World Women; Sandoval 1991), and from there into a wide range of textual and cultural studies. Perhaps even more important than Haraway's inspirational and clarifying effects *within* her own science studies field are those enabling effects on feminist scholars more peripheral to that field. As Nina Lykke suggests (Lykke 1996, 20--22), putting constructionism onto an interdisciplinary feminist science studies agenda allows people from humanities fields, including semiotics, narratological, and discourse studies, to make a contribution from somewhere not completely outside science.

Despite the wildly inclusive scope of the Manifesto, readers who've looked to it or its author to provide some overarching theory of the lot are inevitably disappointed. Haraway is no great meta-theorist and she does not assume the omniscient god position on any field, not even her own work. In the early 1980s she could barely name what it was she was doing. I suggested it was a semiotics of technology, but we both knew that didn't quite capture all the dimensions she wanted to bring together when deciphering objects and artifacts: more than semiotics, she was working on the cultural logic of globalization as expressed in the shape of reality itself, condensed into the very being of the object. Becoming progressively more articulate about her method, Haraway was able to develop more fully the notion of figuration central to her method in *Modest_Witness*:

> I emphasize figuration to make explicit and inescapable the tropic quality of all material-semiotic processes, especially in technoscience. For example, think of a small set of objects into which lives and worlds are built -- chip, gene, seed, fetus, database, bomb, race, brain, ecosystem. This mantra-like list is made up of imploded atoms or dense nodes that explode into entire worlds of practice. The chip, seed, or gene is simultaneously literal and figurative. We inhabit and are inhabited by such figures that map universes of knowledge, practice, and power. To read such maps with mixed and differential literacies and without the totality, appropriations, apocalyptic disasters, comedic resolutions, and salvation histories of secularized Christian realism is the task of the mutated modest witness (Haraway 1997, 11).

Later in the book she describes the objects on this list as:

... stem cells of the technoscientific body. Each of these curious objects is a recent construct or material-semiotic „object of knowledge," forged by heterogenous practices in the furnaces of technoscience. To be a construct does NOT mean to be unreal or made up; quite the opposite. Out of each of these nodes or stem cells, sticky threads lead to every nook and cranny of the world. Which threads to follow is an analytical, imaginative, physical, and political choice. I am committed to showing how each of these stem cells is a knot of knowledge-making practices, industry and commerce, popular culture, social struggles, psychoanalytic formations, bodily histories, human and nonhuman actions, local and global flows, inherited narratives, new stories, syncretic technical/cultural processes, and more (129).[6]

Unlike many contemporary enthusiasts of the „wired" culture of the information society, or some of her own fans, Haraway is not herself a „technological determinist" with faith that the technologies of the information „revolution" automatically produce libratory effects. She shares with many feminist writers on technology a commitment to the „social constructionist" thesis that technologies are themselves expressive of prior social and institutional arrangements and decisions, and that their effects in turn will vary according to the social practices surrounding them and the political contexts in which they are deployed (see, for example, Cockburn 1992, Cockburn and Furst-Dilic 1994). Haraway makes no secret of her indebtedness to actor-network theory and particularly Bruno Latour, a long-term colleague of hers, especially for the idea that agency is not confined only to humans in sociotechnical systems:

> In a sociological account of science [like Latour's] all sorts of things are actors, only some of which are human, language-bearing actors, and ... you have to include, as sociological actors, all kinds of heterogenous entities ... Perhaps only those organized by language are *subjects*, but agents are more heterogenous. Not all the actors have language (Haraway1991b, 3).

Not all the actors have language, but they nevertheless can be caught up in signification: for Haraway, Latour, and other actor-network theorists, the objects and bodies studied/produced by technoscience and biomedicine are „natural-technical objects" (165), or „material-semiotic actors," whose boundaries are not pre-defined but „materialize in social interaction" (Haraway 1991a, 200--201, 208).[7] The exact shape taken by an object of knowledge (a scientific fact or a technological product) is the result of a specific and contingent set of interactions between its material character and the semiotic and/or technical operations to which it is subject, that is, how it is made to mean, and what is materially done to it or with it. This perspective stresses contingency and hybridity in the outcomes of networks, and concomitantly downplays the idea that every technology follows some necessary and pre-ordained trajectory or ideological program. Holding to such a perspective puts Haraway squarely against those who would interpret every technology developed or used within „white capitalist patriarchy" as inevitably playing out a white, capitalist, and/or patriarchal logic, and it opens the way for an imaginative leap to speculate about the political and epistemological possibilities for using technologies to develop alternative connections with each other and the lifeworld. Enter the cyborgs, „illegitimate offspring of

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[6]   Equivalent accounts of Haraway's method may be found in Haraway's *Primate Visions* (1989a, 14, 369), and her „Promises of Monsters" essay (1992; also in Wolmark 1999, esp. pp. 317--318).

[7]   See Law and Mol 1995 (274--295) and Latour 1992 for examples of the way messages maybe encoded into artifacts and vice versa. Pickering (1995) discusses contingency and performativity in technological developments; while Nina Lykke (1996), Roberts (1999), and Sofoulis (2001) look at Haraway/Latour connections. Deleuze and Guattari also talk about similar concepts in notions of machinic assemblages, striated and smooth space, etc., on which see Lee and Brown 1994. For evaluations of and problems with actor-network theory (ANT) see Law and Hassard 1999); for some feminist problems with ANT see Cockburn 1992.

militarism and patriarchal capitalism" who can be „exceedingly unfaithful to their origins" (151).)

Note that while Haraway positions herself within feminism as wanting to adopt different kinds of categories from those of traditional sociology and political economy, including those stressing the contingency of technoscientific products and outcomes, within the field of actor-network theory (and emergent successors) she is seen a bit differently. In his recent work *Reconnecting Culture, Technology and Nature*, Mike Michael (2000, p.31) contrasts typical ANT with Haraway's approach :

> ANT's perspective is typically microsociological. It has thus tended to avoid use of such macro terms as institutions, the state, class, race, patriarchy and so on. This is not to say that it dismisses such 'large actors'; rather, it aims to explicate how these complexes attain coherence, consistency and uniformity across time and space. ANT's purpose is thus the unravelling of large actors in order to show how they are networks that need to be repaired and reproduced moment by moment by their constituent micro-actors (cf. Michael, 1996) . In contrast, Haraway is not averse to drawing upon the traditional terms of macrosociology — ideology, multinationals, sexism, racism and so on — although she is always circumspect about these categories. (Haraway 1997). These structures are seen as conditions and products of networks. But getting a handle on these is no simple empirical matter, and they do not impact upon us in some direct unmediated manner.

Haraway, writes Michael, is concerned with embodied and situated knowledges, and how „Our grasp of the 'out there' is always artefactual, social. It is always constituted through myth, metaphor, fiction, fantasy. But it is also constituted through technoscience — its stories, narratives, facts." (p. 31). In his work, Michael seeks to deploy the microsociological rigour of ANT in combination with the Harawayan socialist-feminist perspective that acknowledges the relevance of (admittedly fuzzy) macrosociological categories to the study of even micro-networks, which are always situated somewhere in particular in this broader social world.

Not all of Haraway's readers appreciate the significance of the dimension of her work I am highlighting here, namely those concepts from actor-network studies translated into cultural and political theory. That these could potentially help feminists go beyond a „merely" discursive or semiotic understanding of the object, and help rethink the subject--object relation in terms of agency and material-semiotic realities in a sociotechnical world was not appreciated by Carol Stabile, for example (Stabile 1994), who seemed to be looking for Haraway to provide a complete model for eco-techno-identity-politics. This author distinguishes between „technophobic" and „technomaniac" approaches to technology: the former represented by the „reactionary essentialism" of ecofeminists such as Mary Daly and Susan Griffin, who act as „ventriloquists" for nature; and the latter by Donna Haraway, whom Stabile accuses of depoliticizing the field by being seduced by postmodern images of „fragmentary and destabilized identities" (the main source for which, as Sandoval [1995a] reminds us, comes from US Third World Women and utopian feminist writing). The „technophobes" can ignore the grim realities of poverty and dispossession in an urban environment in their celebrations of the links between women and nature, while the „technomaniacs" can posit a cyborg subject whose high degrees of literacy, mobility, and choice are shared only by the most educated elites.[8]

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[8] Similar points are made in a more subtle and interesting way by Susan Leigh Star (1996), writing on themes of containment and being „homed" in the networked world.

Stabile attacks Haraway as a practitioner of discourse theory, which she associates with idealizing, aestheticizing, dehistoricizing, and depoliticizing moves within culture critique. Her argument implicitly relies on the old marxist idealist/materialist distinction and fails to show any understanding of the way discourse theories (like Foucault's, from whom Haraway borrows) are precisely about how discourses (traditionally considered part of the nonmaterial „superstructure"), the structures and practices of speaking and acting in institutional contexts, have both historical determinants and real, material effects, and hence how telling new or different stories can potentially change sociotechnical realities. Moreover, Stabile studiously ignores those aspects of Haraway's work which don't fit her critique, as well as those in sympathy with her own socialist views -- such as Haraway's attention to socialist-feminist studies of the gendered international division of labor, especially of women workers in the global electronic industry, her calls for the necessary continuance of „normal" kinds of political work (for example, affinity groups, collective actions, socially responsible practices, etc.), and her encouragement of fellow white Western feminists to become more aware of the privileged and partial character of their/our own standpoints, and to retell or transform existing stories into empowering political narrative appropriate for our own time and experience. Stabile's own perspective by contrast offers very little encouragement to political action or imagination and her conclusion is simply that better historical analysis of the same old stories is needed:

> Before we invent futurologies, we need to be able to tell stories about the fundamental and persistent narratives that continue to exclude, maim, and kill" (Stabile 1994, 157).

Stabile accuses Haraway of installing a feminist avant-gardism (Stabile 1994, 145) and of promoting a cyborg subject that doesn't have to *do* anything in order to be political, since „[p]olitics are, so to speak, embedded in the cyborg body." This critique, I would counter, applies less to Haraway than to some of her over-enthusiastic and under-politicized readers, especially those caught in the „textualist turn" and hence liable to equate semiotic ambiguity with political subversiveness (bolstered in some cases by Derrida's deconstructionism or notions of the carnivalesque from Bahktin, Kristeva, or Stallybrass and White).

Whether or not we agree with Stabile, and diagnose the Manifesto as infected by the very textualism it claims to resist in the name of a more realist epistemology, there is no doubt that it tempts some readers to interpret the category transgressions of cyborg figures, including gender transgressions, or even enthusiastic interfacings with high-tech equipment, as somehow inevitably or inherently politically subversive. A closely related temptation, and a highly seductive one for budding cybertheorists (and I've read just one too many of their dissertations) is to lump the cyborg in with every other kind of semiotically undecidable creature, and to read it as equivalent or identical to every other supposedly teratological (monstrous), transgressive, abject, or some way „in-between" entity or sign. I agree with Anna Munster that through such readings „the 'cyborg' configuration has been reified to denote 'hybridity' as such rather than to seek out partialities and produce changing alliances with the technical" (Munster 1999, 127). Munster points out that:

> If there is something potentially exciting about hybridity, it is the sense in which it resists a capture into the mere grafting of two connecting points (the technological and the cultural, the natural and the artificial, women and technoculture) and encourages a sense of movement between them (127).

There is no doubt Haraway's writings give some support to the idea of grouping all kinds of monsters together as hybrids. One could cite the statement in the Cyborg Manifesto that in the late 20th century „we are all chimeras, theorized and fabricated

hybrids of machine and organism; in short, we are cyborgs," or the postscript to the „Cyborgs at Large" interview where she describes as „monsters" the „boundary creatures -- simians, cyborgs and women" which have destabilized „Western evolutionary, technological, and biological narratives" (1991b, 21). My own reading of Haraway understands the emphasis to be not on hybridity as such, but on the specificity of hybrid forms that arise in particular situations. Frankenstein's creation, for example, could be described as a monstrous fabricated „chimera," but it is not a cyborg. It belongs on the left side of the chart and with the early 19th century, whereas the cyborg is the kind of chimera that becomes possible in the latter part of the 20th century, and in relation to powers and knowledges of the postmodern „informatics of domination." For Haraway as for Latour, the mere fact of something's hybridity does not mean much in itself, for as Latour argues (1993, 1994), there are always and everywhere sociotechnical hybrids; it's just that the project of modernity was to pretend there wasn't, in an effort to „purify" the messy interdependence of humans and nonhumans by making strict divisions between social and physical/natural sciences.[9] More salient questions are: what are the specific networks in which the hybrid is produced or enrolled? with which other actors? how extended are these networks? and to what extent does the prevailing worldview recognize, celebrate, or on the contrary deny, these hybridities? Frankensteinian science was close to field surgery and dealt with „found [biological] objects," dead organisms whose flesh is to be rejoined and reanimated. It aimed to find the secrets of life and death in order to create a new man, not change the nature of living being while turning it into a commodity, „life itself" (Haraway 1997, 13 and 276 n.8). In the late 20th century, the genetic engineering techniques and corporate capital that produce cyborgs and creatures like the OncoMouse™, whose being at the very cellular level bears the mark of commercial technoscientific intervention, are part of complex and extended set of networks in the informatics of domination, involving many universities, research teams and agendas, technological developments, advertising campaigns, etc.

Cybercultural manifestations

Haraway is one of the rare feminist writers to be accorded the status of author, quoted and named by both feminist and nonfeminist writers. As Katie King notes, Haraway has herself become a 'boundary object' within feminism. Her ironic myth of the cyborg and related essays on epistemology and postmodern bodies have inspired many scholars, including a number of her students at the History of Consciousness, to get beyond the essentialist impasses of early 1980s feminist identity politics, and to explore new directions in cultural analysis and criticism in the late 20th century, with renewed attention to scientific, technological, biotechnological, and biomedical themes. A number of articles and edited collections that gather up writings on cyborg and cyberspace themes have come out over the last decade, including the collection for which this was originally written.[10]

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[9]   See also essays in Lykke and Braidotti, eds. (1996).

[10] Those with contributions by Haraway's students include Stone 1996 and Gray 1995, a gigantic compendium of key sources and writers in the in the field, including several History of Consciousness students. Two wide-ranging collections of cultural studies approaches are Dery 1993, and Brahm and Driscoll 1995, which includes Sandoval (1995b) on US Third World Feminism, and critical and philosophical essays on geography, cyborgs and aliens, rap, Shakespeare, etc. Jenny Wolmark (1999) gathers a number of „classic" essays exploring various aspects of gender, race, class, technological embodiment, and popular media, with helpful introductions to each section, while Lykke and Braidotti 1996 emphasizes science studies and related questions of knowledge, objectivity, and spirituality, with some critiques of and developments beyond Haraway.

The mid 80s in the US was at a crest of the first big wave of diffusion of personal computers into academic, and increasingly, domestic life. We were starting to use email and on-line chat. My archived versions of Haraway's Manifesto and its precursors demonstrate through their fonts and print qualities the increasing sophistication of personal computing. People's personal experiences of cyberspace and their excitement at the potential in these new and networked machines made the subject matter of the Manifesto especially meaningful.

Adding to the impact of the Cyborg Manifesto was the growing popularity of what became known as „cyberpunk" science fiction. In the year before the Manifesto's publication, William Gibson scooped up all the major awards with his cyberpunk novel *Neuromancer* (Fitting 1991, 312 n.3), which explored various states of cyborg being, celebrated the obsessive hacker mentality (on which see Turkle 1984, 1996), and offered a definitive literary description of the virtual landscape he named „cyberspace", a translation into words of the imagery associated with high technologies and networks, especially computers and cities, in popular science, high-tech advertising and films like Ridley Scott's *Blade Runner*. Some readers enthusiastically linked and even confused Gibson's „five minutes into the future" cyberpunk visions with Haraway's technomyth of the cyborg. Just as Gibson was a little disconcerted by the leather-clad, technologically identified real-life cyberpunks who wanted him to sign their battered copies of *Neuromancer* (Gibson 1990), so was Haraway „galled" to encounter the technologically determinist ways her work had been interpreted by hardcore cyberpunks, hackers, and writers in *Mondo* and *Wired* who read the Manifesto „as a sort of technophilic love affair with techno-hype" and herself „as some blissed-out cyborg propagandist" (Haraway quoted in Olson 1996, 25). In 1984 (the year of the original „roadshow" where Haraway's „Ironic Dream of a Common Language" was performed) I also attended a science fiction conference in southern California. Gibson's awards had just been announced and the enthusiasm for *Neuromancer* was accompanied by a palpable sense of relief amongst the (80--90 percent male) academic SF fraternity, that finally a man had come up with an outstanding new novel, breaking the women writers' dominance of the awards since the mid 70s. „Find a man and you've found the origin" as my colleague Sarah Redshaw puts it: from then on Gibson's *Neuromancer* became the exemplar of a cyberfiction with only male-authored antecedents such as Phillip K. Dick, J. G. Ballard or William Burroughs (for example, Fitting 1991). It became common to discuss Gibson's cyberpunk in relation to Haraway's Manifesto without mentioning the references in both texts to the previous decade of feminist science fiction cyborg figures, cyberspaces, and stories by people like Joanna Russ, Octavia Butler, Vonda McIntyre, Anne McCaffery, Marge Piercy, James Tiptree Jnr (Alice Sheldon), and so on -- authors by whom Gibson had been influenced and from whom he borrowed.[11]

Already compatible through their shared history of female-authored speculative fictions about biotechnologies and virtual worlds, the Gibsonian and Harawayan visions, together with the real-world experiences of digital technologies, the Internet, and cyberspace expanding into education, workplaces, home, and the arts, all combined to produce a kind of mutant love child in the form of cyberfeminism, a term I loosely understand as a kind of feminism interested in exploring the theoretical and artistic potential of technologies and metaphors of the information age for women, and/or taking feminist activism into the virtual world and its real-world infrastructures. Cyberfeminists make the connection between the cyberpunk slogan „information

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[11] On this point see Samuel R. Delaney interviewed by Mark Dery in *Flame Wars* (Dery 1993, 743--763; see n.13) and Zoë Sofia (1993, 113--114); for a brief comparison of feminist SF and cyberpunk see Jenny Wolmark's „The Postmodern Romances of Feminist Science Fiction" in Wolmark 1999.

wants to be free" and the feminist libratory dimensions of Haraway's cyborg myth. They tend to be enthusiasts of the new technologies, especially the web and its possibilities for networking (Kuni 1999), though most are critical of the idea that virtual worlds offered a seductive escape from embodiment, and many are explicitly interested in maintaining sight of the embodied, indeed „visceral" character of Haraway's cyborg and the leaky, penetrable bodies of Gibson's cyberpunk antiheroes.[12] The term „cyberfeminist" arose simultaneously in 1991 for scholar Sadie Plant in England, and the Australian feminist art group VNS Matrix. Like many Australian feminists, VNS Matrix became aware of Haraway's Manifesto when it was reprinted in the journal *Australian Feminist Studies* in 1987, and paid homage to it in their (1992) *Cyberfeminist Manifesto for the 21st Century* (different versions reprinted in Zurbrugg, 1994, 427 and Sofia 1996, 61). Produced using electronic image-making technologies, it featured a horned woman in a shell amidst a molecular matrix, with a text announcing „the clitoris is a direct line to the matrix" and proclaiming themselves as the „virus of the new world order ... saboteurs of big daddy mainframe ... terminators of the moral code ... mercenaries of slime ... we are the future [etc.]." The group went on to produce *All New Gen,* a series of lightboxes and the prototype of a computer game based on these themes.[13] During the mid 1990s, along with one of the VNS Matrix artists, Virginia Barratt, I conducted interviews with Australian women artists in digital media: we found that almost all our interviewees had read the Manifesto and been inspired in one way or another by it. Slightly later than us, and with a partially overlapping sample of interviewees, researcher Glenice Watson (2000) found that a number of Australian women pioneers of the Internet were committed to the practice of being feminist activists on and around the Internet, though not all identified as „cyberfeminists" per se.

While Australian interest in cyberfeminism had more or less peaked by around 1996, the term continued to attract attention in Europe and the international cyberarts scene. In 1997 and 1999 the first and second „Cyberfeminist International" events were organized by an international group of women (including former VNS Matrix member Julianne Pierce) who ironically call themselves The Old Boys Network.[14] Themes at the second event included „Split Bodies and Fluid Gender," computer hacking and whether feminists could „appropriate the practice for their purposes," and feminist responses to globalization (Volkart and Sollfrank 1999, 4--5), as well as discussions and papers on the problems of defining cyberfeminism, how it might be different from other feminist critiques of technology, its essential pluralism, its connections with praxis, etc. For writers in the *Next Cyberfeminist International* catalog (Sollfrank and Old Boys Network 1999), Haraway was a foundational author to be critiqued. However, one -- Nat Muller -- observed that Haraway's (1988) „Situated Knowledges" essay, which had been overlooked in favor of the Manifesto, offered some promising openings for cyberfeminists who wanted a more technologically oriented approach than that offered in the discourse-heavy cybercultural studies of the mid to late 1990s. Likewise the early self-proclaimed cyberfeminist Sadie Plant was „the theorist we all love to slag off" (Muller 1999, 75), while cultural studies scholar Anne Balsamo was

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[12] For example, in 1993 Virginia Barratt curated an exhibition *Tekno Viscera,* in which various contributors, including electronic artists, played on the theme of „putting guts into the machine" (Barratt 1993).

[13] VNS Matrix and other Australian technological artists are discussed by Glenda Nalder (1993), and in pieces by Teffer, Bonnin , Kenneally, in the „Natural/Unnatural" special issue of *Photofile* 42 (June 1994); by Jyanni Steffensen (1994), Bernadette Flynn (1994), Zoë Sofoulis (1994), and Zoë Sofia (1994, 1998). See also various contributors and interviewees in Zurbrugg 1994.

[14] I am grateful to Irina Aristarkhova for sending me a copy of the *Next Cyberfeminist International* catalog.

cited approvingly for her interests in the real conditions of women's working lives and technological engagements (Muller 1999, Ackers 1999). Rosi Braidotti's (1994) critical approach to cyborgism was also accepted. Various contributors expressed dissatisfaction with Haraway's and Plant's too-easy linkage under the „cyborg" banner of those cybergirls of the rich nations with Third World women producing the equipment (one of the standard critiques of the Manifesto):

> I am very weary of making these celebratory gyno-social links as in: Ooowww look at us girlies we're all digital divas whether we're slaving away in a chip factory or whether we're suffering from rep. strain injury or carpal tunnel syndrome. This makes me think of 70s sisterhood feminism ... before we start jumping around with terms like 'virtual sisterhood,' we should be sensitive to just how inclusive that sisterhood is (Muller 1999, 76).

Some writers rejected Plant's (1995, 1998) essentialist ideas about the posthuman and machinic character of women's subversiveness in the computer age, along similar lines to my critique, above (see Bassett 1999, Muller 1999), and perhaps best summed up by Volkart and Sollfrank:

> Unlike approaches which assume that female resistance is already happening unconsciously in unknown, uncontrollable spaces, we insist on the idea of aware responsibility, reflection and of engaged motivation and intention (1999, 5).

Signaling disaffection with the earlier euphorics of VNS Matrix's *Cyberfeminist Manifesto*, Sollfrank wrote near the end of a report on her research on female hackers (she found few) that „My clitoris does not have a direct line to the matrix -- unfortunately. Such rhetoric mystifies technology and misrepresents the daily life of the female computer worker" (Sollfrank 1999, 48). This interest in practice and the realities of cyberspace life was a theme in several other articles in the *Next Cyberfeminist International* catalogue, which included besides the theoretical contributions I have highlighted others about more technical details of hacking and networking, discussions of various cyber-inspired artworks (or artworks interpretable in cyberfeminist terms), pieces about biotechnologies, the visible human project, and accessing cyberspace in the former Soviet Union; in short, a range of themes quite typical of those discussed in and around cyberarts, and in cybercultural studies (see note 13).

Coming in conjunction with cyberpunk fiction and the personal computer revolution, the Manifesto was well placed to give some focus to expressions of hopes and fears about the emergent technoworlds. As I earlier suggested (after Lykke 1996), Haraway's work, especially the Manifesto, has been important in enabling people from outside the fields of science studies to feel empowered to talk, think, criticize, write, and make artworks about the new forms of being and experience, and new kinds of sociotechnical and biotechnical hybrids emergent into the 21st century. Even though some of the post-Harawayan cyberfeminists have found problems with the Manifesto and its utopian dreams, it is still the case that the work was enabling for many scholars, artists, critics, and activists, who can take from it concepts and vocabulary to help name some of the new experiences and possibilities -- both scary and pleasurable -- afforded by technologies of the late 20th century, and to put some of these into perspective in relation to historical developments in science and industry over the 19th and 20th centuries.

There was a certain infectious euphorics of impurity in the Manifesto's vision of a hybrid identity committed to „partiality, irony, intimacy, and perversity": the cyborg myth offered an appealing way out to those frustrated by the purisms of identity

politics, as well as those white women who experienced forms of hybridity besides those lived by their non-white or non-anglo sisters. The Manifesto's account of the „informatics of domination" outlined the broader power-knowledge context in which the breakdown of purisms became more legible than they were within the dualisms of „white capitalist patriarchy" and the kind of feminism generated in/against it. The former Catholic girl's celebration of blasphemy, irreverence, and iconoclasm fitted in well with the images of „bad girls," flirting on the edge of pleasure and danger, that were cultivated by sexual radicals like lesbianfeminist sadomasochists of the 1980s (and got a heterosexual re-run in the 1990s), and it continued to resonate with the pluralism, activism, and sense of fun in queer (and cyberqueer) political sensibilities emerging from the late 80s and 90s.

Haraway's poetic claim that the cyborg „gives us our ontology" captured the imagination of many who were beginning to experience prolonged interactions with computers, and starting to explore new identities and forms of social life and community made possible by the Internet. While the computer's „holding power" and the fuzzy boundaries experienced between self and machine were already being written about when the Manifesto first came out (for example, Turkle 1984, Gibson 1984), Haraway's contribution was to locate these experiences within a potentially utopian political landscape, in a thought experiment based on the idea that science fiction imaginings could be a form of feminist politics. Whereas a standard feminist line on technology had been to equate it with abstract masculinist rationality, militarism, and the rape of the Earth, Haraway insisted on the intimate physicality of our relations to nonhumans, and on what Claudia Springer (1991) would later call „the pleasure of the interface." Beyond the problematics of heterosexual desire, the political correctness (or not) of lesbian sexualities, and the hybrid identities of (Sandoval's 1991, 1995a) „US Third World Women," the Cyborg Manifesto acknowledged the pleasures and desires we hold in relation to the nonhuman entities that are part of our lifeworld, and the sociotechnical and material-semiotic hybrid entities and plural identities we might form with the nonhumans. Haraway's political commitments to feminist, anti-nuclear and environmental politics, coupled with her bold determination to provide an alternative to what Stabile (1994) called „technophobic" feminists' essentializing equations between woman, reproduction, and nature, helped open up a more positive perspective on new technologies and their possibilities. Her socialist politics and familiarity with social studies of scientific practice and knowledge (especially in the ANT tradition) led Haraway to reject the idea of an inevitable trajectory of domination implicit in technologies, even those of military origin. If the cyborg could be unfaithful to its origins, then so could we. This perspective opened the way for women interested in new technologies like personal computers to explore their libratory, productive, and poetic possibilities in imagination, artwork, and cyberfeminist practice. In the characteristically 1980s spirit of the Cyborg Manifesto, complicity with „the system" was not an unmentionable crime nor a paralyzing political embarrassment, but understood as something inevitable, which did not necessarily prevent further effective political work for justice, equality, peace, and survival.

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