

# Writing, Literacy and Technology: Toward a Cyborg Writing

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Women, writing and culture and “women writing culture” are themes infusing much of Donna Haraway’s work. “Writing,” both in its larger postmodern sense and in its more narrow material sense, is central to living in the world and to enacting the numerous freedom projects of resisting systems of domination—whether in the very uses of discourse itself or in the multiple discourse systems that comprise and constitute our social institutions and academic disciplines. Thus, as Haraway says in *Simians, Cyborgs, and Women*, “writing is deadly serious.” It’s no wonder, then, that Haraway sees herself as a writer. As she mentions in the interview below, there is “no thinking process outside of some materiality.” The very “material density” of language itself is a brief against conceiving the goal of communication to be to produce “transparent” or “clear” statements. In fact, like Jean-François Lyotard, Haraway characterizes “the injunction to be clear”—an injunction all too frequently articulated in classrooms and academic disciplines—as “very strange.”

Like Jacques Derrida, Luce Irigaray, Lyotard, and others, Haraway calls for a conception of writing (“cyborg writing,” in her terms) that resists authoritative, phallogocentric writing practices, that foregrounds the writer’s own situatedness in history and in his or her writing practice, and that makes visible the very “apparatus of the production of authority” that all writers tend to submerge in their discourse. This is not to say that writers must “eschew” authority, but that in a truly ethical and postmodern stance they must reveal how authority is implicated in discourse. And because writing is inseparable both from its own embodied situatedness and from systems of liberation and domination, “literacy” should be a central concern of us all. As “the acquisition of the power to mark the world effectively,” literacy is “intimately implicated in projects of domination” and freedom. Literacy projects, then, are freedom projects. Citing Paulo Freire as “the inescapable ancestor” and as “one of my fathers, or one of my brothers,” Haraway stresses the importance of literacy work to contemporary liberation struggles—especially the recent work of Gloria Anzaldúa, June Jordan, and Katie King.

Haraway believes, however, that notions of literacy must not be restricted to linguistic literacy. In a technoscientific world (she calls it “The New World Order, Inc.”), understanding how the technical and scientific are deeply inter-

twinning with the political is the crucial first step in resisting systems of domination imposed by hegemonic governmental and corporate entities. This is why projects such as Michael Flower's "technoscientific liberty" or Langdon Winner's proposed televised science criticism program (similar to programs that review current popular films) are bold attempts to make visible the fact that the narratives of technoscience are exactly that—narratives, and, as such, they are always interested, never innocent. Such efforts are attempts to develop "a kind of cultural literacy of technology and science." Of course, examining such narratives—be they the narratives of primatology or biology or other scientific disciplines—has been Haraway's life work.

Once it is understood that such disciplines are in the business of producing narratives, it becomes easy to question the traditional notion of objectivity that has distorted our understanding of exactly what science is. The traditional narratives of science—or of any discourse, for that matter—have always been produced from a single standpoint: that of white, typically upper- or middle-class males. Defining this single perspective and the narratives generating from it as "objective" is a political act that silences other voices and perspectives. Like Sandra Harding, Haraway argues that in fact there are numerous contesting narratives produced by those who have been excluded from the knowledge-making projects of technoscience: "There are many actors in our world who can and ought to have a say in the design of the apparatus for the production of scientific knowledge." Hence, for Haraway, "the political project, the freedom project, the democracy project in science and technology is about the engagement of people whose ways of life are at stake in the apparatus of the production of knowledge and systems of action." Thus, because technoscience is "inherently narrative," because it is "inextricably about building stories into the world, building ways of life, building stories and situating subjects in these stories," the crucial political action that women and people of other marginalized groups must take is to "refigure the terms of that story," to re-narrate, to "produce a female symbolic where the practice of making meanings is in relationship to each other, where you're not simply inheriting the name of the father again and again and again."

Haraway makes clear that such attempts to re-tell the stories of technoscience are not cynical attempts to replace the dominant stories with those of women, an effort that would only serve to reinscribe hierarchies and systems of domination. Rather, they are efforts to widen the number and kinds of stories that get told and the actors who tell them. Far from an anything-goes relativism, re-fusing the technical and the political is an effort to "insist on the story-ladenness of knowledge, the story-ladenness of facts." And she also makes clear that "speaking as a woman," for example, refers to a "generic strategy," in that there is no essential "unmediated" female experience from which to speak: "I think of 'speaking as *X*' as a rhetorical strategy that reflects having built certain kinds of accountability to each other so that this generic move of representation is constantly tested against the ongoing possibility of working effectively

together. The only thing that I am against is mistaking these irreducible narrative and generic immersions for the thing itself; the thing I'm against is a kind of idolatry that mistakes the sign for the thing."

As a cultural critic, Haraway is particularly concerned with encouraging political action, not just in areas of technoscience but in all areas of political life. For example, she believes that "now in the '90s we're experiencing—even more than in the Reagan years, which is really quite amazing—a resurgence of compulsory reproductive heterosexuality as the ideal model of humanization." Haraway feels strongly that this and other issues must be addressed: "We have to be out there in every single area of social practice, figuring out what kinds of bonding of people with each other make our lives better, and refusing to analogize everything to the family." The same is true with adoption policy and the current "shift back again away from the possibility of gay and lesbian adoption or single parent adoption." So too must we be concerned with the deterioration of the labor movement, especially given the "feminization of labor" that the world is currently experiencing. Haraway believes that over the last generation "a class war of immense proportions has been waged globally, and it's been very successful," yet on the left "we've almost lost the ability to talk in class terms." New modes of labor organization must be developed, and labor issues *must* be addressed internationally or such efforts will fail.

Like bell hooks, Haraway believes that academics must become much more activist. For example, we've been "incredibly stupid and klutzy about doing propaganda. We ought to do more of it." And "we ought to be doing much more work with congressional staffers and with getting into the process of writing legislation, policy, and federal regulations." Without such efforts, cultural studies runs the risk of becoming "domesticated," turned into just another academic discipline: "The roots of cultural studies that are energizing are about remaking worlds, about paying attention to certain kinds of agencies that didn't get any description before."

It is precisely her linking of writing, literacy, and cultural activism that situates Donna Haraway as one of our most powerful feminist social critics and that makes her work especially relevant to those of us who care deeply about the intersections of language, discourse, and ideology. Perhaps it is exactly her image of the cyborg and cyborg writing to which we can turn to help us construct a useful concept of writing, ideology, and agency in the new millennium.<sup>1</sup>

Q. Often in your work you discuss the importance of writing, from your discussion in *Primate Visions* of the "vast and hegemonic technology of writing" in scientific discourse to your call in "A Cyborg Manifesto" for a revolutionary "cyborg writing." Do you consider yourself a writer?

A. "Yes" is the short answer. My coming to think of myself as a writer has grown over the last few years. While at Santa Cruz, I felt that I got permission to

consider myself a writer in a way that I hadn't in other academic jobs where the generic conventions of argumentation mitigated against taking writing itself seriously. I was more and more compelled by the physical process of writing, creating a tissue of words; by the kind of quasi-dreamstate that writing puts me (and I think most writers) into; by the experience of working through a sentence and finding that it's committed me to half a dozen positions that I don't hold, literally because of the material density of language; and by finding that writing is itself a material process of thinking, that there's no thinking process outside of some materiality. The particular tissue of writing became more and more interesting as a part of my work. I have friends for whom the injunction to be clear remains right at the top of their moral, epistemological, and political commitments. It's always struck me that the injunction to be clear is a very strange goal because it assumes a kind of physical transparency, that if you could just clean up your act somehow the materiality of writing would disappear. This is a psychological problem, as opposed to exactly what's interesting about working in that medium. So yes, I consider myself a writer, more and more so. And I've become increasingly more certain that this is part of the substance of *our* work collectively in science studies and that it's not some personal indulgence or some inability to "think clearly."

Q. In "A Cyborg Manifesto" you say that "Writing has a special significance for all colonized groups" and that "Contests for the meanings of writing are a major form of contemporary political struggle. Releasing the play of writing is deadly serious." Writing is "pre-eminently the technology of cyborgs" and is thus an important revolutionary tool: "Cyborg writing is about the power to survive, not on the basis of original innocence, but on the basis of seizing the tools to mark the world that marked them as other." What might distinguish cyborg writing from traditional phallogocentric, authoritative practices of mastery and domination?

A. Cyborg writing has inherited the kind of acid consciousness of people like Derrida and others who have made it simply impossible to engage in authoritative writing *as if* the subject who did such a thing weren't implicated in the practice and *as if* the history of writing weren't the history of the differentiation of the world for us with all of the sticky threads to questions of power and to whose way of life is at stake in marking up the world that way rather than some other way. That kind of irreducible immersion in writing, that kind of irreducible immersion in worldliness, is what I feel I've inherited from the critical tools of poststructuralism broadly considered. So writing—which is itself a trope and can't carry all the weight for worldly practice—can carry a lot of the weight for worldly practice because it insists on our own implication in meaning-making materiality. When I think of the difference between cyborg writing and the opposition I set up—traditional, phallogocentric, authoritarian, that sort of long list of "bad"—the important issue for me is that the cyborg is from the start a polluted category. It's a truly

odd subject position that I took up in a kind of insane, gleeful, critical, angry spirit. It's an offspring of World War II nuclear culture, and there's no possibility of working out of that position to imagine yourself in the Garden of Eden or returning to pre-Oedipal bliss. Many of the myths and narratives are not available to you from what I would call "cyborg positions." You have to take your implication in a fraught world as the starting point. I don't think that's true for authoritative writing practices that try very hard to produce the kind of masterful "I," a particular kind of authority position that makes the viewer forget the apparatus of the production of that authority. I think cyborg writing is resolutely committed to foregrounding the apparatus of the production of its own authority, even while it's doing it. It's not eschewing authority, but it's insisting on a kind of double move, a foregrounding of the apparatus of the production of bodies, powers, meanings. At first, naming it "cyborg" was flip in a way, but then I liked it better and better. Any kid born at the end of World War II—sort of eating the apple in the Atomic Cafe rather than the apple in the Garden of Eden—has to come to terms with the extraordinary role that communication systems and cybernetics plays in our literacy practices. So it was to catch those meanings.

- Q. You just mentioned literacy, and recently you expressed concern that as public education is co-opted to serve the needs of high-tech capital, literacy—both scientific and linguistic—becomes a tool of control and oppression. How might those of us interested in employing literacy as a form of liberation resist these "violent" uses of literacy?
- A. First, it's not new that literacy is intimately implicated in projects of domination; this is a very, very old story. You have to tell the origin of writing and the story of domination together, no matter where you decide to start your narrative. So in one sense, I think we're immersed in a very old issue. Literacy projects—the acquisition of the power to mark the world effectively in the various literacies that pertain to the social world we're living in (which in our case certainly still includes writing with paper and pen, but also with keyboard and video screen), the multiple literacies that it takes to build the world into categories that can be livable for you and your people—are freedom projects. And freedom projects return to the history of the importance of reading and writing for colonized people, that kind of seizing of the tools that marked you as other, and to contemporary literacy work: Paulo Freire of the previous generation, who is the inescapable ancestor; the projects of June Jordan, the way she writes about African-American education in the United States; the way Gloria Anzaldúa does literacy work; the way someone like Theresa Hak Kyung Cha, the really interesting Korean American via the Francophone world, does writing; the way Katie King at the University of Maryland talks about feminism and writing projects and the sort of layerings of locals and globals in writing projects; the way Romona Fernandez at Sacramento City College writes about "trickster literacy." You can't talk about the history of contemporary liberation struggles without talking about

joining freedom projects and literacy projects. So there's not a simple opposition between writing as a tool of domination and liberation.

Q. Paulo Freire is very important to the work we do in rhetoric and composition.

A. I think of him as one of my fathers, or one of brothers. I inherited his work; *we* who try to link writing and freedom projects inherited his work, collectively.

Q. On several occasions you've drawn on Sandra Gilbert and Susan Gubar's *The Madwoman in the Attic* to "discuss women's travail to construct a voice, to have authority, to author a text" in the sciences. Do you believe that literary criticism in general can have an influence on feminist reconstructions of the philosophy of science and on the actual practices of science?

A. The short answer is "yes." I used *The Madwoman in the Attic* specifically to position ourselves—my generation of feminists who were concerned with the materiality of language in any meaning-making, knowledge-making practice (sciences and technologies are knowledge-making practices)—to emphasize Gilbert and Gubar's arguments about the daughters of Milton: that you never start afresh, that you inherit the stories and practices of the fathers when you're coming out of essentially patriarchal and male-dominant cultures as we are. So you have a certain number of strategies available to you from the position of Milton's daughters: rereading with a kind of acid difference, attempting to set yourself up as other and outside, and making an effort to be a faithful daughter. You don't freely choose these positions.

The other part of the question was whether literary criticism in general has an influence on feminist reconstructions of the philosophy of science. There's a personal answer to that in that it sure made a difference to *me*. Literary criticism in the form of theories of literacy, in the form of semiology, in the form of deconstructive criticism, in learning how to examine the structure of narrative in action, in watching how narratives work through many kinds of systems of practice, in observing how rhetoric is "material" and a technology (whether the tools be high-energy physics particle accelerators or other kinds of tools), in watching the way the body becomes an inscription device and is made to generate streams of markings that are then worked into both narrative and non-narrative writing practices, in getting at practices of figuration, in understanding the ways that the history of Christian realism works into stories of the Scientific Revolution and the Enlightenment, in getting at figuration practices in technoscientific advertising, in getting at the way visual and verbal material co-construct subject positions for potential readers (which is a trope for a broad set of practices), in determining what degrees of freedom can and can't be constructed under given historical circumstances, in analyzing how configurations of reading and writing practices co-construct each other, in determining what the apparatus of literary production looks like, in talking about the apparatus of the production of bodies—all of these things, all of these ways of starting, I learned at least in part from people who have an academic, social, institutional location in literature.

- Q. Obviously the connections are there, but I'm not sure many people would have known there's such a strong connection.
- A. Yes, there's a strong connection. And there's also a strong biographical connection in that I was lucky enough to attend a really good liberal arts college where I got a scholarship and majored in philosophy, English and biology. It was really a fabulous intellectual experience.
- Q. It almost seems that a good liberal arts education is becoming a thing of the past.
- A. Isn't *that* the truth, especially as humanities divisions are made service departments for the funded parts of the university, with the money generating the much more readily enterprised parts of the university, and as we're more and more institutionally made into service organizations, service aspects of the industrially and federally funded parts of the university.
- Q. But despite these trends, you mentioned recently that as systems of domination are being lessened and that as ethnic diversity in the educational setting increases, woman's experience in the classroom is improving. How do you think *these* social transformations will change pedagogy, both for women and in general?
- A. I think about that question from the work of people I've seen in action and who are technically my graduate students but who have really changed the way I think about pedagogy. For example, I think of Ramona Fernandez, Megan Boler, Sarah Williams, Giovanna DeChiro, Ché Sandoval, Katie King—all people who've been graduate students in the History of Consciousness program at Santa Cruz and who have been much more savvy than I about the way their material practices as teachers respond to these different configurations of literacy and the institutionalizations in the university, much more alert to the reconfigurings of racial, class, and gender positions of students in classrooms. They are much better at what I think is a goal for many of us: engaging students actively in constructing knowledge in the classroom through any number of mechanisms. Katie King, who works at the University of Maryland and who has taught many classes in feminist culture, helped her students learn how to do cultural theory by taking them to museums, the Smithsonian, the Library of Congress, small showings of street theater, all sorts of locations. She's gotten very good at helping working-class students who also have jobs, who are living at home with their parents and who don't have a lot of time to read, to learn how to do collaborative projects and how to take up writing as daily work. I feel that what I know about pedagogy comes from watching my former and present graduate students. Also, they do more teaching than I do; I do a lot of lecturing. I'm pretty good at interactive classroom call-and-response work, if you will, but I'm not very good at the kind of really grainy engagement with helping students get to a point where they think of themselves as somehow truly making knowledge. I work with graduate students who are much better at that than I am myself.
- Q. You are characteristically ambivalent about your relationship to science. While you warn of the seductive attractiveness/destructiveness of technoscience, you are adamant that "in our search for an understanding of

a feminist body politic, we need the discipline of the natural and social sciences,” that “these sciences will have liberating functions in so far as we build them on social relations not based on domination.” What types of concrete steps can we take to effect such a conceptual and material revolution?

- A. I’m “ambivalent” about my relation to science in the technical sense—that is, I’m simultaneously possessed by many kinds of passionate relationships to science. I’m not ambivalent in the sense of not knowing what I think about it, but in the sense of a love/hate relationship. I think of scientific practice first of all as reaching into the tissue or fabric of our ways of life way beyond the laboratory or the other sacred centers of scientific knowledge production. I think of the movers and shakers and of what’s going to count as technoscientific knowledge as located in many kinds of places. For example, the activists in the anti-toxics movement that Giovanna DeChiro writes about, who have done persistent work around mapping differential disease and death rates in various communities or who are getting at embodied experiences of pain and disease or well-being that were not previously able to be socially represented; or efforts at getting new kinds of actors into research design; or efforts affecting the most important little technology for making scientific knowledge, which is the research protocol—these kinds of efforts are remaking science. (The research protocol is the little motor—the little machine tool more than motor.) There are many actors in our world who can and ought to have a say in the design of the apparatus for the production of scientific knowledge, not simply at the end of the line—use and abuse questions, or right to know questions, or “not in my backyard” questions, those sorts of questions; we are forced often enough to have a say only at that point. For me, the political project, the freedom project, the democracy project in science and technology is about the engagement of people whose ways of life are at stake in the apparatus of the production of knowledge and systems of action. Sandra Harding’s figure for that is “strong objectivity,” which I think is a very helpful way to think it through. How many kinds of location have to be brought to consciousness, explored in terms of coalition and accountability and questioning? What’s going to count as evidence? For whom? Who’s going to fit or not fit the systems of measure that are produced by these practices? Leigh Star, a sociologist of science at the University of Illinois, wrote a wonderful paper in which she uses her own allergy to onions as a way to suggest a point of view in science studies; she talks about going out to restaurants with colleagues and her difficulty in getting people to believe that she really can’t have onions in her food, that this is not a personal attitude on her part but that it really will make her seriously sick very fast. She uses this semi-funny but obviously annoying issue in her daily life to get at a much larger issue, which is trying to look at the world—of science and technology in this case—initially, as your point of departure in knowledge-making and analysis, from the point of view of people who don’t fit the system of commensurability, the system of measure that is being produced in these practices, but who



nonetheless are made to live inside of it. So it's not simply that you're marginal or outside—quite the opposite. The interesting epistemological, emotional, political position is from the point of view of those who must live in relation to systems of commensurability that cannot be theirs, ever. The practical political question then becomes, “What would it take to make them theirs?” The figure that I've used for this same problem—about what it takes to effect a conceptual and material revolution—is “situated knowledges,” and by that I've meant that you don't know where you are in advance. You build with others a sense of where you are in the world; it's an achievement. And sciences and technologies are ways of constructing different life chances—they build in different life chances for variously located people—so you can't *not* care.

Now, those different life chances also have to do with different access to pleasure in ways of figuring the world. I think of biology, for example, as among other things a source of pleasure. There are some kinds of privileges nobody should have, and some kinds everybody should have, right? Well I think of sciences and technologies in principle as sources of intense intellectual and physical pleasure as well as instruments for doing things in the world. So the practical steps you take involve you in the culture-work of insisting on the pleasure of science and technology in your teaching and your writing, insisting on a kind of real engagement with the physicality of science and technology as a mode of cultural pleasure, and insisting on the legitimacy and entitlement of many kinds of actors, not just in criticism but in building the conditions of knowledge so that, let's say, in the women's health movement or in AIDS activism there's the development of the kind of literacies that enable us to sit down with the Centers for Disease Control or the National Institutes of Health and discuss pretty fundamental issues in research design. Langdon Winner, a wonderful political theorist at Rensselaer who deals with technologies, was talking yesterday in a semi-joking manner about creating a TV show that's called something like “At the Research Park,” a kind of weekly technology criticism show, like movie criticism, where you take up the technologies of the day or the latest kinds of research models in immunology or developmental biology or genetics and develop a kind of cultural literacy of technology and science—that is, criticism that produces the same kind of distributed savvy that we now have for movie culture or music culture in this society. I'd love to see that same kind of understanding of science as culture. The same is true with radio work. My partner does radio production, and he does science and technology issues for public radio. I've been watching the independent workers' group that he's part of produce some really high-class material.

Q. Frequently you make the point that in constructing feminist science we need to “tell truly new stories,” but you warn that “the critique of bad science that glides into a radical doctrine that all scientific statements are historical fictions made facts through the exercise of power produces trouble when feminists want to talk about producing *feminist* science which is more *true*, not just better at predicting and controlling the body of the world.” In fact,

at one point you state that “to fail to engage in the social process of making science, and to attend only to use and abuse of the results of scientific work is irresponsible.” Since as you point out all scientific narratives are in contestation for acceptance and thus dominance, can we really avoid this same struggle between traditional narratives and those deriving from standpoints of situated knowledge?

- A. No, we can't. The call for a truly new story is a kind of conventional, generic, ecstatic move, a kind of slogan work, and so one would hate to be held to that way of phrasing one's project in some sort of comprehensive way; but it's a statement of desire, a kind of yearning for something that's new, a kind of yearning for the relief of suffering in fairly traditional terms. It's the attempt (and I think I get this from literary practice, but “literary” in the broad sense) to re-narrate, to produce women's writing, to produce a female symbolic where the practice of making meanings is in relationship to each other, where you're not simply inheriting the name of the father again and again and again. So part of the freedom projects among communities that have found themselves in positions of the dominated (which is never absolutely) is that yearning for systems of reference, systems of civilization, figuration, narration that are in relation to each other. You reconstruct inheritance. There's a really fine writer, Vicki Smith, a new faculty member in English at Miami University, who's talking about the re-narration of loss and dereliction in women's stories as the mechanism for producing a female symbolic. Perhaps we can transport that into areas of science and technology. I feel very strongly that technoscience is inherently narrative. That's not all it is, but it is inextricably about building stories into the world, building ways of life, building stories and situating subjects in these stories; living within technoscience is living a story. Reconfiguring the terms of that story—who are the actors, what are the plot structures, what kinds of action can be included in that story, how many layers of meanings are allowed to show—is what I mean by building new stories. The traditional narratives of science and technology divide the technical from the political, divide scientists from some peculiar ontological thing called “the public,” and then the public gets tested on whether it understands or not: do they know what the ozone hole is, what does the public think about *X*, are scientists misunderstood? You get a whole set of very traditional divisions between the technical and the political. The main commitment I have is to re-fuse the technical and the political in a non-trivial way that is also not relativist. When you re-fuse the technical and the political, you insist on the story-ladenness of knowledge, the story-ladenness of facts. You're not thereby saying, “anything goes,” or “it's just what you think,” or “it's simply that you have the power to enforce your point of view.” It's not a cynical or a relativist position, but it is about the materiality of anything that's going to be able to count as knowledge; it's about the irreducible historical specificity and materiality of these matters, which I think is the opposite of relativist.

- Q. You write about the position put forth by Nancy Hartsock and Sandra Harding that “because of our historical *position*, women can have a theory of objectivity, of the radical material-social production of knowledge, and of the possible end of dominating by naming.” You then go on to say that you “find this approach promising but not fully convincing.” What refinements would you make to standpoint theory?
- A. First of all, they themselves have been reworking their own approach to standpoint theory for almost twenty years now, so it’s not that I can assess a frozen moment in time. And we’re in conversation with each other, so I feel that we’re in a kind of relay of efforts to try to understand what we mean by “location,” or “standpoint,” or “situatedness.” But that said, I think there remain considerable differences among us, and I actually think they go back to this question of the materiality of language. I believe that in the last instance Nancy and Sandra both have a commitment to being able to say what they mean. I believe that both of them feel that in the last analysis the thickness of language is not itself a permanent part of what they’re about. If Nancy were answering this question, she’d say it’s my sort of hopeless emersion in troping all the time: I will never finally say what I mean. But I tell her it’s not because I’m of bad faith; it’s because I’m committed to the proposition that this is neither possible nor a good idea. That immediately impacts on the theory of standpoint, because what I think is different about my emphasis in this set of issues is my insistence on continuing to foreground in accounts of situatedness how that situatedness is produced and what those consequences are and the finitude of it—and the humor of it, finally. There’s something funny, literally, about these irreducible limitations in the midst of these freedom projects.
- Q. Yours is a much more postmodern position.
- A. That’s exactly right. Nancy beats me up for that regularly, and I tell her that she’s really being quite heavy-handed. We need each other’s sensibilities.
- Q. You frequently make the point that substituting female-centered and feminist accounts of history or science for male-centered and masculinist accounts only serves to perpetuate systems of domination. Instead, you suggest that “destabilizing the positions in a discursive field and disrupting categories for identification might be a more powerful feminist strategy than ‘speaking as a woman.’” Such a strategy makes sense, but can it lead to the same kind of subject position that “speaking as a woman” might?
- A. Yes and no. I understand “speaking as a woman” as a generic strategy. It’s not some kind of unmediated speaking out of my own body of experience, as if there were some way out of the meaning-making processes and the rhetorical positionings. So I would say what I wrote differently now. I don’t have anything against speaking as a woman, or: “I am situated in *this* particular configuration as a woman with a particular class and racial location who can make *these* kinds of articulations with others but *those* are going to be more difficult and fraught; trust is going to have to be built; oppositions are going to remain over there; coalitions are to be built.” How do you build coalitions

in a kind of ongoing accountability both to what you've inherited historically as well as to your contemporary positions? How do you get at the materiality of difference and still construct strong shared standpoints for doing effective things in the world politically? Take someone in the anti-toxics struggle: "Speaking as an African-American mother in this community who's raising children," the following. Or, "Speaking as a woman in terms of the national cancer statistics, we need *these* kinds of databases and protocols and *this* kind of money to get *those* data we need. Women as a group are partially unified here, but we also want *these* kinds of class and race data built into data sets so we can get social representations of *that* kind." I think of "speaking as *X*" as a rhetorical strategy that reflects having built certain kinds of accountability to each other so that this generic move of representation is constantly tested against the ongoing possibility of working effectively together. The only thing that I am against is mistaking these irreducible narrative and generic immersions for the thing itself; the thing I'm against is a kind of idolatry that mistakes the sign for the thing. I don't think Nancy or Sandra mistake the sign for the thing either, but I think they worry about the degree to which folks like me foreground these matters as semiotic technologies, the degree to which that will disempower a certain kind of effective emotional and political belief. In the face of a political world in which the folks you need to work against have no qualms about making essentialist appeals, and in the face of the patent emotional satisfaction of emotional appeals on your own part, how can you *not* use them?

Q. In "Situated Knowledges" you claim that despite feminist and other postmodern critiques of objectivity, feminists need "a usable doctrine of objectivity," so you and others have been "holding on to both ends of a pole." You suggest, instead, "placing metaphorical reliance on a much maligned sensory system in feminist discourse: vision." You envision an "embodied" objectivity that is "not about the false vision promising transcendence," since "only partial perspective promises objective vision." In recouping the metaphor of vision, how can we avoid its dangers—specifically, the ways the "optic metaphor" has tainted epistemology (as in Richard Rorty's critique) and the ways it can lead to what you yourself call the "god-trick," the colonial gaze, the illusion of infinite or complete vision?

A. You can't avoid the dangers. My standpoint theory is that since we're in the belly of the monster, we can't avoid the dangers, so we may as well jump in and try to reconfigure the terrain. That's my quick and dirty reply. Visual metaphors, visual technologies, visual experience are simply too important to reject because they happen to be involved in the history of Western philosophy that makes you mad from dawn till dusk. It's just not a choice; it's like giving up democracy to the right wing. They *can't* have it; it's not their word. Similarly, you just can't give up these extraordinarily elaborate metaphors and technologies because they're involved in the history of domination. So the first thing you do, it seems to me, is just insist until you've

made a boring fool of yourself that vision is every bit as mediated as any other sensory system, that if you're talking about vision, you're talking about apparatuses of certain kinds of vision and not others, so let's see how they work; we're talking about worldliness, ordinariness, what kinds of moves—rhetorical, technological, political—make *that* kind of vision for *these* folks possible and not *those*. You start taking it apart, deconstructing the conditions of vision. And you do it in as many ways as you can think of: you use humor as a constant critical tool, and you continually try to make that which seems self-evident the most odd in order to get at this particular sensory system's privileged ability to figure and effect the experience of transcendence. You get at and block that experience of transcendence, and every time vision comes up, you're able to produce the thickness of its embodiment, whether that thickness of its embodiment is in some kind of new system of optical phone line transmission, or a primate optical neural tectum, or a system of perspective drawing circa 1500 that allows the body to become a certain kind of narrative object through techniques of perspective that were not used in other kinds of painting in that cultural setting. You get at the materiality of the systems of the production of vision every time you open your mouth.

- Q. In your critique of the “politics of experience” in feminism, you remind us that “‘experience,’ like ‘consciousness,’ is an intentional construction,” and that “it is easy to find feminist, anti-racist, and anti-colonial discourses reproducing others and selves as resources for closed narratives, not knowing how to build affinities, knowing instead how to build oppositions.” Given that the politics of experience can lead to a reification of “self” and, therefore, a me/them opposition, why not reject the concept of experience altogether as residue of high modernism and replace it with the kind of cyborg border crossing and self merging that you frequently espouse?
- A. Part of the answer to that is the same as the answer about democracy, or vision, or freedom. These words of ordinary language are too thick and important and in play not to use them. I think that at least in principle (although I'm sure you can find instances when I've done it) noticing the trouble of a certain way of making meanings is not a justification for not doing it that way. What it *is* is a reminder, a thorn, not to try to hide the trouble. So you don't abandon the project of trying to come up with a workable sense of experience, a different sense of what it might mean to have collective experience. What's the apparatus for making this precious object? How did it happen in a particular political movement, or a particular history of a discipline, that some kind of shared sense of the world—even at the level of where the neurotrops were released and so pleasure resulted—produces this precious object called “shared experience?” You can't simply lift the veil and discover it in some unmediated land-ho: “my experience,” or “our experience.” What's the navigational system that allows that trope of discovery in relationship to this thing called “a person”? So again my answer is really the same one. The obligation that I think we've got—having inherited what we

have in terms of knowing about how meanings work, about the conventional narratives of testimony, about the conventional narratives of experience, and about what kind of person can have experiences within these language communities—is to remember that you do know about these things and that while you’re engaging in meaning-making with others, you at least at some point in your project deliberately stutter, deliberately trip; you don’t try to smooth out the trouble. The tripping and stuttering in political and scientific work is a kind of precious moment that blocks idolatry.

- Q. You claim that “the racial and racist nature of sexual politics is distorted by the feminist and anti-feminist discourse of the white middle class that privileges sexual difference as the definitive axis of gender inequality. That is, *sex*, and especially its derivative, *sexual difference*, can be a distorting lens for seeing the asymmetries between and within *genders*, as well as other basic systems of inequality.” How might you describe an expanded notion of gender?
- A. Many other feminists have been doing that with abandon—and have been doing a great job. I started as a white, middle-class feminist who sort of added on race, who didn’t think that it was so deeply and intrinsically a part of the problem of representing gender. Like many of my peers, I was finally forced to see what we who occupy an unmarked category (namely, white) didn’t have to see out of the condition of our own lives—namely, the profound racialization of categories of sexuality, sexual difference, and gender; while other theorists (usually, but not always, people who were themselves marked as “colored,” as “raced,” in the marked categories, “white” being considered a non-raced category in these discourses) for the most part came out of those situations and were forced to live within systems of measurement that they can’t and don’t fit (in Leigh Star’s terms, the people who were allergic to onions). Obviously, it was feminists writing out of those worlds who systematically redid feminist theory. I think it’s been a long time since feminist theorists have looked at gender as a simple opposition between masculine and feminine positions without attention to the historical complexities of national, racial, regional locations, and the complexity of describing “position.” I think of Judith Butler’s work as really exquisite, smart work on the performative nature of gender in its specificities. A lot of folks will look at Judith Butler’s work and say it’s still doing the old white feminist mistake, but I don’t think that’s true—in a big way I don’t think that’s true.

An expanded notion of gender is about the specific ways that sexed categories are produced *in those historical situations*, so that if you’re talking about genders in the new world—over a 500 year period—which kinds of inheritances work in? And what happens when you anachronistically take a category that after all emerged in theoretical discourse somewhere in the 1970s or 1960s (I did a keyword search in *Sociological Abstracts* and *Psychological Abstracts* to try to determine where the word *gender* came from as both a human science and a social science category) and you use this very recent

category (that is meant for very particular kinds of work) across time and space? You've got to beware of the klutzy quality of the category, but, again, that doesn't mean that you don't use it. However, these expanded notions of gender are not about simply adding a list of adjectives; they're about getting at how that kind of category formation collects people into power-charged relationships to each other. And I also think that for a feminist this category, "gender," is also about an absolutely unreconciled emotional, moral, intellectual feeling about the position of women in the world. It's about a kind of raw anger at some level that *it really is not okay*, however you describe it.

Q. You say that compulsory heterosexuality is "the key technology for the production and perpetuation of western Man" in that "women's sexual pleasure for their own ends" is coded as pathological: "As long as 'the family' or the 'pair bond' contained the meaning of women's sexuality, women could not be social subjects, ends-in-themselves, in the hegemonic narratives of liberal theory and bio-politics." Especially given the conservative right's gay bashing and call for "a return to family values," how do we reconstitute social relations in more equitable arrangements? In other words, politically, things seem to be going in the opposite direction.

A. I agree with you. I think now in the '90s we're experiencing—even more than in the Reagan years, which is really quite amazing—a resurgence of compulsory reproductive heterosexuality as the ideal model of humanization. That doesn't mean that this is statistically what people are doing, but that it's an ideal for what it means to be human. For one thing, I think we have to keep doing the descriptive and theoretical work that shows how, in the particular histories we're talking about, woman is in the passage point for the name of the father; that set of arguments variously translated remains important. It's not just that women's sexual pleasure for our own ends is coded as pathological; women have to *be* the space for the passage of the male signifier. Women are a passage point; they're a space for the motion of the other in the narratives that count as Western. It remains important to continue to say all that, but that's only one little piece of the work about the reconstitution of social relations and more equitable arrangements. I think we have to be in the arguments about adoption, about domestic partners, about mortgage policies. We have to be out there in every single area of social practice, figuring out what kinds of bonding of people with each other make our lives better, and refusing to analogize everything to the family. I think we often make tactical, political errors by saying, "Well, these are just different *kinds* of families; they're really similar, just look," as the family in its reproductive heterosexual form remains the norm. I think we need to find other ways of troping, of narrativising critical relationality besides family and kinship. I've *had* it with kinship metaphors. I think we need to go on the ideological offensive in the face of the current climate.

Q. So not just in academic discourses, but specifically in the public sphere.

A. Absolutely, in completely practical areas. For example, I am really quite

worried that adoption policy is now going to shift back again away from the possibility of gay and lesbian adoption or single parent adoption; I'm quite worried that this is in the wings. That would be terrible. If people would only insist that the way to deal with the poverty of women head of families is to raise women's incomes, not to find them husbands, and that the question of stable families is about the quality and availability of jobs and reasonable living conditions and not about deadbeat fathers and single mothers, we could avoid these kinds of misstatements about what it would take to relieve poverty and its consequences. It seems to me that right now on the national scene we're looking at a broadly reinstated common sense that the solution to most suffering is the restoration of the heterosexual reproductive nuclear family. If ever there were a moment for being on the practical and ideological offensive, this is it.

- Q. You criticize the postmodern announcement of "the death of the subject" as "bizarre" and argue instead for a protean, split, contradictory self that is "multidimensional" and "about heterogeneous multiplicities." Because this self is "always constructed and stitched together imperfectly," it is "therefore able to join with another, to see together without claiming to be another." While the notion of self as protean does help to dissolve the problem of the colonial cyclopi gaze that can derive from the totalized self, does it resolve the problem of agency, which, of course, is so essential to effective political action?
- A. No, it doesn't really. Let me first make a kind of aside. This unitary, coherent self is also, as Michael Walzer pointed out to me, the man of parts: the man who can do everything and still be one, the completely comprehensive subject who can fish in the morning and read in the evening, that desire to be everything as opposed to being single, to being multiple and one at the same time. This interesting kind of unified subject is a particular kind of masculine dream in our histories. But that's an aside. I think agency is an effect of working with each other and not something prior. It's not that you have agency and you engage it. I think we make agency, both personal and joint agency, in learning how to connect with each other. Agency is a material effect of our practices of working. It is not something you *have* and then go out and *use*. It's a verb, not a thing that you either possess or don't possess. So this business of being multiplicitous is not about having so many pieces that never come together that you can't do anything because you're never one enough to do it. That's a mistake, and I think it's a mistake *I've* made too. I've gotten clear about what I think about this out of the work that we've all been doing, the political impasses we've run into. So I think of agency in the way that I think of standpoint, or in the way that Nancy taught me how to think of standpoint: it's an achievement; it's not something you have in advance, and this is true in both a personal and a collective sense. Agencies are about the potency to make something of the world.
- Q. So agency is always dialogic.



- A. Absolutely. Just as we have learned how to criticize the theory of the possessive individual, the possessive preconstituted subject prior to all action, just as we've learned to be pretty good at understanding how that subject is a fiction (and a bad fiction, a fiction we don't want any part of), and just as we've learned to understand that the subject is produced in subject-making processes, the same thing applies to agency. The political implication of that way of thinking is "use it or lose it."
- Q. You show that "science is a writing practice mapping the bodies of the world as resource in a culture driven by a logic of expanding production" that works "to ensure dependence of a deskilled, and therefore, docile work force." And you also discuss the intensifying "feminization of work." In "A Cyborg Manifesto," one solution you offer is to intensify "efforts to develop forms of collective struggle" and to work toward an "understanding of a more comprehensive kind of labor organization, involving community, sexuality, and family issues never privileged in the largely white male industrial unions." Given rapid corporate down-sizing, the collapse or deterioration of labor unions, and the transformation of a large segment of the work force into part-time, contingent labor, how can such efforts succeed?
- A. That's right; that's the right question. This is our question in a big way right now. On the whole I'm a believer in the account of our trouble you just gave, and in David Harvey's theory of flexible accumulation and the globalized processes of disaggregating. The theory of deskilling that Harry Braverman proposed, the way he discusses the theory of deskilling, is wrong for our situation in important ways. It gets at a piece of the problem for sure, and it certainly is important as an historical description of some aspects of the way labor processes and monopoly capital work, but while this transformation of a large segment of the work force into part-time contingent labor is occurring, it's not necessarily *deskilled* part-time contingent labor—and that's a very interesting issue. Within every level of skill—including professional labor, certainly including engineering labor—there is a shared disaggregation of expectations and of material and residential securities across what used to be the more readily describable class differences, and this is broadly shared, globalized, across many kinds of class differences and across many kinds of skill configurations. It's out of this very dilemma that we're going to have to find the new modes of organization. Those modes of organization are going to have to involve finding ways to build cross-national unities around, for example, the NAFTA-GATT negotiations (they're good examples of some hints about how to work in these conditions) so that occupational health and safety, the environmental conditions of life, and the systems of health and well-being built into conditions of labor are all addressed practically and globally. They've *got* to be addressed internationally or it won't work; capital's too mobile. Many people know this, and there's a lot of work going on; and it's the *right* work. Also, I think of the ways that organization around toxics goes on that ties together locals and globals and understands that what

you're talking about is a system of traffic of toxics in production, distribution, consumption, and marketing processes that have got to be addressed somehow. You've got to build the instruments for dealing with this stuff transnationally. You watch people doing that in trade negotiations, in United Nations instruments, in the Rio Summit, in the recent population summit in Cairo—NGOs and governmental organizations. The tie-in of labor organizations with these kinds of work—these are the kinds of things we need to be doing. The multiple fragmentary sentences that come out of me when I try to talk about this subject certainly reflect my own but also our collective trouble in trying to understand how to enroll each other effectively.

I think we're living at an historical moment when a new form of organization of capital is extraordinarily successful. Over the last thirty years, a class war of immense proportions has been waged globally, and it's been very successful. At the same time, we've almost lost the ability to talk in class terms on what used to be called "the left." That's a terrible historical loss on our part. At the same time, you can't just pick up the old ways of talking about class—even the term "deskilling" is wrong. Here's where I think technoscience is also at the heart of the matter. We've got to get good at understanding how what Joe Dumit, a graduate student at UCSC, calls "the emerging global infrastructures" transform biodiversity into pharmaceuticals and agribusiness, and that kind of disciplining and proliferating of biodiversity into biotechnology in a corporatized biology, for example. We've got to understand how the links work—the environmental links, the labor system links, the food production and distribution links, the markets and capital flow links—and we have to be organizing in relation to those descriptions. I don't think we can describe the contemporary economic and labor situation (or the sexual situation) outside of coming to terms with the kind of breeder reactions that link competitiveness and technoscience. The breeder reactors that we're going to have to come to terms with are the ones that proliferate, discipline and turn into commodities, through the instruments and practices of technoscience on a global basis, practically everything.

- Q. But those efforts that have been and are being made are being made by large governmental and international organizations and not by labor; that is, they're being made by the allies of the multinational corporations.
- A. Not necessarily. I think of those summits that are bringing together quite heterogeneous arrays of actors and organizations as tips of icebergs; they are not by any means all governmental organizations: the huge array of NGOs, for example, which do include labor organizations. Clearly, there's a serious need for a redeveloped labor movement and for learning to talk in class terms again. I think talking in class terms now absolutely requires a kind of sensitivity to racial, sexual and gender positionings, regional and national and international positionings, issues of the content and quality of labor that can't be given the kind of compromise that American labor unions made after World War II in conditions of American hegemony. We can't make those

compromises around the nature of the labor process again. How you get back a hold on the nature of the labor process in its transnational terms is critical to the ability to organize labor.

- Q. As you know, there is something of a debate over whether men can be feminists since they benefit most from patriarchy regardless of whether or not they support women emotionally and politically. In *Primate Visions* you seem to take a side in this debate when you refer to “feminists—women and men—and women—feminist and not” and when you state that “all women’s practice is not feminist, and men’s practice can be feminist.” What do you see as the role of men in feminism?
- A. I think feminism is a *political* position, not a sex, and I think men can be and are feminists and that their accountabilities as feminists are a little bit different, a little bit fraught, and require a pretty strong degree of watching how privilege is going to continue to work, usually for *you*, even as a feminist. It requires all kinds of sensitivities and a willingness to be called to account by yourself and others, which isn’t really all that different from anybody else who’s trying to be a competent political person. In the same way, I think that white people can be and are anti-racist. And that’s not the same thing as saying a man must *be* a woman, or a white woman must *be* a person of color. Obviously, you can’t *be* whatever. So, I feel pretty clear that these things are political commitments and not something else. The role of men in feminism is many-sided. Certainly, men have certain kinds of primary responsibilities for dealing with questions of sexual violence in all its many forms—for example, the particular cultures of the compulsory production of sexual aggression that go on in initiating a person into a masculine gender position. I think that men especially have a serious responsibility for the education of boys. I’ve been sexually assaulted by a five-year old boy—never by anybody older than that actually. (This boy was an extreme person, a kind of pathological example of the normal.) Watching those key moments when kids come into certain kinds of gender entitlements, watching how that gets installed psychically and physically, is revealing. Men have particular, actual, special, historical responsibilities about sexual violence and about the construction of a masculine gender position as aggressive—no question about that in my mind. That’s one thing. Men also have an obligation to teach each other and to work with women for feminist projects and not to think that it’s somebody else’s responsibility—even in the face of many women who don’t want men anywhere near. (Actually, I think that’s fairly rare. It happens, but it used to happen more I think.)
- Q. In “Sex, Mind, and Profit” you demonstrate that the communications revolution and its systems theory transformed the natural and human sciences into effective tools for maintaining and maximizing profit in capitalist society. For example, “the formal theory of nature embodied in sociobiology is structurally like advanced capitalist theories of investment management, control systems for labor, and insurance practices based on

population disciplines. . . . Nature has been systematically constituted in terms of the capitalist machine and market.” Given the collapse of the so-called “socialist experiment” in Russia and eastern Europe, the increasing multi-nationalization of global corporations, and the ever-increasing control of technoscience by these multinational capitalist organizations, how do we reverse the appropriation of science by global capitalism and redirect scientific practice toward more human, humane, ethical ends?

- A. The short answer is that I don’t have a clue, but the long answer is that that’s not true: we do have plenty of clues. One of them is to drop the practice of describing technoscience in capitalism as monolithic, totally systematized, totalized, and finished. I believe that this is a particular temptation now precisely because of the end of the Cold War and the emergence of the New World Order and the hegemony of free market ideologies and practices. Precisely because of the historical moment we’re in, the temptation to describe this as absolutely total is greater than ever—and a mistake. So the first thing is to remember, even at the level of description, to continue to get at the heterogeneities, the cracks, the counter-intuitive moves, the places where something else is happening that needs to be made stronger. So you continue to look for the non-total nature of that which you’re most afraid of and to affirm, build, latch onto, learn to make stronger those practices that seem to be going somewhere else. You try to find ways of building alliances—let’s say, for example, with scientists working in transgenic molecular biology around food crop production. For example, what kinds of effective alliances could be made, possibly by working through state legislatures or funding organizations, that might tie laboratories at UC Davis together with sustainable agriculture projects that take contemporary technologies as an interesting part of their scene and that are trying to work through marketing structures? What kinds of systems of scientific production, and where can the articulations be built between networks of marketing production research that would open up, make bigger the cracks in the corporatization of food production that we see going on on a global basis? Elizabeth Bird, one of my former students works at the Center for Rural Affairs in Nebraska, right in the middle of mid-western agri-business, and is involved in policy formation at the state level and is working with farmers in just these kinds of areas. There’s lots of that kind of thing going on. We need to learn to make those kinds of efforts bigger.
- Q. In “Mice into Wormholes: A Technoscience Fugue in Two Parts,” you discuss the importance of ethics in technoscientific practice in what you call the “New World Order, Incorporated.” For example, despite the racist preoccupations with human and race purity of many who oppose transgenic engineering, such “transgressive border crossing” can be useful to us all; however, so long as such research is conceived, controlled, and financed by the New World Order, Inc. with its proprietary, military, and social-control agendas, it is difficult to bring about a truly liberatory and ethical scientific praxis. Even the new textbook discussions of ethics present it as a technical discourse. How can a truly ethical

discourse be introduced into the pedagogies and practices of science so as to effectively influence the New World Order, Inc. despite its financial and ideological stranglehold on science and science education?

A. Well, there are little answers and big answers.

Q. Because they don't read what we in the academic world write.

A. No, they don't read what we say. Part of that is our fault, too. I really do think we're incredibly stupid and klutzy about doing propaganda. We ought to do more of it. I can name three biologists off the top of my head—Michael Flower, Scott Gilbert, and John Jungck—all of whom are involved in what I consider solid, politically important, scientifically-on-the-mark textbook or pedagogy projects in the teaching of biology. They are all technically astute, they are all involved in contemporary technologies, they all have political and historical commitments not too different from the ones we've been talking about here. They are all involved in trying to lead students to see how the apparatus of scientific production works, how they might be situated inside of it, how representations of the body can be complicitous with systems of inequality. They all also take considerable pleasure in biology, in their science. Scott Gilbert has got a developmental biology textbook that sells very widely. John Jungck is a mover and a shaker in The BioQUEST Project, which develops CD-Rom methods of teaching biology—very visually effective material. Michael Flower has had NSF funding and is involved in developing a way of teaching “technoscientific liberty,” which is about helping students understand that you don't divide the technical from the political, that the practices of making sciences are practices of making worlds and that this is the essence of “political.” Sandra Harding would call this “strong objectivity.” These are the practices we should engage in: developing strong objectivity or technoscientific liberty (or whatever different words we use for this), writing the textbooks, learning how to do these things in classrooms, getting NSF funding, engaging in the textbook controversies in the schools, producing the visual culture, remembering that from the beginning biology was civics (biology was introduced into urban high schools as part of the Americanization of immigrant students; from the beginning biology has been a civics project, and it still is, so this should not be news). So we ought to be—and we are—in the process of producing the instruments. Certainly, we're not as big as some others, but we're not nowhere.

Q. So the key to these transformations is, again, education; and ethics comes in through education.

A. It's one of the big zones of cultural practice. I also think that we ought to be doing much more work with congressional staffers and with getting into the process of writing legislation, policy, and federal regulations. We ought to have an account of technoscience that takes in all of its zones of production, and we ought to be in every one of them—and learning to build links with each other in the process. We ought to have just as complicated a view of technoscience as the corporate executives do.

- Q. In a recent interview you express your distrust of psychoanalysis and your “hostility” toward Oedipal narratives, and you comment that “Too much of Anglo-feminist theory has started out from Freud, Lévi-Strauss, and Lacan. And I think that’s unfortunate.” If, as you propose, we should reconceive the unconscious independent of familial narratives, how would such a narrative be characterized?
- A. Well, first of all, people ought to study how ferns reproduce! I’ve been beaten down on this, by the way. I’m not nearly as dismissive of psychoanalysis as I was in my youth. For one thing, so many incredibly talented feminists—like Teresa de Lauretis, for example—have done marvelous, really smart work rereading, redoing, reconfiguring psychoanalytic narratives for their own kind of work. (I read this work under the sheet at night with a flashlight, lest I be discovered.) I’ve backed off from some of the more extreme ways of saying that. But that said, the Oedipal family of stories is an historically inherited body of material through which theories of the unconscious have been worked powerfully and have been made to do many counter-intuitive kinds of things, and I think there is a screaming need for a much richer array of narrative toolkits to work these eruptions of the unexpected and irreducible, these eruptions of what you’ve got to call an “unconscious,” into our lives through other stories besides Oedipal stories. This goes back to the same problem of the hegemony of the family in so many areas, including the toolkits of psychoanalytic theory. Our formations of ourselves as subjects come through many zones of social practice from babyhood on; and family relationships, and so-called primary relationships, simply get much too much space on the stage. We don’t have a clue about how to theorize the kinds of relationality out of which subjects emerge *other* than family stories in the kind of ongoing permanently reconstituting nature of relationality. Also, psychoanalysis remains resolutely European in its toolkits. It’s not that those toolkits are bad or don’t get at many people’s most important stories, but they are incredibly parochial. And it’s not like there aren’t zillions of story cycles out there to work into the kind of refined theoretical apparatus that the Oedipal stories have been worked into. People have to be motivated to see such stories as essential to an expanded theoretical toolkit. In a slightly (but only slightly) tongue-in-cheek way, I think part of what I do *is* psychoanalytic theory. When I make a joke about the sexual life of ferns and the kind of baroque apparatuses of the production of biological life, it’s a statement about the baroque apparatuses of the production of psychic life.
- Q. In “The Promises of Monsters,” as in much of your other work, you provide a stunning cultural-studies analysis of representations in scientific discourse, technoscientific advertising, and other cultural forms. Clearly, cultural studies has emerged as a powerful analytical tool for unmasking hegemonic forces at work in a multiplicity of cultural and institutional sites. Do you ever fear that cultural studies itself can be appropriated to reproduce dominant, patriarchal ideology and reinscribe hegemony?

- A. Yes. For one thing, I think anything can be reappropriated to reinscribe systems of oppression—in this case, patriarchal ideology and hegemony. Consider what happened to deconstructive practices in literary theory and the degree to which in the United States the practice of deconstruction almost became synonymous with depoliticization. Now, I think much of that was not true, that there was some bad faith in that description; but even so, the deracinating of the political roots of a Roland Barthes or the political projects of a Jacques Derrida, the kind of easy forgetting of the deep political projects out of which those accounts came is not all that different from a kind of domesticating of cultural studies. It's not so much that it reproduces dominant patriarchal ideology (though it certainly could do that) as that it gets domesticated; it loses its acidity. It no longer makes you nervous; it no longer is a way of mobilizing, of thinking about how to work in the music industry, in the apparatuses of cultural production, in the theory-production industry. You lose the sense that cultural studies is about a kind of unreconciled position to the apparatuses of the production of domination—and that that's going to take different historical forms. Instead, it becomes another discipline to teach; it's domesticated rather than turned into a direct tool of oppression.
- Q. So it becomes an academic exercise and not one that's geared toward praxis.
- A. Yes, in the worst sense of the word *academic*. It's not mobilizing you anymore emotionally and intellectually toward remaking worlds. The roots of cultural studies that are energizing are about remaking worlds, about paying attention to certain kinds of agencies that didn't get any description before, about getting at the complexity that Marxist theory as it was being done couldn't get at. Stuart Hall once said he thought he had the door open for feminism until he realized that the bricks were coming through the window. It's about those uncomfortable political surprises that cultural studies made it possible to face. It's losing *this* that I worry about.
- Q. You mentioned AIDS a few minutes ago. In your analysis of scientific discourse on AIDS and the immune system, you show how the immune system is “an elaborate icon for principal systems of symbolic and material ‘difference’ in late capitalism” and a “map drawn to guide recognition and misrecognition of self and other in the dialectics of Western bio-politics.” The “hierarchical body of old has given way to a network-body of truly amazing complexity and specificity,” in that the “immune system is everywhere and nowhere.” And elsewhere you say that in this essay you were attempting to discover “extraordinarily rich resources for avoiding the narrative of the invaded self, the defended, walled city invaded by the infecting Other.” What might be a useful alternative narrative for purposes of medical research? Is there a way of theorizing health and well-being outside the narratives of the normal/pathological?
- A. The first question, what might be useful alternative narratives for purposes of medical research, is partly an empirical question; it's partly getting inside medical research and watching the kinds of metaphoric toolkits that are being

turned into research projects, or vice versa—watching that traffic and learning how to describe ways that models other than the invading, infectious other are in play in biomedical work. What I did in that paper was to look at Niels Jerne's network theory, where he used structural theories of linguistics to talk about internal imaging and to produce models of always already permanent internal differentiation, so that in a sense there is no truly other. (After all, this guy received a Nobel Prize for work related to this model; we're not talking "alternative science" in that dismissive sense.) But that's only a particularly obvious example of learning to see the ways that, in this case, biomedical research scientists are not doing what *Time* magazine, in the science news, says they're doing. I find the descriptive toolkit of science news writers like Natalie Angier, for example, to be lacking. She is a famous and successful *New York Times* science news writer, a fabulous writer who writes with a kind of vividness of language and action narratives. She's a very good science writer, but her metaphoric toolkit is outrageously conventional in terms of reinscribing sexual warfare, invading others, all the rest of it; her toolkit is an outrage. She misdescribes the complexity of the tropework of biological research. There's a fine science writing program at the UC Santa Cruz where I teach, and I've talked with many of the students who've gone through that program (my own partner was trained in that program), and I've been very interested in the ways that folks going through the program try to understand their own descriptive repertoire for doing science media work and how hard it is to do something other than these conventional narratives, to even know the degree to which you eat and breathe them. So, one is that I think there's a lot more going on than many of us, including science news people, know how to describe. The second is learning how to ask if, and if so how, different paradigms for experimental work hook up to different models of health and disease and different ways of taking action. How might people be enrolled in relation to their own health with some models of the immune system rather than others, for example, which might refocus a kind of collective responsibility for health and well-being and not just an individual pathology model?

And that relates to the second part of the question: whether there is a way of theorizing health and well-being outside of the narratives of the normal and pathological. Well, yes, there are many. The normal and the pathological is a very historically specific distinction deriving from European biomedicine that goes along with functionalist systems, working systems. Georges Canguilhem was certainly the key thinker for understanding how the opposition between the normal and the pathological worked, and Foucault picked it up. But without worrying about whether to get outside this whole paradigm of normal and pathological, we do know how to get outside of the reduction to the individual biological body as the bearer of health or illness. For example, yesterday at a conference Liz Fee and Nancy Krieger gave a wonderful paper on the history of data collection in public health around



health and disease. They pointed out that from approximately the early 1900s until roughly the end of World War II, many of the important public health and vital statistics statisticians in the United States, and certainly in Europe, were committed to obtaining measures of mortality and morbidity that were closely tied to poverty; they were committed to producing data sets that looked at pellagra or tuberculosis or differential death rates in close connection with occupational location, with income, with the amount of money to buy food, and not with the biomedical description of vitamin D deficiencies. Fee and Krieger then went into interesting detail about the way (in the late '40s and early '50s Cold War context) the instruments for the collection of what it takes to produce a social representation, the collection and mobilization of data, were subject to the same Cold War pressures as every other rhetoric of social description. The extreme reduction in American biomedical statistical practice to the individualized, pathologized biological body is firmly entrenched in the data sets of the vital statistics of public health in the 1950s context of the Cold War. Then they talked about more recent and quite current contestations about redoing data collection and data management, database organization, which obviously involves quite contemporary technologies to deal with much more differentiated kinds of factors in data collection and distribution. It also includes reappointing the staffs to do this that were not appointed during the Reagan/Bush years. (A lot of the disabling of the technology of social representation that went on in the Reagan/Bush years was invisible and took the form of not appointing middle-level technicians to federal bureaus that are responsible for producing, in this case, data sets.) And they're talking about bringing together the people in various federal agencies who are responsible for producing data sets with community health groups, with black women's health groups, for example, with occupational health and safety, with anti-toxics people, with women's health organization people; such a coalition could redesign what it's going to take to produce a description of health and well-being in contemporary U.S. society that is not as dependent on the model of the individual biological body and its health and its diseases and its choices—the kinds of “just say no to death” models. Again, that's very practical work, which is right at the heart of technoscience.

Q. Often your work is unsettling to some readers, especially since you don't hesitate to criticize feminist as well as anti-feminist positions when such criticisms are called for. Are there any criticisms or misunderstandings of your work that you'd like to address?

A. What an opportunity! Jesus, talk about privilege! One of them that just really does gall me is the reading of my work, from the “Cyborg Manifesto” on, as a sort of techno-phillic love affair with techno-hype. A fair number of people (I think in deep bad faith) read me as some blissed-out, cyborg propagandist and really don't want to understand the way that *I* read the cyborg figure. I want to read the cyborg figure as a much more fraught, kind of limited trope

that's about the kind of pain as well as possibility involved in contemporary technoscience and the inextricable weave of bodies and machines and meanings. So, it's those who appropriate my work and take quotes out of context and put them into *Wired* magazine or *Mondo 2000* that make me very upset. It's losing control of your own meanings.

Q. Which you of all people shouldn't complain about.

A. Yes, who am I to complain, right? It's just retribution. And then there's a kind of parallel misunderstanding by people who I feel I'm with, often other feminists, who sometimes read my work in the same way but then put a negative value on it. It's very important for me to be in a community of people who have a culture of disagreement and who are working with and against each other without pegging each other like butterflies, without taking some position out of its historical moment and pinning you with it—the kind of thing we often do to each other as a mode of critical discourse.

Then there's the much more serious misunderstanding (embodied most recently in Gross and Levitt's *Higher Superstition*) that makes you line up about whether you're a realist or a relativist, and if you're a relativist then you'd better not fly an airplane because you think everything is just words, or some really total bullshit like that. The British biologist Richard Dawkins says there's no cultural studies of science person who can take an airplane in good faith; you know, the social construction of science argument is bad faith because you really rely on the real truth of things. What I'm concerned about is what I regard as a combination of philosophical naivete and bad faith on the part of people who feel very defensive right now about the way the people I feel affiliated with have gotten good at describing the in-principle contestability of knowledge-making projects—which does not mean you do *not* believe in DNA. It means that now you actually have a pretty good way of describing *how* DNA exists, how come, what its conditions of existence are; and you know that those descriptions are radically historically specific at every level of the onion; and this knowledge in no way derealizes it—quite the opposite. I refuse the relativist/realist opposition. I'm tired of those people who insist that you take sides in an opposition that you're trying to deconstruct (in the technical sense of deconstruction) by showing how it necessarily misdescribes the most important situations that you're in. The worldliness I'm committed to is what makes me refuse the relativist or the realist positions.

Q. It's part of that ambivalence

A. Yes, that's right. It's part of *passion*, which is actually a word I think I prefer to *ambivalence*. It's part of *passion*.

## Notes

<sup>1</sup>I'd like to thank my colleague Kirsten Fischer for reading and commenting on the questions prior to this interview.