Rhetorics and Technologies

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Published by University of South Carolina Press

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Appeals to the Body in Eco-Rhetoric and Techno-Rhetoric

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Techno-rhetoric—the study, practice, and teaching of electronic literacies, as in the fields of new media studies and computers and composition—may draw upon the same terminology as the rhetoric of place and environmental communication, or *eco-rhetoric*, but the aims of the two discourses still remain distinct. Such a point may seem obvious until you read the literature on both sides. A title such as Richard Selfe's *Sustainable Computer Environments* borrows not only the concept of *environment* but also that of *sustainability* from the environmental protection movement and thus hints at a close connection of environmentalist politics with techno-rhetoric, a field that might otherwise seem accommodationist in its promotion of corporate technology, at least from the viewpoint of the anticorporate environmentalist. But accommodationist murmurs also arise on the green side of the exchange. Sid Dobrin, for example, in his eco-compositionist manifesto "Writing Takes Place," explicitly claims that eco-rhetoric should not stop at the study of geographical sites but should also include the presumed ecology of computer classrooms and Web-based environments. Clearly we are well beyond a simple dichotomy between luddite and cyborg rhetoric. But we may also be beyond the trend simply to deny the opposition, a trend that begins with Donna Haraway's eloquent pronouncements from the early nineties about "the leaky distinctions between animal-human (organism) and machine" (152; see also Mazlish).

Rather than a simplistic dichotomy between the discourses on the organic and mechanistic modes of life, or an equally simplistic conflation of the two, what experience often puts before us is a continuum, a systematic relationship that flows from earth to organism to machine and back again, the general outline of which is given in figure 4.1.
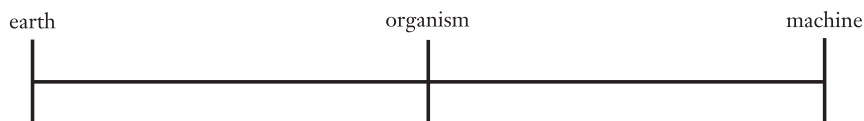
earth   organism   machine

Fig. 4.1 The earth-organism-machine continuum

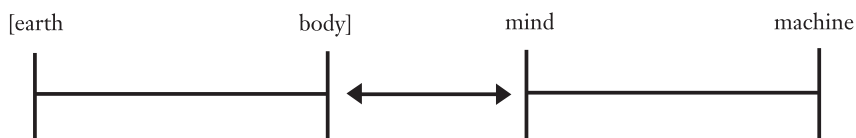[earth   body]   mind   machine

Fig. 4.2 Body divided from mind and bracketed with earth as inconsequential, as in techno-rhetoric

According to this view, the difference between eco- and techno-rhetoric frequently involves which part of the continuum one chooses for a focus—the earth-to-human or the human-to-machine connection. I believe that the merger of the two discourses, which might be warranted in light of their ultimate continuity, founders on the issue of the existential body. More specifically, techno-rhetoric ostensibly accepts the earth-organism-machine continuum, but tends to preserve the old Cartesian worldview that divides body from mind. It then strives transcendentally to negate the body and earth—or bracket them as inconsequential—then treat the organism purely as a mind in communion, or even identical, with the machine (fig. 4.2).

Two points need extra emphasis here. First, I am mainly talking about discourse, not organic and mechanistic life per se. I am not talking about the dangers of computer games, for example, but about the dangers of the ways we talk and think about computer games. Second, I am not suggesting a clear binary opposition between earth-oriented and machine-oriented ways of being (or ways of talking for that matter) and thus indulging in a naïve retreat to essentialism; indeed I would argue that the earth-organism-machine spectrum offers a clear instance in discourse studies of what Sharon Crowley calls "the postmodernists' restless resolution of dualisms into continua" (182). I will come down more strongly in favor of the integrity of eco-rhetoric because, despite its affinity with old romanticist models of discourse, eco-rhetoric is more likely to engage the full length of the continuum. By contrast, techno-rhetoric, in spite of its greater likelihood to claim an affinity with postmodernism, too frequently turns out to be some version of Cartesian modernism in a terminological masquerade, weakly appealing to a posthumanist paradigm, environmental awareness, and embodiment.

I begin with a story from my own techno-autobiography that is an allegory of the contemporary neglect of the body in techno-rhetoric. The suffering body

becomes the phenomenological focus that resists the smooth substitution of virtual (machine) worlds for the physical (earthly) world. The machine may continue to run as long as there is fuel, but the bodily interface fails in a way that anticipates a more general atrophy or collapse, the sapping of the earth and the overuse of energy resources. Next I extend the critique to the texts of techno-rhetoric, specifically to the literature on computers and writing, to expose the neglect of the body in the relentless promotion of technological approaches to literacy. On the way to demonstrating the ultimate attempt at erasure of the body in techno-rhetoric and the contrasting recovery of the body in eco-rhetoric, I focus in particular on the concepts of extension and prosthesis as a way of conceptualizing technology's relation to the body and the earth. In this analysis, eco-rhetoric proves more likely to give a full account of the earth-body-machine spectrum, albeit an account that often (but not always) rejects the technological imperatives of the modernist perspective. Concluding, I consider briefly some practical and theoretical consequences of the neglect of the body in techno-rhetoric. These considerations apply specifically to the research and teaching of writing programs in the American university.

The Allegory of the Prosthetic Demigod

The story from my techno-autobiography betrays a surprising affinity with an episode from the television program *South Park* called "Make Love, Not Warcraft," in which bodily health declines as technological competence advances. In the episode, the South Park kids suffer an outbreak of obesity and bad skin as the price they pay to become masters of an electronic game. The story of their neglect of the body stands as an allegory in the contemporary rhetoric of technology and human experience. Although different in the particulars, my story follows a similar symbolic pattern.[1]

In May 2006 I read a paper at the Computers and Writing Conference in Lubbock, Texas.[2] The point of the paper was to question use of the term "environment" in eco- and techno-rhetoric. The term long ago fell into disfavor among some eco-rhetoricians because it implies that nature is merely "that which surrounds," connoting a necessary separation of nature and humanity (Killingsworth and Palmer 42–44). Eco-rhetoricians tend to prefer a term like "lifeworld." Drawn from the philosophy of phenomenology, lifeworld suggests an intimate connection between organism and place. It connotes Heidegger's revision of "being" as "being there" (*Dasein*)—being as situated in the world. The term would be less amenable to techno-rhetoric, however, because it seems to favor the carbon-based world of organic life over the silicon-based experience of electronic devices.

We could leave it at that and say eco-rhetoric is concerned with the lifeworld, whereas techno-rhetoric really is more concerned with environments, the artificial surroundings of organic life. But in the spirit of continuity, the original

paper sought out a term that both sides could embrace. The concept of "extension" seemed to suffice—the human body as an extension of the earth's body, and technology as an extension of the human. The organism extended in two directions thus becomes the mediating point in the continuity between technology and the earth (as suggested in fig. 4.1).

As we use the concept of extension today, the most immediate influence is the godfather of new media studies, Marshall McLuhan. His book *Understanding Media: The Extensions of Man*, first published in 1964, includes the essay "Clothing: Our Extended Skin." Clothing could be considered an environment that envelops the body, but generally it is too close and too portable—it clings to the body and goes with you everywhere (at least in public)—so it seems instead an extension, your public skin, a counterpart to your mental persona. McLuhan's own most obvious theoretical source is Sigmund Freud's 1930 book *Civilization and Its Discontents*. Freud understands the extensions of technology as an attempt to address people's anxieties over the inadequacies of the body. In earlier times people saw themselves, in Freud's words, as "feeble animal organism[s]." They "formed an ideal conception of omnipotence and omniscience" that, being denied to humanity, could be embodied in the gods. "Today," says Freud, "[the human being] has come very close to the attainment of this ideal"—becoming "almost . . . a god." The new god builds "auxiliary organs" to extend the body's powers—microscopes and telescopes to extend vision, communication devices to send the voice around the globe, airplanes to fly, clothing, armor, and then fortresses to add layers that protect the tender skin. When this "prosthetic God" dons all these "auxiliary organs," in Freud's view, the result is "truly magnificent" (Freud 44–45).

This version of extension, the concept of the prosthetic, has proved appealing in techno-rhetoric, where it has been politicized to some degree. In "Wearable Computing as a Means of Personal Empowerment," Steve Mann suggests that if prosthetics are used to replace missing limbs, to take them away from the wearer would be a violation of human rights. Applying the term "prosthetic" to technological devices is, in effect, to endow them with the same set of rights. The wearer is entitled to have regular access, for example, to "wearable memory."[3] By extension, to take away cell phones from students in class amounts to denying their connection to the world.

From McLuhan and Freud and Steve Mann, it is an easy step to imagining the contemporary, computer-enhanced professor as a version of the prosthetic demigod. Armed with my technological extensions, I can sit at a home computer and do what used to require a far greater expenditure of time and effort. I can write faster and more accurately than I could with a pencil or a typewriter. I can do research by consulting online databases instead of going to the library. I can teach and grade papers without going to the classroom. I can confer with students and colleagues without going to the office. I can attend conferences

without getting on the airplane. My university administration loves me for saving travel money and classroom space. The librarians love me because they can realize their venerable but necessarily unstated ideal of keeping every book on the shelf and out of use at all times. My students love me because they do not have to get up at eight o'clock, or ten, or even noon to meet with me or come to class.

Of course, there is the nagging fear of a system failure or electrical outage that would severely diminish if not totally disable my extended power. Freud anticipated such worries and was not willing to stop with a happy image of power and productivity. At the time he wrote his famous portrait of the prosthetic god, he was suffering from mouth cancer and was forced to wear an ill-fitting prosthetic jaw, so his awareness of the shortcomings of technology was all the more acute. He pointed out that the "organs" of the "prosthetic God" "have not grown on to him and . . . still give him much trouble at times." Although taking some comfort from the thought that things might get better in the future, Freud concludes, "present-day man does not feel happy in his Godlike character" (44–45).

Less frequently discussed than the possibility of a bad fit between prosthetic and human being is the failure of technology on the human side. Which brings me back to my story. After months of testing my ideas on techno-rhetoric by the fullest possible immersion in the technologies of writing—in wikis, blogs, Web sites, and word processing—I barely made it to Lubbock to read my paper. I had decided to drive across Texas for the meeting, but by the time I actually undertook the trip, I was having a terrible pain that, as I found out later, came from two herniated disks in my neck and upper back. The trip to Lubbock was a physical challenge. Once there I could barely sit in a chair long enough to get through a conference session. I could walk for miles around the lovely campus of Texas Tech, where I saw scissor-tailed flycatchers cutting patterns in blue sky and jackrabbits grazing like cattle. But sitting was a huge problem. I had reached my limits as a prosthetic god.

My body had become this uncooperative *thing*, this *other* that resisted my technological ambitions. I took it to the shop—the doctor, the chiropractor, the physical therapist. And after a year of therapy, I had avoided surgery and brought body and soul back into rough harmony again. Part of the price, however, was to limit computer use and time spent in the sitting posture. I revived my use of the notebook—the carbon-, not the silicon-based notebook—and I spent more time outdoors and in the gym. My research in eco-rhetoric continued to flourish, while my work in techno-rhetoric languished.

In this condition, I offer myself as an allegory. Like the business that overextends financially by opening too many stores, or the army that overextends its lines of communication and thus opens itself to flanking maneuvers, I had overextended my body, favoring certain postures (sitting), certain behaviors (reading screens), and certain senses (especially sight) while neglecting others

(walking, standing, listening). A singer may overuse the voice even with the aid of a microphone; driving the car too much is bad for the back. Our extensions still connect to the body and stress it in very particular ways. Such matters are clichés in the preventive health and physical therapy business.

But the allegory of the prosthetic demigod points to a further truth: What is happening to the body is happening to the earth on a larger scale. The idea is well known in the field of eco-rhetoric. The mother of modern environmentalism, Rachel Carson, made the point explicitly in her influential exposé of the pesticide industry, *Silent Spring*, which she wrote in the early 1960s as she was dying of a cancer that could well have been caused by environmental influences. "There is an ecology of the world within our bodies," she wrote; like all of organic nature, we trade in "the common currency of energy" (170, 185).

Embodiment in Techno-Rhetoric

In techno-rhetoric, the same dissatisfaction that feeds the consumerist culture of fad diets, plastic surgery, and personal trainers drives the interest in enhancement and extension. For Steve Mann, as for Freud, all bodies are disabled. Prosthesis is not the exclusive practice of the blind, the elderly, the physically handicapped; we are all naturally disabled. Small, feeble, vulnerable, our bodies constantly victimize us, frustrate us, deny our ambitions. Poor health is not a sign of dysfunction or trouble, as it is in eco-rhetoric; it is the norm of the human condition.

This attitude comes through clearly in science fiction, one of the fountainheads of techno-rhetoric, and no influence from this quarter is greater than William Gibson's 1984 cyberpunk novel *Neuromancer*, written on a Smith-Corona typewriter ten years before the Internet took hold of public communication. Gibson envisages a world where technology allows its most competent adherents to live in a heaven of light and power, a matrix of pure mentality, a gee-whiz realization of the old Cartesian dream of body-mind dualism, in which the mind proves transcendent and outstrips the limits of what Gibson's characters call "the meat world." For the book's protagonist, the cybercowboy called Case, the "matrix" or "cyberspace" stands for freedom, whereas the body is viewed as a death trap, the mind's prison. The ironic narrative voice of the novel, although intrigued with the possibilities Case's behavior suggests, skeptically probes his attitude toward the mind/body complex. The narrative returns attention to the needs of the body again and again, pleading the case of interpersonal involvement against self-absorbed addiction. In final analysis, Gibson portrays Case as an "artiste" certainly, but above all as a *case*, as in "case study" or "mental case." In the years following *Neuromancer*, adherents of the Web borrowed the term "cyberspace" for the product they developed and promoted, and the producers of the film *The Matrix* took the synonymous term to represent a hell of misperception foisted on humanity by increasing dependence upon, and

finally defeat by, the machines, which ultimately enslave the collective body of humanity while treating the mind to a pleasant consensual hallucination, to use the terms of Gibson's novel.

If we extend this interpretive thread only a bit further, using the terminology introduced by the geographer Yi-Fu Tuan, we can say that the body stands for place, whereas the matrix represents space. Stating both terms positively, Tuan writes, "Place is security, space is freedom, we are attached to the one and long for the other" (3). Places are endowed with flora and fauna, indigenous and introduced, with geography and a characteristic terrain, with people and their special cultures and history; space is open, waiting to be planned, a yet-to-be-cultivated field, an unpopulated expanse of the world yielding to the imagination of the person who can acquire it. The two terms often collide politically. In the nineteenth century, Euro-American settlers referred to the western lands as the wide-open spaces, but the indigenous peoples understood the same lands as places, hunting grounds, homes. In this sense, a human body is the place of places, always specific and characteristic of a person; only as an abstraction can we think of the body as a space. To turn the body into an other, a space or a thing, as happens in torture, war, injury, or disease, is, in the language of Elaine Scarry, to "unmake the world" that the person inhabits.

This theoretical connection of body with place allows us to see more precisely how eco-rhetoric departs from techno-rhetoric. If techno-rhetoric resents the demands of the body and seeks to remake it in the image of the machine, overcoming its limits with extensions and enhancements, eco-rhetoric celebrates the body's connection to the earth and strives to accept the limits of the body as part of the perpetual struggle against the human hubris and overreaching that deplete resources and erode the earth. In this sense, eco-rhetoric departs from the old humanist model of the mind-body-earth relationship—seeking to purvey an ecocentric or biocentric worldview rather than an anthropocentric one—but techno-rhetoric sticks with the dualistic model. As Katherine Hayles has argued, the so-called cybernetic posthuman shares with the old humanist self of Cartesian dualism and imperialist universalism at least one feature: what she calls "the erasure of embodiment." "Identified with the rational mind, the [humanist self] *possessed* a body but was not usually represented as *being* a body," says Hayles (4). Likewise, for the cyberhuman of the postmodern world, the body is not the core of identity so much as an element in a distributed identity that includes machines as well as other people. The problem of thus identifying the body with machines is that we may come to think of the body—and by extension, other people—as something we use. Becoming users of the body, rather than a body itself, we are prone to *over*use or even *ab*use the body.

Techno-rhetoricians such as James Paul Gee are inclined to admit that humans think best "through their bodies and emotions" in situated learning, but when Gee and his comrades actually come to discuss a favorite term of the new

cognitivism, "embodiment," they seem concerned more with the mind than with the body itself ("Foreword" x). In their world, the mind is embodied not only in the carbon-based shell of earthly existence but also in the electronic body of the Web surfer or the gaming avatar.[4] This robotic body allows the mind the freedom to roam a worldwide shopping mall or kill boars in a medieval forest, achieving levels of satisfaction, competence, and control unknown in carbon-based life—all while the participant never moves from the sitting posture, eyes fixed on a screen of dazzling imagery.

The experience has a distinct, if furtive, eroticism. Debra Journet thus writes of being "seduced" by the game of Myst, captivated by the "beauty" of its enticing "landscapes," obsessed with spending time in the virtual world (97, 103). Indeed, the language of obsession, compulsion, and addiction—states of mind usually considered harmful to bodily health—haunts the literature of techno-rhetoric. On the much-discussed topic of "cybersex," Sherry Turkle writes, "An Internet list of 'Frequently Asked Questions' describes . . . cybersex . . . as people typing messages with erotic content to each other, 'sometimes with one hand on the keyset, sometimes with two.'" True to the treatment of the mental bias in this literature, Turkle reminds us of "the adage that ninety percent of sex takes place in the mind" (21). But what interests me is the furtiveness of that hand missing from the keyboard. It seems to disappear from the scope of the investigation in a verbal gesture at once prudish and titillating. The body—in this case, the actual genitalia toward which the hand reaches—is outside the scope, the techno-rhetorical line of vision. More frequently even such oblique references disappear in techno-rhetoric, and only the language of sexual attraction remains, as in the essay by Journet.

Bodily Involvement in Eco-Rhetoric

By contrast, eco-rhetoric favors a complete identification of person with body. I do not use a body; I am a body. And I am part of a world that is not an extension of my desires and fantasies, not a space that I possess, but rather a home place out of which my body grows, the health of one relying upon the health of the other. Abandoning even the extension of clothing as an extended skin, eco-rhetoricians favor nakedness with their sensually varied and particularly tactile imagery (as opposed to the scopophilic and obsessive dependency on the gaze in the visual rhetoric of pornography, the very lifeblood of the Internet). Likewise valued in eco-rhetoric is unassisted or minimally enhanced physical power. It is said that you can define your bioregion, your home place, by how much ground you can cover on your own power in one day, walking or at most biking and canoeing.

In a work often cited as an early instance of ecocritical nature writing, the 1882 memoir *Specimen Days*, the poet Walt Whitman returned to a theme that first attracted him in the earliest edition of his masterwork, the 1855 *Leaves of*

Grass, in which he avowed, "I will go to the bank by the wood and become undisguised and naked, / I am mad for it to be in contact with me" (13). Writing as an old man, after he had survived a paralytic stroke, Whitman describes his experience of nature this way: "It seems as if peace and nutriment from heaven subtly filter into me as I slowly hobble down these country lanes and across fields, in the good air, as I sit here in solitude with Nature—open, voiceless, mystic, far removed, yet palpable, eloquent Nature. I merge myself in the scene, the perfect day" (806). The paradoxically "voiceless" yet "eloquent" earth affirms identity not by way of language and the mind, but through the senses and the body of the old poet, who says, "Somehow I seem'd to get identity with each and every thing around me. . . . Nature was naked, and I was also" (807). To become a body among bodies, a flow among flows, to let go of a defining vision and a categorizing language, the means by which the human mind is extended in communication, is to experience the fullness of naked contact with the earth, in Whitman's mystical view. (For a further discussion, see Killingsworth, *Walt* chap. 6.)

For the romantic poet, as for the eco-rhetorician, language itself can prove problematic. To refer to the earth as naked, for example, involves a metaphorical imposition. Nakedness implies a contrast to the state of dress that is characteristically human. People get naked; they go au naturel; but nature cannot, at least not literally. The poet, undressing himself, feels an identity with the earth, expressed in metaphor, the trope of identity. Earth is as it was before, but he declares it naked.

Metaphor, like clothes and the computer, is always an extension, always prosthetic. As I. A. Richards suggests, metaphor transfers terminology from one context to another. With frequent use, the original context fades from consciousness. It ceases to produce an informing tension and becomes instead a vague and often troubling resonance. We might forget, for example, that when we speak of visiting a Web site, we are using a metaphor. But at the edge of awareness is the realization that visiting an online shopping site is very different from visiting a neighborhood store, although the effect on the local economy of sales lost to Internet sources might be very real indeed. Again notice the political conflict between space and place—place as security, space as possibility—this time realized through the power of metaphorical rhetoric.

In *Desert Solitaire*, Edward Abbey studiously resists the extensional powers of language, most memorably in a passage that stands as a manifesto against personification (see Buell 180–218). A balanced rock appears to him in the red Utah desert as "a stone god or a petrified ogre," but then he draws back from the comparison:

> Like a god, like an ogre? The personification of the natural is exactly the tendency I wish to suppress in myself, to eliminate for good. I am here not only to evade for a while the clamor and filth and confusion

of the cultural apparatus but also to confront, immediately and directly if it's possible, the bare bones of existence, the elemental and fundamental, the bedrock which sustains us. I want to be able to look at and into a juniper tree, a piece of quartz, a vulture, a spider, and see it as it is in itself, devoid of all humanly ascribed qualities, anti-Kantian, even the categories of scientific description. . . . I dream of a hard and brutal mysticism in which the naked self merges with a non-human world and yet somehow survives still intact, individual, separate. (7)

Abbey's "bedrock" is not rock, however, nor the immediate ever immediate (that is, free of mediation), because at the base of existence for human perception is always the body, the first medium that defies immediacy and the ground of every perception. Abbey may lay claim to a desire to see earth-as-it-is but cannot resist the language that transforms the earth into a great body—"naked" but still metaphorically kin to the naked human body that greets it—or something recognizable as existing at the edges of bodily life, a corpse with its "bare bones."

Abbey's resistance to troping is a study in the way language returns ever to metaphors of the body, as Lakoff and Johnson have shown in their tour de force *Metaphors We Live By.* No matter how elaborate a metaphor becomes, its ultimate point of reference is the body, and more specifically the relation of the body to the earth. The best example is the conceptual constellation involved in the word "depression." "I'm depressed," I say, or "I'm down," a literal symptom of which is that I cannot get out of bed in the morning. I cannot get up, arise. If I get low enough, suicide looms; gravity draws me to the grave—the gravest conclusion of depression (see Killingsworth, *Appeals* chap. 9).

Abbey's struggle with personification parallels his resistance to technology— resistance that differs from the techno-rhetorical denial of the body in that it does not involve forgetfulness. Indeed it is crucial to this discourse to stay mindful of the entire spectrum of human experience. At one point in his memoir, Abbey offers a self-disparaging account of composing a letter in his ranger's trailer under light extended beyond the daytime with the help of an old generator that "sputters, gasps, catches fire, gains momentum, winds up into a roar," and finally settles into an obnoxious whine (15). The mechanical thing, portrayed here in metaphors of a sick or broken body with its gasping and whining, or a dragon with its fire and roar, produces an unnaturally bright light that blinds him before it enables him to settle down to writing in an ambivalence of extended ability gained at the cost of a ruined peace of mind. In questioning the use of a flashlight when he walks in the desert at night, to take a milder example, he concedes that it is a "useful instrument" but insists that "I can see the road well enough without it. Better, in fact" (14–15). And there is the larger problem: "like many mechanical gadgets it tends to separate a man from the world around him. If I switch it on my eyes adapt to it and I can only see the

small pool of light which it makes in front of me; I am isolated. Leaving the flashlight in my pocket where it belongs, I remain a part of the environment I walk through and my vision though limited has no sharp or definite boundary" (15). In accepting the limits of the body's power, Abbey finds it more to his liking than what most of us would consider a technological extension of its power. The flashlight's capacity to light up the night and dispel the perennial fear of the dark ultimately limits natural ability.

Even though Abbey's resistance to metaphor and technology proves impossible to sustain, he compensates by cultivating mindfulness of limits, scope, and range, the very characteristics that techno-rhetoric seems most eager to ignore, outrun, or overcome. Part of reclaiming a sense of place for Abbey involves reclaiming the bodily awareness numbed by technological experience. He contends that "you can't see anything from a car; you've got to get out of the goddamned contraption and walk, better yet crawl, on hands and knees, over the sandstone and through the thornbush and cactus. When traces of blood begin to mark your trail you'll see something, maybe" (xii).

We might be inclined to dismiss the blood-and-bones outlook of old Abbey as an instance of an outdated literary machismo. But it has proved surprisingly sustainable in the discourse of naturalism, in women's writing as well as in men's. Annie Dillard begins her now-classic book of 1974, *Pilgrim at Tinker Creek*, with the story of her old fighting tomcat coming in through the open window of her bedroom and landing on her chest in the night. "I'd wake up in daylight to find my body covered with paw prints in blood; I looked as though I'd been painted with roses," she writes: "The signs on my body could have been an emblem or a stain, the keys to the kingdom or the mark of Cain. I never knew" (9). Dillard's parable for the writer in the first chapter of *The Writing Life* is the story of an Algonquin woman who, instead of starving to death in an arctic winter, uses a strip of flesh from her own thigh to catch a fish under the ice and thus save herself and her infant. "The materiality of a writer's life cannot be exaggerated," she insists (576). "The art must enter the body" (590). In this same vein, Dillard's younger sister in nature writing, Janisse Ray, tells us in *Ecology of a Cracker Childhood* that the memory of the lost pine forests of her south Georgia home "is scrawled on my bones, so that I carry the landscape inside like an ache" (4). And as noted earlier, Rachel Carson provided a scientific foundation for the blood-and-bones school of nature writing.[5]

We can thus say that on the earth-organism-machine continuum, eco-rhetoric struggles in one direction and resists in the other. It struggles to regain the connection of organism to earth that technology inhibits and that language can overpower, reversing the dependency of humanity on its earthly sources. But to resist is not to deny or forget, and that is the key difference between eco- and techno-rhetoric. I am not saying that eco-rhetoric is always more successful than techno-rhetoric, or necessarily more advanced or enlightened; only that in

current manifestations it is more likely to keep all the elements on the continuum in play.

Consequences—Practical and Theoretical

Now we come to the big question that every rhetorical critic rightly fears: so what? So what if techno-rhetoric breeds forgetfulness of geographic places and neglects the experience of bodily presence? Nature writing is boring after all, and we are mainly an urban people. And so what if the body of some *gringo viejo* in an oversized Texas university becomes, to borrow an image from Greg Brown's song "Slant-Six Mind," roadkill on the information highway? What are the real consequences?

First and foremost is the tendency to forget about the demand of silicon-based writing and teaching on the energy supply. A discourse of forgetfulness diminishes awareness of the electrical uptake required to make thousands of computers run all day and all night in most every house and office around the country. A nice clean connection to a virtual world usually depends upon a much dirtier connection to a coal-fired power plant somewhere near somebody's home place. I have never read an environmental impact statement as part of a plan to install a computer classroom or to increase the use of computers in a writing program. Indeed, it is difficult to find studies of how much energy computers actually use, even with the easy access afforded by Web-searching engines and such databases as the online *Applied Science and Technology Index*. Searching under rubrics like "computer energy use" and "environmental impact, computers," what you do find is a large number of articles telling you how to save on energy costs by shutting down your computer at night (a little high-tech laptop can use as much electricity as an old-tech refrigerator, I learned) and how difficult it is to recycle computer parts. The images of landfills teeming with plastics and metals from discarded computers should raise big questions about software giants who render our equipment obsolete with every new version of their products. Should we really need to replace faculty workstations every three years, as the current wisdom at my institution suggests (an uncanny parallel with the shelf life of textbooks in a comparable industry)? The logic is that it is cheaper to replace than to repair after a certain number of years—a logic again driven by the availability of parts in an industry that keeps the "new and improved" and "more powerful" models coming out every year (often with functionalities that most users never learn to use before yet newer models appear). What is the environmental cost of such planned obsolescence? Should not this discussion engage scholars in techno-composition as much as the concern with "environmental footprints" has engaged such scholars as Derek Owens in eco-composition?

A second consequence, one that should worry directors of writing programs and department chairs, is the neglect not just of *the body* but of bodies. In my university, proposals for new hardware almost never fail, and proposals for software

are only slightly less successful. Where we run into problems is with proposals for "meatware," new technical staff and new teachers to make the machines run. The problem, I guess, is that you can throw old machines on the ever-larger scrap heap, but you have to take care of people, and that is an expensive business. As Reilly and Williams argue, questions of technology are always entwined with the politics of labor. In the literature on techno-rhetoric, there is an increasing interest in the question of labor, no doubt, but not enough to ensure the level of body awareness I have in mind nor to prevent the kind of habitual denial or neglect that I stand against. The few pages on "Bodies at Work" in Rob Shields' *The Virtual*, for example, are mostly devoted to showing that, despite public worries, no clear evidence connects carpal tunnel syndrome to excessive keyboard use (147–50).

Finally, a more subtle consequence, one more in line with the methods of analysis in this essay, concerns research and theoretical issues in the fields of literacy studies, English composition, rhetoric, and literary criticism. Habitual neglect of the body left seated at the computer (or wallowing around with the newer user interfaces) can lead to a willful blindness that spreads outward from the individual to include issues conspicuously related to bodily experience in social contexts, such as gender, class, and race, as well as the themes of hate, war, and violence (see Killingsworth, *Appeals* chaps. 6, 7, and 8; also Crowley). In the concern with access to technology and the identity issues covered in collections such as those of Selfe and Hawisher, techno-rhetoric may seem to be covering this crucial connection of body with identity politics, but without a clear account of the material foundation of such problems, political insensitivity and quietism can slip in the back door. Among the most prominent promoters of technology as a key to improving literacy, James Paul Gee is perhaps the most culpable in this regard. In his first book extolling the educational virtues of electronic gaming, he notoriously dismisses questions of gender and violence in explaining the uneven appeal of first-person shooter games. "I have nothing whatsoever to say about these issues," he writes (*What Video Games* 10). But before leaving the topic, he does manage to assert that "the issue of violence is widely overblown" and that "shooting is an easy form of social interaction (!) to program"—glibly adding an exclamation point in parentheses after the phrase "easy form of social interaction" to register what is, I suppose, some measure of shock at himself for being able to write such a thing. In his rather defensive foreword to Selfe and Hawisher's *Gaming Lives in the Twenty-First Century*, Gee moves on to race. "I do not think that the issue of race and games is just that some games are racist," he writes. "They are no more or less so than the U.S. media culture they give back to us" (xii). We might just as well excuse a student paper full of hate language and verbal abuse as no worse than the homophobic, misogynistic, and racist culture at large. But we do not excuse such writing. We call the school psychologist or the campus police.

The problem is that Gee either has no understanding of the critical function of rhetorical analysis (not very likely), or in an act of willful avoidance, he turns off the switch so that he can get at what is good in video games without worrying about what is bad. Along with some other writers on electronic literacy (such as DiSessa xi), Gee insists on this practice of cultivated critical incapacity, avoiding the "negative" in order to better comprehend the "positive." However, by dismissing questions of gender, violence, and race from his considerations, and by more generally neglecting the place of the body in the earth-organism-machine continuity, Gee raises doubts about his entire project. He adamantly insists, for example, that the enhanced learning ability of home gamers accounts for their success in school. But how would he know? Could such success possibly arise not from enhanced literacy but from the cultivation of a special will to power, a killing competitiveness fed by the control fantasies in a steady diet of graphic violence and the pursuit of a superexpert competence in a narrow range of highly specialized skills? Or could it be that the kind of literacy Gee values is one that powerfully concentrates the attention to a limited scope while just as powerfully crippling awareness of whole other fields of experience? As rhetoricians we cannot ignore how even the most remote connections among the elements of experience—bodies, machines, social structures, attitudes, fantasies, ideals—are formed and reinforced. We want instead to ferret out forgotten sources and bring hidden assumptions to light.

In this cultivated critical incapacity, Gee may not be alone in our field. Sharon Crowley admonishes that rhetoric and composition as practiced in English departments lag behind the discipline of speech communication in the development of rhetorical criticism. Indeed she says that it is "virtually absent from composition studies" (185). Stuart Selber is moving in the right direction when he insists on including "critical literacy" in his concept of a multiliterate world that treats technological literacy, or competence, alongside print literacy. I would also want to add what David Orr years ago called ecological literacy. And more to the point of this paper, I would again stress Crowley's main point—that body criticism offers a path into fuller realization of critical rhetoric.[6]

As for critical techno-rhetoric, another promising possibility would involve a fuller treatment of the erotics of technology, a topic that hovers on the edges of my own analysis as well as that of such authors as Sherry Turkle and Debra Journet. Like rhetoric, the erotics of technology will ask, What is the appeal? What holds the attention? What moves and pleases us? Again, a good starting place for such a study is to confront questions about not only the social body but also the bodies of individual users, the ones addressed in invitations to porn sites, electronic shopping venues, and dating services online, from the *gringo viejo* forced to delete hundreds of ads every year that promise help for erectile dysfunction to the lonely lad enticed by the possibility of realizing his most disturbing fantasies. What is the appeal? What holds the attention? What moves us? And why?

Notes

1. Thanks go to David Cockley of Texas A&M for calling my attention to this episode. I would also like to thank Elizabeth Talafuse for finding the episode for me on YouTube and helping in other ways with the research for this paper. Further help came from Sarah Hart.

2. Parts of the original paper are reproduced in summary in this section. Parts also appear in Killingsworth, "A Phenomenological Perspective."

3. Thanks go to Professor Isabel Pedersen of Ryerson University in Toronto for calling my attention to the work of Steve Mann.

4. Sharon Crowley quotes Halbertstam and Livingston in her brief overview of the "posthuman body," which is said to be "a technology, a screen, a projected image" that "both writes and is written upon" (Crowley 178). I intentionally address the concept of the posthuman only tangentially here because, although I admire much about the treatment of the body by such writers as Hayles and Crowley, who seem content with the terminology of posthumanism, I have a problem with the slippage of metaphors like the one quoted from Halberstam and Livingston toward the literal treatment of "screened" bodies in writers such as Gee as a replacement for the blood-and-bones body of a more existential or phenomenological reading of physical life. The trouble is that some applicants of the posthumanist terminology tend to miss the crucial ironies of a Katherine Hayles or Donna Haraway.

5. For more on the rhetoric of Rachel Carson, see Killingsworth and Palmer 64–68; also Waddell. For a somewhat fuller treatment of Janisse Ray's appeals to place and the body, see Killingsworth, *Appeals* 63–66.

6. See Jack Selzer's groundbreaking collection on body rhetoric, in which Crowley is a contributing editor; also Debra Hawhee's reconsideration of the body in classical rhetoric.

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