"If we want technology to liberate rather than destroy us, then we, the techno/peasants, have to assume responsibility for it."

-- The Techno/Peasant Survival Manual [1]

Perhaps the question is, what isn't technoculture? The two parts of this word, techno(logy) and culture, are actively contested in contemporary social criticism. Donna Haraway, for instance, has read the logos of techne as "translatable/transferable technique", and then more closely as "frozen labor" [2]. Haraway draws attention to the accountable, though usually unaccounted for, aspects of "our" artifacts, our shirts, our computers, our words. She asks: "How is the world in the object, and the object in the world?" [3]. With regard to culture, it is precisely these webs of interconnection and constructed barriers of individuation which are under attack within and without anthropology: "culture" as a signification of privilege, by the privileged. Under these lights, technoculture points toward a world where the high and low speed technique-transfers are the common culture, and where "culture" is a technology.

*Technoculture*, the book, looks in this and other directions. Penley and Ross use technoculture in their introduction almost always in the phrase "Western technoculture" and situate technocultural situations as stemming from technology transfer problems and creative appropriations. "The essays collected in *Technoculture* are almost exclusively focused on what could be called 'actually existing technoculture' in Western society, where the new cultural technologies have penetrated deepest, and where the environments they have created seem almost second nature to us". While Western now apparently includes Japan, it is important to reflect on the role of this monster word, "technoculture", and the world it invokes.

The terrain claimed by *Technoculture* has been approached from a variety of angles. Cultural studies is the most obvious one, though this field has often shied away from emphasizing machines. Social studies of science has a long history of looking at what has come to be called technoscience -- in Bruno Latour's terms, "all the elements tied to the scientific contents no matter how dirty, unexpected or foreign they may seem" [4]. Technoscience, and therefore science studies, should be looking at more than laboratory science. Sal Restivo has most vigorously challenged science studies and cultural studies by reintroducing C. Wright Mills's sociological imagination and calling for a revisioning of the relations of science and society, for seeing science as a social problem and thinking towards what Sandra Harding calls "successor science" [5]. Books such as *Cyborg Worlds*, *Women, Work, and Technology*, *Technology and Women's Voices*, and *The Anthropology of Technology*, address concerns which readily fit under the title of *Technoculture* and should be seen as complements to it. [6]

The contents of *Technoculture* range from traditional American cultural studies (reading texts and commenting on culture), literary genre criticism, and ethnography, to historical and practical activist manuals. Ignoring Penley and Ross's prescriptions that "it is the work of cultural critics, for the most part, to analyze that process of cultural negotiation and to say how, when, and to what extent critical interventions in that process are not only possible but also desirable", the contributors have a wide variety of takes on what it means to be a cultural critic writing an edited book section. We can situate *Technoculture* then in a busy intersection [7] of academic
interests and note some special needs to which it points and which it begins to address: (1) building on the cultural studies subversion of the high/popular split, it expands studies of technology in society to everyday appropriations; (2) it pays attention to the media's role in scientizing us as well as in selling science [8]; (3) parts of it draw upon fieldwork and provide practical histories and analyses, pushing in the direction of applied cultural studies; and, (4) by refusing to posit monstrous enemies in control of technology (especially of communications technologies), it provides models for rethinking intellectual technophobia.

Technoculture begins with an interview of Donna Haraway, "Cyborgs at Large", followed by her postscript to the interview, "The Actors are Cyborg, Nature is Coyote, and the Geography is Elsewhere", Returning to the "Cyborg Manifesto", the questions and imperatives of naming complex and contradictory situations are humorously, seriously foregrounded. Do we "cultural critics" still want to name Malaysian factory workers cyborgs, and why? Figuring out how to be accountable for naming while still speaking (English, in this case) is the challenge put forth by Haraway: "My stakes are high; I think 'we' -- that crucial riven construction of politics -- need something called humanity and nature".

In conversation with this question of the politics and stakes of naming is Valerie Hartouni's important, nightmarishly optimistic analysis, Containing Women: Reproductive Discourse in the 1980s, carefully examining the issues and language of such articles as "Brain-dead Mother has Baby", Hartouni skillfully unravels the frustrated attempts of journalists, scientists and judges to re-normalize the new biotechnologies of human reproduction. What she finds among admittedly conservative nuclear-family rhetoric are the open possibilities left in the "instability and vulnerability of privileged narratives about who we are... Naming and seizing these possibilities however, require imagination, a new political idiom, as well as a certain courage -- to eschew a lingering attachment to things 'natural' and 'foundational'". By paying so much attention to how media constructions, anti-abortionists, senate subcommittees, infertility clinics and women's movements materially interact with each other, Hartouni is able to show places where naming can reorder parts of the world and reconfigure rights and reproduction. "Containing Women" sets an important challenge for cultural critics.

In another kind of media analysis, "Penguin in Bondage" : A Graphic Tale of Japanese Comic Books by Sandra Buckley takes on the history of Japanese mass-erotica and pornography. Deftly drawing out the subversive uses and ruses of girl and boy comic books, Buckley shows how popular media can challenge and even change gender and sexuality configurations. She contrasts these adventurous books with technoporn, which unfortunately is given an extreme determinism; it "insinuates the reader into the graphics of the narratives... [and] literally captures the imagination and the fantasy of the male consumer". Still, her discussion of pornography and the struggles over it in Japan are insightful, and her analysis of how the books are consumed and discussed as well as of their content is valuable.

A different set of articles reports on current cultural phenomena, looking for signs of resistance and subversion. Peter Fitting, Andrew Ross, Jim Pomeroy and Reebee Garafalo are poised to judge the politics of new cultural arenas. Understanding their audience to be other left critics, they array their examples to defeat other, more limited theories. Fitting begins with a close genre reading of cyberpunk science fiction (crystalized in William Gibson and Bruce Sterling) as a brave but misguided attempt to come to terms with the postmodern corporatist present. Drawing on Fredric Jameson and Haraway, "The Lessons of Cyberpunk" charts the seductions and difficulties of postmodern critics in using this brand of science fiction. Fitting acknowledges that Gibson's is a corporatist, "violent, masculinist future" which is not to his liking, but insists, nevertheless, in finding "some potentially contestatory options" in it. Unfortunately, after dismissing a self-defined cyberpunk subculture, the only "readers" Fitting acknowledges seem to be other left critics. How cyberpunk is read and used by others, contestory or not, seems not to matter.

Andrew Ross's contribution, "Hacking Away at the Counterculture", takes on the media construction of hackers, people who use computer systems and networks innovatively, extracurricularly, and illegally. He sensitively
tracks their construction as deviant boys who with better rearing will serve the country well, which most of them did. Most interesting is his plea for expanding the definition of hackers to include on-the-job slow-ups, minor and major sabotage, and other forms of resistance to corporate and government surveillance and scientific management. His equally intriguing, though unconnected, concluding call is for making cultural critics's "knowledge about technoculture into something like a hacker's knowledge". He goes on recklessly, however, to make over this cultural hacking into redemptive practice, into "rewriting the cultural programs and reprogramming the social values that make room for new technologies".

Garafalo and Pomeroy discuss mega-musical events (e.g. Live Aid) and techno-artists (e.g. Mark Pauline of Survival Research Laboratories). Both looking hard for politics, each finds only ambivalence, ambiguity and contradictions. Garafalo, for instance, assesses mega-events as political leaders in the 1980s "in the relative absence of [political movements]", but misses the "World Beat" curatorship of non-American music by such artists as Paul Simon [9], any mention of such musical forces as reggae and rap as political (Public Enemy is mentioned but only for its contribution to Do the Right Thing), and acknowledgement of 1980s political movements: gay and lesbian rights, anti-nuclear, environmentalism, anti-apartheid as movements in spite of meg-events.

Houston A. Baker Jr. takes a more critical, nuanced turn at ambivalence in "Hybridity, the Rap Race, and Pedagogy for the 1990s" with a rich and rhythmic tribute to rap's innovational history and its liberating possibilities: "Rap is the form of audition in our present era that utterly refuses to sing anthems of, say, white male hegemony". Controversial perhaps, as he tells of teaching Shakespeare's Henry V as a rapper, he also raises but leaves untouched issues of homophobia and "macho redaction", leaving the reader waiting to hear the next verse.

Most appealing to my activist and anthropological sensibilities are the articles by The Processed World Collective, DeeDee Halleck, Constance Penley and Paula Triechler. Each of these essays traces current empowering interventions which make use of mass media tactics and create new ways of living. "Just the Facts, Ma'am: An Autobiography" tells the story of Processed World magazine. Started by a small collective of dissident office workers in 1981, PW's "purpose was twofold: to serve as a contact point and forum for malcontent office workers (and wage workers in general), and to provide a creative outlet for people whose talents were blocked by what they were obliged to do for money". By detailing the ways in which the PW collective organized itself, disseminated information (conversations on the street, expos, tours of Silicon Valley), published, and thought -- "Rebellion can be fun, humor subversive... make people feel 'good' about hating their jobs" -- "Just the Facts" inspires and informs by providing workable suggestions.

DeeDee Halleck provides a similar contribution regarding Paper Tiger Television in "Watch Out, Dick Tracy! Popular Video in the Wake of the Exxon Valdez", Critically examining the trickle-down theory of communications technology, Halleck poses the question, "Is it possible to have a populist vision of the process of 'electronic' production?". She answers by showing first that active audio-video technology (camcorders and VCRs over laser disks) has always been preferred by consumers and has been incorporated into organizations and groups readily. Second, and most importantly, she provides a history of the public-access movement wherein local groups produced and "aired" their own shows. Halleck was one of the founders, in 1981, of Paper Tiger Television and the Deep Dish Satellite Network which have provided encouragement, models, and funding for critical, responsive, low-budget programs. She continues that tradition here.

Other consumers of the active VCRs have formed their own communities based on humorous, subversive rereadings and re-presentations of mass culture. In "Brownian Motion: Women, Tactics, and Technology", Constance Penley reports on "slashers" : groups of women who have taken the Star Trek series and produced fiction, graphics, videos, fanzines and conventions around a Kirk/Spock homosexual story. "Slasher" notes the slash between Kirk and Spock (K/S). These groups have retooled passive TV and masculinity with the
appropriate technology of science fiction, copiers, mailing lists and VCR editing. Penley's close observation of and participation in this community is rewarded with a thought-provoking account of their insights and their struggles.

Paula Triechler focuses on a larger scale retooling, that of human access to health, the medical establishment, and the FDA. In "How to Have Theory in an Epidemic: The Evolution of AIDS Treatment Activism", she tells an inspiring history of AIDS drug regulation and approval processes, ACT UP, and the ongoing negotiations of persons with AIDS and people at risk for it (everyone) within our bureaucratic media-organized world. "This version of AIDS treatment activism, probably best exemplified in real life by ACT UP, invokes several essential elements of the movement: a vision of the power structure that calls for unleashing the power and knowledge of resistant forces; expertise about technology and science, the politics of the federal bureaucracy, biomedical research, and economics; self-education; and the use of tactics including civil disobedience, lawbreaking, infiltration, and seizing control of the media". "Evolution" needs the complement of books like Women, AIDS and Activism by The ACT UP/NY Women and AIDS Book Group, which tells the many stories of continuing absence of care and concern over communities of color and women [10]. Nevertheless, Triechler's article demonstrates both the effectiveness of new kinds of struggles and the enormity of the challenge: "these negotiations... involve significant renegotiations of the geography of cultural struggle -- so of sources of biomedical expertise, relations between doctor and patient, relationships of the general citizenry to science and to government bureaucracies, and debate about the role and ownership of the body".

Halleck's, Penley's, Triechler's and the Processed World Collective's pieces are important because they provide evidence of what people have done, and can do, with mass-produced culture by using the tools which produce that culture, thereby revising their world. This approach, which tells how things are done, which disseminates information in an age run by information, but more by the privatization of information, makes the most of a collected work's format.

Each of the articles in Technoculture tells the story of communities which are perhaps best described as virtual [11]. These communities are constituted not around face-to-face meeting, but around common access to newsletters, TVs, books, computer bulletin boards and music. These media and their accompanying machines -- desktop publishing, fax, copiers, modems, VCRs, record players, tape players, satellite transponders -- are as much part of these communities, part of the everyday, as language. Documenting ways of living, surviving, multiplying (converting and disseminating) and helping others to do the same is the laudable aim of this book. Missing, however, is a questioning and situating of how technophobia and technophilia are in the world, how they are differently positioned and engendered in people, and how they often may be appropriate responses and survival strategies. Too often, in proposing a "middle path", relations to machines and jobs are simply pathologized, dismissed as errors.

Returning to the other technocultural analyses mentioned at the beginning, we note that some of the so-called luddite responses to nuclear power, to certain surveillance technologies, and to various attempts at industrialization and automation may be a reaction against a technological meliorism which ignores those whose ways of living are being disrupted or placed under siege. The technophilic embrace of scientific professions, medical science, and even weapons systems, must be moderated by an understanding of the implications of such things for race, class, gender, morbidity, and the international community. Studying technoculture, as opposed to studying technology or studying culture, should mean addressing the variable configurations of lives and forms of life which are involved in our nuclear (post-WWII) world.

In this milieu then, in Technoculture, we find cyborgs, women's reproductive systems, ACT UP, hackers, slashers, pornography, rappers, public access groups, office anarchists, mega-musicians, techno-artists and cyberpunks. Most of these are defined by their relation to electronic media; they are also, by and large, recent popular media personalities, and all but Triechler focus on the U.S. In this sense, Technoculture locates and
names itself as American high-tech pop-culture studies, and it is in this sense that technoculture and postmodern
culture are used interchangeably. In the intersection of cultural studies, anthropology, history of technology and
social movements, and science studies, it draws attention to this mass cultural realm. But often this is a different
topos, a different sense of place, from the "technoculture" of world-webs bound by accountability to frozen
labor named at the beginning. The best parts of Technoculture do succeed in this accounting, aiding in
envisioning and living better lives, presenting new and successful communities, and doing so with a critical
optimism.

References


3. How materially, historically, politically, economically, mythologically, semiotically do these objects
   persist, what sorts of labor produced it, transported it, marketed it, consumed it, disposed of it, what are
   the histories of these labors, what labor supports those laborers...


   Free Association Books; Wright, Barbara Drygulski, ed., 1987, Women, Work, and Technology:
   Transformations, Ann Arbor: University of Michigan Press; Kramarae, Cheries, ed., 1988, Technology and

7. The metaphor of culture as a busy intersection belongs to Renato Rosaldo (1989, Culture and Truth,
   Boston: Beacon Press.)

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10. The ACT UP/NY Women and AIDS Book Group, 1990, Women, AIDS and Activism, Boston: South End
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