c y b e r i n g   d e m o c r a c y

electronic mediations

Katherine Hayles
Mark Poster
Samuel Weber
Series Editors

cybering democracy

Public Space and the Internet   **Diana Saco**

To my sister Nikki Saco,
who made this possible in countless ways
beginning with the sage advice that I should get a modem

Contents

The Politics of Visibility

On 5 August 1993, convicted murderer Joseph Paul Jernigan was executed by lethal injection in Huntsville, Texas, leaving to scientific research, at his own request, the otherwise healthy corpse of a well-developed, thirty-nine-year-old male who was free from the ravages of disease, age, and trauma. Technicians of the state anatomical board placed Jernigan's body in one and a half gallons of one-percent formalin for temporary preservation and transported it by jet to the dissection lab of the University of Colorado Health Sciences Center. There the remains were scanned by magnetic resonance imaging (MRI) and computerized tomography (CT), frozen, and then CT scanned again, giving the dissection team an anatomical map to refer to later for alignment purposes. Using a carbide-tipped blade, the lab technicians then proceeded to saw through Jernigan's body, cutting it into four sections of approximately the same length—head to a torso, abdomen to a pelvis, thighs to knees, and calves to feet. To secure the forearm-and-hand sections next to the abdominal section and the pairs of leg sections symmetrically to each other, technicians placed corresponding body parts into aluminum molds, filled the molds with a blue gel, and then refroze the contents, producing four ice blocks of the portioned cadaver, each measuring about twenty by twenty by fifteen inches. The bluish cubes were then taken to a grinding area that was enclosed by Plexiglas to avoid debris from the corpse flying everywhere as it was sectioned further. Over the next several months, the quartered and twice-frozen body of Joseph Paul Jernigan was painstakingly sliced, millimeter by millimeter, into 1,871 cross sections. As they sectioned the corpse further, technicians polished and digitally photographed (in

twenty-four-bit color) each sliver of Jernigan's body, giving them axial images, at one-millimeter increments, of his organs, tissues, and bones in their exact orientation to each other. By the time the sawing, photographing, and digitizing were complete, the lab crew had compiled a fifteen-gigabyte, anatomical data set of what they felt was a near-perfect male specimen (despite an absent appendix and a missing testicle). In the fall of 1994, as part of the National Library of Medicine's Visible Human Project (VHP), these electronic images of the insides of Joseph Paul Jernigan were posted on the Internet.[1]

For those involved, the VHP has accomplished what it set out to do. By photographing cross sections of a corpse and making the raw images available in electronic form, members of the project created a virtual resource that other medical professionals, both commercial and academic, could use to put together digital human atlases, clinical-diagnostic programs, pharmacological software analyzing the effects of certain drugs, and even supplemental practice programs that could allow medical students to amputate an arm, remove a kidney, or perform a coronary bypass. Their hopes realized, Jernigan has become, according to one commentator, a "medical tool extraordinaire and ultimate guinea pig" (Anthony 1996). The reference to a guinea pig, as much a test subject of the high-school biology lab as of the professional medical lab, highlights the central goal of this project. According to its purveyors, the VHP was meant to distribute knowledge to people both inside and outside the medical profession by giving them the chance to glimpse the inner workings of the human body. In other words, laypeople could now gain access to a type of formerly privileged knowledge. UCLA radiologist Dr. Paul Chesis, who incorporated the VHP images into his virtual anatomy software, summarized his interest in the project in the following manner: "We wanted to democratize this information" (Anthony 1996).

At one time, that claim seemed to me wholly unremarkable: to put anatomical data on computers is to *democratize information*. The conceptual path from the former to the latter was like an instantaneous electrical connection that makes the needle in a battery tester sweep all the way to the right to indicate a full charge and then sweep back home to a place that when our synapses are fired up by our own thoughts we call "understanding" and that when they are fired up by others' words we call "communication." (Something about the subject matter—anatomy on computers—makes this combination of neurological and electrical metaphors seem appropriate.) Were we to trace, however, all the synaptic connections that have to fire off in our brains from one nerve ending to

another—all the definitions, articulations, presuppositions, and para-
digms of thought—in order for us to make sense out of that statement
(to arrive home, as it were), we would find that, in fact, quite a lot of dis-
cursive energy is required to get from *computers* to *data* to *information* to
communication to *democracy*. This study is fundamentally about how
those flows of thought are generated and disrupted and, more modestly,
about how to generate a few new ones.

The claim that projects like the VHP democratize information rests
on several rather pervasive discourses that have helped to pattern and
normalize these connections (most of them implicit) between democra-
cy, universal access, communication, informed citizens, scientific knowl-
edge, and the progressive faith that they can all be united through tech-
nological innovations like the Internet. Read as such, the VHP draws
from and contributes further to a growing literature, in both the popular
media and official U.S. government pronouncements, about the demo-
cratic potential of computer networking (e.g., Friedland 1996; Browning
1996; Bowen 1996; cf., Wright 1995). On the basis of these apparently self-
evident claims, then–Vice President Al Gore, in a 1994 meeting of the
International Telecommunications Union in Argentina, lauded the bene-
fits of a "Global Information Infrastructure" (GII) by making the still
bolder declaration that computer networking could actually usher in "a
new Athenian Age of democracy." The speech is worth quoting at length
for the remarkable metaphor Gore engineers, likening citizens to micro-
processors and the GII to a form of participatory democracy that could
harness the power of all these parallel civic computers:

> [T]he distributed intelligence of the GII will spread participatory
> democracy.
>
> To illustrate why, I'd like to use an example from computer science.
> In the past, all computers were huge mainframes with a single pro-
> cessing unit, solving problems in sequence, one by one, each bit of in-
> formation sent back and forth between the CPU and the vast field of
> memory surrounding it. Now, we have massively parallel computers
> with hundreds—or thousands—of tiny self-contained processors dis-
> tributed throughout the memory field, all interconnected, and togeth-
> er far more powerful and more versatile than even the most sophisti-
> cated single processor, because they each solve a tiny piece of the
> problem simultaneously, and when all the pieces are assembled, the
> problem is solved.
>
> Similarly, the GII will be an assemblage of local, national, and

regional networks that are not only like parallel computers but in their most advanced state will in fact be a distributed, parallel computer.

In a sense, the GII will be a metaphor for democracy itself. Representative democracy does not work with an all-powerful central government, arrogating all decisions to itself. That is why communism collapsed.

Instead, representative democracy relies on the assumption that the best way for a nation to make its political decisions is for each citizen—the human equivalent of the self-contained processor—to have the power to control his or her own life.

To do that, people must have available the information they need. And be allowed to express their conclusions in free speech and in votes that are combined with those of millions of others. That's what guides the system as a whole.

The GII will not only be a metaphor for a functioning democracy, it will in fact promote the functioning of democracy by greatly enhancing the participation of citizens in decision making. And it will greatly promote the ability of nations to cooperate with each other. I see a new Athenian Age of democracy forged in the fora the GII will create. (1994)

Despite the apparent anachronism, other commentators have made this connection between an ancient political ethos and a seemingly futuristic form of communication. Computer writer Howard Rheingold, for example, argues, if a bit more critically, that "the vision of a citizen-designed, citizen-controlled worldwide communications network is a version of technological utopianism that could be called the vision of 'the electronic agora'" (1993, 14). A term of classical Greek extraction, the Athenian agora was not simply an open space but more fundamentally a public space where the ecclesia, the popular assembly of Athenian citizens, could gather, exchange information, engage each other in debate, and deliberate issues affecting the polis (see Held 1987, 1–35). In this sense, the term links a particular kind of space to certain democratic practices, especially open discussion and deliberation. Those discussions, however, were face-to-face. That is, the spatiality of democracy, in this context, presumed physical bodies gathered together in a physical space, a point that has not been lost on advocates of direct democracy, who have insisted that true democracy can exist only in small polities, built on "human scale" (Sale 1980), where citizens can gather and appear before each other in the flesh without having to travel onerous distances.

If this is the ideal evoked by the notion that computer networks are forging "a new Athenian Age of democracy," our flows of thought require some rather radical rearticulations of space and body for us to settle back into the calm assertion that this notion makes. Discourses about the Internet already evoke (almost relentlessly) different spatial understandings in their ubiquitous references to specific online sites, rooms, and forums, and more generally in terms of an electronic agora, the Electronic Frontier, the Information Superhighway, or quite simply cyberspace. Rather than dismiss Gore's comments as hype and these Internet spatial references as mere metaphors, I want to suggest that we take these explicit references seriously. What interests me here is how the discursive move (the flow of thought) might be made from the ideal of an Athenian agora grounded in physical space and fleshy bodies to one of an electronic agora that is also grounded but in a cyber space and in digital bodies. What makes possible these different inflections of *space, body, visibility, gather, meet, face,* and so forth that are tacitly presupposed in associating cyberspace with Athenian democracy?

Questions like this one cannot be addressed adequately within the limits of current debates about the Internet. Thus far, Internet commentary has tended to fall into two broad camps. In what has been characterized by critics (and even by some sympathizers, like Rheingold) as the "technological utopian" position are those who argue that computer networking is revolutionizing society in positive ways. According to this view, technological advances like the Internet democratize information by simplifying the creation, duplication, storage, and distribution of data. In addition, networking via computers also facilitates communication among a larger number and broader spectrum of individuals, enabling people from different remote locations to associate with each other, to engage in economic transactions and political debates, and, more generally, to make their opinions matter by having their voices heard. In the "technological dystopian" position—also referred to as the neo-Luddite position by its opponents—stand those detractors who claim that computer networking, like other modern technologies, is changing society in decidedly negative ways. Critics argue that the burgeoning flows of data that computers have made possible are serving primarily to numb people with a glut of unnecessary and often inaccurate information. The investments of personal time and money actually needed to go online, moreover, further isolate and disaffect individuals from their communities, create an ever wider gap between the knowledge-rich and the knowledge-poor, and distract people from social

problems and collective-action remedies by giving them a false sense of political effectiveness.

To the apologists of high tech, in short, computer networking provides solutions to many of the problems of space, population, access, and participation that confront large societies. To critics, on the other hand, such technologies exaggerate these problems by further alienating people from each other and even from themselves. These arguments raise interesting and important questions about the role of public communication in democracy—how citizens talk to each other, exchange ideas, assess the validity of the information they share, and deliberate different courses of action—and about how new media affect the prospects for this type of communication. Ultimately, however, both sides offer deficient responses to these critical issues. Maintaining that adequate democratic participation does not have to be direct (i.e., a face-to-face encounter), proponents assert that the Internet simply *is* democratic in some way; precisely how this is meant, however, remains vague. By contrast, opponents of technological fixes, who discount anything other than direct participation, argue that the Internet is yet another coercive technology, restructuring our daily lives in often antidemocratic and asocial ways. This position, too, however, is problematic precisely because it denies (and therefore ignores) questions of agency, of how Internet users might appropriate, explore, and realize other, more progressive, uses of this technology.

The fundamental issue underlying these extreme positions is whether an electronically mediated democracy can exist. Are the forms of public communication that are central to the proper functioning of a democratic polity possible under conditions of electronic mediation (and if so, which forms, e.g., Internet but not television?), or must public communication always be unmediated to avoid its distortion, its delimitation, and its control by interested and powerful others? Opponents and proponents of the Internet reach a kind of impasse on this issue.

In this study, I complicate these two positions to move beyond this impasse. I complicate utopian assessments of the Internet by exploring the spatiality of cyberspace, showing how it is produced as a social space and in ways that occasionally (perhaps often) reproduce existing power asymmetries, despite the faith that the Internet is a unique medium of communication that gives us a fresh, unencumbered, nondiscriminatory, and universally accessible way of being and acting in the world. I complicate the dystopian position by showing how far cyberspace has developed, by the agency of its users, as a space for exploration and experi-

mentation, opening to critical analysis the role of the body in communicating our needs and our identities.

Three issues are at stake for me in this inquiry. First, I want to show how our theories of democracy have presupposed "elaborate spatial strategies" (Shapiro 1992, 4). Democracy, in other words, is related to space. We need to begin exploring that relationship to analyze some of the different ways in which democracy has been, is, and can be spatialized. Second, I want to suggest that many of our democratic theories reach a dead end in addressing problems of public communication and collective action because they begin with a rather limited conception of what constitutes spatiality. Space has been too narrowly defined in physical terms: for example, as an area within which bodies move. Third, I want to propose alternative notions of social space to broaden our flows of thought about democracy, particularly in the context of some of our current technologies. If we rethink spatiality, we can begin better to understand how cyberspace becomes a social space and one, more to the point, that is challenging and changing the ways we think and do politics. These flows of thought, I argue, turn on three central concepts, which are the focal point of this study: namely, *space, technology,* and the *body.* The Visible Human Project, as the following introductory analysis suggests, invokes and rearticulates this relational triad in provocative and illuminating ways.

The Virtual Body of the Condemned

In two of his classic works, *The Birth of the Clinic* (1994a) and *Discipline and Punish* (1979), Michel Foucault links the visibility of the body with the unfolding of the modern disciplinary practices of pathology and penology, respectively. In the former, Foucault locates the origin of contemporary medical knowledge—the "anatomo-clinical method"—in the "discursive space of the corpse: the interior revealed" (196). An emergent medical discourse, in short, spatialized the body, reconstituting it as an area to be visually explored.[2] So, when in the late 1700s and early 1800s doctors resolved to "open up a few corpses" (146), they fundamentally redefined the medical gaze. Before this shift, clinical understanding had rested on a superficial examination of observable symptoms in living organisms. Death, by contrast, had constituted the limits of this knowledge—"the great dark threat in which [the doctor's] knowledge and skill were abolished" (146). This notion of death as darkness gave way to the conviction that only through analysis of the internally visible corpse could the invisible workings of life and disease be revealed (159).

In what amounted to a reversal of perspective, then, death had become day and life night. Foucault, in his characteristically taunting fashion, underscores the irony:

> With the coming of the Enlightenment, death, too, was entitled to the clear light of reason, and became for the philosophical mind an object and source of knowledge. . . . A fine transmutation of the corpse had taken place: gloomy respect had condemned it to putrefaction, to the dark work of destruction; in the boldness of the gesture that violated only to reveal, to bring to the light of day, the corpse became the brightest moment in the figures of truth. Knowledge spins where once larva was formed. (125)

In *Discipline and Punish,* the story Foucault tells of the birth of the prison hinges, as well, on the visibility of the body and processes of spatialization: here not with the body *as* space, but rather with the body *in* space. He begins with a graphic retelling of an eighteenth-century incident: the public torture and execution of a condemned regicide named Damiens.[3] Foucault then notes a shift in modern societies from the spectacle of torture as a method of individual punishment and social control to the surveillance of prisoners—notably, through the architectural innovation of Jeremy Bentham's *panopticon.* The panopticon was a prison designed to heighten inmates' sense that they could be constantly and covertly monitored by authorities. The cells were arranged in a circular pattern, several floors high, around a central tower from which an unseen-but-potentially-all-seeing guard could watch any prisoner through the bars of his or her cell. At the same time, the sides of the cells were walled to isolate the prisoners from each other, further limiting their own ability to see and interact with others. For Foucault, the most telling feature of this *pan-optic* design was how it made visibility "a trap" (200). The inmate "is seen, but he does not see; he is the object of information, never a subject in communication" (200). The point is not that the panopticon gave authorities the power to watch all prisoners at all times, which is physically impossible, but rather the way its spatial configuration situated the inmate in that field of vision—that is, as visible at any time but never aware of precisely when he was being watched. The defining feature of panopticism, then, is that it enables a form of seemingly pervasive, covert surveillance that, in turn, fosters in the object of visibility (the prisoner) a form of self-discipline: it engenders, in short, the will to behave because the guards might be watching.[4]

Like the corpse of the recently deceased, then, the body of the con-

demned underwent a change from being the object of a superficial gaze (the spectacle of torture) to becoming the site of a more penetrating (because internalized) gaze. It became the target of a *technique* of surveillance that—together with other techniques for partitioning space (into individuated grids) and serializing time (into schedules) and regulating movement within these spatial stalls and temporal installments—disciplined the body, instructed it, shaped its activities down to the smallest detail through the imposition of timetables, procedures, drills, and tactics. Here, too, Foucault comments with some irony on the nature of this shift to the more penetrating gaze of panopticism—except here the irony is that we are all, in a sense, *free inmates:*

> Our society is one not of spectacle, but of surveillance; under the surface of images, one invests bodies in depth; behind the great abstraction of exchange, there continues the meticulous, concrete training of useful forces; the circuits of communication are the supports of an accumulation and a centralization of knowledge; the play of signs defines the anchorages of power; it is not that the beautiful totality of the individual is amputated, repressed, altered by our social order, it is rather that the individual is carefully fabricated in it, according to a whole technique of forces and bodies. (217)

Foucault's point is three-pronged. He notes, first, that surveillance is more insidious because more invasive, ubiquitous, and controlling, but he also argues, second, that its techniques produce (fabricate) rather than simply repress the Enlightenment individual. Hence, it is not just social control that is produced here, but also freedom. In fact, control and freedom—like power and resistance—are mutually constituted. Finally, central to these techniques for creating disciplined subjects are "the circuits of communication" with which information ostensibly about us is manufactured, compiled, sold, and distributed. These, then, are the defining features of modern, disciplinary societies: productive techniques of freedom and social control that include, at their base, technologies of communication for the production, reproduction, and dissemination of disciplinary knowledges.

The Visible Human Project invites a reading through the parallax of Foucault's two studies. In both name and practice, it exemplifies and even exaggerates—through "the violence of the dissected corpse" (Foucault 1994a, 159)—the extent to which the body can be opened up to a penetrating anatomo-clinical gaze. At the same time, detailed accounts of the project in the popular press can scarcely avoid some kind of

commentary that seeks to justify the clinical dissection of a human being by identifying the body in question as having belonged to a "condemned killer," thereby implying that the violence done to it, much like the torture of Damiens, is a fitting kind of social justice under the circumstances. This is not, of course, a feature of the scientific discourse on the VHP. In fact, none of the documents at the NLM Web site identify the male body of the VHP as Jernigan's, an anonymity that makes sense given the way that the medical discourse inscribes this body as an acceptable stand-in for *any* body—i.e., as normal. The popular imaginary, by contrast, has been much exercised by the fact that the Visible Man was an executed murderer. Reporter Ted Anthony, for example, begins his summary of the project by noting, "Alive, he wasn't much. Joseph Paul Jernigan spent many of his 39 years as drug abuser, alcoholic, robber, killer. . . . But the conclusion of [his] mortal existence sent his body on a most unusual odyssey that has made him into something life couldn't—a productive member of society" (1996). Even David Rothman, in his considerably more sanguine treatment of Jernigan, seems compelled to justify the violence done to his body. He constructs Jernigan as a man who "felt so contrite that he wanted to die," refers to Jernigan's bequest as "The Gift," and notes that even though Jernigan did not know at the time that he would become the Visible Man, he very likely would have been "happy" and "delighted" (1996, 184, 194).

When viewed in light of these biographical accounts, the painfully graphic images of Jernigan's anatomized body seem to signal a return to spectacle—to the practice of setting apart, of making Other, exemplified by the hypervisibility of the multiply dismembered cadaver of a murderer.[5] The irony here, as Foucault might have noted, is that despite these efforts at distancing, what qualified Jernigan for "Visible Manhood" (Rothman 1996, 182) was precisely the fact that he could stand in, as it were, for almost any healthy male. If the images haunt and disturb, perhaps it is because Jernigan's generic male body is made to suffer indignities that indeed any body could, in principle, suffer.[6] It is our own subtle awareness of this possibility that invites us to empathize, to be both amazed and appalled when we hear details about the project: "'Wow,' I thought . . . (And: 'Ew')" (Laskas 1996). This "wow" and this "ew" are honest expressions of the ambiguities that such images, perhaps rightly so, engender in us.[7]

That these images were splattered over the Internet "for all to see" (Anthony 1996) is the most compelling aspect of this story for me. The Internet is part of (indeed magnifies) the violence perpetrated here: not

the violence of the scalpel, but of visibility itself.[8] In a sense, Foucault's references to "the violence" to which the dissected corpse is subjected cannot be a violence *for* the corpse any more than chopping is an act of violence for the wood. Inanimate objects, corpses included, cannot feel. To the extent this is so, the violence experienced here is something that a sentient onlooker, through her own feelings of empathy, displaces onto the corpse. It is through this transference that the onlooker, like a Dr. Frankenstein, brings the corpse to life again and imagines *its* pain and humiliation. The violence therefore is not in the cutting, but in the looking. It is in the duplicitous gaze that empathizes as it invades. Placing these images on the Internet opens the body up not just to the distanced inspection of clinical analysis, but to multiple, anonymous, gaping stares, constituting, as Rothman notes, "the ultimate invasion of privacy" (1996, 195).

"The ultimate invasion of privacy": that phrase, too, when I first read it, seemed self-evident. Of course, the account with which I began this introduction—in its painful detail—plays off the horrified sentiment expressed by the notion that corpses can have their privacy invaded, can have violence done to them, can feel pain. But this notion, too, is another one of those flows of thought that the translation of bodies into bits further disrupts. When the body is digitized, it is not just that anatomical information is transferred to a different medium, but rather that data are created (Poster 1990, 94). This conversion is both prosaic and insidious. What started out as flesh and blood becomes just another way of arranging pixels on a computer screen (Waldby 1996b).[9] In the process, the body is materialized through very different normalizing discourses (Butler 1993). No longer the site of an embodied identity with a rich biography, it becomes instead, in this instance, a space of exploration: either serious (when converted into medical programs) or playful (when converted into video games) or most often both, as in the new interactive media category of "edutainment."[10] It is worth noting, in this respect, that one proposed use of the Visible Human data set (Rothman 1996, 173) is to create a computer-game version of Isaac Asimov's sci-fi adventure *Fantastic Voyage,* in which a team of intrepid doctors in a submarine are miniaturized to microscopic size and injected into the body of an ailing scientist to destroy a blood clot in his brain.[11] Digitized images can be integrated into a variety of interactive programs that simulate (rather than simply represent) physical events, conditions, and phenomena, and this incorporation—the materialization of bodies in a different field of discourse (involving integrated circuits on silicon chips rather than bundles

of carbon-based molecules)—helps to change our understandings of the body. Simulation parodies the physical in a way that potentially (perhaps often) mocks and disrupts it. As a consequence, meanings and concerns that matter in our fleshy encounters—a patient's pain, a person's death—may become irrelevant in digital simulations.[12]

What status can the physical body retain in a place like cyberspace? In a sense, once identities are projected into cyberspace (as virtual personae) and embodied, if at all, in digital bodies, the physical body can be dispensed with, forgotten. At its most basic level, cyberspace constructs the physical body as *meat* and the physical space it inhabits as "meatspace" (Barlow 1995). Speculative-fiction author William Gibson, who first coined the term *cyberspace* in a lesser known story (1982), conveys this understanding of the human flesh within the first few pages of *Neuromancer* (1984), the novel that made the term famous. Case, the story's protagonist, is described as a former data thief—a one-time "console man . . . [or] cyberspace cowboy"—who, with the benefit of neural implants in his brain, had regularly "jacked into a custom cyberspace deck that projected his disembodied consciousness into the consensual hallucination that was the matrix" (5). Once inside the matrix, he would invade corporate systems and steal valuable data for his employers. One day, however, he made the fateful mistake of stealing from those employers. When the story opens, then, he is no longer able to jack in: the result of a neuro-inhibiting drug injected into him by his former bosses as payback for his betrayal. Gibson describes Case's predicament this way: "For Case, who'd lived for the *bodiless exultation of cyberspace,* it was the Fall. In the bars he'd frequented as a cowboy hotshot, the elite stance involved a certain relaxed contempt for the flesh. *The body was meat.* Case fell into the prison of his own flesh" (6, my emphasis; cf., Heim 1993, 75). Though treated, arguably, with more care than contempt (given its importance as the central object of knowledge for the VHP), Jernigan's flesh, too, has in significant ways become meat: *raw data* for a wide variety of computer programs. As Rothman notes, the light solution of formalin used to preserve Jernigan's body in transport to the dissection lab was intended expressly "to keep his tissue looking nice and bright like prime meat" (1996, 184). Cyberspace exaggerates this sense of the body as meat by offering the casual observer a form of "information" that is out of context. Lacking the anatomo-clinical knowledge to interpret what they see as part of a human body, the uninitiated are more apt to see an image that to them looks remarkably like something one might have picked up at a butcher's shop.

Figure 1. The body as "meat." Reprint of the sample image of a thorax cryosection from the National Library of Medicine's Visible Human Project. Downloaded from and reproduced courtesy of the National Library of Medicine. Retrieved 22 August 2000 from http://www.nlm.nih.gov/research/visible/image/thorax.jpg.

This image, of course, exaggerates the point and intentionally so. I mean it as a ludicrous overstatement—but for that reason, a very vivid illustration—of one of the ways cyberspace redefines the body as abject, as meat. The VHP seems to belie this claim if focus is placed on the great skill and care that the dissection team applied in their handling of Jernigan's body, but consider the point of the project. In digitizing and saving images of this standard male, the creators of the VHP hoped as well to help future researchers dispense with the body, to enable at least some anatomy lessons to proceed without the presence of a body. This conversion of flesh to bits transforms the body into a medium (binary code) that is infinitely reproducible (without cloning), easily stored (without freezers), almost instantaneously available (without transport), and extremely durable (without preservatives).

There are other bodies and spaces, of course, that never make it into cyberspace in even mock digital form. In his analysis "Forsaken Geographies: Cyberspace and the New World 'Other'" (1996), Olu Oguibe describes attending a conference in Guadalajara, Mexico, where a boy of about five, a poor street performer, had entered the hotel lobby where the conference was being held and had been making gestures toward the staff and visitors. Unable to communicate what he wanted, he had been hastened away by one of the hotel staff, who had understood anyway, he later explained, that all the boy had wanted was water. In recounting this incident, Oguibe highlights the following points: "[T]his story . . . is about

communication, or the failure of communication. It is also about loca-
tion and privilege. It is about power and its proclivity for insensitivity. It
is about priorities, also." He explains that for many like the boy, cyber-
space is not a reality.

My point in reciting this story is not to oversentimentalize bodies in
need, though maybe some of that is inevitable and appropriate. Rather,
what I want to foreground are the ways in which the cultures that con-
struct cyberspace as a space of bodiless exultation construct the physical
body—the body that eats, drinks, sleeps, gets sick, and dies, as Sandy
Stone says (Leeson 1996, 114)—as in many respects the abject body, the
forgotten body. "Forgetting about the body," Stone points out, "is an old
Cartesian trick, one that has unpleasant consequences for those bodies
whose speech is silenced by the act of our forgetting; that is to say, those
upon whose labor the act of forgetting the body is founded—usually
women and minorities" (1993, 113).

Here then are two bodies and two politics of the body. One is digital
(the Visible Man); the other is abject (the boy's). One is subjected to the
violence of a hypervisibility; the other is relegated to a realm of invisi-
bility. One becomes the splayed public display of the ultimate invasion of
privacy; the other is hastily driven out of public view. And both, from the
standpoint of cyberspace, are meat.

Space, Technology, and the Body

"Politics," Stone observes, "works through physical bodies" (Leeson 1996,
114). Indeed, as Foucault's own work has shown, relations of power in
contemporary societies are manifested in a variety of disciplinary tech-
niques that are organized around the visibility of the body. To the extent
this is so, physical presence before others is a rather risky venture. The
paradigmatic ideal for a kind of participatory democracy, however, has
been the agora: an ostensibly egalitarian physical space where citizens
could have a say, in part because they were physically present, there in the
flesh. Being seen, making an appearance before fellow citizens, was a nec-
essary (though not sufficient) condition for becoming empowered, for
being a political actor.[13] In one respect, Oguibe's story participates in this
ideal. The story he tells is fundamentally about how people are dis-
empowered by being excluded from certain spaces, such as cyberspace.
Even while he criticizes utopian claims about the democratic potentials
of cyberspace, however, he makes the following challenge: "[T]hat we
begin to explore with greater seriousness and humanism [the] means of
extending the numerous, practical possibilities of this new technology to