

Technologies of Wonder: Rhetorical Practice in a Digital World

SECTION	Chapter 3
TITLE	Embodiment by Design
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OVERVIEW	<p>Analyzing the “turn to the mind” of the Enlightenment reveals the consequences of the disembodied rhetoric that emerged with the ascendancy of Cartesian rationalism for those unable to put their material circumstances aside. Today, visions of virtual immateriality have re-emerged with the rise of digital technologies, visions that undercut feminist arguments for the necessity of specifically embodied perspectives. Similar discourses of immateriality in seemingly neutral anatomical drawings, elocution manuals, women’s rights speeches, and photographic documentation of hysteria function as “pedagogical performances” which teach cultural and social interpretations of bodies and how they are supposed to behave in the world.</p> <p>Scholars in rhetoric and composition have created models of rigorous intellectual work in interactive digital media, and have addressed pressing questions in the field: What does it mean to be a technological body? How do we represent the material conditions and consequences of our “objects of study” ethically? How can we develop practices of digital design that promote thoughtful inquiry and analysis? Unfortunately, current texts frequently used as guides for multimedia design fail to acknowledge visual argument as an embodied practice. Discourses that devalue the visual must be replaced with theories of new media production embedded in visual, material practice.</p>
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Embodiment by Design

Image: Rizwan Sagar, Mehndi design, 2009.

The reliance on *logos* as the primary foundation of classical, early Modern, and Enlightenment rhetoric, with its systematic privileging of the first term and devaluing of the second in such binaries as mind/body, text/image, theory/practice, and male/female, has proven remarkably persistent. Both feminism and postmodernism (and postmodern feminism) have pushed against these dichotomies, because they have functioned to naturalize the privileged terms as the controlling discourse in public rhetorical spaces—government, the courts, education, business. ¶ Just as it seemed that feminist and postmodern understandings of situated knowledges and multiple subject positions were combining to bring about some practical improvements in the status and material conditions of women and other “devalued” groups, proponents of the transcendent properties of electronic communication, virtual reality, and information technology claimed to have discovered that “bodies don’t matter,” that we can be freed from our “meat” (a surprisingly lifeless term) to enjoy simulated experiences and environments without the hazards of actual physical engagement. Eventually, suggest enthusiasts like Hans Moravec (1988), technology will enable us to transcend our human condition and enter a perfected state of being that does not depend on mortal physiology. While a cynic might argue that this is a convenient discovery on the part of a hegemonic patriarchal discourse that serves to protect its dominant position, claims that the materiality of human bodies is somehow less consequential in cyberspace still maintain a great deal of cultural currency. ¶ Discourses of immateriality are not new, of course, although in the past they have rarely been so explicit. Contemporary conversations about digital technologies and virtual reality often seem to celebrate the disappearance of the body, whereas in the past it was more the case that the presence of the body had not been particularized or acknowledged as a significant component of the ideas it was articulating. As a result, the universal, male, able body stood in for the state, the family, the church, and the human condition, and this representation appeared verbally in law and in church doctrine, and visually in art, literature, and other texts that collectively enacted scholarly performances of gendered, classed, and raced power and knowledge.

To counter this new move to disembody digital technology and its rhetorics, we must insist on the visibility and materiality of performances in our fields, even when those performances are through words, by affirming that visual representations are powerful and legitimate forms of communication, that embodied visual representation is an essential step toward including the contributions and concerns of those who are disenfranchised by the claim that “bodies don’t matter,” and that composing and designing with/in our “technological bodies” is important scholarly work.

Bodies *do* matter. Embodied pedagogy, which allows the literal or figurative materiality of the teacher and her topics to emerge, communicates in ways far richer than words alone can convey. The visibility of specific gendered, raced, classed, and more or less abled bodies—whether physically in front of a classroom, textually on the pages of a book, electronically on a screen, or implicitly in the design of interactive multimodal digital media—matters, because knowledge is located and specific; it has no meaning outside of the contexts in which it is deployed. Embodied pedagogy communicates social and cultural values that can be analyzed, understood, and, if necessary, challenged and emended. By the same token, traditional deployments of scholarship through words and numbers cannot claim, just because the scholar seems to be absent, that they are culturally neutral; it is simply the fact that the “body of knowledge” has hidden himself behind the scrim of universal objectivity. And traditional scholarship deployed in words and numbers also cannot claim putative neutrality or objectivity simply because the human beings who are the material foundation upon which those words and numbers are based also seem to be absent. Embodied pedagogy must also allow the materiality of embodied “evidence” to emerge, both during the period of intellectual inquiry and at the point of scholarly representation of results.

▲ 3.1 Alphabet based on human forms, *The Tudor Pattern Book* (ca. 1520-30). Bodleian Library.

The early Western Latinate tradition comfortably associated the word and the embodied image, which often, as with historiated letters in medieval manuscripts, eclipsed the text on the page. In *The Alphabetic Labyrinth*, Johanna Drucker (1995) noted, “Such practices bespeak a faith in visuality which escapes the need for a textual reference” (p. 108). But as early as the twelfth century, a competing belief in the transcendence of the word held that decoration was a dangerous distraction. This resistance to the idea that visual design did, or should, contribute to verbal meaning still holds sway. [Click image to enlarge.](#)

This chapter explores how historical discourses of immateriality, and the scholarly pedagogical performances that articulate them, still permeate the theory and practice of teaching multimediated writing and rhetoric. Analyzing early anatomical illustrations, a nineteenth-century elocution manual, speeches and letters from the abolitionist movement, and textbook illustrations of mentally ill women as examples of “pedagogical performances,” I show that historically non-artistic representations and appearances of the body, ostensibly objective and uninflected, are in fact also manifestations of cultural attitudes and understandings of what constitutes knowledge, and who gets to make it. Expanding on the work of de Lauretis (1989), Balsamo (1999), and others, I argue that, far from being value-neutral, the embodied pedagogical performances of images such as those in anatomy texts and conduct books are visual “technologies of the body” which, like modern imaging techniques, serve not only to inform, but also to mediate and control social behavior. Applying this insight to the teaching of multimediated composition and visual rhetoric, I note

that some progress has been made in incorporating visual, material rhetoric into both self-representation and pedagogical performances of scholarship, as exemplified in the growing use of interactive multimedia in personal web pages, blogs, and wikis, and in articles in journals such as *Kairos* and *Computers & Composition Online*. Nevertheless, current texts widely recommended as guides for graphic and typographic design in academic work still fail to recognize visual argument and design as embodied practices, and are therefore ill-suited to enhance the particular nature of academic discourse as a wonder-induced method of inquiry and knowledge production. Rather, these texts reify a discourse of visual performance that effaces the maker and instead foregrounds the hegemonic standards of clarity and concision developed for the use of commodified corporate culture. I conclude with a call for embodied performances based upon the use of images and visual argument as material practices of both self-representation and representation of evidence essential to ethical intellectual work.



▲ 3.2 Otto Lilienthal, Preparing for flight, 1894.

One of the most persistent technological dreams is that of flight. From the Icarus myth to Leonardo da Vinci's flying machines to the experiments of Otto Lilienthal and others, humans have endowed their gods and superheroes with the power of flight and have ventured to emulate them.



◀ 3.3. Leonardo da Vinci, Mechanical wing, late fifteenth century.

Technological Dreams

The immediacy of my experience of corporeality should be understood as an indication of the interior perspective I occupy with respect to “my body.” I am neither “in” my body nor “attached” to it. It does not belong to me nor go along with me.

I am my body.

Maurice Natanson (1970), *The Journeying Self*

Among the many claims made for digital technologies is that they will enable us to leave our bodies behind. In the (near) future, goes this story of technological disembodiment, virtual reality, informatics, e-discourse, and the Internet will allow us to experience the world and communicate our thoughts through words, images, sound, and actions that are independent of our physical attributes or movement through time and space. Examples range from the discursive (engaging in multiple conversations and relationships online while inhabiting our choice of the numerous personae we have created), to the immersive (putting on a Tron-like VR suit and experiencing the sights and sensations of climbing a mountain, flying through space, or robbing a bank), to the transductive (downloading our brains into a data bank, and transferring our knowledge and experience—and personhood? soul?—into a custom-built clone).

Technological dreams like these have always called forth both utopian desire and dystopian aversion: Francis Bacon's *New Atlantis* (1627) versus Mary Shelley's *Frankenstein* (1818), the promise of a society freed from want by the achievements of science versus the horror of a future in the thrall of the monsters, literal and figurative, that science might unleash. Looking at the possibilities for virtual representation and embodiment within academic spaces, electronic discourse and

interactive digital media seem to hold the most immediate promise—and concern—primarily because they are already here, and already in use in research and the classroom. Virtual reality, on the other hand, is still an extraordinarily expensive and clunky technology and calls attention to its mediation at every turn of the head, although it does seem to have found some purchase in the arts, as well as a disturbing military presence in the form of Army recruitment games, flight simulators, and the control of remote drone aircraft in the war in Afghanistan. And the specter of downloadable brains will always be merely an electric dream. (Jeffrey Sconce [2003] has compared the rush to theorize virtual digital technologies in the absence of practical or usable examples to the Dutch tulip mania, noting that “most of us would be hard-pressed to think of a discipline [digital media studies] in which more pages have been printed about things that haven’t happened yet” [p. 180].)

In technologized academic settings, like networked computer classrooms and individual, class, and institutional sites on the Web, one technological dream goes like this: if we could just erase or obscure the paralinguistic cues and physical characteristics that denote race, gender, age, and ability, we would go a long way toward eliminating problems of access and disenfranchisement for individuals who are not members of the dominant discourse community. Furthermore, eliminating the putative disadvantages of those social and cultural markers for underrepresented groups would simultaneously remove the advantages inherent in being a member of the dominant sociocultural group, thereby leveling the playing field for everyone. It was this hope that fueled the great but largely unexamined eagerness that heralded the arrival of computers in writing classrooms in the 1980s. As early as 1991, Gail Hawisher and Cynthia Selfe felt it necessary to caution that computers were being embraced for the teaching of writing without the “necessary skepticism

and careful planning” that should attend the adoption of any new technology. Without such skepticism, they declared, computers in the classroom will, as “cultural artifacts embodying society’s values, (p. 55), reproduce the values of the dominant culture. Yet many instructors registered “uncritical enthusiasm” for using computers to teach writing, and spoke of the “effects of technology” (p. 56) as though the computer itself were instrumental in that effect.

Many teachers also believed that the use of computers for online discussions would change the classroom culture to reflect more egalitarian principles—greater collaboration, the disappearance of visible or audible status markers, a greater sense of community, and a blurring of the distinctions between teachers and learners. In *Fragments of Rationality*, Lester Faigley (1992) praised the “achieved utopia of the networked classroom,” noting that networked discussions demonstrated the triumph of “dialogic centrifugal forces of multiplicity, equality, and uncertainty” over the “monologic centripetal forces of unity, authority, and truth” (p. 183). But subsequent experiments with online discussions in the networked classroom were less successful, an outcome Faigley attributed to a local “crisis of legitimation.” With no central authority to turn to, and no way to sort out claims, “conversation is inherently agonistic and to speak is to fight” (p. 185).

Early enthusiasm for the transformative power of the Web to disassociate our selves from our bodies also abounded in print and television advertising in the 1990s. Selfe (1999a), in an analysis of print advertisements for Virgin Records, IBM, GTE, and others, discovered consistently enthusiastic narratives about the Internet as a “global village,” “land of equal opportunity,” and “ungendered utopia,” despite the fact that the advertisements themselves actually reinforced the same old American stories of colonialism, resistance to difference,

and gender inequality (p. 292-322). In a similar vein, Karla Kitalong (2000) found that “new communication technologies are portrayed as creating unprecedented, seemingly magical opportunities” (p. 290) in AT&T’s print and televised “You Will” campaign; like Selfe, Kitalong offered more measured analysis and more cautious claims, noting that the “magical opportunities” often arose from conflating work time with leisure time.

A particularly pervasive strategy for televised advertisements during the early years of the Internet was the “serial montage” (Goldman, Papson, and Kersey, 1998-2003), in which rapid sequences of multicultural faces and multi-accented voices suggest that the Internet (with the help of the company being advertised) could create a new global community. Cisco Systems 1999-2000 campaign featured a series of faces from diverse ethnic backgrounds finishing one another’s sentences (e.g. “Today people are sending video mail, instead of email” and “Soon

all our ideas will be free of borders”), followed by the repeated refrain “Are you ready?” Using a similar montage of multicultural faces, voices, and settings, WorldCom’s (2000) cast of characters repeat the mantra, “I was born into a new generation,” Generation d; “Generation d isn’t about the country, it isn’t about culture, it’s about attitude.” While the images and accents in this series suggest social and racial difference, the people all “speak the same language – digital.” (They also all speak English, a fact that is *not* noted.)

This supposed erasure of difference through technology is challenged by Lisa Nakamura (2000). In “Where Do You Want to Go Today?” Nakamura analyzes the disembodied utopian (from the Greek, *no + place*) claims for the Internet in “Anthem,” a televised MCI commercial—“There is no race. There is no gender. There is no age. There are no infirmities. There are only minds. Utopia? No. The Internet” (p. 15). She argues here and in *Cybertypes* (2003) that this



▲ 3.4 “Are You Ready?” campaign, Cisco Systems, 1999. [Click image to play.](#)



▲ 3.5 “Generation d” campaign, WorldCom, 2000. [Click image to play.](#)



▲ 3.6 “Because of Us” campaign, Akamai, 2000. [Click image to play.](#)

attempt to erase difference actually re-embodies difference, and shows us that the real boundaries are racial and ethnic. Contrary to the inviting promise of a “radical postracial democracy” (p. 18), discourse on the Internet either assumes “default whiteness” or produces a “cybertype,” a simulacrum of an authentic, raced “native.” This erasure, like Foucault’s use of the Panopticon, universalizes the concept of power. While it makes the trope of the Panopticon more powerful, it also diverts attention from actual bodies, negating (theoretically) the possibility of resistance to the panoptic gaze by the “native” who is performed by the discourse.

Yet these advertisements for the Internet, while claiming to erase the limitations of time, space, and embodied difference, in fact bring those differences into sharp relief. By picturing the “Other” in a discourse that actually represents the perspective and interests of a relatively small, privileged First World population, these advertisements

perform a visual ideological pedagogy, teaching their privileged viewers that the technology of the Internet, and the world it depicts, are under their control.

The primary purpose of advertising is persuasion, of course, but as the examples above show, advertisements are also demonstrations of what Wendy Hesford (2000) calls “pedagogical spectacles,” visual embodied performances that are staged to convey implicit or explicit lessons on how to behave—or how *not* to behave. Hesford focuses on two instances in which photographs of and a film about women are used as pedagogical spectacles: photographs of medicalized performances elicited from mental patients at La Salpêtrière hospital in Paris in the late nineteenth century, and Mindy Faber’s 1993 documentary *Delirium*, which includes both spontaneous and scripted performances by her mentally ill mother. The concept of the pedagogical spectacle is useful for analyzing the cultural underpinnings of performances

3.7 Mayna Gilmer, 1930s. Photobooth images, ➔
rephotographed by Calliopejen in 2008.
The locus of representation shifts when those who
had been the objects of art and photography took
their image-making into their own hands. José
Luis Brea (2003) compares such visual acts to
speech acts, “identity factories” in which what is
shown is “the subject’s non-constituted character
. . . her ‘self-making’ through representational
acts” (n.p.).



that are put forward primarily to teach, rather than to persuade or entertain. However the phrase “pedagogical spectacle” emphasizes the unidirectional sense of a spectacle as the powerless “object of the gaze.” In Hesford’s examples, there is evidence that both the hysterics at La Salpêtrière and Faber’s mother were not merely the passive objects of the looks of their audiences, but actively participated in their performances. While their images may have been put forward as spectacles, they managed to appropriate their own, albeit limited, control over their representation. In so doing, the spectacle becomes a “pedagogical performance,” a term that expresses the bidirectional sense of a performance as mutually constructed between the subject performer (witting or unwitting) and the audience. For me, this is a more flexible term. It encompasses not only the public display by Dr. Charcot of La Salpêtrière’s madwomen, but also their desire to “perform” their hysteria to please him; not only Mindy Faber’s documentary display of her mother’s schizophrenia, but also her mother’s move to regain control by taking the camera and turning it on her daughter. It allows for performances that are resistant or oppositional, that push back at the viewer, and that can include spoken and written as well as visual representation. The idea of pedagogical performance thus becomes an analytical tool with which to gain insight into underlying ideological constructions and discourses in visual and verbal texts that are primarily

intended, like the staged performances of Charcot’s madwomen, to teach, insights which we can then apply to our own embodied pedagogical performances in our classrooms and in the digital media objects we produce.

Feminist analysis of images of the body that are ostensibly designed only to teach specific, locatable, objective “facts” often discovers a hostility toward the pedagogical performances of women, although in early pedagogical performances women were often absent, surely a form of passive aggression. In what follows, I will analyze four loci of pedagogical performance—early anatomy books, an illustrated elocution manual, the abolitionist speeches and letters of Sarah and Angelina Grimké, and Pierre Janet’s images of La Salpêtrière patients—to explore how putatively objective representations have much to say about constructions of power and gender in the contexts in which they were created and deployed. Analysis of these sites will help to demonstrate that contemporary claims about the lack of attention to the specifically raced and gendered body in cyberspace is just the latest move in a long history of pedagogical performances in which the “universal” white, male body stands in/for all bodies. Of course, as Pierre Bourdieu (1997) knew, “The whole trick of pedagogic reason . . . lies precisely in the way it extorts the essential while seeming to demand the insignificant” (pp. 94-95).

Dream Anatomy

The early Modern period, roughly 1450 to 1750, was characterized by a growing interest in science, the secularization of politics and economics, and rapid technological progress that included the introduction of printing. Although the spread of printing was uneven and not nearly as democratizing as it is often represented to be (as evidenced by the critiques of Elizabeth Eisenstein's [1979] revolutionary claims for the printing press by historians such as Roger Chartier [1989] and Adrian Johns [1998]), nevertheless the printing press made possible for the first time a wider distribution of information and knowledge. Among these early printed texts were illustrated anatomy books, and we can look to them for examples of pedagogical performances in which “the dead teach the living”: the human body displays itself and is displayed in order to teach anatomy, while at the same time it also conveys contemporary cultural attitudes and beliefs.

The influence of art on scientific illustration, which would diminish with the objectification of the scientific method in the seventeenth century, was pervasive in early anatomies, and most anatomical drawings included familiar artistic conventions, “iconographies of landscape, nudity, mythology and Christianity” (*Dream Anatomy*, 2002, n.p.). The first profusely illustrated anatomy was Andreas Vesalius' *De Humani Corporis Fabrica*, published in 1543.

Many of the illustrations, like the one shown here (Figure 3.8), portray male figures disposed in “natural” positions—standing, walking, reaching—while exhibiting anatomical characteristics of muscle, blood, and bone with a precision that could substitute for being present at a dissection. Conventions of portraiture place the anatomical figure in the foreground; behind and below him lie a bucolic landscape and a small town. He stands, seemingly impervious to both his audience and his excoriated state, as a human figure in command of a civilized world.

But as the figures in *De Humani* lose more and more layers of muscle and flesh, they become less and less noble, and their surroundings erode and decay as

▲ 3.8 Andreas Vesalius, *Tertia Musculorum Tabula*, *De Humani Corporis Fabrica*, 1543. [Click image to enlarge.](#)

▲ 3.9 Andreas Vesalius, Septima Musculorum Tabula,
De Humani Corporis Fabrica, 1543. [Click image to enlarge.](#)

their bodies become less recognizably human. Stripped of all flesh, Vesalius's flayed figure (Figure 3.9), slumps against ruined walls, unable to support himself, his head and arms held up by twigs and twine. It would seem that personhood, agency, control, and perhaps even the survival of civilization itself, are dependent upon the muscular male body.

Pedagogical performances like these anatomical drawings demonstrate convincingly that visual representations are not merely ancillary to written descriptions of the human anatomy. Nor are they substitutes, in the sense that they *mean* the same, for written texts. Barbara Maria Stafford (1997) points out the important distinction between “imagery used as equivalents to discourse (or as illustration) and as an untranslatable constructive form of cognition (or as expression)” (p. 27). Anatomical drawings construct a cognitively different understanding of the human form and condition than that constructed by verbal or written texts, an understanding that carries with it vivid physical, intellectual, emotional, and ideological weight.

As cultural and artistic practices and perceptions of the body changed, so did pedagogical performances in anatomical illustrations. The growing emphasis on self-fashioning, foppishness, and wit is reflected in Giulio Casserio's *Tabulae Anatomicae* (1627) and reached new heights in John Browne's *A Compleat Treatise of the Muscles, as They Appear in the Humane Body, and Arise in Dissection* (1681). Unlike Vesalius's figures, who seem unaware of their state of deconstruction, Casserio's and Browne's figures actively participate in their display, posturing, posing, smiling coyly at the viewer while holding skin and muscle out of the way.

As in other areas of public pedagogy during this period, women were rarely present in anatomical illustrations. One might (too easily) assume that this absence reflected the cultural subordination and invisibility of women in the early history of science, but the reasons are more complicated, and more interesting. Until well into the seventeenth century, Galen's physiological model of human sexuality held sway, a one-sex model that claimed women were simply “imperfect men,”

their sexual anatomy identical “in every respect to the male member except that the latter is outside and the former inside” (Laqueur, 1990, p. 63). Such differences as existed between male and female were of degree, not kind. Women’s interior genitalia and other insufficiencies were said to derive from their “lack of heat,” “heat” (blood) being the source of the heightened vitality in males that resulted in their metaphysical perfection. Galen, the second-century Greek physician and philosopher, codified what Aristotle and others had long maintained—that man is superior to woman *by nature*, and therefore is justified in taking charge of her: “[A]ll tame animals are better off when they are ruled by men; for then they are preserved. Again, the male is *by nature* [italics mine] superior, and the female inferior; and the one rules, and the other is ruled; this principle, of necessity, extends to all mankind” (Aristotle, 330 BCE/1984, p. 8).

Because women’s bodies were believed to be inferior versions of male bodies, it follows that the male body would be overwhelmingly represented in anatomy texts. And so they were, as a review of the early anatomical images on the U.S. National Library of Medicine *Dream Anatomy* website substantiates. As late as the sixteenth century, there was “only one canonical body, and that body was male” (Laqueur, p. 66). When women *do* appear in anatomical illustrations, it is often as unnervingly modest uteruses. In *Anatomia del Corpo Humano*, Juan Valverde (1560) portrays a female figure, skin peeled back to show her uterus, with one hand covering her genitals and the other concealing one breast. In Adriaan van de Spiegel’s *De Formato Foetu Liber Singularis* (1626), Casserio limned another pregnant female figure, belly pulled back like flower petals to reveal a baby, although her genitals are serendipitously disguised by the leaves of a plant. A final example, from Charles Estienne’s *De Dissectione Partium Corporis Humani* (1545), illustrates the sometimes fine line between pedagogical performance and pedagogical spectacle. In the plate on the right (Figure 3.10), the female anatomical figure, again a pregnant woman, sits on a draped throne, legs akimbo and arms at her sides, with one foot resting on the framed Latin legend of the illustration. Unlike earlier illustrations set in more natural spaces, she is surrounded by buildings. She looks to her right with an expression of surprise, or horror, toward a

▲ 3.10 Charles Estienne, *De Dissectione Partium Corporis Humani Libri Tres*, 1545. [Click image to enlarge.](#)



balcony where a male figure, holding a pair of spectacles to his eyes for a better view, gazes down at her. Furthermore, if this spectator were not disconcerting enough, even the structure from which he looks down is gendered male: a parapet is supported by a bearded stone head which also gazes down upon this woman's figurative disembowelment. Unlike other examples, in which the women modestly cover their breasts and genitals, this figure is laid open before the viewer.

Our understanding and acceptance of anatomical images in pseudo-realistic settings as liminal figures, suspended between life and death, is dependent upon our belief that they are willing participants in their pedagogical display. Vesalius's figures are serenely unconcerned; Casserio's and Browne's return the viewer's gaze. This particular image by Estienne disturbs us because we have no such assurance of the figure's participation, and we feel like voyeurs sneaking illicit peeks.

But there is another element that makes us uneasy with this image: the little man on the balcony is observing her through some sort of glasses. This disrupts any sense that we may have had that this is a natural scene, and that he, and we, are "just looking." Optical devices,

3.10 (details) Charles Estienne, *De Dissectione Partium Corporis Humani Libri Tres*, 1545.

Laqueur notes that Estienne, whose *Dissectione* appeared in the middle of the sixteenth century, is still "thoroughly, indeed obsessively, Galenic" (p. 132), going to great lengths over several paragraphs to emphasize that the women whose anatomy he has illustrated have genitalia identical to men. Despite the mounting anatomical evidence, it was not until the eighteenth century that a two-sex model, in which men and women are more notable for the differences than the similarities in their anatomy, became the definitive paradigm, as anatomy fell into line with the changing cultural beliefs about the relationships between men and women.

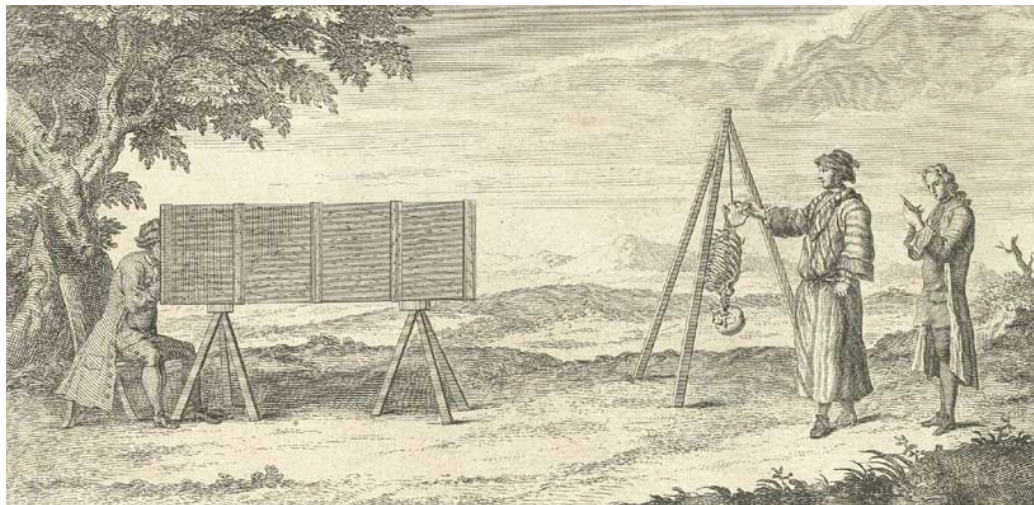
used to manipulate the viewed object for the benefit of the viewing subject, bring into sharp relief the cultural lenses we use to regularize relations of knowledge and power, although at the same time we recognize that they also have legitimate uses. Albrecht Dürer's (1532) well-known woodcut portraying a draughtsman using a gridded frame to draw a reclining woman is often cited in feminist cultural criticism to exemplify the objectification of women by the male gaze, and it is easy to pair it with the Estienne image and draw that conclusion. But within its historical context, the image was one of a series published by Dürer, in a book on painting, to illustrate a device for accurately rendering inanimate objects and both male and female nude figures. Accuracy was much prized in anatomical illustration. Bernhard Albinus (d. 1770) "approach[ed] his subjects like an architect might. He insisted on accurate measurements and employed an approach whereby the artist stood varying distances from the skeleton and viewed it through grids of netting to obtain proper perspective and proportion" (Wright-Peterson n.p.), a process which used the principle of Dürer's draughtsman's net. And to demonstrate the precision of his own work, Thomas Cheselden

depicted himself (Figure 3.11) on the title pages of at least two of his anatomies using a *camera obscura* to draw dissected corpses.

Anatomical drawings, then, are embodied pedagogical performances. And despite the fact that medical observations during the Renaissance had become increasingly more acute and accurate, ingrained ideological beliefs about the roles of men and women, the “whole fabric of interpretation, clinical practice, and everyday experience . . . protected [the one-sex model] from exposure to what we would construe as contrary evidence” (Laqueur, p. 98). While explicitly teaching doctors and artists the intricacies of human anatomy they would need for their respective arts, anatomical illustrations also implicitly conveyed to the viewer historical and cultural attitudes about the body: The universal body, except for those parts dealing with pregnancy and birth, was male; personhood was inherent in the able male body; the male body

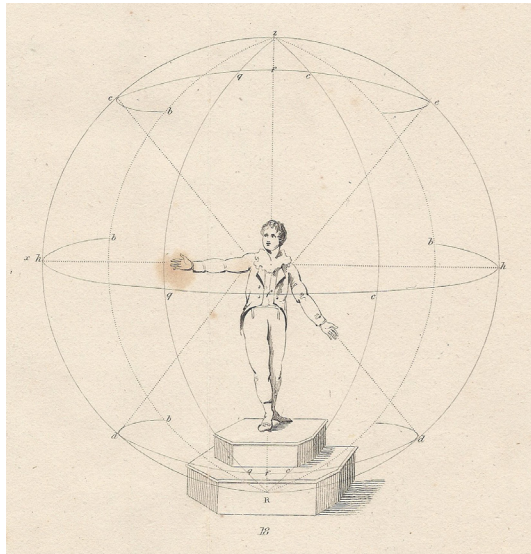
commanded the civilized world, and commanded the display of his own body. The female body, on the other hand, was the reproductive body; when it did appear in early Modern anatomies, it was often “distinguished by the parted thighs obliged by gynecology and pornography” (Rifkin, 2006, p. 20).

Obviously visual representations of the body in anatomical drawings go beyond their explicit pedagogical intent to teach us much about historical and cultural constructions of gender and knowledge. Recognizing that images represented as solely objective and factual contain underlying cultural and ideological warrants enables us to search for and identify those warrants in contemporary pedagogical performances, including those in digital media and, if necessary, resist and reframe them.



3.11 William Cheselden, detail from the title page of *Osteographia, or The Anatomy of the Bones*, 1733. The skeleton of a human torso and head is suspended upside-down from the tripod, allowing the anatomical illustrator to render the image, which is inverted by the *camera obscura*, more easily.

Chironomia



↑ 3.12 Gilbert Austin, Imaginary circles for determining the position and the direction of gesture, from Plate 2, *Chironomia*, 1806.

If anatomical drawings were created to teach doctors and artists about the bodies of others, elocution manuals were designed to teach young gentlemen how to manage their own. The broadening of educational opportunities to include the sons of merchants and businessmen toward the end of the eighteenth century created a desire for texts that could teach the art of elocution to the rising middle class. Thomas Sheridan's *A Course of Lectures on Elocution* (1762) and Gilbert Austin's *Chironomia* (1806) were the most widely used, and *Chironomia* became immensely popular in the United States. Austin created a notation of gesture for public speakers (lawyers, politicians, preachers, and actors) that described the appropriate positions of the hands, arms, head, and feet for dozens of attitudes and dispositions. In this age of the natural style, the irony of such complicated choreography seems to have escaped Austin, who favored the mechanical style, although the consequences of using inappropriate gestures, or none at all, were duly noted. Austin attributed British public speakers' "frigid indifference" to the *actio* of delivery in large part to their constitution—a "grave people" from a cold climate. Noting, however, that the absence of gesture "chills the ardour and weakens the splendour of their composition" (p. 18), he proposed that gesture had been neglected because of prior injudicious use and the lack of a proper standard for effective movement. If "nature does not by any means suggest . . . the most dignified or graceful expressions of those passions" so as to avoid "laughter or disgust" (p. 138), then appropriate gesture must be studied to effect "some advantageous change from awkward rusticity to manly grace" (pp. 140-141).

→ 3.13 Gilbert Austin, The positions, motions, and elevations of the arms, from Plate 4, *Chironomia*, 1806.



Chironomia, and the many nineteenth-century elocution manuals that borrowed shamelessly from it, explicitly regulated the male body—this was the way a gentle-man behaved (and, implicitly, dressed). Although Austin illustrated three specifically theatrical gestures (Shame, Agony, and Resignation) with costumed female figures, his representations of other attitudes and emotions, with one exception, were male.

The exception? The female figure of Repose.

3.14 Gilbert Austin, The arms reposed, from Plate 4, *Chironomia*, 1806. Versions of Austin's work as late as Albert Bacon's *Manual of Gesture* (1873) offer no illustrations of women at all.



Austin quoted extensively from classical sources and believed, like Quintilian, that “rules, even if perfect, cannot bestow genius where nature has denied it,” but that for “the ordinary description of men,” rules “bring forward and improve the talents that they may possess” (p. x). Austin maintained that if each young pupil “regulate[d] by rules every possible circumstance in delivery; his articulation, accent, emphasis, pauses, tone, voice, countenance, and along with all, his gesture,” that he would eventually become the person he was emulating, and understand how to “regulate his own manner according to the suggestions of his judgment and taste” (p. 282).

Austin's *Chironomia*, Sheridan's *A Course of Lectures in Elocution*, and similar elocution manuals were written for young male pupils. This does not mean that there were no guides for how women in the

nineteenth century should conduct themselves physically, but what a difference! Austin and Sheridan showed men how to deploy their bodies to enhance their speech. *Miss Leslie's Behavior Book: A Guide and Manual for Ladies* (1859) admonished women to control their bodies and keep their mouths shut. A brief excerpt:

It may be well to caution our young friends against certain bad practices, easily contracted, but sometimes difficult to relinquish. The following things are not to be done:— Biting your nails. Slipping a ring up and down your finger. Sitting cross-kneed, and jogging your feet. Drumming on the table with your knuckles; or, still worse, tinkling on a piano with your fore-finger only. Humming a tune before strangers. Singing as you go up and down stairs. Putting your arm round the neck of another young girl, or promenading the room with arms encircling waists. Holding the hand of a friend all the time she sits beside you; or kissing and fondling her before company. Sitting too closely. (p. 330)

There are no drawings or other visual illustrations of either good or bad behavior in *Miss Leslie's Behavior Book*.

Obviously manners and etiquette were not benign constructs, but were deployed both implicitly and explicitly in visual and verbal pedagogical performances in order to regulate and discipline “gentle” bodies in public spaces. On the one hand, men were encouraged to use their bodies as expressive adjuncts to their speech in the legislature, courts, and churches; gesture enhanced their credibility. Women, however, were enjoined from using their bodies in any but the most highly regulated way, in order that they may not seem plebeian or frivolous. Men may deploy their bodies to reinforce their *ethos*; women's credibility depends upon restraining theirs.



- ▲ 3.15 Harris & Ewing, Men looking in window of the National Association Opposed to Woman Suffrage, 1911. Abolition of slavery and women's rights were arguably the most significant human rights issues in the United States during the nineteenth century, yet slavery was abolished in 1865 by the 13th Amendment, fifty-five years before the 19th Amendment granted women suffrage in 1920. Among the arguments against suffrage were that immunity from military service would make women irresponsible voters; the moral, intellectual, and economic advances women had already enjoyed occurred without the vote, so it was not necessary for continued advancement; women's current duties already took all their time and ability; it would increase the "undesirable and corrupt vote of our big cities," and it sought to "efface natural differentiation of function, and to produce identity, instead of division of labor." (From a broadside published by the National Association Opposed to Woman Suffrage, 1894.)

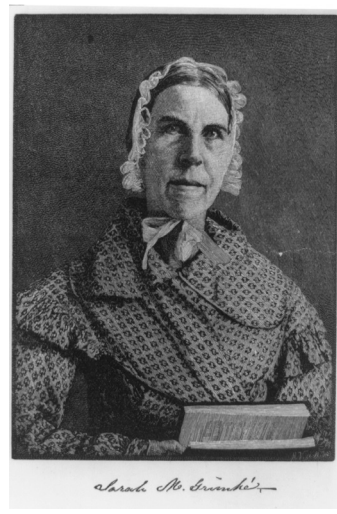
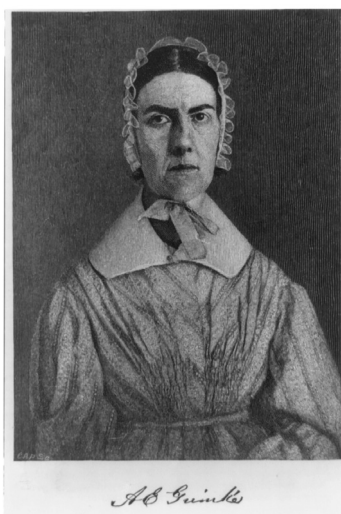
Women Teaching Women's Rights

Anatomical drawings and gestural notations in elocution manuals are embodied pedagogical performances that teach not only anatomy and gesture, but also how gendered bodies are supposed to behave in the world. This twinned sense of performance is also the case when women inhabit the public sphere. Contemporary reactions to the nineteenth-century abolitionist speeches and writing of Angelina and Sarah Grimké are illustrative of the cultural pressures brought to bear on the visual and verbal pedagogical performances of women who insisted on embodied public appearances in person and in print.

Over the long and acrimonious decades during which the young United States grappled with the rights of slaves and women, proponents of abolition and women's rights established their right to be heard, their *ethos*, by virtue of their perceived moral character and intelligence. Depending on the rhetorical situation, *ethos*-building strategies might include traditional ethical appeals such as invoking canonical texts or the higher authority of God or the Church, or strategies that built *ethos* through rational or emotional appeals. In their writing and speeches, Angelina and Sarah Grimké employed both. These tactics, and the responses they evoked from friend and foe, illustrate the particular problems women had in becoming rhetorically visible, and are echoed in resistance to certain kinds of embodied pedagogical practices that is still pervasive today.

The Grimké sisters were two of thirteen children of John Faucheraud Grimké, a Revolutionary War veteran, congressman, and slave-owning judge in Charleston. Both sisters committed to principles of equality and human rights early in life, moving to Philadelphia and joining the anti-slavery Society of Friends. But the Quakers were not activists, and the Grimkés soon established direct alliances with the abolitionist movement and began writing letters and speaking out at public meetings. Their appearances drew thousands of women to the movement. During her brief career as an abolitionist speaker, Angelina

Grimké (1835) deployed the traditional methods for authorizing American women in the nineteenth century to speak in public—divine inspiration and the refined moral character of women—and always qualified her remarks with deference to more authoritative (male) speakers. In her speeches and letters, she often opened with a traditionally female apology for the “uselessness of so insignificant a person as myself,” but then “thanked God, and took courage” before making her prophetic and hortatory calls to “be willing to suffer the loss of all things” (p. 25) in pursuing the anti-slavery cause. Her strong stand was always tempered by her deference and the intimacy of her oratorical style and served in some part to deflect criticism when she spoke before mixed audiences.



▲ 3.16 Angelina (left) and Sarah Grimké, wood engravings, date unknown.

And yet, despite this approach, her very presence at mixed gatherings produced outrage. Pennsylvania Hall, built by Philadelphia abolitionists as a meeting hall “to be open on an equal basis . . . by any groups ‘for any purpose not of an immoral character’” (Brown, 1976, p. 128), was dedicated by Secretary Dorsey “to Liberty and the Rights of Man” (cited by Brown, p. 128) on May 14, 1838. Several notable abolitionists spoke on the 15th and 16th, and the Philadelphia Lyceum met both afternoons to discuss scientific subjects. On the evening of the 16th, it was time for abolitionist women to speak, including Lucretia Mott and Angelina Grimké. As Grimké spoke to an audience that included men, women and Blacks, “a mob assembled in the streets outside” (p. 130). Grimké’s speech, peppered with calls to conscience and accounts of the plight of slaves, was repeated interrupted by “Shoutings, stones thrown against the windows, &c.” (Webb, 1938, p. 125). The mob reassembled the following day (May 17) and, despite an appeal from the mayor that evening, attacked the building and burned it to the ground. A grand jury investigation blamed the victims, noting, “Individuals were brought into close and familiar intercourse, whom long habits and a well ascertained and accepted sense of propriety had invariably kept asunder” (Brown, p. 135).

Sarah Grimké took a different approach. In *Letters on the Equality of the Sexes and the Condition of Woman* (1837), Grimké laid out a Biblical proof of the equality of women with men. Her tone is not deferent, but defiantly direct. Claiming to travel “nearly untrodden ground . . . in search of truth” (Letter I, p. 3), Grimké set out to “designate the sphere of woman” (p. 4) by relying upon her own reading of the Bible, rather than on an interpretation based upon the “false translation . . . of any man, or set of men.” She argued that Adam and Eve were equally complicit in the fall, and she read the Biblical injunction, “Thou wilt

be subject unto thy husband, and he will rule over thee,” not as a command, but a prophecy! Relying on an *ethos* based upon her right (and ability) to construct her own biblical exegesis, she boldly ended her first letter, “Here then I plant myself. God created us equal” (p. 8). From traversing “untrodden ground” to “planting” herself as equal to men, she underscored her position as both physical and epistemological. Letter II continues her discussion of the consequences of that prophecy, in which man’s “lust of dominion” caused him to have “done all he could to debase and enslave her mind; and now he looks triumphantly on the ruin he has wrought, and says, the being he has thus deeply injured is his inferior” (p. 11). Unlike her sister, Sarah Grimké spoke less often in public; yet her writings were embodied pedagogical performances that argued for physical autonomy for women by invoking her material and epistemological presence (“Here then I plant myself”).

Sarah Grimké’s writing attracted the ire of the General Association of Congregational Ministers of Massachusetts, which released a Pastoral Letter in 1837 addressing the “dangers which at present seem to threaten the female character.” Citing the Bible as their authority, they declared that “the power of woman is in her dependence . . . , which God has given her for her protection.” Then, in a direct attack on the tone and content of rhetoric like Grimké’s, they continued, “But, when she assumes the place and tone of a man as a public reformer, our care and protection of her seem unnecessary; we put ourselves in self-defense against her; . . . and her character becomes unnatural” (p. 1).

One might expect such a critique of women and women’s rights from an essentially conservative ministerial association. However the sisters were also roundly criticized by their friends, including William Garrison, editor of the *Liberator*, and Theodore Weld, a leading abolitionist whom Angelina Grimké had married on May 14th, 1838,

the day Pennsylvania Hall was dedicated. The sisters were pressed by Garrison, Weld, and other prominent abolitionists to remain silent on women’s rights lest they dilute the message of abolitionism. Wrote Jonathan Whittier:

Does it not *look*, dear sisters, like abandoning in some degree the cause of the poor and miserable slave . . . whose cries and groans are forever sounding in our ears, for the purpose of arguing and disputing about some trifling oppression, political or social, which we may ourselves suffer? Is it not forgetting the great and dreadful wrongs of the slave in a selfish crusade against some paltry grievance of our [read *your*] own? (cited in Birney, 1885, p. 204)

It seems that however women choose to construct authority for their claims, they are open to criticism, because women’s speaking and writing is always marked, always interpreted in relation to the “neutral” rhetorical strategies of men. When Angelina Grimké gave a pedagogical performance considered within the “appropriate sphere” for women—speeches that appealed to the passions, claimed the moral superiority of women and mothers, or drew their urgency from divine inspiration—her arguments were dismissed for their inferior position in a hierarchy of faculties that valued reason and understanding over imagination and passion (although her physical presence, as the Pennsylvania Hall incident shows, was incendiary). On the other hand, when Sarah Grimké’s performances in print employed sophisticated empirical logic and arguments from canonical texts and the Bible, or when she adopted an agonistic tone, she was deemed “unnatural,” monstrous, vile.

The experiences of Sarah and Angelina Grimké offer a prescient look at some of today’s key issues, including equal pay for women, the relationship between women’s education and economic and political power, and the social construction of gender (Lerner, 1998). Further-

more, their difficulty making themselves heard, even among their friends, and the opposition that directly attacked their *ethos*, or authority to speak, resonates in some modern examples of resistance to certain kinds of self-representation employed by women.

In 1978, Lois Gibbs and the families who lived in and around Love Canal in upper New York State raised a public alarm about the high incidence of cancer and birth defects in their community, which, they had learned, was built on a toxic waste dump. Initially dismissed for the localized, emotional, and anecdotal nature of their rhetoric, they eventually prevailed by documenting the illnesses of local residents and generating embodied public performances of their plight through media campaigns that focused on images of women and children affected by the poisons of Love Canal. One reason they were unable to exert their claim earlier was that they could not point to *logos*-based research that showed a relationship between the chemical toxins in the soil and drinking water of Love Canal and the illnesses and birth defects in their community because the only studies that had been conducted looked at adult exposure in the workplace during a 40-hour week. Obviously (although not to the state of New York or the EPA), prolonged, 24 hours a day, seven days a week exposure, particularly for the small bodies of children, was devastating. Yet Love Canal residents who wished to leave were not completely relocated until October 1980 (Gibbs, 1998).

Because, out of necessity, they initially built their appeal on the evidence they had—images of the ill and damaged bodies of themselves and their children—the women of Love Canal were easier to dismiss



▲ 3.17 Masumi Hayashi, *Love Canal No. 1*, Niagara Falls, New York, 1990. Courtesy of Dean Keesey.

This scene, constructed by Masumi Hayashi from multiple images of an abandoned home at Love Canal, compellingly illustrates the fragmentation of lives and community following the environmental catastrophe there.

This image, and the images presented as evidence by the women of Love Canal, are examples of *non*-rational appeals, which make their case through emotional or ethical means, rather than with logical arguments—*pathos* and *ethos*, rather than *logos*. They should not be confused with or dismissed as *irrational* appeals, which are failures of logic. The problem, of course, is that non-rational appeals are often represented as irrational.



- ▲ 3.18 Advertisement for Brook's Spool Cotton, ca. 1880.
Paper dolls, like alphabet books, are both objects of play and objects of culture. They teach children, not only the alphabet, but also how to inhabit specific gender, race, and class roles.

3.19 Topsey, Paper doll published by McLoughlin Bros., 1863.
Black paper dolls were mass marketed, almost certainly for White children to play with. McLoughlin Bros. also published a Little Eva doll (Brown, 2006).



as emotional and irrational. Yet even in supposedly neutral venues, women's bodies are often read in ways that can be used to denigrate their performances. In the workplace, as Deborah Tannen (1993, 1994) has documented, women's speech and women's dress are marked; there is no "neutral space." So too in electronic environments; there is still strong resistance to digital representations, visual or verbal, that are associative, analogical, emotive, or multi-perspectival, or that in other ways fail to observe the conventions of propositional logic, although more experimentation along these lines is taking place. While there is no record of Sarah and Angelina Grimké ever *speaking publicly* on the subject of women's rights, their *writings* on abolition and women's rights are embodied nineteenth-century hypertextual performances, intertwining the arguments for abolition and the arguments for women's rights; supporting them logically, authoritatively, and passionately through empirical evidence, testimony, anecdote, and analogy; and encouraging their readers to make the appropriate associations.

Lest we imagine that things have changed much in today's postmodern, feminist world, consider the following examples of women's embodied presence inflecting their self-representation. In *Women Lawyers*, Mona Harrington (1994) notes the problem men have seeing women as powerful, rational speakers, rather than as bodies first. In one law firm, the male partners warned a young woman about the inappropriateness of her waist-length hair; in another, an African American woman was criticized for wearing her hair too short; and in a third, a female

lawyer on her way to court was asked by a male colleague, "Aren't you going to button your blouse?" In each case, body overwhelms mind; image confounds text; meaning exceeds intention.

Early pedagogical performances of the body, like anatomical drawings and illustrated elocution manuals, were notable for either the absence of women, or for their presence as passive/reproductive bodies. When women like the Grimké performed their pedagogical roles as public, active, productive voices and bodies, they were "put in their place." The following section turns to the late nineteenth century and to the new technology of photography, which was used to capture pedagogical performances designed to "put women in their place" by illustrating how they were *not* to behave.



▲ 3.20 Christ Healing the Possessed (detail), Dečani, Kosovo. Fresco, ca. 1340. Photograph by Steven Enich.

Before much was known about the workings of the human brain, mental illness was assumed to be spiritual rather than physical, a possession by unclean or evil spirits; the remedy consisted in one form or another of exorcising or casting out those demons (seen fleeing the bodies of the possessed in the fresco detail). While much more was known about the physiological components of mental illness by the end of the nineteenth century, and responses had turned from punishment toward treatment, madness was still ineluctably associated with moral weakness, sinfulness, and sexual deviance.

Hysterical Bodies

As education became more universal, manuals of gesture and etiquette served not only to regulate gender roles but also to model class behaviors; they proliferated in the form of self-help manuals for the sons and daughters of merchants and tradesmen. If elocution and etiquette manuals alone were insufficient to discipline bodies to their cultural roles, then catalogues of “disorderly conduct” and its consequences also proliferated. Following the invention of photography, images of criminals and the mad were documented and distributed as “pedagogical spectacles” (Hesford, 2000). Hysteria, almost exclusively a women’s dis-ease, was particularly well-recorded, furnishing visible lessons on the consequences of embodied excess.

Jean-Martin Charcot directed La Salpêtrière hospital outside Paris from the 1870s until his death in 1893. During that time he transformed it from an institution which treated (or merely housed) thousands of indigent, ill, and insane women to a hospital so famous for Charcot’s treatment of hysteria that at one point he was admitting as many as ten patients a day (Showalter, 1997, p. 31). Well into the nineteenth century, hysteria was thought to be a disease originating in the female reproductive organs (hysteria was named by Hippocrates and attributed to a “wandering uterus”), although Charcot is recorded as having treated the occasional male hysteric. (Interestingly, while adventure and travel were prescribed for male hysterics, the cure for female hysteria was rest, a provocative echo of Austin’s earlier use of a female figure for “Repose.”) Charcot believed instead that hysteria was an inherited neurological disease that manifested itself through a range of physiological symptoms—twitches, ticks, eccentric movements, seizures, fainting, etc. Still, more than ninety percent of those diagnosed as hysterics were women, and Charcot often described hysterical symptoms as being “typical” of particular gendered qualities.

Charcot's work was well documented. In fact, as Georges Didi-Huberman (2003) has noted, La Salpêtrière was a "great optical machine" (p. 10), where Charcot orchestrated a theatre of demonstrations, lectures, photographs, drawings, charts, and graphs, performing hysteria into being as a medicalized spectacle. Charcot's complete works, copiously illustrated, ran to nine volumes, and Pierre Janet's widely-read two-volume *Névroses et Idées Fixes* (1898) set forth a compendium of hysterical manifestations and their treatment also abundantly illustrated with drawings, graphs, and photographs. One would expect, given the population of La Salpêtrière, that the majority of Janet's photographs would be of women; nevertheless it is still disturbing that most of the images of women are full-figure, naked photographs, while the sole male patient pictured is wearing trousers and shoes.

Janet's illustrations include eight images of Gi. (who may be Augustine, Charcot's most famous patient) captured in various poses of hysteria described as "Imitation de la danse." He wrote, "Look at this unusual patient Gi., who presents such an amusing spectacle. As soon as she is placed on the platform in front of you, she makes bizarre gestures whose meaning soon becomes

clear. She raises her arms . . . sways on her legs . . . spins on tiptoe . . . In a word, she dances; it is not a vulgar dance, it is an awkward and comic imitation of dancers' steps on stage in the theater [Trans. mine]" (p. 341). Charcot was noted for the lectures and demonstrations he gave at La Salpêtrière in which he induced women patients to "perform" their illnesses under hypnosis. He also had his demonstrations photographed and illustrated, and published the images in a three-volume *Iconographie* (1877-1880). Wildly popular, these representations of hysteria were incorporated into plays and novels of the time. Jan Goldstein states, "The 'iconography' of hysteria as defined by Charcot—with all its vividly theatrical contortions and grimaces—seems to have been so widely publicized . . . in both pictorial and verbal form, as to constitute for that historical moment a reigning 'cultural preconception' of how to act when insane" (cited in Hesford, p. 36). In other words, Charcot's "pedagogical spectacles" became the pedagogical performance of hysteria. What began, and continued to be represented, as legitimate scientific investigation became a rigid cultural model of hysteria that naturalized the appearance, definition, and control of women's madness in the late nineteenth century.



3.21 Pierre Janet, "Imitation de la danse" at La Salpêtrière, 1898.
Click large image to play.





- ↑ 3.22 The Visible Woman Assembly Kit, ca. 1960.
The box announces that she comes with an “Optional Feature - The Miracle of Creation.” This consists of a boxed kit that enables her to be assembled pregnant, but which could be removed by overly cautious parents. However pregnancy might be difficult to explain, as the figure has no genitalia.

(In)Visible Woman

Pedagogical performances staged through ostensibly inartistic representations in anatomical illustrations, elocution manuals, women’s rights speeches and texts, and documentary photographs of hysteria demonstrate that there is no such thing as a neutral, innocent, uninflected, universal representation of the body. At the same time that the anatomical drawings of Vesalius and Estienne instruct the viewer about blood and bone, they also teach that the male body commands his world and his representation, the male body is the universal body, and the female body is merely a passive reproductive body which may be objectified and represented by others. Austin’s gestural notations in *Chironomia* instruct young men in the bodily deportment of preachers, lawyers, and orators, while also teaching that the most important position for women is repose. The photographs of Charcot’s hysterical patients instruct the medical profession and the public on the physiological manifestations of hysteria, and in so doing teach that hysteria, in all its manifestations, is Woman. Drawings and photographs are inseparable from the material and cultural contexts in which they are produced and consumed. Even written texts such as Sarah Grimké’s published letters were, and are, received and responded to as embodied inscriptions that cannot be abstracted from their materiality: letters by a woman, a Southerner, a spinster, a Quaker, an abolitionist. Consequently, claims that postmodern bodies have achieved, or should desire to achieve, a state of virtual immateriality are troubling. History tells us that, particularly for bodies that in “real life” are disadvantaged, the concomitant claim that “bodies don’t matter” authorizes members of the dominant culture, who possess bodies putatively unmarked (in the linguistic sense that they are the default standard) by race, gender, ethnicity, age, and ability, to ignore everyone else.

To counteract the move that suggests bodies are no longer relevant in a digital world (thereby rendering underrepresented groups invisible in the conversations that circulate around the production and use of digital media), it is necessary to resist discourses of immateriality and insist first on the simple fact that it is not possible to exist, to “be,” outside of the body. In “Virtual Bodies and Flickering Signifiers,” N. Katherine Hayles (2003) addresses the question of materiality in her analysis of the embodied experience of working with computers. “Even though

information provides the basis for much of contemporary society, it is never present in itself” (p. 498); it has no existence outside of some form of material substrate—a book, an X-ray, a hard drive, a human body. She compares bodies to books. Just as a body is simultaneously a physical structure and a genetic code, so too a book is simultaneously “a physical object and a space of representation, a body and a message.” Because both have bodies, both books and humans “have something to lose if they are regarded solely as information patterns, namely the resistant materiality that has traditionally marked the experience of reading no less than it has marked the experience of living as embodied creatures” (p. 500). Changing the location of information, as in Hayles’ example from a book to a computer, from print on a page to “flickering signifiers” on a screen, changes the way we think about that information, not just conceptually, but visually, aurally, and kinesthetically. Our mental and physical habits will shift, adapt. It follows then that a shift in the technology will bring about both a change in the body and a change in the message.

Contemporary feminism has been acutely aware of the interconnectedness of body and message, and of the fluid nature of subjectivity. Like information on the web, women’s subjectivities are lively, heterogeneous, and dispersed. Feminist perspectives recognize that material, subjective, and discursive representations of embodiment are always in play, and therefore provide a powerful analytical tool to evaluate claims about pedagogical performances in electronic spaces. “[F]eminist embodiment resists fixation and is insatiably curious about the webs of differential positioning” (Haraway, 1997, p. 196), and that productive curiosity leads us to wonder—and to experiment with—what might constitute a gendered academic body or a gendered technological body when it is performed in interactive digital media.

While second-wave feminism had no problem speaking for and to the categories “Woman” or “women,” a more contemporary feminist understanding of the exclusionary and non-representative nature of such categories raises important questions about the genealogy of the implicit binaries (man/woman, male/female) of which “woman” and “female” are the “other” half. In *Gender Trouble*, Judith Butler (1990) detaches “gender” from “sex” and argues that both may be either pre-determined or open to construction, depending upon the terms of the debate, and then proposes alternatives to a masculine, binary, empirical, hierarchical, equally constructed norm. Butler seeks to deconstruct the hegemonic, naturalized discourse on sexuality. However, she is not optimistic enough to believe that this rhetoric alone will effect any change in the circumstances of Woman/women/any particular woman. Rather she argues that an understanding of how discourse shapes the ability to act will permit individual resistance and destabilization within the framework of the dominant discourse and that this destabilization should take the form of performances that “trouble” that discourse on sex and gender.

Gender Trouble was critiqued for failing to locate “troubling” performances in specific contexts, and to account for how these performances are/might be read within actual social and cultural practices. Butler addressed this in part in *Bodies That Matter* (1993), arguing that the construction of “sex” as a regulatory norm shapes a heterosexual matrix of intelligibility. This matrix excludes the unintelligible, the abject, because a cultural conception of variability outside of the heterosexual matrix has to exist for that variability to be visible. However, since the matrix itself is a cultural construct, albeit an extremely well-sedimented one, and the “forming, crafting, bearing, circulation, signification of that sexed body” (p. 12) comes into being by

“citational accumulation,” it follows that the gender matrix is revisable; new citations can attach, gradually and subtly altering the possibilities of subject positions for previously excluded gender identities. (Of course, we must continually keep in mind that the power of feminist thought is that, although it was founded on principles of social justice as they applied to women’s issues, its principles apply to any person or population excluded by virtue of class, race, disability, or other categories of difference.)

Hayles identified new technologies as sites where representations of the body are under serious revision, where new experiences of embodied performance create new meanings for the body. Thus new technologies can be sites for creating new citations, for revising the gender matrix, and it becomes extremely important how scholars of and in digital media studies embody ourselves, and how we are embodied, by new media, because in the process we will be forming new citations for gendered, raced, classed, and differently abled pedagogical performances. Selfe has cautioned us about the perils of not paying attention to the integration of technology in our lives and work. As we relocate our pedagogical performances in electronic spaces, the digital tools we use will be at their most visible to us, and how and when and why we use them at their most plastic. But this plasticity should not be interpreted as immateriality, a postmodern move that depends on believing that bodies and gender are merely discursive and linguistic constructions. Abstracting bodies entirely, or making claims for universal bodies rather than particular embodiments in and through digital media, has the same effect as the heterosexual matrix Butler describes: it makes bodies unintelligible, and discourses about their materiality unspeakable. De-emphasizing materiality means de-emphasizing the material conditions

of oppressed or under-represented groups and makes the ideologies underlying those oppressions unavailable for critique. It also means that we are less likely to develop the rhetorical tools for understanding—and if necessary, resisting and reframing—the visual rhetoric and material consequences of such relentlessly embodied images as those found in the commercial messages that surround us. Furthermore, and perhaps most significantly, it means we will be enjoined from producing overtly embodied digital words and images of our own to represent our selves and our work.

Strongly conservative, traditional, and often disembodied criteria still influence expectations for the look and content of interactive digital media produced as pedagogical or scholarly work in the academy: what should appear there, how it should be arranged, and what visual representations are acceptable for print, images, and document design. In addition, these expectations, although not explicitly so, are tied to a normative discourse that values the impersonal, the linear, and the unadorned, over the personal, the ambiguous, and the idiosyncratic. Authors of scholarship in digital media are often advised to scale back, to tone down—which they may interpret as a recommendation to separate their embodied selves from the visual/textual construction of their new media spaces so that those spaces more closely approximate the “old media” of print articles, books, and curriculum vitae.

But while it might be feasible to remove traces of the body—images, pronouns—from digital multimedia, it is not possible to dis-embodiment it, to remove all evidence of the material existence of a maker. Attempting to do so would simply be enacting a different pedagogical performance of gender, or race, or class that has been deemed “appropriate” for academic embodiment, donning a visible invisibility for the duration.

Hayles (1993) makes a useful distinction between the body, which is “always normative relative to some set of criteria,” and embodiment, which is “contextual, enwebbed within the specifics of place, time, physiology and culture that together comprise enactment What discourse is to the body, instantiated experience is to embodiment”

(p. 154-155). Both the body and embodiment are shaped by (and also shape) the cultural contexts in which they appear and act. This is what we should be paying attention to when we create visual and textual pedagogical performances in interactive digital media.

↑ 3.23 Photographer recording the visit of a Tuskegee Syphilis Study doctor (behind man in suspenders) and nurse (behind man in pith helmet), n.d. Records of the Centers for Disease Control and Prevention. The presence of a black nurse reassured the men upon whom the study was being conducted that the white doctor was legitimate. The presence of the camera turned the visit into a public performance in which each participant—the doctor, the nurse, the patients, and their relatives—acted out their culturally constrained roles. The Tuskegee Study was designed by the U.S. Public Health Service to determine whether African American men with syphilis would benefit from what was at the time (1932) a dangerous and toxic treatment for the disease. By 1947, penicillin has become the standard—and safe—treatment, but the study was not ended until 1972. It’s impossible to estimate how many men died—and how many women and children contracted the disease—because treatment was withheld after the reason for the study became moot. [Click image to enlarge.](#)

Technologies of the Body

The embodied pedagogical performances of images— anatomical illustrations, notations of gesture, medical photographs—are visual “technologies of the body.” They represent specific information locatable in human bodies, and also serve to mediate and control the behavior of those (and our) bodies. Modern technologies like film and medical imaging are also technologies of the body that provide information while simultaneously mediating cultural constructions of identity based on gender, race, and class. De Lauretis (1989), for example, theorizes identity as the product and process of social technologies which, through “several interconnected sets of social relations . . . of work, of class, of race, and of sex/gender,” enculturate us to enact “a set of effects produced in [our] bodies, behaviours, and social relations” (p. 8). Among the technologies of gender she identifies is cinema. As a social technology of representation that focuses on the visualization of the body and gender, film is particularly well-suited as a site for analysis of the interpellation of viewers into a set of embodied social relations, which in turn helps us to see that the portrayal of specific relations of gender, class, and race on the screen are in fact pedagogical performances that reinforce normative roles through repetition. To resist such inscription-through-repetition, de Lauretis proposes a “subject of feminism” who refuses identification with Woman, or “all women,” or even “the real, historical beings and social subjects who are defined by the technology of gender and actually engendered in social relations.” Instead, she should claim an identity “whose definition or conception is in progress” (pp. 9-10). She is embodied within sexual relationships,

but also by race, class, age, and a myriad of other individual qualities and characteristics. She (but not always She) is a multiplicity of representations and self-representations that is neither unified nor divided, existing both within and without an ideology of gender.

In her discussion of the materiality of information technology and its effects, Hayles (1993) describes a similar “social technology” of incorporation and inscription that we can apply to the visualization of the body and identity in both film and the institutional discourses that circulate around academic performances in digital media. Hayles asserts that an incorporating practice is “an action that is encoded into bodily memory by repeated performances until it becomes habitual” (p. 157). As an example, consider the difference between using a manual typewriter, which responds to varying hand pressure by producing a lighter or darker imprint, and using a computer, which produces the same effect on the screen no matter what pressure is applied to the keys. The difference is also conceptual. At the typewriter, striking “a” produces an “a,” Shift-“a” produces an “A.” Striking “a” and any other combination of keys is likely to produce a key jam. On a computer, however, each key combination may produce a range of effects on the screen: Option-“a” produces “ä”; Command-“a” selects “All” by highlighting or framing everything in a document. There is no longer a one-to-one relationship between keystroke and mark. Consequently we incorporate—our body learns—new bodily habits of sitting and writing and thinking in front of the screen; says Hayles, “[I]ncorporating practices perform the bodily content; inscribing practices correct and modulate the performance.” Gender is produced and maintained in the same way, both by discourse and by “gendered body practices that serve to discipline and incorporate bodies into the complex significations and performances that constitute

gender within a given culture” (p. 158). The interplay of incorporation and inscription affect, both physically and conceptually, what we see and what we do, and who we think we are, when we work on our screens.

Despite the pressures of sedimented expectations, both de Lauretis and Hayles see opportunities for resistance to dominant discourses of gender, opening up the possibility of “citational accumulation” for new roles. Hayles notes that, because embodiment is about “the particularities of specific people embedded in specific contexts,” the potential exists for “subversion, excesses and deviations” (p. 155), and de Lauretis conjures a concept of gender identification that will perform “a radical *rewriting*, as well as rereading, of the dominant forms of Western culture” (p. xi).

Anne Balsamo (1997) also analyzes cultural practices that construct gender. In *Technologies of the Gendered Body*, Balsamo questions how the body, “a thing of nature,” becomes a social construct. “As a *product*,” she says, the body “is the material embodiment of ethnic, racial, and gender identities, as well as a staged performance of personal identity, of beauty, of health (among other things). As a *process*, it is a way of knowing and marking the world, as well as a way of knowing and marking a ‘self’” (p. 3). For Balsamo, “‘technology’ describes the workings of a collection of practices that produce specific cultural effects . . . at the level of the body” (p. 21) through the interaction of techno-social practices and bio-medical machines. For example, she points out that in a 1989 illustration from an issue of *LIFE* magazine on “Visions for Tomorrow,” the body of the future is gendered by the inclusion of a penile implant and an artificial testicle. As a pedagogical performance, this illustration is reminiscent of Vesalius’ anatomical drawings; it teaches us that in the future, “the male body is marked by the sign of a full-bodied person,”

whereas the female body “appears” only as a reproductive body in a footnote on the development of an artificial uterus. Balsamo worries how we are to “interpret . . . such cultural projections” (p. 9).

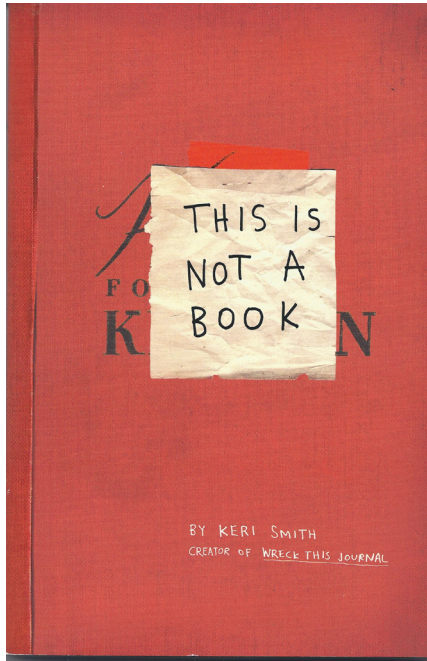
Contemporary instances/methods/apparatus for visualizing the body for pedagogical purposes are technologies of the body, as are the images they produce. X-rays, EKGs, and MRIs are pedagogical performances in the same way that anatomical drawings, gestural notations, and digital representations on the Web are, and serve to teach not only the physiological “facts” of bones and brains, but also the cultural practices of body and gender in which they circulate. In the era of fetal imaging, for example, pregnancy is no longer a private matter, and the ability to “see” the development of the fetus (“a new body to watch”) has resulted in re-focusing medical interest, and cultural control, on the rights of the fetus over those of the mother, thus re-inscribing her primary role as Reproductive Woman in the service of her family, her community, her nation—anyone or anything, it seems, except herself. In effect, the resulting images of a woman’s body become a pedagogical performance of culturally correct motherhood.

Balsamo concludes that simply because “virtual realities offer new information environments does not guarantee that people will use the information in better ways. It is just as likely,” she continues, “that these new technologies will be used primarily to tell old stories—stories that reproduce, in high-tech guise, traditional narratives about the gendered, race-marked body” (p. 132). However the very possibility that traditional narratives about who can speak for and control the material body can be re-inscribed by new technologies holds within it possibilities for new narratives, new forms of *techné*-logical embodiment, “new opportunities for subversion and sabotage” (Hayles, 1993, p. 152).



←
3.24 Sonogram of 24-week-old fetus, posted by lillmommajenna on YouTube, 2008. Among the comments on the video were questions and answers about the weight of the fetus and the kind of ultrasound used. [Click image to play excerpt.](#)

In a world in which technology and the body have become inextricably enmeshed and their conjoining produces the boundary figure of the “more real than real” techno-body, it is neither possible nor desirable to disentangle our bodies from the practices and discourses that inform our scholarly performances. But it is possible to offer alternative multimodal representations. The growing ubiquity of the Internet is contributing to a push-back against medical professionals as the sole interpreters of images of maternal and/or fetal health. On websites such as Daily Strength, Baby Place, iVillage, and Aha! Baby, parents and expectant parents use message boards to post sonograms, ask questions, share experiences, give advice—in other words, add the “wisdom of crowds” into the mix of resources available for making sense of their pregnancies and regaining some autonomy over the meaning of and response to their technologized bodies. So, too, our ability to either acquiesce to or resist dominant hegemonic practices is always already present in the material and discursive possibilities of our own performances as we expand into digital environments.



- ▲ 3.25 Keri Smith, Cover of *This Is Not a Book*, 2009. Photograph by the author. The questions raised by René Magritte's *The Treachery of Images* persist: Just what does an image represent? What does it *mean*? What objects and ideas inhabit the category of "the image"? The ambiguities of definition and meaning are often cited as reasons to exclude images from scholarly production, where the value and precision of words are paramount. And yet . . . can we draw such a bright line between the precision of words and the ambiguity of images? Or should we?

Visual Rhetorics of Representation

Many rhetoric, composition, and literacy scholars were early adopters of web authoring for personal web pages and scholarly work and also for use as a pedagogical tool in the classroom, just as they had embraced the use of computers for the teaching of writing. Perhaps because of their deep commitment to the power of words, they struggled with the place of the visual in their web texts (unlike their students, who often enthusiastically implemented every visual and kinesthetic effect they could jam in). Most early academic websites incorporated images, if at all, simply as illustrations for the written text (e.g. the Rossetti Archive, the Victorian Web). And initial standards for what constituted a well-formatted academic web page required that it should not call attention to its design, that it should mask its visual rhetoric behind a "culture of no culture," allowing the *real* meaning to shine forth through the words on the screen.

(Of course, our scholarly work has always been visual; how else to see the words on the page? But prior to the rise of digital media, print performances had become so naturalized that we rarely noticed their visuality [Lanham, 1993]. Nor were we called upon to pay attention; format and design were out of our hands.)

Images hold a complicated place in rhetoric and English Studies; at least since the late Renaissance, they have most often been the devalued term in the text/image binary. But the saturation of our culture with images in a continual state of remediation, coupled with the radical questioning of the value-laden mind/body, male/female binaries that accompany text/image, have combined to encourage a growing percentage of scholars to undertake fuller analyses of visual as well as verbal texts, to create their own web presences, and to experiment with new ways to think about and produce scholarship in multimEDIATED digital formats. Unfortunately the rejection of mind/body, image/text binaries has not necessarily been accompanied by a rethinking of the rubrics for new media design, which frequently still cling to a traditional, disembodied approach left over from Cartesian constructions of print design.

As we engage with the shift of academic performance from print to multimodal digital media, we face several challenges:

- What does it mean to be a technological body, to engage physically with digital hardware and software, and to represent our selves through those media?
- How do we enact our responsibility to represent the material conditions and consequences of our “objects of study” through the ethical collection and presentation of visual evidence and embodied argument?
- How can we develop concepts and practices of digital design that help us to use digital media in a *techné* of thoughtful critical inquiry and analysis?

Answers to these questions will inform the kinds of embodied pedagogical performances that might be possible in new media, including websites, course pages, born-digital articles, e-books, and other forms of digital multimedia. Our sense of embodiment interacts with current social and cultural constructions of the body. Scholars working, or choosing not to work, with computers and new media will be affected by their felt sense of what kinds of bodies work with digital media, which bodies appear on screens, and how bodies are represented there: in other words, by what it means to be a technological body with a specific material identity. What happens if what you see there is presented as the norm, but does not match your identity and your experience? One response would be to “pass,” to discipline your technological persona to look and act like the normative standard. Or you could assume that your identity and experience are somehow defective, and opt out. Women and other minorities in the academy feel pressure to discipline their pedagogical performances; they are encouraged to be seen (and to see themselves) as normalized, homogenized limbs of the “institutional body.” But I would argue that many scholars, male and female, who work with and in digital media have felt similar constraints

on being seen as “technological bodies,” which are often associated more with craft practice than with intellectual work. But there is a third response to the problematically normative technological body: you could maintain a healthy skepticism about the current standards, asking who benefits from those tacit rules, and figuring out ways to participate that foreground your unique technological embodiment.

One of the earliest examinations of how academic women were embodying themselves and being embodied in the new medium of the web is Gail Hawisher and Patricia Sullivan’s “Fleeting Images: Women Visually Writing the Web” (1999), published before web pages were common in academic settings. Previous scholarship on computers and gender had primarily studied text-based computer-mediated communication, which Hawisher and Sullivan found inadequate to analyze women’s visual self-representations and the “vexed relationship between online writing and images” (p. 269). Several of the women they interviewed expressed concern about what and how much of the visual to incorporate into their websites, one complaining that she was having “enough trouble with words” (p. 268). At issue for these women, then, was whether to stick with the textual practices with which they were familiar and which had been successful for them in the past, or to use the moment of remediation to revise and re-imagine their self-representation in the visual medium of the web.

(I want to emphasize here again that Hawisher and Sullivan’s study and other important feminist research on women and digital multimedia are equally applicable to men: first, because digital media scholars, male and female, are often young and in positions of less power as graduate students and junior faculty; and second, because, as mentioned earlier, working with technology and digital media may not be considered rigorous enough for serious intellectual work.)

Hawisher and Sullivan analyzed two sites which demonstrated that remediation did not necessarily result in new forms on representation: institutional home pages and the personal/professional home pages of academic women. The choices these women made, or that were made for them by their institutions, demonstrate the difficulty many of them had in establishing a truly embodied presence on the web.

The mission of university home pages is to provide information about the institution and to project a positive image to prospective students, parents, and other visitors to the site. These websites are often dominated by pictures of buildings, the brick and mortar of the business of education. As Hawisher and Sullivan note, “The buildings become the body of the institution” (p. 277). While people are present on the websites, the institution often speaks for them, incorporating them seamlessly into the design. The design of the websites of individual departments may differ from the institutional site, but many departments still control the images and text on its pages. Faculty web pages on these sites are often constructed from templates, and may not even incorporate a photograph of the faculty member. In all respects, the institutional website is constructed to visually and verbally re-inscribe the traditional disembodied authoritarian values upon which the institution establishes its credibility. For the most part, faculty web pages are interchangeable; faculty bodies appear as prosthetics of the institutional body, carefully crafted (by other institutions and the “docile bodies” themselves) to fit, but readily replaceable if they cease to function. Representations of individual academic bodies are disciplined by often arbitrary institutional constraints. Even when women faculty designed professional web pages of their own, their visual representations seem to be constrained by institutional discourse—perhaps these faculty were simply more comfortable with text, or perhaps they were

concerned about privacy issues. Whatever the reason, these websites operated within technologies of gender that were used “to tell old stories” about the body.

Within a few years, however, women in English Studies were becoming more involved in teaching online visual literacy, assigning website design and construction while at the same time encouraging their students to experiment with embodied on-line representations. By 2002, Dànielle DeVoss and Cynthia Selfe’s study of ten women at Michigan Technological University who designed and published personal web pages found the women more able than Hawisher and Sullivan’s subjects to consciously “compose against the grain of the modernist-inspired narrative of the unified subject and to author new postmodern identities, comprising multiple, even conflicting, selves” (p. 35). DeVoss, who directs the Professional Writing program at Michigan State University, had a faculty web page that, like the pages discussed by Hawisher and Sullivan, followed a departmental template. However she playfully subverted the conventional view of what an academic body should look like—serious, composed, “institutional”—by inserting an overexposed photograph of herself in which she peeks in from the lower left corner of the frame. In addition, DeVoss had her own professional web pages that departed from the institutional format.

DeVoss redesigns her pages often. In the version available in early 2011, the opening screen shows a horizontal strip of film containing four “frames”—selected from among photographs, cartoons, graphic designs, drawings, text, movie stills, and more—some “serious,” some playful, some irreverent. These groups of four are randomly generated from a database of over 50 choices, each representing in some way her personal and professional interests; each time visitors come to the site, they see a different “snapshot” of DeVoss’ online persona. Clicking

on the image takes the visitor to her index page, which re-iterates the filmstrip design at the top, but substitutes a photo of DeVoss in one frame, leaves the other three blank, and superimposes her full name—danielle nicole devoss—in a rounded lower-case font over the top. The listing of hours, contact information, and links to curriculum vitae, biography, multimedia work, courses, and places follows the lower-case convention.

Searching more deeply within the site, visitors discover that DeVoss uses each of her pages to perform a different embodiment of her professional persona. On her biography page, the conventional textual format (“Danielle Nicole DeVoss’ research interests include . . .”) is again subverted by the image, this time a mock-up of her imaginary “MSU Rhetoric and Writing Trading Card.” The entry page to her course on web authoring consists of multiple digitally manipulated versions of the ubiquitous “HELLO! My name is” adhesive nametag (Figure 3.26), suggesting the multiplicity of identity on the Web as well as the tensions inherent in her position as a feminist professor. Her other course sites reflect a similarly personal rhetorical approach to images, typeface, color, and overall design.

DeVoss works artfully back and forth between the conventions and expectations of professional design as articulated in the texts in her profession and the primarily visual tactics she uses to resist and undermine the authority of those conventions. As a result, her website functions as a technology of gender through which her pedagogical performance disrupts the unified, homogeneous, institutional template by creating multiple visual and verbal representations, and these representations frankly acknowledge her material embodiment as a woman professor in control of her technological space, an example of Balsamo’s “more real than real” techno-body. In addition, her high profile in Digital Media



3.26 Dànielle DeVoss, splash page image from her course web pages for Introduction to Web Authoring, 2005. Used with permission.

Studies as a presenter at conferences and oft-cited author in the field confirm that it is possible to be a successful scholar and teacher despite performing identities and pedagogies that push back at conventional academic discourses.

Is the growing practice of asking students to design and construct an exponentially increasing range of digital multimedia an indication that principles which value embodied performances of multiplicity and heterogeneity are gradually permeating composition programs and other academic spaces? Is DeVoss’s website, where she confidently represents both her self and her work visually and verbally in a multi-textured and layered design that is both personal and professional, a signal that academics feel more supported in constructing complex pedagogical performances online? One indication that the answer to these questions is “Yes,” would be evidence that the texts being used in rhetoric and composition classrooms to teach typography and design for web pages value these principles of multiple, heterogeneous, embodied representation. Unfortunately, this is not yet the case.



▲ 3.27 Graphic of planned troop surge in Afghanistan, *TIME* magazine, December 14, 2009. This is an example of what Edward Tufte calls “small multiples.” Extraneous information is purged, leaving text, color, space, shape (figures with guns), and proportion (1 figure = 1,000 people) to tell the story.



← 3.28 Thirty of the 930 U.S. troops who have died in Afghanistan as of December 11, 2009, from the *Washington Post* Faces of the Fallen Project. These photos represent part of the “extraneous” information that is necessary for a full and fair representation of one effect of sending soldiers to war.

Envisioning Information

The texts that are invoked as guides for new media design in the academy should, above all, be rhetorical. That is, they should be attentive to audience, to purpose, and to the specific material exigencies of time and place. They should also affirm that design, or form, is not something that is “done” to content *ex post facto*; rather form and content work together, and must be designed together, as integral to the development of a multimodal scholarly performance. Unfortunately several of the texts most commonly cited for design advice show just the opposite: rather than embracing more situated, embodied approaches to design that encourage lively, heterogeneous pedagogical performances, these texts insist on a presumptively universal “view from nowhere” perspective on visual argument and design that often explicitly bars embodied display. The books by information designer Edward Tufte (1990, 2006) and graphics designer and typographer Robin Williams (2005, 2008) appear frequently on reading lists and in bibliographies for courses and articles on visual rhetoric and design. Both offer guidelines for the visual display of information—words and images—that are either disembodied, or embodied in a form that assumes an audience of “average” (read white, middle class) consumers.

Information design guru Tufte, noted for his analysis of the data cloud surrounding the Columbia shuttle disaster and his excoriation of Microsoft’s presentation software in *The Cognitive Style of Powerpoint*, is professor emeritus at Yale and the self-published author of four texts on the display of quantitative information. It is not my intention here to lay the blame solely at Tufte’s feet for gender and other inequities that result from the continuing insistence in many venues, both corporate and academic, on design principles that reify the disembodied display of information. Many of the arguments and examples he constructs to illustrate the necessity of clear and unambiguous presentation of information make sense. However I would argue that the criteria for choosing the specific character of a visual display of information are

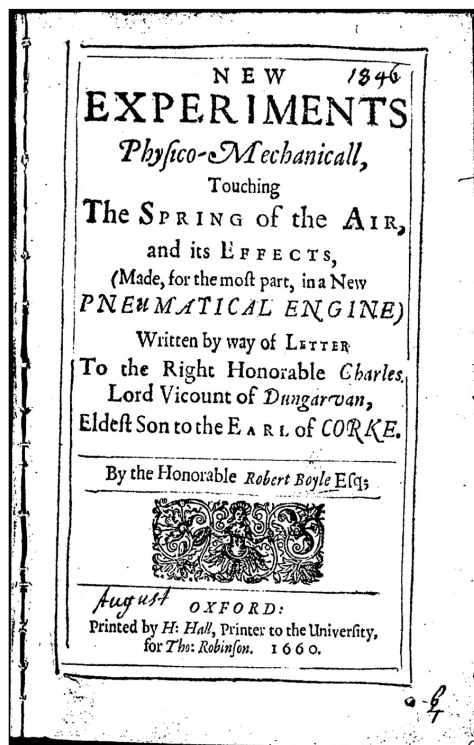
contextual, dependent on the needs and purpose of the particular argument that the information is called upon to support. But according to Tufte (1990), “principles of information design are universal—like mathematics—and are not tied to unique features of a particular language or culture” (p. 10). Visual representations of information (charts, graphs, tables, etc.), he argues, should be stripped of all that is not *logos*. He is particularly exercised by what he terms “chartjunk,” elements of data presentation that are “merely” decorative or ornamental. Effective design strategies, by “giving the focus over to data rather than data-containers . . . are transparent and self-effacing in character. Designs so good they are invisible. Too many data presentations, alas, seek to attract and divert attention by means of display apparatus and ornament” (p. 33). He offers many examples in which he claims that, because the data is obscured by its presentation, the information meant to be communicated is neither clear nor effective. Another “grave sin of information design” Tufte identifies is “Pridefully Obvious Presentation” (p. 16). His example is the orrery—a mechanical device conceived to demonstrate the movements of the planets and their satellites around the sun—a device so complex, according to Tufte, that the audience focuses more on the ingenuity of the maker than on the information about planetary motion that the orrery is designed to convey. But surely the orrery represents a different magnitude of information, one that actually benefits from the complexity of the machine (inviting comparison to the mechanisms that turn the planets), and from the element of wonder-induced play that both explains and fails to explain (scale, for instance) how the solar system actually works. Its purpose is to engage the imagination, not to interpret the precise data needed to know whether it is safe to launch a space shuttle.

While Tufte occasionally acknowledges the value of embodied representation (e.g. the terrifying engraving of slaves crammed into the hold of the *Vigilante* [2006, pp. 22-23]), his fault still lies in his determination to strip data display of any sign of its maker or of the individuals whose material circumstances might be represented in the data, to present disembodied information as if it were the product of a universal “view from nowhere.” Donna Haraway (1997) investigates the problem of abstracting information from its maker and context in her discussion of Robert Boyle’s seventeenth-century scientific investigations (p. 23-39). It was Boyle’s habit to invite members of the Royal Society to observe his experiments with the air pump. At these “public” gatherings (which were in fact open only to the all-male membership of the Society), members participated as “modest witnesses” to the results of the experiments. A larger audience of “virtual” witnesses was then addressed through written reports of the experimental results. These three sites—of the physical experiment, of the social community of the witnesses, and of the written report—together constitute the birth of the scientific method as the source of “objective” understanding. The motto of the Royal Society, “*Nullius in Verba*,” or “Take the word of no man,” reinforces this sense that knowledge comes from dispassionate observation of external reality rather than through the imprimatur of religious or royal authority, as had previously been the case. By means of this material, textual, and conceptual apparatus, Boyle established the parameters of what could count as scientific knowledge.

But two groups are missing in this narrative of “modest witnesses” who merely observed and then reported on the natural phenomenon of the effects of a vacuum on a ringing bell or a burning candle—or a bird. Neither the presence nor the labor of the men who sweated below the

3.29 Robert Boyle, Title page of *New Experiments Physico-Mechanicall, Touching The Spring of the Air*, 1660.

According to the cover, Boyle's work on the air pump (Pneumatical Engine) was dedicated to Charles, Viscount of Dungarvan and son of the Earl of Corke, who would have provided financial support for Boyle's experiments. While women found it difficult to participate in men's science, one entry point was through patronage. For example, Queen Sophia of Denmark supported the astronomical experiments of Tycho Brahe. ↓



floor as they pumped the bellows that produced the vacuum was acknowledged. In addition, women of the station of Boyle and his male contemporaries were excluded because Boyle deliberately scheduled demonstrations late in the evening, when it was inappropriate for women to be out and about. Although records indicate that women were occasionally present (and the men who pumped the bellows always were), they were not permitted to join the Royal Society and were never listed as witnesses. Haraway identifies this new masculine virtue of modest witnessing as a crucial epistemological move in the production of “self-invisible, transparent” male individuals whose “reports would not be polluted by the body” (p. 32). In contrast to this male modesty of the mind, women’s physical and epistemological modesty was of the body. They were rarely present at the scene of knowledge-making and, if present, could not participate by officially “witnessing” the experiment. Thus Boyle’s air pump, like film and medical imaging today, functioned as a technology of gender and class, producing a discourse of immateriality that conserved gender inequities and created the grounds for the exclusion of women from “the experimental way of life” (p. 28).

Tufte’s interest in visual explanations grew out of his profession as a political economist, which may color his views on data presentation; nevertheless, I believe that he is mistaken to argue that the material evidence of the individuals who create and are affected by the graphs and charts and timetables he values must be made invisible. Those who uncritically accept Tufte’s approach to information design as the only, or best, approach to all design problems are also mistaken. If a Tufte aesthetic can be located, it is an aesthetic of economy and reserve. But aesthetics are cultural constructs. Tufte’s claims for universality are misplaced, and mask a predilection for rational, transparent, disembodied access to information that best serves the needs of a corporate or consumer culture which benefits from masking its self-interest.

In its review of Tufte’s *The Visual Display of Quantitative Information* (1983), the *Boston Globe* described the book as “a visual Strunk and White” (dj). But that’s the problem. Listen to Strunk and White (2000) on “needless words”: “Vigorous writing is concise. A sentence should contain no unnecessary words, a paragraph no unnecessary sentences, for the same reason that a drawing should have no unnecessary lines and a machine no unnecessary parts” (p. 23). Sometimes, quantitative information has an essential qualitative dimension, and amplification, accumulation, and *ekphrasis* are the tropes we most need to see.



Design for Non-Designers

Whereas Tufte focuses on charts, graphs, tables, and maps to develop guidelines for the visual display of complex information, Williams offers up principles for the overall design of documents and web pages. She is the prolific author of best-selling books on graphic and web design, including *The Non-Designer's Design Book* (2008). Currently in its third edition, it is one of the most widely popular and uncritically cited books on design and typographic principles, and it is used by many writing instructors who include visual design and production in their assignments. Her audience, states the book's preface, is the "visual novice," the clerk, church secretary, or teacher who doesn't have "the time or interest to study design" (p. 10), yet who wishes to create brochures or bulletins or websites.

Williams' principles are based on a set of four interconnected design elements—Contrast, Repetition, Alignment, and Proximity. Simply stated (and they can be simply stated), and reproduced on the following page as they appear in her text, these are the rules for effective design:



3.30 Amish crib quilt (Triangles), Kalona, IA, ca. 1930. Collection of Faith and Stephen Brown.

In her discussion of interface design in *The Non-Designer's Web Book*, Williams recommends a hierarchical structure that resembles the hierarchical plan of many an organization and academic essay. Easy and predictable. But what would be the experience of building and navigating a multimodal digital environment that looked like a quilt? Imagine for a moment that the border of this Amish quilt is the entry point, and each triangle represents an image, a block of text, a sound, a video, or an animation. Step into the quilt at any point, absorb what you find there, move in any of three directions to the next triangle, and so on, stitching together a web of associations and connections. What kinds of reading and composing subjects might be produced?

Contrast

The idea behind contrast is to avoid elements on the page that are merely *similar*. If elements (type, color, size, line thickness, shape, space, etc.) are not the *same*, then make them **very different**. Contrast is often the most important visual attraction on a page—it’s what makes a reader look at the page in the first place.

Repetition

Repeat visual elements of the design throughout the piece. You can repeat colors, shapes, textures, spatial relationships, line thicknesses, fonts, sizes, graphic concepts, etc. This develops the organization and strengthens the unity.

Alignment

Nothing should be placed on the page arbitrarily. Every element should have some visual connection with another element on the page. This creates a clean, sophisticated, fresh look.

Proximity

Items relating to each other should be grouped close together. When several items are in close proximity to each other, they become one visual unit rather than several separate units. This helps organize information, reduces clutter, and gives the reader a clear structure. (p. 13)

There is nothing intrinsically “wrong” or “evil” about these design principles, nor with the print and digital documents that are designed according to the principles. They meet the minimal needs of the audience of novices that she identifies. However these rules radically oversimplify the design process, reducing it to a set of do’s and don’ts

that entirely disregard rhetorical concerns of audience, purpose, and context. If Tufte is the Strunk and White of visual design, then Williams’ advice is the design equivalent of the five-paragraph theme, and seriously inadequate for thinking about design in an academic setting as an integral component of complex rhetorical argument.

Why would academics, who can think about and analyze the content of images in sophisticated rhetorical ways, so happily embrace such an oversimplified, arhetorical set of standards? Perhaps for the same reason they have rarely thought to question the visual design of the traditional academic essay. We have become so accustomed to the form of the essay that it has become transparent, and we can no longer see how its visual design constrains our students’ performances. The arrangement of the words on the page, the structure of the sentences, the organization of the argument, the acceptable forms of evidence—all constitute a technology of the rational, dispassionate, objective, conservative, immaterial subject of knowledge who has risen above any limitations of gender, race, or class. In speaking of the way we have learned to look through, rather than at, the printed page, Richard Lanham (1993) observed that the alphabet, “[t]horoughly internalized” during childhood, “would become a transparent window into conceptual thought. The shape of the letters, the written surface, was not to be read aesthetically; that would only interfere with purely literate transparency . . . It took a long while for this ideal to be realized in a page of modern print” (p. 4). But Anne Wysocki (1998) has argued compellingly that the white paper, 12-point black type, regular spacing, and otherwise defined formatting of the academic essay impart a rhetoric of order and adherence to convention that we internalize as values authorizing specific kinds of textual and personal performance. She worries about the “subject-making repercussions of this disembodied, pure design” and

asks “how readers might themselves be composed through reading only pages with such rationally arranged, self-effacing elements” (n.p.). Now internalized and embodied in all of us, the alphabet and the printed page—and their material effects on habits of mind and body—have become invisible from constant use.

Williams sees words and images as having certain and specific fixed, locatable, hierarchical relationships that are universal, independent of audience, purpose, or context. Missing from her principles of document design is any sense that these formulae are anything but natural, any sense that they are cultural constructs that encourage in the viewer a particular way of thinking, in this case the thinking that design itself has

no meaning, but merely serves to mediate predictably and transparently between the mind and the world.

She carries this approach through her books on typographic and web design as well. “As a matter of fact, simple is better,” she and John Tollett say in *The Non-Designer’s Web Book* (2005, p. 136), and “There is something so pleasing about being able to view a complete and well-designed page in one window” (p. 140). But where does this pleasure come from? A lack of ambiguity, and a (false) sense of unity and completeness and containment. These are an unacknowledged fifth principle of visual design that Williams communicates on every page of her guides for print, typography, and web design.



3.31 Puzzle jug, eighteenth century. Photograph by Gaius Cornelius. Design is not necessarily, or always, about efficiency, clarity, and ease of use. It can be equally effective as an amusement, a puzzle, or a provocation.

“Hey, Good Looking!”

The popularity of Tufte and Williams as design guides in writing classes that include a visual component is disconcerting, but understandable. Producing visual rhetoric and composing with digital media are relatively new to the field of rhetoric and composition, and Digital Media Studies has only recently become a recognized component of English Studies. When we began incorporating visual and digital assignments into our classes, we looked first for help with production to books already available and accessible, and they have provided a “way in” to design. But we need to find, or to develop for ourselves, guides that recognize the complex rhetoricity of design, and its importance in constructing the meaning of a multimedia artifact. The composing we teach, and the composing we do, are knowledge-making activities, as much about the journey as the destination. Instead of design principles that privilege transparency and homogeneity and speed, that reify the dominant visual discourses of corporate and commercial culture, we need content and design principles that force us to take into account the multiplicities and ambiguities and inescapably visual materiality of our thinking and working lives.

Following the warnings given by Christina Haas (1996), Selfe (1999b), and others about the perils of not paying attention to how and what and why technology enters our lives and classrooms, we should reject discourses of immateriality that ask us to erase our embodied selves from our work, and we should take on all the roles necessary to develop convincing, principled, pedagogical performances in digitally mediated environments. While we may already have resisted and/or rejected the tendency to conflate the masculine perspective with the human and the commercial perspective with the universal *in theory*, we must now take the next step toward affirming social, cultural, sexual, and racial differences, and addressing the inequities they entail, by recuperating visual embodiment as a positive and valued form of representation and argument *in practice*. This may mean creating our own exemplary new media texts as pedagogy and scholarship (e.g. Wysocki, “A Bookling Monument,” 2002); writing our own design guides or using alternatives to Tufte and Williams that challenge standards of uniformity and transparency (Alex White, *The Elements of Graphic Design*, 2002; Timothy Samara, *Making and Breaking the Grid*, 2002; Ellen Lupton and Jennifer Phillip, *Graphic Design: The New Basics*,

2008); publishing scholarship that enacts an ethical, rhetorical *techné* of digital multimedia; and learning and teaching the hardware and software necessary to implement these goals. The consequences of *not* doing so are disheartening.

Our first task should be to subvert the widely-held mistrust of the visual in academic discourse by insisting that the material world cannot be reduced to language, that visual representations, including the visual components of words on a page or bars in a graph, contain meaning beyond mere data. Looking at anatomical drawings, medical photographs, and academic web pages, we have seen that even images whose primary purpose is intended to be simply informational communicate extended meanings contained in their historical, social, and cultural contexts. Claiming that pedagogical images in particular do not, or should not, contain cultural constructions of gender, race, class, and other embodied differences that are imbricated in the values and standards of the context of their display disenfranchises those who are misrepresented or not represented at all by or in such images.

A frank acknowledgement that all visual representations, including alphabetic texts, are culturally constructed, and furthermore that it is neither possible nor desirable to extract the visual from the sensorium of meaning that surrounds us, frees us to consider, with DeVoss, Wysocki, and others, what kinds of embodied pedagogical performances might be possible in interactive digital media, including websites, course pages, Flash and video presentations, and other forms of multimedia. Our sense of embodiment is inextricably entangled with current socio-cultural constructions of the body. Individuals and groups working with computers and new media cannot help but be influenced by what it means to be embodied as a materially raced, classed, and gendered “technological body.”

Part of the process of re-presenting the visual as a legitimate form of argument and embodied representation in new media requires reframing the issue. Claims that trace the image/text binary and mistrust of the visual back through the Enlightenment to Plato are positing a seamless narrative where none exists. While images can deceive, their power to do so will only be enhanced by refusing to look, refusing to engage with, understand, and employ their complex meanings in principled pedagogical performances. Images have been used positively, often for pedagogical reasons, at many points between Plato and the present. Instances over time of images being employed, not merely for decoration but as vital discursive elements that would not *mean* the same if replaced by text, include illuminated manuscripts, church windows, and needlework samplers. This is not to say that these images are innocent, or that they do not also carry in them marks of cultural practices and ideologies. (But of course words are not innocent either.) Yet it does suggest that there have been times when images, including images of (gasp!) men and women, have not been fraught with such anxiety as they are today.

In her artful examination of practices of looking, Stafford (1996) decries “the marginalization of imagery of all kinds in our society as an intellectual form of communication” (p. 124) as vision has increasingly become identified solely with superficial gaping, a “radical prying apart of deep and shallow looking” (p. 192). She calls for a return to “good looking,” attending to visual objects as they were viewed in both eighteenth-century parlors and scientific laboratories—each possessing “a unique capacity to teach, to uncover the relation of known parts to an unknown whole” (p. 12); she remarks that most people had a clear understanding that, while some images were merely illustrative or decorative, others functioned as “an untranslatable constructive form



↑ 3.32 Joseph Wright of Derby, *A Philosopher Lecturing on the Orrery* (detail), 1766. The candle in this painting serves not only as the Sun at the center of the orrery's solar system, but also as the source of the dramatic lighting which illuminates the natural philosopher, his note-taker, and the acutely attentive faces of the wonder-struck boys. Wright painted other such demonstrations, including those of air pumps and alchemical flasks; in each, scientific technology is at the center, illuminating the fascinated onlookers (with one exception: in *An Experiment on a Bird in an Air Pump*, a woman looks away from the dying bird). [Click image to see more examples.](#)

of cognition” (p. 27). Eighteenth-century viewers would not have had Tufte’s problem with the “Pridefully Obvious Presentation” of the orrery; they would have both appreciated the information about the working of the solar system that it conveyed *and* celebrated the ingenuity of the device itself.

Reframing the conversations in our field to signify images and interactive digital media as intellectual means of communication, and composing and designing with digital technologies as intellectual work, are tasks we have just begun, and they require that we represent ourselves and our work in multiple ways. Perhaps women and other under-represented groups have an advantage here, as they have long inhabited a space that is both inside and outside the dominant academic discourses. But those of us who teach with technology are all cyborgs, Haraway’s “fusion of the organic and the technical forged into particular, historical, cultural practices” (1997, p. 51). The slipperiness of distinctions between biology and physics (cellular nuclei do mechanical work; computers “think”) suggests that the body constructs and is constructed by technology, that all bodies are technological, and that the techno-body, the Cyborg, stands as a boundary object belonging to both organic/natural and technological/cultural realms. We all occupy multiple subjectivities as we shift back and forth between our students and our screens, moving “inside and outside current power structures, knowing when to work with and when to work against an established hierarchy” (Gruber, 2003, p. 164); but we are not infinitely plastic—we are constrained by our “ideologies and . . . need for agency in a world that often frowns on agency” (p. 173). This strategic positionality enacts a fragmented subjectivity that, like the cyborg, is sometimes more human, sometimes more machine, but always embodied.

When Haraway first conceived of the cyborg, she imagined it as ungendered, capable of reproducing itself like an amoeba or a fern. In later discussions, she argued for it as a site of feminist practice, a location “in the belly of the monster, in a techno-strategic discourse” (Penley and Ross, 1991, p. 6). Locating this discourse in a matrix or web formed by strands of nature and culture further unhinges the space semantically. The fluidity of both the matrix and the cyborg anticipate multiple possibilities for the scholarly digital performances of the ambiguously personified technological body.