

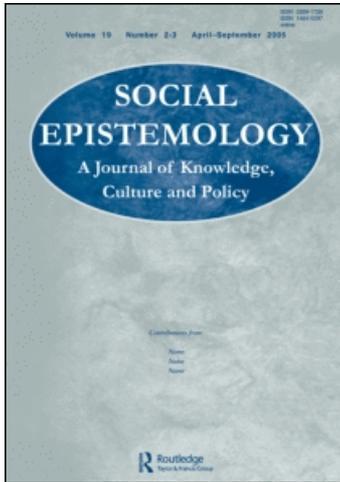
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# Oppositional Technophilia

Ron Eglash

*Technophilia has been routinely pathologized in the science and technology studies literature. It is variously framed as a type of dangerous psychological deviance, a form of spiritual deficit, and a source of social destruction. This essay seeks to reframe technophilia as a way of life no more pathological than homosexuality, atheism, or other traditionally disparaged identities, and to note how its oppositional forms—much like gay activism or atheist humanism—can be as politically helpful and ethically grounded as any other progressive social movement.*

*Keywords:* Technophilia; Techno-critics; Environmentalist

## Introduction

Writers concerned with science and technology (“technoscience” as it is called in my discipline) in terms of its social relations have always struggled with the task of balancing critique with affirmation. On one side of that balance lies the “techno-critic”—scholars who cast an unrelenting gaze at contemporary technoscience, and do not pull any punches in their harsh portraits. They expose, for example, the ways in which the dangers of nuclear power were covered up by a cold war military and its commercial interests; the ways that university research has benefited corporate farms at the expense of family farms and left us more dependent on pesticides and petroleum-based fertilizers; and the ways in which collusion between government and industry has sacrificed progress on alternative energy sources for increasing dependence on low-mileage cars and foreign oil. We would be fools not to support techno-critic scholars; their courage in speaking out against such dangers is only matched by the importance of their work. But what of the other side of the balance between affirmation and critique? The polar opposite of the techno-critic is the technophile; the unabashed technoscience enthusiast. My purpose in writing this essay is not to question the validity of the techno-critic, but rather to defend technophilia as an

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equally legitimate position, equally capable of fighting for social justice and earthly survival.

Cast in the frame of “balance,” as I mention above, it might seem like defending technophilia would be an easy task. Surely there are times when we want to emphasize the benefits of technoscience, just as there times when we want to emphasize its dangers and deficits. But here we find a strange asymmetry: technophilia is routinely disparaged in Science and Technology Studies and other disciplines in which the social relations of technoscience are studied. Unlike the techno-critic position, technophilia is pathologized as both psychological dysfunction and spiritual deficit. Let us take some examples from social studies of computing.

Several writers—Sally Hacker (1989), for example, whose work I otherwise greatly admire—have criticized the intensity with which computer geeks are involved with their machines by calling this activity “a form of masturbation.” The accusation is suspect on two grounds. First, why assume masturbation is bad? There is a history of suppression of masturbation—spiked cages, plaster casts, and pathologizing modes of surveillance and inquiry—through which middle-class norms of control were inflicted in oppressive excess (Frykman, Lofgren, and Crozier 1987). Why join in that effort instead of opposing it? Second, it is difficult to understand why obsessive intensity in writing poetry or communing with nature can be celebrated, but similar focus involving machines should be condemned.

Hacker’s position is not arbitrary or thoughtless, and I find myself agreeing with many of her observations. Like Hacker I suspect that the lack of women and non-Asian minorities in computing is partly due to geek subculture, and I have devoted much of my research to both investigating the attributes that create this problem and attempting to devise potential solutions (for example, Eglash 2002a, 2002b; Eglash and Blecker 2001). But identifying technophilia itself as the problem is an enormous error. It is similar to noting sexism in churches, mosques, and synagogues, and concluding that therefore every feminist should become an atheist.

One point of departure for Hacker and I can be found in the 1990 collection of her papers, which also includes interviews by Dorothy Smith, taken shortly before Hacker’s death in 1988. There Hacker describes her struggles with sex-positive feminism—feminists who champion the right to engage in S&M, pornography, and other “non-vanilla” sexual practices (as long as it is through consensual, health-conscious means).<sup>1</sup> She rejects the legitimacy of their position, and later conflates that rejection with her critique of technology:

There is no single ... negative term for a kind of technology that rouses prurient interest, demeans the powerless, eroticizes domination, or offends along a moral dimension. We could all think of technologies that fit this bill, such as the short hoe recently outlawed for migrant field workers, nuclear energy, or the fat American car; tools of torture, or weapon systems; chemical technologies for the exciting and often eroticized domination and control of nature. Many do describe such technologies as pornographic. (Hacker 1990, 80)

While we should support Hacker in her techno-critic rejection of the “fat American car,” we should also join technophiles in celebrating the phat American Car (Figure 1).

### Low-riders: The Phat American Car

The low-riding tradition is often traced back to the traditional Mexican *paseo* (promenade) in which the unmarried youth would circle the town square, boys on one side, girls on the other. Most sources cite 1930s California as the earliest appearance, when the zoot-suit was a signature style, and “pachucos” began to custom-modify their cars to be *bajito y suavecito* (low and slow). By 1958 there was a regulatory backlash: California Vehicle Code 24008 outlawed any car having any part lower than the bottom of its wheel rims. Police could now ticket low-riders whenever they pleased. In 1959 a young Latino customizer from San Bernadino, Ron Aguirre, added hydraulics scavenged from a B-52 to allow his car to rise up to legal height whenever police pulled him over; the hydraulics later became a feature unto itself.

Women’s role in low-rider culture has varied: during the 1970s there were several women’s low-rider clubs, and one of the first issues of *Low-Rider Magazine*, back when it was just a home-grown “zine,” showed independent, mechanically competent women in overalls. When it became a slick glossy magazine, the homegirls were exchanged for bikini babes; and by 1990 women’s low-rider clubs had died out, although they are now coming back.<sup>2</sup> While its potential for contesting sexism at the intersections of power and technology has been under siege, the low-rider remains a powerful practice for contesting the ways in which technology exclusion works across race and class boundaries (Chappell 2001).

During World War II, zoot-suit riots were inspired by “pro-American” racial paranoia. The lavish use of materials were seen as flaunting defiance against the austerity measures proscribed by the war effort (in March 1942, the War Production Board’s first rationing act instituted a 26% cut-back in the use of fabrics, and drew up regulations for the production of clothing that effectively criminalized zoot suits) (Cosgrove 1984). While sailors carried out vigilante punishment, and local law enforcement carried out mass arrests, the California state government conducted an un-American activities investigation.



**Figure 1** Joe Grosso’s Mazda, “Desirable Ones.” Courtesy of *Low-Rider Magazine*.

I find a discomfoting resonance between the 1940s austerity measures used against zoot-suits, and the calls for austerity by some contemporary techno-critics. I recall attending an environmentalism conference at the University of California at Santa Cruz in which white activists condemned the (primarily Latino) working-class visitors from the near-by Silicon valley with their “hopped up cars” and “disregard for the natural beauty of our beaches.” They seemed oblivious to the fact that only a few generations ago such Latino youth would have been the only citizens of those beaches (Mexico did not surrender California until 1848). Another example of this kind of political clash, during the 1980s activists in the Nuclear Freeze Movement often demanded that other political groups issue a statement affirming the priority of their cause: “nuclear weapons are the single greatest threat to our lives.” It sounds innocent enough—who wants to say they don’t find nuclear proliferation threatening? Yet it has a similar effect to that of the 1940s War Production Board: “you have to put away your petty squabbles, because now we have something that threatens even us white middle class folks.”

But the bias against technophilia is much broader than class warfare or ethnic conflict. The following list suggests some of this greater breadth:

- a. *A Christian legacy*: the fall from the garden is redeemed by the rejection of the programmatic authority of the Synagogue by Jesus. Thus Christianity can be interpreted as justification for a return to the garden—a sense that nature is morally or spiritually superior—and rejection of technology as alienating, programmatic authority.
- b. *Romantic organicism*: the claim that what is natural is better than what is artificial. We tend to see this in the 1960s counter-culture, in the claims for “holism” as a way of life, in movements like Deep Ecology, and so on. Bell Hooks commented about the ways this 1960s organicism forced a singular conception of “authentic” black identity: “This discourse created the idea of ‘primitive’ and promoted the notion of an ‘authentic’ experience, seeing as ‘natural’ those expressions of black life which conformed to a pre-existing pattern or stereotype” (Hooks c1990, 29)
- c. *Realism*: here the claim is that representations and abstractions are susceptible to errors and manipulation, while “real” forms of human contact are better guarantors of truth. We tend to see such claims in the “direct democracy” and the “face-to-face community” promoted by the Students for a Democratic Society in the 1960s, and in Rousseau’s “Noble Savage” concept. A recent example can be found in Carolyn Merchant’s description of indigenous culture: “In contrast to the transcendent world of Judeo-Christian religion ... [Native American culture] precludes separation. ... Communication is direct and immediate. The objectivity that is dependent on distancing has not yet arisen” (Merchant 1989, 48).
- d. *Religious organicism and normative sexual concepts*: Often claims are made that “unnatural sex” is that which was not ordained by God. Homosexuality, BDSM, and other “deviant” sexual practices become metaphors for condemning “unnatural” technological practices.

As we begin to investigate the reasons for a bias against technophilia, we see that it opens up a broad range of topics around what it means to be human, and how we can

best support movements for social justice and earthly survival. Many of my colleagues define what it means to be human in opposition to technology; they see humanity as fundamentally natural, and machines as a new imposition. For example, in his introduction to *The cyborg handbook*, Chris Gray asks:

But haven't people always been cyborgs? At least back to the bicycle, eyeglasses, and stone hammers? This is an argument that many people make ... The answer is, in a word, no. Certainly we can look back from the present at some human-tool and human-machine relationships and say "Yes, that looks very cyborgian," but this is only possible because of hindsight. (1995, 6)

I have no problem granting that there is a long-term natural human legacy from our organic origins, but why deny that there is long-term artificial human legacy that is equally embedded in what we are? Our artificiality—our machines, tools, cave paintings, stories—are the embodiment of the ability for self-reflection that makes us fundamentally human.

Philosopher Jacques Derrida spoke of this need to understand the artificiality of our origins in his critique of Rousseau's theory of communication. Rousseau claimed that the paralinguistic aspects of our speech are more natural, since we share that with animals, and that the linguistic parts of speech are more artificial, being a later imposition. But Derrida objected that it is the linguistic part that makes us human—that we are "always already" artificial. Anthropologist Marshal Salhins makes much the same point in his critique of biological determinism. He points out that the laws of physics give you a good description of the interaction of molecules until you get to DNA and its ability to self-reference—then you have the complexity of biological organisms, which are better described by the laws of biology. In the same way, he notes that the laws of biology provide a good description until you get to organisms that can reflect upon what it means to be biological—and then you have the complexity of social beings, and the need to describe them through culture.

Finally, we also encounter objections to technophilia on the grounds of political pragmatism. "Sure", the techno-critic says, "you might have a point on abstract, theoretical grounds, but don't forget that technophiles like Bill Gates and Newt Gingrich are the ones in power. For every subscriber to *Mother Earth News* there are a hundred subscribers to *Wired* magazine. We can't afford to be lenient". I think such objections are wrong on a couple of grounds. First, political pragmatism has justified phenomena such as the USSR's policies on *Pravda*—the official state newspaper that gave only glowing affirmation to the state—and the Israeli hardline stance against Palestinians ("sure we are hard on them, but after being victims of genocide we can't afford to be lenient"). Second, I'm not sure it's entirely true. *Wired* magazine does have an enormous circulation—currently estimated at 500 000—but *Organic Style* magazine has an estimated circulation of 750 000.<sup>3</sup> Now one might object that *Organic Style* magazine is merely a corporate pretender, not a true representative of the spirit and substance of the techno-critic, but I would make exactly the same objection about *Wired* magazine in relation to technophiles.

So what would a faithful representation of this radical stance in technophilia look like? I have entitled this essay "oppositional technophilia" in honor of Chela Sandoval's

“oppositional consciousness.”<sup>4</sup> But I’m not entirely happy with qualifying the term—we do not see essays with the title “Positive Homosexuality” or “Not-too-scary Black Identity.” What would a magazine that was the technophile equivalent of “Mother Earth News” look like? What would it be like to have a political left in which technophiles were free to come out of the closet?

### Technophilia as Radical Practice

There are many ways of recouping technophilia for its radical potential. Some of these fall under the category of what Michel Foucault called “subjugated knowledge”—in this case, understandings of socio-technical relations that have been obscured by both right-wing technophiles and left-wing techno-critics. Take, for example, the history of computational mathematics. As I learned it as an engineering student at UCLA, it was the kind of dull hagiography that Sharon Traweek describes in her ethnography of physicists. It was not until much later that I found out how much political consciousness is in that history—the revolutionary zeal of Sophia Kovalskaia in the 19th century, the courageous pacifism of Lewis Fry Richardson in the 1920s, the leftist views of 1950s cyberneticians like Norbert Wiener, Humberto Maturana and Francisco Varela. I grew up admiring the politics of 1960s radicals but never suspected that some of the central figures, like Steve Smale at Berkeley and Kenneth Boulding at the University of Michigan, were professors in mathematics or systems theory. Oppositional technophiles have a history worth recovering.

As mentioned in the quotation from Bell Hooks in the previous section, there is an unfortunate conflation between the artificial/natural dichotomy and identity dichotomies like male/female in gender or white/black in race, or upper class/working class in economic standing. One outcome of this conflation is that it creates a barrier for women and non-Asian<sup>5</sup> minorities to be involved in technoscience—if you buy into that dichotomy, then being “authentically” female or black or working class would mean staying away from careers in technoscience. Another unfortunate outcome is that it scape-goats things in the category of “artificial”—namely technoscience—to take the blame for what wealthy white guys have done. I suspect that some potential self-critique by white males gets turned into a rant against technology. Take, for example, Ted Kaczinski’s rant against machine intelligence (favorably quoted by Bill Joy, Ray Kurzweil and others), but in this case replace “machines” with “wealthy white guys” (note that it exonerates them in the first sentence):

But we are suggesting neither that the human race would voluntarily turn power over to the [machines] nor that the [machines] would willfully seize power. What we do suggest is that the human race might easily permit itself to drift into a position of such dependence on the [machines] that it would have no practical choice but to accept all of the [machines] decisions. As society and the problems that face it become more and more complex and [machines] become more and more intelligent, people will let [machines] make more of their decisions for them, simply because [machine]-made decisions will bring better results than man-made ones ... At that stage the [machines] will be in effective control. People won’t be able to just turn the [machines] off, because they will be so dependent on them that turning them off would amount to suicide. (Joy 2000)

My point here is not to condemn folks like Bill Joy, but to try to show how the quick switch from technophile to techno-critic can still leave much of the social justice issues untouched. What we need is not the abandonment of the technophile position, but a cultivation of its oppositional possibilities.

One place where such oppositional technophilia does seem to prosper is in groups like the AfroFuturist movement. Rather than merely reverse the stereotypes, the AfroFuturists have attempted to forge a new identity that puts black cultural origins as much in categories of the artificial as in those of the natural. AfroFuturists blur the distinctions between the Alien mothership and mother Africa, the middle passage of the black Atlantic and the musical passages of the black electronic, the mojo hand and the mouse. That is not to say we should have utopian illusions about AfroFuturism; it is fraught with problems stemming from its derivative relations to the original Futurist movement, the elitism of academic influence, and most problematically, its preference for artistic and literary approaches over science and technology, economics, politics, and other disciplines. But its ability to disrupt and redefine the boundaries of technocultural identity—the putative opposition between blackness and technology—rather than merely relocate the figures that inhabit them is important and controversial.

Another wonderful example of oppositional technophilia can be found in groups such as the American Indian Computer Arts Project. Founded by Ojibway artist Turtle Heart, he describes his first efforts in a recent interview:

I have studied petroglyphs and cave paintings since my childhood. When I first heard about personal computers I thought immediately that I would be like those ancient rock painters and story tellers and do the same with computers, which is basically what I have been doing since that time. I felt right away that tribal images should be on computers. It may seem a small thing but it was important to me to affirm in every area possible that our ancient cultures were not merely “savage” or “pagan” but filled with rich teachings, ideas and philosophies, all of which are quantified and codified through our arts. I really like the “poetry” of our tribal images on these computers. That must have been in the very early 80’s I think. (Eglash et al. 2004, 183)

Other groups with similar positions include the community that has formed around websites such as “NativeTech,” and much of the ethnomathematics community, which reaches indigenous groups worldwide.

Finally, I think it is important to make a case for the spiritual dimensions of technophilia as well. George Washington Carver, for example, declared that not only did God create the Kingdom of Plants and the Kingdom of Animals, but that He also had a “Kingdom of the Synthetic.” This spiritual legitimization of the artificial fits well into the African religious traditions of Animism. Animism typically concerns a transfer of energy or information through culturally mediated activities and artifacts. Even in the Judeo-Christian tradition there are such “technologies of the sacred”—my favorite example is Gloria Anzaldúa’s description of the way that she had sacredized her desktop computer with a figure of the Virgin of Guadalupe and burning candles.

In conclusion: by issuing blanket condemnations of technophilia as a psychological aberration or spiritual deficit, we make the error of joining a long history of repressive

homophobia, white self-hatred, and delusional romantic nostalgia. Those of us who love both people and machines with equal passion should never be ashamed of who we are.

## Notes

- [1] Carla Freccero, Gayle Rubin, and Ellen Willis among others.
- [2] See Gil Griffin's "Taking the Wheel: Female Lowriders find their Place on the Road" in *San Diego Union-Tribune*, 23 August 2004.
- [3] See [http://www.meredith.com/default.sph/pr\\_user.class?FNC=ViewRelease\\_\\_Aextemplate\\_html\\_\\_937](http://www.meredith.com/default.sph/pr_user.class?FNC=ViewRelease__Aextemplate_html__937)
- [4] A connection that first occurred to me when Chela's father died, and she wrote a poem about his life as a welder. See Chela (1999).
- [5] Primitivist racism operates by making a group of people too concrete, and thus "closer to nature"—not really a culture at all, but rather beings of uncontrolled emotion and direct bodily sensation, rooted in the soil of sensuality. Orientalist racism operates by making a group of people too abstract, and thus "arabesque"—not really a natural human, but one who is devoid of emotion, caring only for money or an inscrutable spiritual transcendence.

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