Virtualpolitik

An Electronic History of Government Media-Making in a Time of War, Scandal, Disaster, Miscommunication, and Mistakes

Elizabeth Losh
“You don’t need a computer to do computer science.”

These words sound paradoxical, but first-year computer science students often hear this truism as they sit in their introductory classes. The dictum is meant to serve as a reminder that they will be studying discrete math, formal languages, data structures, or number theory, as well as computer hardware or software. The saying seems contradictory, but it makes a simple point: computer scientists frequently study algorithms, not computers. Without a computer terminal or electricity or a high-speed connection, a curious individual can still learn the fundamentals of creating code, managing information processing, and facilitating networked communication.

So perhaps one could also begin this chapter with this phrase: “You don’t always need a computer to do computer rhetoric.” Yet many who purportedly study the rhetoric of digital discourse focus almost exclusively on the technological apparatus, so that a conventional view of the subject directs attention to the mechanical responses of the computer to input rather than the theories behind the design and continuing evolution of digital media and networked systems. Specialists in “computers and composition” or “computers and writing” debate about MOOs and MUDs, blogs and wikis, but too rarely consider the epistemological implications of contemporary information science for networked, digital communication, which may operate with some fundamentally different assumptions about systems of signification than do natural language models. In other words, in the standard model of digital rhetoric, literary theory is applied to technological phenomena without considering how technological theories could conversely elucidate new media texts.

What do I mean by “digital rhetoric”? For the purposes of this discussion, I am going to focus on four different definitions of digital rhetoric:

1. The conventions of new digital genres that are used for everyday discourse, as well as for special occasions, in average people’s lives.
2. Public rhetoric, often in the form of political messages from government institutions, which is represented or recorded through digital technology and disseminated via electronic distributed networks.
3. The emerging scholarly discipline concerned with the rhetorical interpretation of computer-generated media as objects of study.
4. Mathematical theories of communication from the field of information science, many of which attempt to quantify the amount of uncertainty in a given linguistic exchange or the likely paths through which messages travel.

With each definition, it may seem that I am getting further away from the common experiences of average citizens, but I hope to show that this new ideology about information (definition four) actually feeds back to influence the norms and generic conventions of everyday digital discourse (definition one). In other words, typical lay users have attitudes about information that may be changed by expert discourses, because many on the Internet participate in cultural conversations in which they share ideas about tactics for effective communication through new technological interfaces, ones that indirectly rely on interpretations—and sometimes misinterpretations—of theoretical components gleaned from specialized fields.

**Rhetorical Rules for New Digital Genres**

At the level of everyday experience, there are many occasions for rhetorical expression through electronic means. I may be an academic researcher, but in my personal interactions as a member of my local community, a typical week might include several situations similar to digital events in the lives of my neighbors. I might contest a parking ticket using an online form, e-mail my minister, notify my health club that there is a mistake on their website, check one son’s grades electronically, correct spelling on the other son’s PowerPoint presentation homework, make retouching suggestions about family photos, or look for a good local coffee shop recommended by a blog or online newspaper. To participate in these activities I have to be familiar with a lot of different rules that apply to specific kinds of verbal and visual interactions. There are also subgenres to consider—I certainly could not send the same kind of impersonal, businesslike message to my family’s minister that I might send to the parking office.

Earlier new media theorists argued that these new genres, particularly digital documents connected by electronic links as hypertext, obviated many of the distinctions between author and reader, sender and receiver. For example, Nancy Kaplan’s work on reader-centered hypertext imagines an empowered audience for digital media by extrapolating from the experiences of conventional readers who can still “provide their own scriptures, their own rules, in light of which they are sometimes content to dwell within that other set of rules, imaginary or not, that the texts they are reading supply.”¹ As Kaplan acknowledges, her argument owes much to the ideas of the late French theorist and Jesuit philosopher Michel de Certeau, who claimed that ordinary
activities, such as walking, cooking, dwelling, talking, and reading, are inherently rhetorical, even though they are ostensibly carried out by nonproducers. For example, in *The Practice of Everyday Life*, de Certeau points out “homologies between practical ruses and rhetorical movements,” and his reading of reading itself indicates that set rules of propriety are constantly being disrupted by the “ways of operating” in the “ensemble of practices” of impertinent readers and other users of cultural systems of meaning.

Kaplan argues that traditional readers “do not literally write anything anywhere and leave no traces that we know of, not even (as far as we can tell) in their own brains.” That is to say, a fastidious user of a print artifact, who wants to leave it pristine for the next user or for posterity and does not mark in the book’s margins or dog-ear its pages, is an anonymous visitor to the text who does not change the printed codex in any significant way. In this case, the connection between interpretation and rhetoric may be a stealthy one. Unlike a reader acting appropriately and nondestructively with the pages of a traditional book, digital readers now leave many traces in their online viewing habits. Obviously, I alter digital files when I suggest changes to the health club’s website, my child’s PowerPoint, or the family photos. The cut, copy, and paste features of many computer applications transform the once definitive versions of individual texts into something more editable. Counters and cookies may also keep track of my visits to the online database of grades or the city parking office website. And regardless of whether or not I choose to leave a comment on the blogs I read, just clicking on the author’s profile to verify the credibility of the source may include me in a recorded number of page views that will be displayed for the next visitor. Even as a consumer, I am producing rhetorical relics.

At this level, merely interacting with electronic code or files does not seem to explicitly require that I assume a central role as a political speaker in an obviously public sphere, even though all of these virtual places represent physical sites for communal, communicative action: the city hall, the church, the school, the gymnasium, the childhood home that may center a geographically dispersed extended family, and even the neighborhood coffee house or restaurant. At times, out on the periphery, I may not seem to be actively engaged in persuasion or argument, even when I am most absorbed in completing transactions. For example, perhaps I accept my punishment from the state obediently and pay my parking ticket in full with my credit card number. In what sense is this rhetoric?

It could be asserted that some forms of rhetoric do not require an attempt to influence others at all. Among rhetoricians, the narrow Aristotelian definition that focuses on persuasion is disputed, even by some traditionalists. After all, in classical rhetoric, the critical Greek term *kairos* merely describes an opportunity or season for speaking; perhaps an exact time or a key moment for addressing a pertinent issue about war and peace, legislation, or budgetary planning. According to the Liddell and Scott Greek
Lexicon, the word also carries the sense of “due measure, proportion, fitness” in the original language. Although “rhetoric” is often equated with persuasive discourse, the term can also be defined to focus on the timing of a given message and how the language of that message may be shaped by specific contexts and opportunities for social change, which are located in time and space, as well as politics and culture. Rather than privilege the intentions of the speaker, a given utterance might also be responding to an opportunity created by a specific occasion. In describing everyday activities as “rhetorical,” de Certeau also draws on the notions of kairos discussed by Vernant and Détienne and the importance of “manipulations of language relative to occasions.”

The birth of a child or the death of a friend are occasions that can be marked by the creation of a digital HTML-coded artifact that can be experienced via a personal computer or other device connected to the Internet. This ceremonial rhetoric has been traditionally communicated and commemorated through other means, such as engraved announcements or newspaper obituaries. Now static webpages, attachments to e-mail, postings to blogs, and even activity on social network sites may be part of the communal welcoming and mourning rituals of social groups. Discrete, one-time events that take place in the real world may be subsequently recorded and represented in discourses and linguistic exchanges that take place in the virtual one.

These commemorative webpages often incorporate photographs or other visual ephemera associated with the person whose life is being celebrated. Multiple portraits can be used to establish that the person has occupied a wide variety of identity positions. For example, even little James Oakley (figure 2.1) is depicted as a coddled younger brother, restaurant patron, and model for fashionable baby clothes. Like nineteenth-century commonplace books or friendship albums, the dominant sentiment of filiation may be modulated by other authorial and editorial interests. His parents, who appear as “Admin” on James’ blog, have included a blogroll that supplies a “Mystery Link” taking visitors to the White House website; above this are links that lead to online news.

As simple-to-launch dynamic sites allow more do-it-yourselfers to create web presences, the path to content on such sites can change and, of course, degenerate, sometimes leading to entirely noncommunicative code. Links can become broken, connections to the source files for photographs can be ruptured, and domain names can expire so that the perceivable rhetorical connections tying the visitor to the newborn are fragmented and that particular history in his or her social community is lost.

Like gravesites that are not properly maintained, this deterioration can also be true of the websites of the deceased. In this In Memoriam digital genre, it is important to note that there are many subgenres that reflect disparate ideologies about class, gender, and ethnicity. Victims of crime may be commemorated to locate a perpetrator or to
solidify bonds with a given support group. The death of a gang member who has died violently may be recorded in a “memory garden” or other designated location for that particular population on a gang website; these forms of commemoration may seek to end gang violence through positive community-based alternatives, but they may also glorify the drama of live-fast-die-young antiheroes. Although users’ accounts are often closed or frozen at death, social network sites can serve as places for mourning and remembrance, so that the digital activities of the deceased are connected and contiguous with those of his or her survivors. On commercial commemorative services such as Legacy.com, online comments may be moderated by live minders to preserve decorum.

When my friend Valerie Margolis died after years with cancer, her parents held a memorial service at a Northern California park in a community center, where champagne was consumed in honor of the deceased, eulogistic speeches were read, and mourners filed by sign boards and tables covered with Valerie’s photos, awards, mementos, and writings in which much of the text was handwritten. However, the face-to-face commemoration also had a digital dimension. The service, like many weddings, was videotaped by several people, who could post the clips on the Internet. Some guests brought laptops and showed digital slideshows of Valerie from Burning Man and other contemporary countercultural happenings. Another mourner present at the service, Jenny Cool, had made a website shortly after Valerie’s death, featuring
photographs of her in life organized into themed galleries, such as “Faces & Friends,” “New Hampshire Fun,” and “Valerie Plays Olympia” (figure 2.2). After the service, friends contributed photographs for the category of “Burning Man 2004.” Like many In Memoriam websites, this webpage eschews use of traditional mourning motifs or black, the distinctive color associated with death. Instead, this website occupies itself with gestures to other aesthetics; for example, a digitally altered image of the departed is inserted into Manet’s famed painting about sexual and racial power, Olympia.

In short, these pages do much more than convey data related to events in history, such as the factual details of the birth or the death of an individual. These websites also serve significant rhetorical purposes that may elevate the creator/sender of the message, endorse particular forms of social association or cultural organization, and even promulgate particular ideologies, sometimes through references or allusions with explicit or implicit political or social import, which words like “Burning Man,” “New Hampshire,” and “The White House” might suggest, thus bringing some visitors who are strangers, in terms of face-to-face interactions, to the community celebrating the person’s life. These newcomers may be brought to these sites entirely by chance, thanks to a scrupulous but literal-minded search engine.

The occasions for rhetoric are not limited to rituals or ceremonies in the contemporary world, because sensitivity to kairos could also be important for other time-contingent public events, such as a vote on a proposition, election of an officeholder, or opportunity to present evidence at a trial or lawsuit. In the era of classical Athens, Aristotle’s Rhetoric categorized three types of rhetorical situation that still exist today: (1) epideictic rhetoric for ceremonial occasions of praise and blame, (2) deliberative rhetoric intended for legislative assemblies grappling with questions of right and wrong, and 3) forensic rhetoric addressing questions of the just and unjust in a court of law. Contemporary citizens may find themselves using similar rhetorical appeals when making webpages for political causes or legal cases.

In the summer of 2006, several people from the same college organization sent e-mails around to the larger alumni group to raise money for a friend’s legal defense fund, a person who had been accused of arson and insurance fraud and was standing trial with a former employer. This social group also established a website to enable supporters of the accused to donate money for his defense via a PayPal account. The website they established used photographs of the accused, eulogistic descriptions of his childhood and early career, and several arguments for the improbability of the crime, given his character and lack of economic motive (figure 2.3).

One of the e-mails directing readers to the defense fund site indicates a blurring of rhetorical genres in contemporary digital discourse. The authors of this e-mail write about the epideictic/ceremonial dimension suggested by the upcoming forensic/legal rhetoric of the trial: “We tend to think of holiday gifts, wedding registries, and baby shower presents as symbolic gestures of friendship or support. But the stakes are
Figure 2.2
Valerie photos. Courtesy of Jennifer Cool.
suddenly so much higher when a friend is falsely accused of a serious crime. Please help Dan ensure his freedom by making a contribution to this important cause.”

In addition, the group promulgated their appeals through an electronic mailing list that included dozens of other members of the college organization. Thus, more than one electronic forum can be used to digitally defend a person’s character. In this case, ultimately the accused was acquitted.

To have basic competence in digital rhetoric also means to understand the conventions of many new digital genres: these include e-mail, instant messages, static websites, blogs, wikis, webtoons, electronic slideshows or PowerPoint presentations, desktop publications, altered digital photographs, web-engineered video, machinima films, videogames, virtual reality simulations, cave installations, databases, online archives, and many other specific and socially regulated forms of digital text that are composed as files of electronic code.

There is also a plethora of mixed genres, which are ever more rapidly evolving thanks to more sophisticated software, beefier computers, faster network connections, and a richer ecology of media literacy practices, with a general public now able to exploit these technological developments and compose complicated transmedia artifacts or historical pastiches. A blogger may insert a home movie into his or her dynamic text. A Flash webtoon may pay homage to an interactive online game. A 3-D
videogame may use a skin taken from a digitally altered image of a public personality, perhaps one derived from an online news service with remnants of the traditional print page. Mapping subgenres can be difficult because they are rarely constituted as neat, mutually exclusive subsets. For example, in classifying videogames many permutations can be made by combining components of dyads like online/offline, first-person/third-person, or single-player/multiplayer.

Even traditional oratory becomes a form of database when recordings of speeches become the raw materials for mash-ups and information visualizations. For example, mash-up videos on sites such as YouTube frequently draw attention to particular forms of repetition, or they recombine syntactical elements to reveal supposed implicit content. When Republican presidential contender Rudolph Giuliani objected to fellow candidate Joe Biden’s characterization of his presidential campaign message as “a noun, a verb and 9/11,” anti-Giuliani users of digital tools promptly created a number of audio and video compositions consisting of nothing but instances of Giuliani inserting the event into a speech. Former President George W. Bush’s State of the Union addresses were frequently remixed, so that one classic version begins with the president of the United States saying, “During these past few weeks, I’ve been trained by Al Qaeda, and I’m weak and materialistic.” Websites also show speeches by American public figures as information trees in which expressions in particular parts of speech are presented as interchangeable.

Some Internet genres reach wide audiences, others are public but site-specific, and still others are intended to be conveyed privately only to single recipients. Some genres conventionally have one author; others have many. Some genres are associated with little or no investment of time, labor, or fiscal resources; others may be extremely expensive to produce. However, the advent of user-friendly tools or amateur-accessible instructions, allowing computer users to create their own content or modify the content of others, can change a given cost-benefit or individual-corporate ratio very rapidly, so that even the manpower requirements and price of production of a once prohibitively expensive videogame could be reduced to the level of personal computing, if the code is made public or back-end programming tasks are given a familiar graphical user interface. Several of these digital genres have stimulated so much media discussion in contemporary civic life that I have devoted entire chapters in this book to them. Of course, many digital genres are still evolving, emerging, and merging, so that likely my tentative list will soon include even more neologisms.

At some level, of course, it is all just code running on machines, but it is important to recognize that some genres become strongly associated with the presence of particular moral values (or their absence) or specific postures about practical worth to society (or cost). What makes the general public think that making a first-person-shooter is intrinsically more morally suspect than word processing a document? What makes the population think that video file sharing is intrinsically worse than
exchanging electronic mail? The answers have to do with ideas about language and knowledge that shape the nation’s legislative agenda as well. Rhetoric, as Aristotle points out, entails precisely those discursive practices that assign positive and negative characteristics. Studying digital rhetoric involves examining ideologies about concepts like “freedom” or “honesty” that are in turn shaped by factors like national, linguistic, theological, or disciplinary identity; societal attitudes about ownership and authorship; and cultural categories of gender, race, sexuality, and class. As Richard Lanham has argued, “in practice the computer often turns out to be a rhetorical device as well as a logical one.”

So, how do people learn appropriate rhetorical practices in these new digital genres? Critics are only beginning to ask this question and attempt to answer it. The traditional pedagogical model of error correction is certainly one approach. For example, a software design class might devote a considerable portion of instruction to techniques for debugging. Teachers and fellow students might endeavor to “break” vulnerable systems or designs. Professional or lay instructors might also provide specific forms of corrective feedback on individual projects, an activity requiring a common metalanguage shared by both teacher and learner. In the corporate setting, the work of error correction may be done by outside consultants who specialize in particular types of interface design or back-end programming, sometimes to capitalize on pre-existing industrial segmentation, and sometimes merely to save face.

Some of these often self-appointed experts choose to create model texts, which are designed to be imitated. Occasionally these models reach the commercial marketplace and become at least temporarily adopted as standards. These “correct” templates may take the form of materials in style guides, such as the venerable Yale Web Style Guide, or they may be distributed online by manufacturers of software applications, such as Microsoft or Adobe.

In the field of written composition, this method of imitation has generally been viewed in a more favorable light in recent years. Despite the fact that throughout much of the twentieth century imitation was regarded as far inferior to invention, many who teach composition and communication now look for continuity with classical and medieval mimetic traditions and express skepticism about uncritically embracing the ideologies of Romanticism and Modernism, which glorify originality.

However, some forms of rhetorical instruction use inverse models of digital style. For example, humorous “antistyle” templates aim to instruct by showing the effects of violating certain authorship taboos to would-be makers of digital content. A computer science professor who teaches technical writing at my university developed a PowerPoint-style slide with numerous “mistakes.” Students are asked to identify the problems with the sample slide both in traditional style (errors in grammar, spelling, and usage) and in digital composition (typography, layout, and design).
What’s Wrong
With this slide?

List as many things as you can that could be improved on this slide. It was designed to embody as many flaws as possible, of various different kinds. For each flaw, try to list (a) the improvement you suggest and (b) a general principle of design that, if followed, would allow someone to avoid the flaw. Consider:

- design,
- typography,
- layout,
- content,
- grammar,
- usage,
- spelling,

and anything else that harms the effectiveness of the message.

Figure 2.4
What’s wrong with this slide? Courtesy of David Kay.
Another model of don’ts for the digital rhetorician is showcased by the self-described “World’s Worst Website,” in which jarring colors, chaotic animations, blaring music, flashing text, unnecessary frames, copious advertisements, and outdated information collectively obscure any actual message other than sensory overload. Although this webpage is obviously satiric in its hyperbolic visual and auditory presentation, the site’s home page provides discrete chunks of specific advice about web design choices and links to information about web style on other sites.

However, the error-correction model has largely fallen out of favor with compositionists, particularly since the publication of Mina Shaughnessy’s *Errors and Expectations* in 1977, which argued that many intrusive practices of correction were typically based upon subjective judgments and often futile interventions in longstanding behavior patterns. Research showed that even expert teachers disagreed about the precise location, relative severity, and actual category of individual errors, even though they might all agree that Standard Written English should be the academic idiom of choice. Instead of focusing on error correction, specialists in rhetoric and composition turned their disciplinary attentions to recognizing multiple literacies and validating a wider range of identity positions in activities of authorship. Many also became critical of dominant ideologies about language that reinforced existing and often unjust power structures, which excluded certain social actors from participation in communicative exchanges.
Greater attention to the importance of audience also shaped many of these discussions in the rhetorical disciplinary community. Given this interest in audience, the imagined reader and the norms of reading communities become central. For example, in my own relatively modest experiments with web design in my professional capacity as a writing program director of a large undergraduate course, consideration of my audience shaped design decisions reached with other administrators, artists, programmers, and information technology managers. As higher education master planner Clark Kerr once pointed out, the university really is a “multiversity” composed of niche populations, and often these disparate cohorts have very different interests and goals. Consequently, there may be very different forms of official program website in a university setting, each adapted to a particular group of stakeholders.

During a two-year period, I developed two very different websites for the same undergraduate course, despite working with relatively similar design teams. One page was designed to appeal to prospective students, their parents, alumni, and potential donors by showing how former freshmen looked back on their experiences in the course; another was designed for course instructors, an audience with specialized expert knowledge from many different departments, disciplines, and fields, who needed time-sensitive and easily modified materials for classroom teaching of first-year students.

The page for the general audience of students and parents was graphics-intensive and programmed in Flash with relatively little explanatory text on the home page. Users navigated from the opening screen by clicking on the smiling color photographs of former students. When the photo was activated, the images of the other students faded out into the dark background, while animated text appeared with the individual student’s name, major, and advice for potential students on academic research. A link could take the visitor to an HTML copy of the student’s prize-winning research paper (figure 2.6).

The page for the audience of instructors was more programming-intensive and required specialized labor to build search features and decide on metadata protocols. It opened with a large amount of explanatory text, which described the features of the database and the rationale for the pedagogical file-sharing project. Graphics were limited to one logo that would identify the project and another to recognize the support of the site’s institutional funders. Individual and group photos of the project team members were buried deeper in the layers of the site (figure 2.7).

Although both websites were created for the same undergraduate course and housed on the same server for the electronic educational environment, they followed fundamentally different rules or principles of web design. Of course, rhetoricians since the Greeks have acknowledged this central position of audience in rhetorical production, but digital dissemination now makes it possible to deliver even more targeted appeals than one would deliver when speaking to an interested crowd of heterogeneous
spectators. Given the importance of addressing potential audiences by “narrowcasting” on the World Wide Web and appealing to the sometimes idiosyncratic needs of very specific addressees, an error-correction model would often not be helpful to a web designer who must choose the appropriate combination of image, text, technology, and programming.

Composition specialists have suggested several approaches in lieu of the error-correction model. This proactive attitude about the pedagogy of digital rhetoric was first formulated in the discipline known as either “Computers and Composition” or “Computers and Writing,” after the prominent journal launched in 1983 and the conference launched in 1982. Many of the individuals who were active in this upstart movement were early adopters who had knowledge of literary and linguistic computing; often they had relatively little stature in the university because of their interest
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in collaborative projects and their tendency to produce online rather than print publications. It would take almost two decades for these groups’ work to be fully integrated into the professional associations affiliated with rhetorical studies. A significant turning point in the recognition of this pedagogical community took place in February 2004, when the Conference on College Composition and Communication (CCCC) issued an official statement declaring the importance of rhetorical instruction specifically for computer-mediated environments. The CCCC position statement included an assertion that the focus of “writing instruction is expanding: the curriculum of composition is widening to include not one but two literacies: a literacy of print and a literacy of the screen. In addition, work in one medium is used to enhance learning in the other.”

To provide for the education of students in practical digital rhetoric, Gail Hawisher and Charles Moran advocated an apprenticeship model that used the case of e-mail to demonstrate the value of this approach in preparing students for the businesslike

Figure 2.7
SPIIDER: Shared Pedagogical Initiative: A Database of Electronic Resources.

SPIDER Web Sites
39A/A+ Student Site
39B Student Site
39C Student Site
HCC Student Site
39A/A+ Instructor Site*
39B Instructor Site*
39C Instructor Site*
HCC Instructor Site*
Virtual Research Project
Discovery Tasks
Writing Information for Transfer Students
*Password required. Email spider@uci.edu for access.

Based in UC Irvine’s Composition Program, Humanities Core Course, and Library, with partners at UC Santa Barbara and UC Riverside, SPIDER is funded by the University of California’s Center for Teaching, Learning, and Technology, and by both local grants and cost-sharing from the participating campuses. SPIDER aims to improve writing and research instruction and thereby to improve undergraduates’ writing and research skills. SPIDER provides a publicly-available online database of modular, searchable, peer-reviewed learning materials that instructors can integrate easily into their own courses and classroom activities. SPIDER thereby functions like a virtual pedagogical seminar, providing high-quality instructional materials and an intellectual community for the graduate students, lecturers, and professors who assign writing and research in both composition and “content” courses.

NEW Project Evaluation for Year One
Principal Investigators: Michael Clark & John Hollowell
The SPIDER team: Photographs and Biographies
Chapter 2

rhetoric they would eventually be producing as working professionals. Hawisher and Moran observed that the discursive practices of e-mail were fundamentally unlike those manifested in word processing programs or hypertext editing applications, although students who were careful revisers of such polished offline and online documents were the darlings of composition researchers at this time. In contrast, they characterized e-mail writers as generally overinvested in rapid response or underinvested in careful deliberation, and thus these writers often violated the rhetorical norms of professional or academic communication. In other words, such composers of written texts understood the importance of *kairos* in the sense of “exact or critical time, season, opportunity,” but disregarded its other—but equally important—meaning of “due measure, proportion, fitness.” Of course, in their analysis of how appropriateness could be sacrificed in the interest of time-sensitivity, Hawisher and Moran would forecast many of the issues involved with blogging, messages for social network sites, and other pseudojournalistic or diaristic chronologically oriented genres. In an apprenticeship model, writers new to electronic communication would learn by watching the composition and revision processes of more experienced writers of e-mail and other electronic genres and gradually advance to crafting compositions of their own in imitation of the carefully nuanced messages of their rhetorical masters.

Unfortunately, this model paid relatively little attention to so-called recreational computing. Furthermore, as Kathleen Yancey and Michael Spooner would later argue, the norms of academic communication can be comparatively atypical, even for the professional world. Spooner and Yancey claimed that classroom e-mail and listservs were a peculiar and limited case, which could not serve as the model for digital literacy practices in the world of work and leisure. They suggested another paradigm, which was derived from their reading of Russian literary critic of the novel and carnivalesque Mikhail Bakhtin, which I have called the *dialogic model*. (Spooner and Yancey’s meta-essay explaining this model actually takes the form of a two-sided dialogue on the page.) Instead of accepting the idea that students should learn through imitation of the media objects produced by more rhetorically expert superiors, Spooner and Yancey posit that students should be engaged in answering their actual correspondents rather than responding to their instructors in artificial, monological, discourse situations. In their minds, e-mail bears little relation to a bounded artifact because it can assume a number of polymorphous forms.

In some cases, it looks like a business letter. Sometimes it’s a bulletin, sometimes a broadside, sometimes a joke, a memo, a graffiti, a book. In many one-to-one postings, email shows all the features of the lovers’ correspondence you used to read (or did you write it?) every day.

For Spooner and Yancey, e-mail never entirely takes the static form of a single, homogeneous genre, because the rhetorical production of digital rhetoric expresses the heteroglossia of its composition, which takes place in a rhetorical environment of
competing voices, overlapping texts, and mixed genres that refuse definitive synthesis. Spooner and Yancey also deny the possibility of “netiquette,” upon which Hawisher and Moran’s argument rests. They make analogies to telephone conversations or channel surfing instead of traditional written compositions. Unfortunately, this approach would make acceptable composing practices extremely difficult to teach, because it assumes there is no “single rhetorical situation,” “coherent set of formal conventions,” or common set of “communicative purposes” to shape a given digital message.44

In contrast, rhetoricians with a somewhat anthropological bent might see a more explicable set of narratives and rituals governing computer-mediated communication and community behavior. The gift economy of the Internet—which revolves around the paradigm of exchange—seems to present an opportunity for such an analysis, especially since users literally trade digital files, programs, and documents through informal online networks. Ellen Strenski has argued that e-mail functions as a form of communally recognized “epistolary gift exchange” rather than the unstructured, netiquette-less, free-form discussion posited by Spooner and Yancey.45 In her analysis of this gift economy, Strenski is careful not to idealize these noncommercial linguistic transactions, which are based on social conventions about membership and power constructions of periphery and center. By marshalling the arguments of Marcel Mauss, Claude Lévi-Strauss, Jacques Derrida, and Lewis Hyde, for whom the gift is not always a positive commodity, Strenski argues that like other epistolary genres, e-mail “impels response” and thus may actually coerce the reader into a gift exchange.

According to the pedagogical logic of the gift-exchange model, students learn what is appropriate by participating in actual exchanges, but those exchanges are still governed by the norms of the relevant society or subculture. For example, they learn that a short e-mail usually merits a short e-mail back, and a longer e-mail deserves a longer one, and that it is especially rude not to reciprocate at all, particularly if the sender is a member of the community who is close or important in lived experiences. One group’s netiquette may be different from another’s, but they both have a sense of the concept. Students learn by gauging how to respond to e-mails from many levels of the social hierarchy. Peers, superiors, and subordinates can give the sender more cues and clues if his or her message elicits a response in turn. Although e-mail may seem like a relatively narrow case, many rhetorical practices associated with code sharing and file sharing more generally could be interpreted through the apprenticeship, dialectic, and gift-exchange models.46

As digital media continue to evolve from hypertext to hypermedia and have come to include vivid first-person imagery and even entire computer-generated immersive environments, rhetorically oriented pedagogues have begun to theorize about these newer sites for language practices and about the significance of assuming avatar identities or situating rhetorical experiences spatially. Ironically, classical rhetoric
focuses on public oratory, the appearance and projection of the speaker, and delivery in indoor or outdoor spaces may be remarkably relevant in these contexts. In the massively multiuser online role-playing environment *Second Life*, for example, presidential candidates, United Nations spokespersons, corporate executives, digital rights activists, and cultural commentators have given speeches to virtual crowds who have assembled in virtual fora to hear them.

Janet Murray has discussed how the concept of cyberspace has shaped cultural production and how fictions from popular culture, such as the holodeck on *Star Trek*, may serve as prototypes for new stages for storytelling. For Murray, computer programming functions as a form of performance capable of generating engrossing cyberdramas that deeply resonate with profound human symbolic needs for expression, immersion, agency, and transformation. Like the rhetorician Steven Mailloux, who uses another *Star Trek* episode to make a point about the cultural function of shared stories, Murray argues that such narratives serve as “interpretations of the world” and that interpersonal communication takes place through shared stories. In her pedagogical work with her own students, Murray uses what I would characterize as a storytelling model, in which the synthesis and transmission of narratives constitutes almost the entire situation of teaching and learning. Rather than see her students as her obedient apprentices, she characterizes them as incipient masters and praises them as “half hacker, half bard.” Unlike traditional oral-formulaic storytelling, the formulaic character of these narratives is constituted as a function of computer code.

Many digital sophists are excited by the possibility of freeing rhetorical instruction from the industrial model of the twentieth-century writing classroom in which education is commodified, intellectual labor is relegated to piecework, and ideologies about efficiency and productivity promote neither. By using a situated learning model, James Paul Gee has argued that skills acquired through digital literacy experiences in videogames can be transferred to traditional literacy contexts because the games offer a secure learning environment in which risk-taking, experimentation, and challenging authority are all permissible activities, and yet players can rapidly experience the rewards of participating in expert discourses.

Of course, digital literacy is far from a primary literacy for many citizens, who may be particularly reluctant to engage in videogame play, file sharing, or rapid exchanges of abbreviated information. Yet basic digital rhetorical competence using mobile telephones and personal computers equipped with proprietary software has become critical to our increasingly globalized and technologically mediated society. Those who lack rhetorical skills in digital media can pay a steep price. They may suffer from economic and professional disadvantages. They may lose social capital, since their lack of proficiency may inhibit their choices of friends and romantic partners in their generational cohort. The digitally disadvantaged may suffer from incomplete cultural citizenship without any sense of the touchstone narratives of public life. They may
mistrust civic institutions that have adopted an e-government approach to delivering the services of the state. Their problem-solving capacities may be limited by never getting beyond remedial tool literacy in the information literacy hierarchy, and it is likely that they can only envy the recognition associated with publication, authorship, and acknowledged authority that provides gratification to many digital creators.

Manuel Castells has argued that despite rapid amelioration of some inequities in participation in electronic communication, the “digital divide” is being reinscribed along several axes. In particular, he notes that there is a divide between the “interacting” and the “interacted” in which the former “select their multidimensional circuits of communication,” and the latter are “provided with a restricted number of prepackaged choices.”

For example, as 3-D computer-generated models, animations, simulations, and games become increasingly important in public rhetoric, the issues surrounding productive digital literacy become more complex, particularly now that sophisticated software for photorealistic rendering is important for much more than special effects in movies. Sensibilities in the public sphere are shaped by scientific reconstructions in paleontology, archeology, or microbiology, by reenactments of news stories, by models and animations in courtroom exhibits, by architectural renderings that promote particular visions for urban development, by computer-generated imagery in advertising and corporate promotion, and by a wide range of political imaginaries in which digital experts depict everything from trucks carrying weapons of mass destruction to equipment landing safely on distant planets. Because this complicated software for 3-D design has a relatively steep learning curve, members of the general public rarely understand how this compellingly realistic imagery is created and manipulated.

Even if the population gets beyond rudimentary receptive literacy and finally reaches fully functional productive literacy, their earlier rhetorical mistakes may haunt them. Impulsively posted messages by youthful senders can have remarkably irreversible consequences, as several recent cases demonstrate. For example, danah boyd has described how a MySpace page with gang-affiliated material almost compromised a high school student’s college admission, and Tracy Mitrano tells the story of a college senior who was turned down for employment by a prestigious firm on the grounds of his compromising Facebook page.

Public Rhetoric through Electronic Means

The digital literacy of policy makers and other political actors is also not without consequences, particularly when rank-and-file citizens in the electorate discover that disasters and scandals may have involved inappropriate or unprofessional forms of communication by government representatives or their bureaucratic agents. Remnants of digital intercourse may seem to be anonymously authored or fleetingly ephemeral...
and thus trivial to the interests of the state, and yet these forms of communication can carry distinctive electronic signatures and addresses, or they can be saved and cached indefinitely. Because of the intimacy of the user’s experience as either sender or receiver (inside the supposed privacy of home computing or the conventionally agreed-upon social bubble around other forms of ubiquitous contact and interchange via cell phones or hand-held devices) contemporary cyborgs might entertain the false perception that they are not creating documents that can be quickly disseminated and made public or leaving legible traces as readers in texts created by others, both of which can lead to unwelcome media revelations.

The recent political history of electronic media in the public eye has been one of many dramatic rhetorical gaffes. A Florida congressman sends sexually explicit instant messages to underage pages in the House, and a national magazine immediately suggests that it could cost the ruling political party dominance in the midterm elections. A Virginia senator appears to use a racial epithet against a member of his challenger’s team documenting a fundraising event with a digital videocamera; footage of the incident is posted on a popular video-sharing site, and ultimately he loses the race and his party’s majority in the U.S. Senate. A California governor is recorded uttering ethnic stereotypes about people from Latin America, and the MP3 files demonstrating his cultural insensitivity are posted on an official website, where they can be accessed by his opponent’s campaign. A White House policy report on a “National Strategy for Victory” in Iraq, released as a portable document format (PDF) file, is revealed to have an embarrassing and previously undisclosed author, who turns out to be an expert in public relations rather than in the appropriate field of military strategy. A Federal Emergency Management Agency (FEMA) head coordinating the response to Hurricane Katrina in 2005 is exposed as self-absorbed when e-mails about his excessive attention to his fashion choices in preparation for press conferences come to light. As former Secretary of Defense Donald Rumsfeld said, “People are running around with digital cameras and taking these unbelievable photographs and passing them off, against the law, to the media, to our surprise, when they had not even arrived in the Pentagon.”

Given the high stakes and high visibility of this new form of public rhetoric, it is no wonder that policy makers have increasingly turned to professional advertising agencies to design authorized government messages intended to provide a professional package for their constituents. To understand these novel alliances between public officials and the persuasive agents of corporate consumer commerce, it is useful to look at four specific twenty-first-century fields in government rhetoric, which I will explain in further detail: (1) institutional branding, (2) public diplomacy, (3) social marketing, and (4) risk communication.

Institutional branding is the practice of closely associating corporate symbolic constructs, often created by marketers, with information about civic institutions, as
though public organizations were analogous to manufacturers of a distinctive commodity product distributed in a competitive marketplace. These symbolic constructs can include brand names, logos, trademarks, graphic identities, or distinctive verbal formulas. The aim of branding campaigns is to increase brand recognition, which is a measure of public familiarity with a given brand, and brand equity, or the set of related positive cognitive associations or fulfilling emotional responses, which may be tied to personal gratification, abstract social values, or both.

The idea of branding a government institution like a corporate product created a scandal among professional diplomats and officials in nongovernmental agencies when Undersecretary of State for Public Diplomacy and former advertising executive Charlotte Beers began to use the language of Madison Avenue to describe soft power campaigns for the hearts and minds of foreign nationals and ethnic minorities opposed to U.S. policy. Journalists were amazed that Beers was comparing Islam to McDonald’s during a press conference a few months after the September 11 attacks and that she discussed the branding of America so matter-of-factly. As Beers said, “‘poster man’—well, you know, in a way, our poster people are President Bush and Secretary Powell, whom I think are pretty inspiring symbols of the brand, the United States.”

Despite the public ridicule of Beers and her eventual exit from office, her basic approach in branding national governments and their official agencies to make them seem distinctive, competitive, and desirable has become the norm. Considering that some branding experts, such as Wally Olins, have traced the practice of corporate identity back to regalia for informal social associations, visual iconography for religious orders, and finally patriotic symbols for nation-states, one could argue that the practice of branding has simply come full circle. Yet this form of public rhetoric does more than merely amplify official messages. The effects of these campaigns often extend beyond would-be laudable goals like providing more vivid information design to the electorate or creating more usable maps and indexes to assist citizens navigating through bureaucracies. Branding, as critics of globalization and corporate capitalism have pointed out, can also be a cultural strategy of economic, social, and political control, in which the rhetoric ultimately serves the purposes of deception by an illusory narrowing of choices or by furthering obfuscation.

This policy shift toward institutional branding also risks limiting political dissent; at the same time, it fundamentally redefines what is meant by public property held in common. Although the content of government reports and public records has been traditionally free of copyright restrictions, these new branding strategies have placed certain limitations on how intellectual property assigned to the government is managed. For example, the National Security Agency has ostentatiously trademarked several mascots on its children’s site. This might sound like a relatively trivial example of a proprietary exercise of power, but trademark protections have already been used in other cases to justify limiting parody, thus stifling constitutionally protected
sardonic critiques from political activists and dissenters. Of course, some of the graphic identity of federal institutions, such as the seal of the president, have been protected for a considerable length of time. Nonetheless, during recent years, the number of institutions whose seals are protected under the relevant federal law (Title 18, Section 713 in the U.S. Code), along with the number of protected types of symbolic construct, has certainly expanded.68

First Amendment protections for parody, particularly political parody, have traditionally been affirmed by the Supreme Court.69 Yet the laws concerning federal seals have been used to justify cracking down on parodic content that imitates institutional online publications. For example, on December 12, 2002, the office of the vice president sent a content removal request to the parody website whitehouse.org regarding images and obviously satirical information about Lynne Cheney, the vice president’s wife. The letter cited the Title 18 federal law as justification.70

Thus, as images themselves are increasingly recognized as capable of serving as arguments,71 sometimes without any recourse to verbal texts at all, this taboo on using certain images has consequences for public discourse more generally. For example, although skeptic David Fleming has asserted that visual images cannot serve as arguments because a picture in itself “makes no claim that can be contested, doubted, or improved upon by others,”72 digital technology has changed this assumed lack of interactivity. The software program Photoshop, which makes the alteration of images by would-be critics easier for nonspecialists to undertake, would seem to contradict the basis of Fleming’s claim. With Photoshop, the ideological messages of state-sanctioned images can be refined and debated. This digital tinkering interferes with the media consumption model of perfect replication for mass audiences upon which the culture industry depends.73

The use of the government’s brand identity by others, particularly in cases of digital images used on parody websites, has been closely followed by federal officials, who have made intellectual property claims against several political opponents on the basis of an even broader definition of institutional brand identity that encompasses content other than official seals and traditional insignia. On August 14, 2006, the Department of Homeland Security dispatched a letter to the director of biology for the Federation of American Scientists (FAS) informing the often politically oppositional group that they were in violation of trademark and patent law.74 The FAS had created a parody website, “Really Ready,” which was critical of the rhetorical presentation of the government’s official Ready.gov site. Thus, both sites claimed to provide useful advice to citizens about the proper measures to take in preparation for possible terrorism. The federal official from the Department of Homeland Security asserted that the agency had filed service mark applications for several “Ready”-related graphics. Although the notice explicitly acknowledged a more generous free speech prerogative for critics of the administration such as the FAS than the 2002 letter from Cheney’s office did, its
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wording also made more expansive claims, by covering previously unregulated forms of visual public rhetoric and arguing for exclusive rights of ownership of the intellectual property as a government agency endowed with a new form of power different from eminent domain. The letter included the assertion that “we recognize that your organization has every right to advise the public about being prepared in the event of an emergency, we also have to service the American public in the best manner we can, including protecting the Government’s intellectual property if that will prevent any future confusion in that regard.”

In this official letter, the legal counsel representing Homeland Security is not making a claim to conventional terrain for use in the public interest, such as a national park, deep water port, or any historically significant, environmentally sensitive, or strategically essential territory. Nor is he arguing for requisitioning housing, supplies, or energy or construction resources on the basis of state interest. This is not property for the use of the general public being acquired; this is property that the public is explicitly forbidden to use. There are really two arguments at work here: (1) the government needs this virtual property in order to most efficiently convey emergency information to its citizens, and (2) the government has a legal right to this property on entirely different grounds, because it has registered the marks with another federal agency and thus hold a superior intellectual property claim.

The principles behind protecting the government’s intellectual property can be explained using the framework of rhetorician Richard Lanham’s book The Economics of Attention: Style and Substance in the Age of Information. Ironically, Lanham claims, real, tangible property has become less valued in an economy oriented around the worth of otherwise scarce attention, rather than of goods or real estate. By the law of supply and demand, virtual property for which you can “count eyeballs” has become the real currency standard, and the culture’s commerce has come to depend on accumulation of this form of capital.

Clearly, the “government’s property” doesn’t mean the same thing as “the commons,” which has become a powerful utopian metaphor in the digital age. David Bollier’s 2002 essay “Reclaiming the Commons” asserts that the once collectively owned resources of the nation are “rapidly being enclosed: privatized, traded in the market, and abused.” Bollier claims that recent trademark and copyright legislation—particularly the Digital Millennium Copyright Act, the Copyright Term Extension Act, and the Trademark Anti-Dilution Act—is a manifestation of this trend and complains that legislators have ignored its potentially disastrous effects. He compares such laws to the Enclosure Acts of eighteenth-century England, which fenced off village commons land for active cultivation. Although these laws were justified by state-sanctioned policies of efficiency, they resulted in disproportionate benefits to privileged private interests and the further exclusion of the underclass from public resources. In arguing for an “Information Commons,” Bollier takes issue with the thesis of Garrett Hardin’s
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1968 “The Tragedy of the Commons,” which uses the grazing metaphor quite differently. Gold War-era Hardin takes a Hobbesian view that focuses on the consequences of excessive liberty and the impossibility of sharing resources without abuses. His essay is leery of claims to both the inevitable dominance of the state’s coercive power and the sustainability of an administrative culture capable of just, equitable, and rational distribution. In contrast, Bollier complains of a lack of liberty in public life, rather than its excess. Branding is a special case of the manifestation of this control.

In principle, public diplomacy sounds less hegemonic and more committed to grass-roots organizing than do the strategies of institutional branding. If conventional diplomacy might be described as elite diplomacy or the communication between government leaders or top officials, public diplomacy is characterized by the techniques by which a country (or a bloc of countries organized into a military, political, or economic organization) communicates with citizens in other political states or societies. However, because these rhetorical strategies are often specifically formulated to bypass a given country’s leadership structure, they may be justifiably perceived as a form of covert force or “soft power.” Furthermore, corporate branding experts like Wally Olins have participated in articulating a new public diplomacy strategy for American international policy that attempts to capitalize on the rhetoric of the digital age. Websites, online video, advertisements, news broadcasts and print stories, film and television programs, cartoons, comics, music, and even videogames can be used by public diplomacy specialists in an attempt to sway opinion abroad. Like traditional advertising, sometimes these campaigns involve additional merchandising and product tie-ins.

Those in the academy who are affiliated with public diplomacy efforts often define their task in terms of fostering mutual cultural understanding or promoting peace by avoiding escalation to armed conflict. At the Center on Public Diplomacy at the University of Southern California, public diplomacy is defined as “understanding, informing, and influencing foreign audiences.” Persuasion is relegated to a tertiary position, and the emphasis is on “dialogue, rather than a sales pitch.” USC argues that “public diplomacy must be seen as a two-way street. It involves not only shaping the message(s) that a country wishes to present abroad, but also analyzing and understanding the ways that the message is interpreted by diverse societies and developing the tools of listening and conversation as well as the tools of persuasion.” In contrast, the Edward R. Murrow Center of Public Diplomacy at Tufts University provides a definition of “public diplomacy” in which there is more acknowledgment of the importance of “influence” and the fact that campaigns may be addressing “private” rather than public political actors. John Rendon, chair of the Rendon Group, which has handled public diplomacy efforts in Iraq after the U.S. occupation, puts his role leading his company more baldly: “I am a person who uses communications to meet public policy or corporate objectives . . . I am an Information Warrior and a perception manager.”
Rendon’s mixed metaphors of corporate management and military might are telling. Some of the actual government contractors who have handled the implementation of public diplomacy campaigns on the ground in recent years have been closely tied to traditional forms of aggressive influence peddling and rely on their prior professional expertise, which is often derived from advertising and marketing, political campaigning, military service or mercenary work, or intelligence gathering turned to sponsoring disinformation efforts. The Lincoln Group was particularly shaken by scandal when it was revealed that it was planting stories in Iraqi newspapers, spending considerable sums of money on bribery, and expending some of its human resources on tasks related to physical intimidation of the populace.87

Furthermore, many social scientists are suspicious of the long-term success of programs designed to whet consumer appetites rather that foster intercultural communication. Anthony Pratkanis, a proponent of social influence theory, has been highly critical of the information war in Iraq, which was led by government contractors first from the Lincoln Group and then the Rendon Group. Pratkanis has argued that although it may not have been as disastrous as the actual war fought with bombs and bullets, the campaign for Iraqi hearts and minds was doomed by poor administrative planning. By drawing on the lessons of social influence from World War II, Pratkanis argues that more recent models from advertising, public relations, and soft power will inevitably fail to effect long-term social influence, because these approaches don't indicate any engagement with analyzing the enemy’s purpose and the related history of successful and unsuccessful messages in a given rhetorical context.88 Pratkanis’s authority rests on the fact that much of his fieldwork has been grounded in the everyday experiences of citizens engaged in linguistic exchanges and social psychology experiments, with a long track record of published research and demonstrable cause-and-effect relationships. This includes research on domestic populations, such as U.S. con men communicating with the elderly.89 Despite his background in social psychology, Pratkanis orients his critique of slick public diplomacy by harkening back to what he considers to be the still-true lessons of classical rhetoric, often by quoting Aristotle and citing the beliefs of the Sophists.90

Social marketing is the application of commercial marketing concepts and techniques to achieve social change by affecting the behavior or social practices of a target population to get them to lead healthier and more productive lives, obey generally agreed-on social rules, and hopefully cost the state less by saving money otherwise spent on medical care, social services, and incarceration.91 Social marketing as such officially began in 1972 with the publication of an article in the Journal of Marketing by traditional marketing experts Philip Kotler and Gerald Zaltman, who used their corporate experiences to codify strategies for “social change campaigns.” Another published authority on social marketing, Alan R. Andreasen, notes that unlike “social
advertising,” which merely promotes the image of a desired behavior change by emphasizing how social goods function as “products,” social marketing adopts a systemic approach that also considers how to best adjust the “price” of the behavior change and make the “place” of behavior change more accessible to the consumer. Social marketers often differentiate themselves from the earlier “social hygiene” or “mental hygiene” movements of the Cold War era, which were closely tied to educational films. For contemporary social marketers, schools are no longer the primary institutions for indoctrination. Thus contemporary social marketing can reach a number of different niche audiences and use the more flexible model of the mobile commodity that may circulate. Even social norms can be treated as exchangeable goods, ironically—in one case—at an academic research center funded by a corporation synonymous with the alcohol industry. Many political progressives have lauded the organized efforts of social marketers, which are directed by one group (the change agent) to persuade others (the target adopters) to accept, modify, or abandon certain ideas, attitudes, practices or behavior. Universities have also granted social marketing status as an academic discipline, although, like public diplomacy, social marketing has also struggled with establishing lasting professional organizations.

Social marketing campaigns are also sometimes closely associated with cause marketing campaigns, which encourage donations of money or labor to support research, treatment, or other social services. Critics of cause marketing complain that issues like breast cancer or other matters of public health and safety may be consigned to private charity or “selfish giving” initiatives that encourage consumers to buy goods from private sector vendors who are sponsors and who give a fraction of the proceeds to the cause. The irony is that the same advertising industry brought the United States many of the social ills that social marketing strives to ameliorate. After all, smoking and obesity may be seen as medical conditions at least partially caused by stoking the desires for immediate gratification and conspicuous consumption, which the advertising industry feeds. Yet now advertisers are charged with fixing ills that they helped create. Furthermore, because social marketing explicitly uses the same tools and techniques as traditional advertising, this form of public rhetoric can risk reinforcing repressive norms about gender, sexuality, class, race, and age and increasing the amplitude of messages about conformity and homogenization already bombarding the public through mainstream media channels. Although some social marketing campaigns make use of an “adbusters” approach, which uses the tools of the advertising industry to subvert its ideology, many others reinforce existing prejudices. For example, recent campaigns about HIV, smoking, obesity, and skin cancer have all emphasized the importance of maintaining superficial physical attractiveness and even sex appeal as grounds for behavior change, often in lieu of a presenting more serious risks to the public, such as long-term illness or early mortality.
From the standpoint of public rhetoric, it would seem to be preferable to foster open discussion, deliberation, debate, consensus, and compromise rather than deploy implicit, un debated, and even unconscious appeals that may actually intensify existing prejudices through covert means. Moreover, social marketing risks promulgating top-down forms of political organization and sometimes even repressing grassroots opposition to its messages. For example California voters have passed propositions that decriminalize some forms of marijuana possession; at the same time public health campaigns in the state advocate continuing prohibition on medical uses of the drug, despite the fact that the constituents they are targeting already favored greater liberalization at the ballot box. Certainly, social marketers should beware of creating cognitive dissonance, particularly when there is a different emerging consensus at the level of populist initiatives. Finally, the issue here is one of real goods in common as well as virtual ones. Policy makers always must decide how budgets should be apportioned, and the benefits of spending marketing money can be difficult to account for in comparison to concrete goods distributed or services rendered.

At their very worst, because these campaigns depend on the ideology of the competitive capitalist marketplace, social marketing rhetoric may devolve into the same “Brand X versus Brand Y” techniques that present a distorting binary worldview based on either/or logic. Thus even social goods grounded in positive communal values like volunteerism and personal generosity could be presented as being in competition with each other. For example, the 2005 “Blood Saves” campaign, which targeted a young adult demographic, emphasized how much simpler blood donation would be than more idealistic forms of social action, because supposedly really ambitious good deeds inevitably have negative consequences. Television spots show the travails of two do-gooder characters, Julie and Charlie. Charlie wants to stop a labor injustice, but he unintentionally creates environmental pollution; Julie wants to halt environmental pollution, but unfortunately she puts events into motion that cause a labor injustice. The “Why bother to take political initiative?” message is clear, as is the message about limiting personal contributions to society. As Slate critic Seth Stevenson asks, “Since when do charities bash the competition?”

Risk communication involves the transmission of vital information to the civilian population before, during, and after emergencies. Its most important design principle is to forestall panic, distrust, or disregard for the rule of law. As governments have responded to anxieties from the public about the likelihood of another catastrophic terrorist attack or a global flu pandemic, risk communication has received more media attention and more public funding, and risk communicators have pursued opportunities to use distributed digital media, particularly now that news is also transmitted rapidly through channels other than television or radio. At the same time, connections to the advertising and marketing industries have been solidified as government officials attempt to respond effectively to public concerns. Ad agencies such as BBDO
have handled campaigns for the federal government’s risk communication efforts, and
the chairman of the mega-agency Interpublic Group sits on the advisory board of the
Department of Homeland Security.\textsuperscript{104} Although many of these projects are volunteer
efforts, taxpayers could be affected if the firms can deduct their pro bono work.

In 1989, the National Research Council defined risk communication as “an integrative
process of exchange of information and opinions among individuals, groups, and
institutions that often involves multiple messages about the nature of the risk or
expressing concerns, opinions, or reactions to risk messages or to the legal and institu-
tional arrangements for risk management.”\textsuperscript{105} However, risk communication is
directly related to social marketing to the extent that many social marketing cam-
paigns are designed to alert the public that they may be at risk of mortality, illness,
physical danger, or psychic trauma. For example, the first HIV/AIDS campaigns were
designed to explain the difficulty of becoming infected through casual contact, includ-
ing everyday interactions like shaking hands or using a public toilet.\textsuperscript{106}

Risk communication expert Peter Sandman, however, is careful to differentiate
between “public relations” and “stakeholder relations.” For Sandman, the general
public is assumed to be inattentive and credulous, while concerned stakeholders are
willing to devote time to more complicated messages; yet this population is also much
more likely to be skeptical.\textsuperscript{107} In Sandman’s essay “Why Are People Over-Reacting to
Risk?” he suggests that audiences can respond to risk communication messages in a
number of ways.

Roughly two decades ago I suggested dividing the concept of risk into two components. I labeled
the technical side of risk (magnitude times probability) “hazard” and the rest of risk (factors like
control, trust, dread, voluntariness, and responsiveness) “outrage.” People’s response to risk, I
argued, is mostly a response to outrage. So when hazard is high and outrage is low, people under-
react. And when hazard is low and outrage is high, they over-react.\textsuperscript{108}

As Sandman points out, risk communication can increase the level of fear as well
as diminish it. Although fear-based campaigns in social marketing have been criticized
by some, exploiting the psychic energy of fear can be integral to the rhetorical
dynamic of risk communication. After all, Aristotle advised rhetoricians in Book II,
Chapter 5 of his \textit{Rhetoric} that threats to safety always engage the public with an orator’s
message, because “fear makes people inclined to deliberation.” In these situations
when it is advisable that the audience should be frightened, the orator must “make
them realize that they are liable to suffering”\textsuperscript{109} and that negative consequences have
happened to others who were stronger, and are happening—or have happened—to
people like themselves, at the hands of unexpected people, in an unexpected form,
and at an unexpected time.

Unfortunately, sometimes more thought is given to the graphic presentation of risk
communication messages to the general public than those aimed at critical decision
What Is Digital Rhetoric?

In his three-volume encyclopedic series on information design, Edward R. Tufte has argued that many disasters and tragedies could have been avoided with better visual explanations and clearer displays of quantitative and qualitative information to policy makers as well as to the public. In his essay on “Visual and Statistical Thinking: Displays of Evidence for Making Decisions,” he cites as an exemplary model the 1854 work of John Snow, who mapped London’s contaminated wells to represent cholera transmission in a way comprehensible to urban planners. In contrast, National Aeronautics and Space Administration (NASA) engineers presented unclear data, solely in numerical form, which made it difficult to see potential problems with the Challenger space shuttle. When the Columbia space shuttle crashed, Tufte blamed bad information design in a garbled PowerPoint slide. Nonetheless, some risk communication professionals don’t advocate complete information transparency of the kind that is valued in open source communities. Although withholding information often leads to mistrust in the government, dispensing it too freely can sometimes stimulate a panic. The federal government has developed a number of “governance dilemmas,” involving scenarios such as bioterrorism, which are designed to dramatize the difficulty of the balance. Furthermore, to save individuals, people may risk whole populations—for example, by not observing rules on quarantine; on the other hand, to save populations, citizens may self-centeredly disregard threats to the life and health of other individuals.

During the Cold War period, risk communication focused on threats to public safety and the environmental catastrophe that would result from a Soviet nuclear attack. Some of these risk communication efforts came to be ridiculed in retrospect, such as the 1951 “Duck and Cover” campaign aimed at schoolchildren. Thanks to digital media, present-day risk communication campaigns may be lampooned almost immediately, as in the case of the color-coded Threat Advisory System from the Department of Homeland Security. Although Brian Massumi has described this alert system as an abstracted series of cues intended only to “direct bodily responsiveness rather than reproduce a form or transmit definite content” to reinforce “the irrational, self-propelling mode of fear-based collective individuation,” in many ways it functions as a medium rather than a channel. There are now literally hundreds of humorous alternative versions of the ubiquitous graphic of five colored bars, poking fun at the essential oversimplification of risk communication that the original threat alert represents. A feminist peace group, Code Pink, put their name at the bottom of the scale with their pink label and the words “Peace and Harmony” to remind citizens that the desired state of a lack of conflict is not even represented on the chart. A “Democracy Threat Advisory System” showed a register topped by “Martial Law.” A Sesame Street terror alert graphic ranged from an Elmo condition to an Oscar the Grouch. There was even a pro-administration “Liberal Terror Alert” system, which showed photographs of left-wing politicians and pundits. In an attempt to seem to move from risk
communication to more neutral information representation, an article from *Wired*, “One Million Ways to Die,” is illustrated with a graphic showing that the relative risk of dying in a terrorist attack is comparatively quite low.

There are, in fact, digital parodies that mock all four rhetorical tendencies to which I am pointing in the rhetoric of the contemporary state. There is an online video send-up of the social marketing campaign designed to get young people not to make digital copies. There are other online videos that make fun of the public diplomacy efforts of Al Qaeda jihadists to bypass the U.S. ruling government and appeal to average Americans directly. There are images that mock institutional branding efforts. For example, after I wrote in my *Virtualpolitik* blog about the fact that an extensive part of the United States Agency for International Development (USAID) website is devoted to brand identity rather than techniques for ending world hunger and poverty, my colleague Professor Julia Lupton transformed the message underneath the USAID logo, changed its official seal, and then posted it to her own *Design Your Life* blog with the punning title “Brand Aid.” It is worth noting that, in addition to branding, USAID also has expanded its public diplomacy efforts, to which Lupton also alludes with the moniker “Band-Aid Diplomacy.”

At the same time, multinational corporations have become important actors in encouraging government agencies to pursue these four rhetorical strategies to influence the public. Some firms have been involved in many different types of collaboration between Madison Avenue and the Beltway. For example, the public relations firm Allyn & Company has produced private sector advertising for conventional print ads and logos for companies such as Wal-Mart and Coca-Cola; political campaigns for parties and candidates in the United States, Indonesia, and the Bahamas; a public diplomacy campaign on behalf of the government of Mexico aimed at changing U.S. public opinion in favor of building a physical barrier between the two countries to one more amenable to liberalized immigration; and a social marketing campaign to discourage unwed mothers from abandoning their newborn babies in dumpsters and other hazardous locations with a “Baby Moses” spot aired on television.

![Image showing the USAID logo before and after transformation](image)

*Figure 2.8 “Brand Aid” before and after. Courtesy of Julia Lupton.*
Messages can also be designed to encourage stakeholders to express their resistance to these alliances between government agencies and commercial advertisers. There are many parties who resent the cooperation of the state with media consolidation, consumerism, commercialism, or the proprietary ownership of culture. These groups include activists for the creative commons and copyleft movements, bloggers, culture jammers, adbusters, creators of live and virtual political theater, telestreet producers of narrowcast content, smart mobs with cell phones, do-it-yourself (DiY) enthusiasts, open source and homebrew programmers, remix and mash-up artists, and political crowds of all types.¹²⁴

Of course, norms regarding audience participation have ostensibly changed, which is reflected in some of the government’s rhetorical appeals to the public through digital media interfaces. Rather than merely listening passively to presidential oratory, visitors to the White House website are encouraged to engage in online “chat” with government officials¹²⁵ or take a 360-degree panoramic tour of each of the building’s historically important rooms.¹²⁶ While some might complain that highly scripted unit operations are in danger of replacing traditional forms of interactivity with government—such as voting, signing petitions, or walking precincts—there are ways that these functions make the visitor cognizant of the constraints of such stylized simulations and open up the possibility for critique.¹²⁷

Ian Bogost has written specifically about “procedural rhetoric” in interactive electronic media, which he distinguishes from traditional verbal or visual rhetoric and even from forms of rhetoric that merely use computer-mediated communication as a presentation technology, to explain how videogames and other interactive media influence users and present particular ideologies.

I call this new form procedural rhetoric, the art of persuasion through rule-based representations and interactions rather than spoken word, writing, images, or moving pictures. This type of persuasion is tied to the core affordances of the computer: computers run processes, they execute calculations and rule-based symbolic manipulations.¹²⁸

Bogost focuses largely on the case of “persuasive games,” videogames designed to influence players by encouraging them to explore boundaries and other constraints or exploit features created by certain rules of play. He argues that even seemingly recreational videogames can put forward implicit arguments—for example, about the value of public transportation (in Sim City) or the structural factors that contribute to obesity in urban culture (in Grand Theft Auto). In Bogost’s analysis of political games, advertising games, and educational games, he claims that such games may engage players in ways that potentially allow them to read the same algorithms critically and against the grain and thus—through an awareness of a given system’s affordances and limitations—imagine alternative explanations or counternarratives.¹²⁹
Although he doesn’t name it “rhetoric” initially, Bogost introduces the rhetorical possibilities of games in his earlier book *Unit Operations* by pointing out how users experience rules of play and technical constraints and the ways these limiting structures simultaneously facilitate enjoyment and critique. For example, Bogost describes how machinima artist Jim Munroe creates a film of his gameplay with *Grand Theft Auto*, which violates and yet reinscribes many of the rules of the game. In *My Trip to Liberty City*, the player avoids theft and violent confrontations and instead wanders around the urban environment as a Canadian tourist, a mime, and a priest. Instead of drawing a false moral about the ethical superiority of nonviolent behavior in the virtual cityscape, Bogost shows how Munroe’s counternarrative represents a more ambiguous form of rhetorical engagement.

As Bogost notes, governments have developed many videogames for their employees and constituents that cover topics in the public interest from disease control to taxes and budgeting, but the dual function of procedural rhetoric, which naturalizes and denaturalizes specific procedures, extends to other digital genres through which state organizations communicate with their stakeholders. For example, as a member of the teaching faculty of the University of California and thus a worker for a state agency, I was required to complete mandated sexual harassment training, which I could either do in a face-to-face on-campus workshop or from home through an online tutorial. Like most of my colleagues, I chose the remote option.

At the level of verbal and visual rhetoric, I was exposed to argumentative claims related to the definitions, causes, and consequences of sexual harassment and several explanations of the institution’s position on the importance of the subject. The program presented dozens of office sexuality scenarios with a number of possible gender configurations. The answers were very clearly telegraphed to the user, however, and wrong responses were often laughably so. Although trial and error didn’t seem to be punished, it certainly wasn’t encouraged either, because the second-best choice was rarely very tempting. Furthermore, the visual representation of intimate office interactions was very crude because the narratives were illustrated with comics-style graphics.

In clicking on answers in the process of completing the tutorial, I also found myself reading those official verbal and visual claims quite critically. Most of the answers were obvious to me, perhaps because I was already an administrator, but I found their actual obviousness to be extremely ideologically loaded when I looked closely at the individual slides. Why were only women shown wearing inappropriate clothing to work? Why was the female dress code more regulated? Why did the role-playing never present a supervisor (dean, department chair, lab supervisor, or program manager) who was gay or lesbian? Why did homosexuals only appear as actors in the conflict, never as decision makers in the resolution? What did this tell me about the point of view that I was supposed to be adopting and how that point of view was gendered?
I was also aware of a procedural rhetoric at work, which was separate from my analysis of its verbal and visual persuasive appeals. The system was not tabulating “right” and “wrong” answers or checking me periodically with a question to gauge my attention level. The only way it kept score was by showing the total number of minutes passed in my online sessions, the page number I was reading, a progress bar indicating my relative location in the tutorial between the beginning and the end, and a dial with red, yellow, and green segments, so I could be reminded if I was reading too quickly to be properly paced. Of these, the only number that was important for monitoring purposes was the number of minutes total. All that seemed to matter to the computer program was that I complete two hours of online time; I didn’t have to demonstrate competence with any particular minimum fraction of the total material. It was even less rigorous than another form of state-sanctioned timed online instruction, traffic school, a procedural rhetoric with which I, like many Californians, was already familiar.
Naturally, everyone who did the tutorial found themselves wanting to game the system, particularly when the essential cheat code was so simple. Those who finished the whole tutorial correctly and conscientiously told others that they were only punished for reaching the end too early, and were then made to go back and repeat sections until their time was up. Rather than thinking about possible ideological critiques of the system, like the ones with which I found myself absorbed, my colleagues invested their attention elsewhere. Some spent their time on other university work while the online clock was ticking: they graded papers during the tutorial or held telephone conversations on professional business. Others realized that they could just open another web window and take care of e-mail or surf the web.

They were clearly getting a message about the choices the university had made in deciding to deploy this particular form of procedural rhetoric. Even though the organization’s own managers, potentially including the president of the entire ten-campus University of California system himself, might have completed the same online tutorial under similar and thus seemingly democratic conditions, there might be a disquieting implication that those in power were only concerned with taking an arbitrary statistical measure to prove some technical compliance through a gesture of educating employees about laws preventing hostile workplaces. The “cheaters” resisted partly because they may have figured out that the price of limiting potential liability for future litigation was to be exacted from the labor force in the form of additional hours of work, even though all that would be produced would be a relatively empty signifier, particularly without a real assessment of the distance learning program. Those who took the tutorial might have intuited another purpose of the exercise for university administrators: to avoid serious, substantive, structural changes in the conditions of academic labor relating to gender and sexuality.

Of course, the digital rhetoric of the virtual state aims at much wider audiences than its own employees. As a number of recent studies have shown, traffic to government websites has increased almost exponentially. As the Pew Internet & American Life Project pointed out in its report on “The Commons of the Tragedy,” unique visitors to official agency websites jumped dramatically after the attacks of September 11. In anticipation of the needs of these new audiences, many.gov websites undertook dramatic makeovers. For example, “before” and “after” images of the “press conference” section of the FBI website demonstrate how state interests may adjust their visual appeals by using noticeably different layout strategies.

In the earlier version of FBI webstyle, the agency used a design template on their “press release” page that was common among law enforcement and military sites at the time, situating documents against a black background and using sans serif type with 3-D effects, sometimes with a chrome or other metallic finish on the letters. It is important also to note that in 2001 the FBI website was composed of comparatively few pages, many of which suggested the traditional print genre of the wanted poster.
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The banner also featured the FBI government seal, which is proprietary to the U.S. government, although it was largely blocked by type, along with a newspaper with a blurred headline held by a pair of disembodied hands.

In contrast, the version from four years later uses a white background, perhaps to conserve the audience’s printer ink and to conform with the design philosophy of other federal government sites. (The FBI site is used as an exemplar in several sections of the guidelines at http://www.usability.gov/.) The official seal is shown much more clearly as it is no longer obscured by lettering. This webpage also has come to incorporate the American flag, which many government websites have adopted as a horizontal design motif since the sharp rise in displays of nationalism after the terrorist attacks. What is particularly interesting about this particular graphic is that it serves as a metarepresentation, which presents an image within an image in the layout; thus it reiterates the seal, the flag, and the banner lettering in its basic design. As a state-sanctioned rhetorical presentation it establishes its authority multiple times, with no fewer than three official seals on the page and word repetitions including the phrase “press room” itself.

When one sees the actual word “rhetoric” on the website of a government agency or other public institution, the term is almost never endowed with a positive
meaning. The White House website is typical. We are told that “Saddam Hussein’s rhetoric is being removed from Iraqi schoolchildren’s textbooks,” that “old, tired, stale political rhetoric” needs to be resisted for budget planning, that “rhetoric” needs to be brought in line with “our traditions” during the immigration debate, and that “rhetoric” is opposed to “reality” in our dealings with the Korean peninsula.

Ironically, opponents of government policies restricting cultural production around a burgeoning digital culture often distance themselves from the term “rhetoric” as well. For example, in Lawrence Lessig’s *Free Culture*, “rhetoric” indicates that “hard questions” about “balance” are being avoided, that the “rostrum” produces overly “simple” language, and that “great rhetoric” is “wonderfully romantic” and “absurd.” Even those, such as Lisa Nakamura, who question the heterosexual white male biases of supposedly politically oppositional “free culture” ideologies use “rhetoric” dismissively. For example, Nakamura talks disparagingly about “libertarian rhetoric,” the rhetoric of the “global village,” and the “rhetoric of the digital divide.” In other words, the criticisms of rhetoric from Plato’s *Gorgias* seem to be alive and well in the digital age, even if this anti-rhetoric ideology is not sufficient alone to unite those with widely disparate views on other matters of cultural policy.

The search engine on the made-over FBI website also leads back to an early Internet defense of the traditional arts of oratory. A 1996 text file titled “The Four R’s for Police Executives,” by James D. Sewell, explains the value of rhetoric to the “law enforcement executive.” Among other options, Sewell recommends Toastmasters to FBI agents because “skillful oral communication is not so much a product of innate ability as one of desire, training, and practice.” At the same time, another 1996 text file associates rhetoric with extremist groups, using language similar to pronouncements about jihadists that would be made a decade later. In “The Lethal Triad: Understanding the Nature of Isolated Extremist Groups,” Kevin M. Gilmartin asserts that, as time progresses, “the rocking, chanting, rhetoric-espousing individual becomes unable to question either the group’s tenets or its organizational authority structure.”

**Digital Rhetoric as a Field of Study**

In the academy, the value of rhetoric is somewhat more likely to be defended. Today there are faculty appointments advertised for professors of “digital rhetoric” and courses listed in college catalogs on the subject. Yet this particular combination of words is a relatively recent formulation. The genealogy of this specific term can be traced to Richard Lanham and his seminal essay on the subject, “Digital Rhetoric: Theory, Practice, and Property” (1992), which later appeared as “Digital Rhetoric and the Digital Arts” (1993). Lanham’s interest in multimedia goes back to at least 1979, when he created a multimedia video with animated digital lettering for his writing
textbook *Revising Prose*. A few years later, he attended an early SIGGRAPH conference and realized the power of computer-generated imaging technology. By the mid-1980s, he was reading British science writer Jeremy Campbell’s account of information theory, *Grammatical Man: Information, Entropy, Language, and Life*, and in a 1988 keynote address at Duke University, Lanham was imagining how a hypothetical student might be reading a computerized version of *Love’s Labour’s Lost*. During this period Lanham gave several prominent addresses to prestigious academic organizations, such as the Modern Language Association, where members appeared to be reluctant to embrace his enthusiasm for multidisciplinary explorations.

Like his predecessor Marshall McLuhan, Lanham was a crossdisciplinary popularizer who once even attempted to define “digital literacy” in the pages of *Scientific American*. When Lanham published *The Electronic Word: Democracy, Technology, and the Arts*, it also appeared in an electronic “expanded book” version for Macintosh. That version was produced by the University of Chicago Press and inspired by the now-defunct multimedia software publisher The Voyager Company. Reviews of the digital version of Lanham’s text were mixed. Some praised how the “analytical reading and dialogue with the author” was “more efficient” in the electronic form, while others complained that Lanham did not take adequate advantage of the rhetorical opportunities of a digital hypertext. Despite the challenge of working outside the linear academic prose forms that he knew so well, Lanham pursued subsequent collaborations with multimedia software development firms, which included a never-produced volume on *Three Thousand Years of Multimedia* to have been released by Calliope under the direction of Robert Winter and Jay Heifeitz.

Some of the earliest polemics about digital rhetoric were occupied with defensive postures on behalf of the new discipline, many of which involved taking sides in intellectual turf wars within the academy. To understand digital rhetoric in the 1980s and 1990s, it is useful to look at several trends. Traditionalists were attempting to insulate themselves from what they perceived as a triple threat, consisting of an assault on the preeminent authority of print from media studies, the advent of a disruptive new class of practitioner-theorists, and the introduction of unconventional collaborative procedures, which broke even the rules of peripheral university programs like creative writing. Digital rhetoric was also responding to two major influences on the field of rhetorical studies more generally: continental critical theory, particularly the work of deconstructionist philosopher Jacques Derrida, and anti-Socratic revisions to rhetorical history, which questioned the authority of Aristotle as a founding father of the discipline.

At the time Lanham was writing, a series of fin de siècle debates about the mortality of print literature was taking place in literary journals, academic publications, and occasionally the mainstream media. The various death knells clanging over the literary scene included the death of poetry, the death of the novel, and the death of literature
more generally. One of the books in this genre that Lanham is reacting to is actually titled *The Death of Literature*. Its author Alvin Kernan blames deconstruction for sapping texts of their symbolic power and thus leaving them vulnerable to a final coup de grâce at the hands of a brutish mass media. Although Lanham also treats poststructuralist critical theory as being of dubious value, he takes Kernan to task for bemoaning declining literacy while also upholding the cultural elitism that denigrates college composition and other sectors of practical rhetoric.

In “Digital Rhetoric and the Digital Arts,” Lanham jumps to answer his own central question: “What happens when the text moves from page to screen?” At one level, what Lanham describes in his answer is a classic information bomb in which “the fixed, authoritative, canonical text, simply explodes into the ether.” At another level, he imagines a transformation that is creative as well as destructive, because the reader can become a writer now that such texts are “unfixed and interactive.”

In formulating a disciplinary realm for digital rhetoric, Lanham appeases the traditionalists by attempting to integrate new media studies into a longer rhetorical history. Yet, at the same time, he is alerting his colleagues that a fundamental paradigm shift is taking place in the present moment. Specifically, Lanham argues that it is the very model of knowledge itself that is dying, and that its close association with the more obviously outmoded codex form is merely serving as a distraction from the fact of knowledge’s impending demise. In his work on the “sociality of knowledge,” Lanham argues that “electronic information” not only changes what is meant by “author” and “text,” but also “desubstantializes” the arts and letters, along with the industrial revolution that produced them.

Lanham is very pointedly *not* responding to another significant factor that shaped the discourses about digital rhetoric at the time, as the ideas of Jacques Derrida and of poststructuralism more generally were becoming part of the canon, studied in graduate programs in rhetoric, and cited frequently in prominent books and theoretical journals in the field. At one point in *The Electronic Word*, Lanham briefly raises the work of Paul de Man and Derrida, only to dismiss their respective efforts on blindness and insight in reading or the inherently unstable character of text as pale imitations of rhetorician Kenneth Burke in the 1930s. He also distances himself from some of his fellow digital rhetoricians, who were using poststructuralism to explain contemporary media culture and information architecture, notably George Landow and Gregory Ulmer.

Despite their different theoretical orientations, both west coast Lanham and his east coast contemporary Landow emphasize the need for brand-new academic institutions in their founding texts for the discipline. As Lanham writes, “If what we hopefully call the ‘real world’ is moving toward the electronic word, can we continue to plan our curriculum around great books? Can we, in fact, continue to think of the curriculum in our customary linear terms—preparatory courses, intermediate ones, advanced,
prerequisites, the whole big catalog enchilada?" Landow also appears to believe that
digital rhetoric necessarily involves a complete redesign of the academy and a restruc-
turing of literary education. For example, in the original 1992 edition of Hypertext,
Landow predicts that hypertext and hypermedia will attract more nontraditional stu-
dents, foster more situations for collaborative learning, and change the current system
of credit hours and timed examinations. Landow also assumes that new digital texts
will reshape the literary canon and require that students and their instructors be like-
wise “reconfigured.”

In this classic and frequently upgraded book, which later appeared as Hypertext 2.0
and Hypertext 3.0, Landow examines how electronic documents link to each other and
how the reader makes choices among competing texts and alternative logical paths.
Landow sees a cultural convergence taking place in which software development and
poststructuralist theory are producing analogous if not homologous texts. He fre-
quently cites the work of Derrida, Barthes, and Foucault. Yet Landow asserts that the
poststructuralist reader is still oriented through a “rhetoric of arrival and departures.”
For example, in Hypertext 3.0, Landow says that linking “permits simple means of ori-
enting readers by allowing a basic rhetoric of departure” whereby these readers will
be directed to “a clearly defined point in the text” that operates through a rhetoric of
arrival. Landow’s approach to digital rhetoric is prescriptive as well as descriptive.
For example, in a section on “How Should We Write Hypertext?” Landow proposes
“A Rhetoric and Stylistics of Writing for E-Space.”

In contrast, software theorist Lev Manovich considers such digital rhetoric to be
an oxymoron, given the paratactic organization of weblinks. He equates rhetoric
with stylized hierarchies of tropes that he believes do not transcode to computer
interfaces.

Traditionally, texts encoded human knowledge and memory, instructed, inspired, convinced,
and seduced their readers to adopt new ideas, new ways of interpreting the world, new ideolo-
gies. In short, the printed word was linked to the art of rhetoric. While it is probably possible to
invent a new rhetoric of hypermedia that will use hyperlinking not to distract the reader from
the argument (as is often the case today), but rather to further convince her of an argument’s
validity, the sheer existence and popularity of hyperlinking exemplifies the continuing decline
of the field of rhetoric in the modern era.

Although Manovich clearly doesn’t associate rhetoric with mere distraction or dis-
simulation, as the term often colloquially appears, he asserts that any rhetoric of new
media would need to be invented because real digital arguments do not even exist at
present.

However, Manovich’s bold assertions in his own “death of rhetoric” narrative are
highly questionable, given the facts of electronic texts and the disciplines that study
them. Most obviously, hypertext doesn’t present the user with all the data at once; if
anything, hypertext delays and defers the revelation of information beneath layers of web artifacts, often much more effectively or—in Manovich’s terms—seductively than the direct access offered by the easily flippable pages of a book. Furthermore, his characterization of rhetoric as being the handmaiden of the printed word seems particularly counterfactual in light of the number of professional rhetoricians throughout history who have grounded their field in classical oratory and the norms of social interaction in oral culture.

One of the earliest advocates for understanding the role of orality in digital culture was Gregory Ulmer, who is frequently cited by Landow as a precursor to his own work. Although much of Ulmer’s analysis is set in the 1980s and thus focuses on the model of television as a media platform upon which to apply Derridean philosophy, rather than hypertext or hypermedia, Ulmer seems extraordinarily prescient elsewhere. Particularly in the current information environment of user-friendly desktop digital tools, his work on sampling and recombinant activities with audiotapes and films remains extremely relevant. He points out that modern-day digital bards can manipulate received content from collective sources and answers the objections of humanists, such as Jerry Mander or Neil Postman, who “condemn electronic orality because they assume that a free society depends on the subject of individualism as it is defined in the Enlightenment tradition.”

Instead, Ulmer suggests that we must “imagine a different apparatus, beginning with a different technology.”

He also rereads the canon of classical rhetoric differently, drawing on the lessons of those such as Quintilian who valorized alternative logics, such as those based upon the structure of the joke.

Many of these digital rhetoricians also allude to their involvement with a number of hands-on web-based projects. For example, Landow was particularly important in establishing scholarly “rings” on subjects like the Victorian era or postcolonial literature in Africa and Asia. Landow’s involvement with Storyspace, to which he contributed a “descriptive cross-referenced index,” demonstrated the particular significance of this now-proprietary computer application for understanding the confluences of thought about digital rhetoric during its formative period. Storyspace plays a critical role in this short history of digital rhetoric. Both Michael Joyce and Jay David Bolter were active authors in this community based around publicly constructing and revising hypertext narratives and the associated software development project.

Bolter had garnered Lanham’s obvious respect, partly because he also appealed to the traditionalists by drawing a longer timeline through which to understand the current late age of print as one in which a conventional notion of “writing space” is revitalized by new technology. Both critics also shared a common enthusiasm for modernism and collage and even insert some of the same images in their books. Lanham went so far as to claim that the computer fulfills “the expressive agenda of twentieth-century
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Both Lanham and Bolter also display a facility for drawing attention to the medieval preprint antecedents of digital texts.

Bolter, however, goes further and claims to understand the processing power of the actual machine, although he often couches his assertions in the positive terms of intelligent design rather than the negative terms of mechanical constraint. For example, he argues that the computer can serve “as a vehicle for human (what computer specialists call ‘natural’) language.” Later he claims that it is “no accident that the computer can serve as an outline processor” because the “machine is designed to create and track such formal structures.” Of course, as this book has already implied, more recent digital rhetoricians, who now study the actual algorithms controlling input-output interactions, have a slightly more jaundiced view of the freedom of those who use computers for rhetorical purposes, given the limitations of specific forms of code.

Bolter and Lanham also share an interest in the key term “remediation.” Bolter’s later work with Richard Grusin complicates his original, relatively straightforward conception of writing space by introducing the theme of remediation, or the way that “digital forms both borrow from and seek to surpass earlier forms.” Bolter and Grusin examine how the viewer both looks at and looks through media technologies, and they emphasize that these media technologies function in “networks or hybrids that can be expressed in physical, social, aesthetic, and economic terms” and that the software protocol governing exchanges on the World Wide Web serves a variety of different uses: “marketing and advertising, scholarship, personal expression, and so on.” It is interesting to note, however, the absence of the political or messages of the state from their list, despite a number of examples with political content; for example, from the websites of news organs, such as CNN or USA Today.

Bolter’s fellow Storyspace author Michael Joyce focuses on the hybridity of the human subject as well as the new media text, and considers what this lack of heterogeneity means for the contemporary cyborg-author. Based on his experiences teaching writing workshops in virtual environments, Joyce looks at how writers for the screen function with “two minds” and how writers connected to computer networks experience what he calls “othermindedness.” In his first book on the subject of digital rhetoric, he uses Vannevar Bush’s “memex” and Ted Nelson’s “Xanadu” as early prototypes for the associative and intermingled qualities of the human mind, which are expressed in dialogic hypertext. Over the course of a decade, his intellectual interests move from the implications of hypertext to the significance of networks. Thus Joyce’s more recent work is influenced by studies of emergent behavior and chaos theory, but like Bolter he denies the power of “technological determinism.”

The rediscovery of the pre-Socratics was also an important event in the field of rhetoric and composition, particularly for feminist scholars who wanted an alternative historical narrative from which to trace their critical lineage. In this vein, in 1999 Kathleen Welch published *Electric Rhetoric*, which paid homage to Ulmer from its
opening epigraph. In her analysis of “electric rhetoric,” Welch rejects the Aristotelian/Platonic/Socratic model as fundamental and proposes Isocrates as the better classical rhetorician through which to understand the current media age. Isocrates, she argues, acknowledges the ways that rhetorical culture may be changed by the advent of a technology of writing, without relying on the rigid, mutually exclusive, binary opposition of writing to speaking, to which Aristotle’s teacher Plato held so dear. She characterizes Isocrates as both a Sophist and a precursor of postmodernism for whom the word “logos” represented a “flux of language, thought, and action.”

Welch posits that our new media culture is fostering what Walter Ong had called “secondary orality,” in which audiovisual electronic media coexist with the literacy of writing but manifest aspects of oral experience as well, just as the era of Isocrates represented a similar juncture in media culture. Furthermore, Welch makes an analogy between how cultural critics complain of the drug-like character of television watching and computer use and Plato’s description of writing as druglike pharmakon, which is potentially both remedy and poison in the Phaedrus.

In the course of this book, I will be coming back to what I see as two possible shortcomings to the bulk of the critical work done in digital rhetoric to date: marked tendencies to overlook the rhetoric of the virtual state and to ignore theories about rhetoric from the discipline of computer science.

First, the objects of study in much new media scholarship are not very relevant to the political interests of the public at large. Art installations in small galleries, hypertext novels with cult followings, and procedural poems by poets considered too minor to be represented in chain bookstores continue to appeal almost exclusively to a rarified, miniscule, and academically oriented niche population of users. Private audiences for demos in university research laboratories or feedback practices in closed online creative writing workshops may also seem inaccessible to average citizens, who are hermetically shut out from such secret knowledge spaces of the elect. And when the objects are relevant, because they represent digital artifacts from popular culture or niche fan communities, they are often divorced from concerns about either the virtual state or the deliberative processes of online communities. As Ulises Ali Mejias points out, there can be significant differences between “masses” and “publics” when it comes to civic participation.

There are some significant exceptions, however, as rhetorical scholarship adapts to the twenty-first century, even though much of this work tends to focus on web campaigning or particular debates about Internet use rather than a broader theory of digital rhetoric. In Rhetoric Online, Barbara Warnick uses theories of intertextuality derived from Julia Kristeva and Mikhail Bakhtin to examine web-based public discourses that reuse and remix sources. Warnick also applies a traditional Toulmin model, which has been used in college composition classrooms for many decades, to make statistical generalizations about de-authored discourses in independent news
ventures that rely on “flattened hierarchies, wikis, temporary group representation, and collectivism.” Unfortunately, her theories about “interactivity” tend to rely more on a knowledge of Kenneth Burke than of the constraints of computer interfaces and the algorithms of computer programs, although her uses of Burke’s notion of a “body of identifications” rather than “one particular address” may be useful for complex rhetorical interactions online.

In *Cyberliteracy: Navigating the Internet with Awareness*, Laura Gurak promises to deliver a rhetorical primer for Internet users. As Gurak writes, “Unlike many of the ‘how-to’ books and ‘dummies’ guides’ on the market, this book is not a technical listing of what to do and not to do.” Yet there’s also a kind of normative moralism that runs through Gurak’s book, along with a tendency to emphasize “cyberliteracy” in singular rather than “cyberliteracies” in plural. Gurak’s messages about gender-based harassment, the hazards of “techno-rage,” and hoaxes could also be said to play into many of the ideologies that are key to the current reactionary political mood that focuses on cybersafety and Internet security rather than building a commons of public information infrastructures. Furthermore, there are legitimate arguments to be made in favor of conventionally antisocial practices of dissimulation, exhibitionism, and transgression in Internet environments, which are part of the expected social scripts dictating many contemporary conventions for common online behavior.

Second, many interpretive approaches from traditional rhetorical studies have been limited by a peculiar set of disciplinary blinders. The theoretical texts upon which the earlier authors draw tend to be exclusively from literary criticism or critical theory and are thus firmly grounded in traditional humanities departments. Despite appeals to those with interdisciplinary credentials, this work often excludes highly relevant literature from technologists who may have a more intimate understanding of the systemic constraints that govern the representation, processing, or retrieval of information that may be central to communicative exchanges effected through digital media. The discourses of computer scientists themselves—or information scientists, in the terms of the postwar era—tend to be conspicuously absent in scholarly books and articles about digital rhetoric. Yet the field of rhetorical studies considers both the rhetoric of science and the science of rhetoric, and I would argue that the literature of research in computer science has made significant contributions to both. Specifically, I am claiming that a basic understanding of both signal theory and network theory is valuable to any contemporary rhetorician.

**Mathematical Theories of Communication**

Although Welch argues that digital media practices cannot comfortably fit the traditional Aristotelian model, I would say that it depends on the Aristotelian model in question. Aristotle is also the philosopher who arguably first situated rhetoric in the
realm of probability, and as such his approach continues to be relevant to contempo-
rary digital rhetoric and the computer-mediated view of information as a construct of 
relative uncertainties. In his meditations on possible topoi, Aristotle explains the 
relationship between probability (eikos) and rhetoric in some detail. Aristotle points 
out that what is improbable does happen and that this specific line of argument can 
be extended disingenuously by his fellow rhetoricians, such as the Sicilian teacher 
Corax, into a more spurious construction: what is improbable is probable. Aristotle 
also shows some suspicion about the dogma surrounding established knowledge 
and its inclusionary/exclusionary logic of absolute certainty: “Listeners react also to 
expressions speechwriters use to excess: ‘Who does not know?’ ‘Everybody knows . . . ’ 
The listener agrees out of embarrassment in order to share in the feelings of all 
others.”189

As Dilip Gaonkar summarizes the epistemological positions of the ancients, “Aris-
totle replaces Plato’s binary opposition between reality and appearance with his own 
binary opposition between the necessary and the contingent.”190 In other words, 
to use Gaonkar’s opposition, Plato can be seen as the consummate philosopher of 
knowledge, and Aristotle as the philosopher of information. In his 1959 essay The Two 
Cultures, C. P. Snow described the “intellectual life of the whole of western society” as 
divided between “two polar groups”: those of the sciences and those of the humanities.191 Now it is possible that institutions of intellectual inquiry will eventually be 
divided into two even more incompatible communities of scholarly association: the 
culture of knowledge and the culture of information. In arguing on behalf of “Critical 
Information Studies,” Siva Vaidhyanathan identifies the communities of association 
that may challenge traditional Platonic institutions of knowledge: “Economists, 
sociologists, linguists, anthropologists, ethnomusicologists, communication scholars, 
lawyers, computer scientists, philosophers, and librarians.”192

Definitions are important here, particularly since in everyday language, “informa-
tion” is generally treated as nearly interchangeable with “knowledge.” Webster’s Dic-
tionary, slightly more precisely, defines one word in terms of the other, so that 
“information” is classified as the “communication or reception of knowledge or intel-
ligence.” The Oxford English Dictionary goes further to acknowledge the term’s ety-
mological history by including social practices of interpretation in its definition, 
so that the entry on “information” encompasses the “formation or moulding of the 
mind or character, training, instruction, teaching; communication of instructive 
knowledge.”193

Although I am claiming Aristotle as an early philosopher of information, he did not 
have the actual word “information” in his lexicon of ancient Greek. In their work on 
literacy and numeracy, Michael Hobart and Zachary Schiffman have traced the word 
back to Latin classical culture to consider how antecedents of the term “information” 
actually functioned in the rhetorics of the ancient public sphere, at a time when the
What Is Digital Rhetoric?

information culture of the Roman world was exploding with new libraries and modes for disseminating written texts, maps, scientific illustrations, art works, and luxury goods:

The term itself traces back to the Latin verb informare, which for the Romans generally meant ‘to shape,’ ‘to form an idea of,’ or ‘to describe.’ The verb, in turn, supplied action to the substantive, forma, which took varied, cognate meanings that depended mostly on context. The historian Livy used forma as a general term for ‘character,’ ‘form,’ ‘nature,’ ‘kind,’ and ‘matter.’ Horace applied it to a shoelast, Ovid to a mold or stamp for making coins, while the wily Cicero, among other uses, extended it to logic as ‘form’ or ‘species,’ his rendering of the Greek. . . . The practical notion of ‘form’ as a last, mold, or stamp remained closely tied to its more abstract, logical meaning, which paired content and container.194

Hobart and Schiffman claim that the concept of information can be tracked even further back to its historical roots in the origins of writing. Thus information is created at the place where technology and rhetoric intersect.

However, it is the technical definition of the word “information,” as it is used by mathematicians and computer scientists in relation to “uncertainty,” which is central to my argument. From the perspective of information theory, information is linked to a fundamentally different paradigm for the interpretation of ambiguity in communicative exchanges from that of knowledge. As Bell Labs scientist Claude Shannon explains in his 1948 groundbreaking article, “A Mathematical Theory of Communication,” the quantity of information transmitted is determined by the amount of uncertainty at issue in a given situation.195 For example, I might say that more information is conveyed by the next letter of the sequence C-H-O than by the next letter of the sequence C-H-O-C-O-L-A-T. So, in my example, the components of the first message, C-H-O, could be a restaurant order for “chocolate,” but they could just as easily be forming the letters for “chop suey” or “choice steak”; in contrast, the completed contents of the second, longer message C-H-O-C-O-L-A-T appear easier to predict.196 Shannon’s collaborator, Warren Weaver, went so far as to say that information has “nothing to do with meaning,” although it does describe a pattern.197 This is because information refers not to a single message, but probabilistically to an entire set of possible messages. Shannon and Weaver connect information to entropy and thus understand it against a measure of the disorder or randomness in a closed system.

Weaver argues that the redundancy of written English affects how messages are conveyed through text. “Since English is about 50 per cent redundant, it would be possible to save about one-half the time of ordinary telegraphy by a proper encoding process, provided one were going to transmit over a noiseless channel. When there is noise on a channel, however, there is some real advantage in not using a coding process that eliminates all of the redundancy. For the remaining redundancy helps combat the noise.”198
Ordinary people have some sense of this redundancy in English, from which they infer that the use of acronyms in instant messaging does not significantly lower comprehensibility. One interesting case of how this colloquial understanding of theories of information functions is the “Cmabrigde e-mail” that has been widely circulated in the past decade. The version I received in 2004 reads as follows:

Aoccdmig to a rscheearch at Cmabrigde Uinervtisy, it deosn’t mtaer in waht oredr the ltteers in a wrod are, the olny iprmoetnt tihng is taht the frist and lsit ltteer be at the rghit pclae. The rset can be a total mses and you can stil raed it wouthit a porbelm. Tihs is bcuseae the huamn mnid deos not raed ervey lteter by istlef, but the wrod as a wlohe.

Amzanig huh?

Despite the article error of the descrambled “a research,” the appeals to authority in the e-mail are obvious. By locating the authors of the supposed study in a prestigious British university and claiming that their findings can be easily demonstrated to the general public in a few lines of text, the notion that most of a given word functions as an empty placeholder is given considerable credence. Unlike the classic example of the telegram that reads “NOTHER DYING” instead of “MOTHER DYING,” which Joyce’s hero in *Ulysses*, Stephen Daedulus, receives, there is no poetic register on which the ostensible mistakes make secondary meanings. In this popularization of the principle of redundancy, Shannon and Weaver’s original message about the robustness of written English as code may be lost, and arguments about Taylorizing the language for greater brevity and efficiency may even be entertained.

The alleged findings have been disputed by a member of the actual Cognition and Brain Sciences Unit at Cambridge University, Matt Davis, who offers his own demonstration of how the e-mail message is a selective sample chosen for its rhetorical effectiveness rather than its actual likelihood as an example of written expression if the intervening letters were randomly generated. Davis even provides a web link to an online generator that will scramble text to conform to the procedural rules. Yet Davis notes that versions of the Cmabrigde e-mail continue to occur in many different languages, including a German variant, which was published as a cartoon in *Der Spiegel*.

Shannon’s signal theory model of communication (figure 2.11) can be read as a scheme for explaining rhetorical interactions and the centrality of interference in any information transfer. Like conventional rhetoric, electronic communication is mediated, it travels through channels, it is distorted by noise, and messages must be converted into signals in order to pass from speaker to audience. In order to generalize their work, Shannon’s collaborator, Warren Weaver, characterized communication systems as functioning on three different levels. At Level A, the question was “How accurately can the symbols of communication be transmitted?” At Level B, the issues involve “How precisely do the transmitted symbols convey the desired meaning?”
Finally, Level C concerns “How effectively does the received meaning affect conduct in the desired way?” These Level C concerns can be seen as rhetorical concerns if we look at how action is changed by linguistic exchanges in examples from the work of other twentieth-century rhetoricians like Kenneth Burke or the speech act theorists. Although Shannon’s actual text is largely occupied with Level A situations, in which the clarity of the signal is the main issue at hand, Weaver argues that information theory has much to contribute to understanding of the entropic character of Level B and Level C discourse.

Strangely, there are some who read information theory and its initial impact on linguistics through interdisciplinary organizations, such as the Macy Conference and the American Society for Cybernetics, as a repudiation of rhetorical models of communication. In explaining the work of Macy participant Roman Jakobson, Lev Manovich has argued that information theory presents a reductive schematic model that is inherently unrhetorical. As Manovich writes, “Ancient and medieval scholars classified hundreds of different rhetorical figures. Roman Jakobson, under the influence of the computer’s binary logic, information theory, and cybernetics to which he was exposed at MIT where he was teaching, radically reduced rhetoric to just two figures—metaphor and metonymy.” And yet the diagrams that Jakobson himself actually drew, in essays like “Linguistics and Poetics,” seem to suggest an appreciation for the complexity of rhetorical exchanges within communication channels that was complementary to the work of rhetoricians who were his contemporaries.

The importance of signal theory to matters of the public sphere may not always be apparent, although there are situations in which noise in messages to stakeholders contributes to events that eventually cost lives or human resources. For example,

![Diagram](https://example.com/diagram.png)

**Figure 2.11**
Diagram from *The Mathematical Theory of Communication*, copyright 1949, 1998 by the Board of Trustees of the University of Illinois. Used with permission of the author and the University of Illinois Press.
Edward R. Tufte has pointed to the messages from PowerPoint presentations prior to the crash of the space shuttle Columbia as indicative of scrambled communicative efforts. A PowerPoint slide shows how a redundant signifier, “significant,” masked crucial information buried deep in the hierarchy of bullet points. In addition to signal theory, a new science of networks also offers opportunities for rhetoricians to share in theories of communication developed across disciplinary lines. For novices, physicist Albert-László Barabási has written a primer on network theory, *Linked: How Everything is Connected to Everything Else and What It Means.* In it, Barabási connects prevailing models of hubs and connectors in graph theory to studies of the spread of disease, the mechanisms of social contact, and the traffic to and from particular websites. Perhaps most interesting to rhetoricians is Barabási’s analysis of the persuasive success of the Apostle Paul. The physicist credits Paul’s “firsthand knowledge of the social network of the first century’s civilized world from Rome to Jerusalem” with the successful dissemination of the Christian faith.

Just as signal theory excites the public’s imagination, there are also popular narratives that interpret the research of network theorists for mass audiences. For example, in the 2006 fall television season, a series called *Six Degrees* on the ABC network used the idea that “everyone is connected” to create a drama around the seemingly separate lives of six New York City dwellers. Even before membership in social network sites became mainstream, the series calculated that the general public would have some familiarity with the network concept thanks to awareness generated by a Broadway play and a later film with a similar title about a young imposter who claims to be the son of actor Sidney Poitier, and by fan culture around the ongoing ABC series *Lost.* As in the case of the Cambridge e-mail, there are anecdotal references to scientific studies imbedded in much of this popular discourse, although most people who use the term may not know the specific citation that could be made to work by behavioral psychologist Stanley Milgram and others before him.

**From Multimedia to Social Media**

Rhetoricians may be hesitant to acknowledge contributions to the field of electronic communication from disciplinary sciences in departments far from their own, and they may be particularly leery of the kind of popular pseudoscientific interpretations that I am highlighting, given the humanities’ understandable professional biases against empirical claims, broad generalizations about language, and technological determinism. But to exclude these discourses that present models of signals and networks is to overlook research that could enrich research questions in traditional rhetoric as well.

James P. Zappen has characterized the field of digital rhetoric as an assemblage of heterogeneous elements, which nonetheless have a significant contribution to make
to rhetorical studies as a whole. As Zappen writes, “Digital rhetoric is thus an amalgam
of more-or-less discrete components rather than a complete and integrated theory in
its own right. These discrete components nonetheless provide at least a partial outline
for such a theory, which has potential to contribute to the larger body of rhetorical
theory and criticism and the rhetoric of science and technology in particular.”

In contrast, I think that an integrated theory can be defended, although digital
rhetoric operates at a number of different registers and includes messages to, from, and
within the personal, the governmental, the academic, and the scientific public spheres.
However, these registers do not represent discrete, hermetically sealed realms of dis-
course, because discussions about civic participation, community membership, and
appropriate timing inform each other across the multiple levels of disciplinary expert-
tise. As digital rhetoric moves from a model based on one-to-many multimedia—
typified by audiovisual CD-ROM technology of the 1980s and 1990s—to one based on
many-to-many social media that include file sharing and social network sites, it is likely
that these registers of communal knowledge will be even more interconnected.

On February 8, 2006, the New York Times reported that a junior presidential appointee
at NASA had resigned his post. The story behind his resignation illustrates how digital
rhetoric operates across all four hierarchies of different forms of knowledge work. The
political appointee, George C. Deutsch, had irked scientists by telling a web designer
to insert the word “theory” each time that the phrase “the Big Bang” appeared on a
NASA website. Deutsch had claimed on his résumé that he held a bachelor of science
degree from Texas A&M University, which turned out to be a falsehood. A young
blogger discovered that Deutsch had attended classes at A&M but never graduated. The
blogger, Nick Anthis, was a genuine Texas A&M graduate and Rhodes Scholar who was
studying biochemistry at Oxford. His blog, The Scientific Activist, earned attention from
Time Magazine and the journal Nature for his coverage of the Deutsch story.

Blogger Anthis is explicit about the fact that The Scientific Activist is intended to
connect the personal, the political, the academic, and the scientific modes of digital
rhetoric. In covering the Deutsch case, he draws on his personal autobiography as a
recent college graduate, in which he heard the rumor about Deutsch never graduating,
and combines this story with government documents in the public record, which he
then relates to his status as an initiated junior member of the academy and the more
specialized scientific communities to which he now belongs, communities that might
dispute Deutsch on other grounds, such as the experimental evidence for the occur-
rence of the Big Bang, if the rhetorical context had been more formal and mediated
around print rather than the norms of digital community. The circuit of digital
production in the Deutsch story began with a website and ended with a blog, but
that network of communicative exchanges engaged a number of other social actors,
disciplinary communities, and modes of discourse in ways characteristic of rapidly
changing social media.
Introduction

1. In a conversation with former student Karla Gutierrez in Santa Monica, California, on May 18, 2008, this suspicion was confirmed. She also pointed out that it was I who had shown the students how easy it was to send messages to each other in this fashion, when I was demonstrating the speed at which the system worked.


4. One of the first academic interpretations of the PEN experience is by Pamela Varley in “What’s Really Happening in Santa Monica,” MIT Technology Review (November/December 1991). Varley points out the prescience of this program in that the municipality of “Santa Monica is appropriating for public purposes technologies that had previously been mostly the province of businesses and individual computer devotees” (4), while also claiming that such conferences are “vulnerable to abuse” (21) as they are “enabling and empowering” users (27). Howard Rheingold uses Varley’s analysis of the PEN system as a “vivid example of the practice” of what exists on the level of theory as “electronic democracy.” By citing Rheingold, Mark Poster casts PEN as possible evidence for the argument that “the Internet promotes, even enhances, existing political formations” in Information Please: Culture and Politics in the Age of Digital Machines (Durham: Duke University Press, 2006), 79. Poster uses PEN in support of a political model of “The Net as Tool,” which his analysis of the construction of a polymorphous “netizen” beyond traditional citizenship is intended to undermine.


6. For more about these questions from an artificial intelligence perspective, see Michael Mateas, “Authoring and Expression,” presentation at the Software Studies Workshop, University of
California, San Diego, May 21, 2008 on “the relation between code machine and rhetorical machine.” Available at http://www.youtube.com/watch?v=XHdRBvHVdWE.


1 **Digital Monsters: Show and Tell on Capitol Hill**


4. Ibid.


8. In actual insurgent video posted on the Internet, the targets are generally lightly armored Humvees from the U.S. armed forces or the civilian automobiles of those assumed to be collaborators with the occupation.


13. See the comments of gamers on the Planet Battlefield Forums, which were written in the aftermath of the Reuters story, at http://www.forumplanet.com/planetbattlefield/topic.asp?fid=7419&tid=1888667.


18. Ibid., 9.

19. Ibid., 21.

20. Ibid., 13.

21. Ibid., 21.

22. Ibid., 21.

23. Ibid., 18.


37. Of course, many rhetoricians celebrate the oral turn that the Internet supposedly represents in contemporary culture. Richard Lanham has made much of the new rhetoric that will flourish in the absence of the printed book, Michael Joyce capitalizes on the destabilizing of authorship by new constructs of “voice” in his writing workshops, and other Internet scholars, influenced by the work of Walter Ong, celebrate what they believed to be a new orality that will enrich a culture that has grown anemic without the mythic and epic vitality of shared verbal narratives.


42. See *Henry IV*, Part 2, I.1 and *The Aeneid* IV, among others.