

TECHNICAL COMMUNICATION QUARTERLY, 14(3), 319-325

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## Digital Rhetoric: Toward an Integrated Theory

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This article surveys the literature on digital rhetoric, which encompasses a wide range of issues, including novel strategies of self-expression and collaboration, the characteristics, affordances, and constraints of the new digital media, and the formation of identities and communities in digital spaces. It notes the current disparate nature of the field and calls for an integrated theory of digital rhetoric that charts new directions for rhetorical studies in general and the rhetoric of science and technology in particular.

The concept of a digital rhetoric is at once exciting and troublesome. It is exciting because it holds promise of opening new vistas of opportunity for rhetorical studies and troublesome because it reveals the difficulties and the challenges of adapting a rhetorical tradition more than 2,000 years old to the conditions and constraints of the new digital media. Explorations of this concept show how traditional rhetorical strategies function in digital spaces and suggest how these strategies are being reconceived and reconfigured within these spaces (Fogg; Gurak, *Persuasion*; Warnick; Welch). Studies of the new digital media explore their basic characteristics, affordances, and constraints (Fagerjord; Gurak, *Cyberliteracy*; Manovich), their opportunities for creating individual identities (Johnson-Eilola; Miller; Turkle), and their potential for building social communities (Arnold, Gibbs, and Wright; Blanchard; Matei and Ball-Rokeach; Quan-Haase and Wellman). Collectively, these studies suggest how traditional rhetoric might be extended and transformed into a comprehensive theory of digital rhetoric and how such a theory might contribute to the larger body of rhetorical theory and criticism and the rhetoric of science and technology in particular.

### STRATEGIES OF SELF-EXPRESSION AND COLLABORATION

Studies of digital rhetoric help to explain how traditional rhetorical strategies of persuasion function and how they are being reconfigured in digital spaces. Laura J.

Gurak shows how strategies of persuasion based upon Aristotle's notions of ethos, pathos, and logos function to motivate action and belief in the online debates about Lotus MarketPlace and the Clipper Chip (*Persuasion*). In the case of Lotus MarketPlace, for example, the product—a CD-ROM database of direct-mail marketing information about American consumers—raised issues related to personal privacy, provoked strong protests via newsgroups and e-mail, and, as a consequence, was never placed on the market (19–31). According to Gurak, the protests were based upon a highly emotive and often inflammatory ethos; in contrast, Lotus' response was based upon a hard-facts corporate logos, which was both untimely and inadequate to the situation and thereby ensured the failure of the product (85–91, 93–96, 114–24). B. J. Fogg shows how the computer itself (and its associated software) functions as a persuasive technology: as a tool when, for example, it simplifies processes or customizes information; as a medium when it simulates cause-and-effect processes, environments, or objects; and as a social actor through a variety of physical, psychological, linguistic, and social cues (23–120). Fogg is particularly interested in how computers as persuasive technologies (hence captology) achieve credibility (ethos) and in the ethics of various kinds of persuasive appeals, including appeals to the emotions (pathos) (5, 121–81, 211–39).

Barbara Warnick similarly explores the uses of persuasion in digital media, especially digital texts, but she also observes the potential of these media to extend and transform traditional notions of rhetoric as persuasion. Describing attempts to attract women to the Internet and the World Wide Web in the late 1990s, for example, she notes the failure of persuasive appeals in traditional print media and in cybergrrl narratives (so-named because the “cybergrrls” were seeking to distinguish themselves from the “girls” depicted in Internet pornography), which she claims were “elitist and hierarchically motivated” (71–82). In contrast, she notes the success of Web-based alternatives to mainstream media, including e-zines, which offered a variety of forums for self-expression and new modes of interacting with others—“welcoming places where invitational discourse becomes truly inviting” (82–86). Again, describing Web-based political parody in the 2000 presidential campaign, she notes their success as persuasion, effected, however, through a heteroglossic cacophony of voices, offering opportunities for reader participation and interactivity and achieving unity of purpose not through direct appeals or explicit arguments, but through a web of reciprocal links and intertextual references (87–113). Kathleen E. Welch likewise observes the potential of digital media to transform traditional notions of persuasion when she observes characteristics of both oral and print media in the new “electric rhetoric,” which she claims can be both additive and subordinate, aggregative and analytic, redundant and copious, agonistic and collaborative or participatory, situational and abstract (106, 108, 184–86). I have sought to contribute to this discussion in my epilogue to *The Rebirth of Dialogue*, where I argue that dialogue—conceived not as a mode of persuasion, but as a testing of one's own ideas, a contesting of others' ideas, and a collaborative creating of ideas—is possible in any

medium: oral, print, digital (146–61). Collectively, these studies are challenging the view that associates rhetoric exclusively with persuasion, a view that has persisted for more than two millennia.

### CHARACTERISTICS, AFFORDANCES, CONSTRAINTS

Studies of the new digital media explain some of the basic characteristics of communication in digital spaces and some of their attendant difficulties. Such basic characteristics function as both affordances and constraints and so help to explain how the new media support and enable the transformation of the old rhetoric of persuasion into a new digital rhetoric that encourages self-expression, participation, and creative collaboration. Gurak identifies some of these basic characteristics—speed, reach, anonymity, and interactivity—and explains how they function as both affordances and constraints (*Cyberliteracy* 29–46). Speed encourages an oral and casual style, but it also encourages redundant and repetitive postings (30–33). Reach permits communication among multiple participants in an array of media and thus the development of communities of interest on a global scale; however, it does not include the benefits of gatekeeping (33–37). Anonymity encourages experiments in self and gender identities, but it also problematizes notions of authorship and ownership and encourages “flaming”—the hostile expression of strong emotions (38–43). Interactivity permits closer access to other people with increased opportunities for discussion and feedback, but it also permits increased opportunities for intrusions upon personal privacy (44–46).

These characteristics accord with our everyday experiences with digital communication technologies but raise some difficulties upon closer scrutiny. Thus, Lev Manovich, for example, questions whether terms such as “digital” and “interactivity” have any real meaning. Manovich finds in the new media characteristics of numerical representation, modularity, automation, variability, and transcoding (27–48). Because new media are digitally coded assemblages of discrete components (numerically represented and modular), they enable creation of media objects at low and high levels, from the most simple photo and text manipulations to the most advanced Artificial Intelligence (AI) applications (automation) (27–36). For the same reasons, they can appear in different versions (variability) so that a media database, for example, can produce an almost infinite variety of end-user objects, which can be customized for different users, manipulated through hyperlinks, periodically updated, and scaled upon demand (33–45). Finally, new media can also be translated from one layer to another (transcoding)—from a computer layer to a cultural layer—so that the media database, for example, becomes a cultural form in its own right (45–48). Given these characteristics, Manovich questions the use of the term “digital,” which can refer to analog-to-digital conversion, common representational code, or numerical rep-

resentation, only the last having any relevance to the other characteristics (52). Similarly, he questions the use of the term “interactivity” since it states only the most basic fact about computer structures and operations and is therefore, without further qualification, simply redundant (55–56). Anders Fagerjord accepts these key characteristics as a point of departure, but he emphasizes their communicative aspect and observes the tendency of the modularized and variable components of Web media to come together in a process that he calls “rhetorical convergence” (306–13, 318). Fagerjord uses the term “rhetorical” to emphasize both the Web author’s choices of topics, arguments, sequences, and words and the reader’s processes of selection and semiosis—noting, however, that we have barely begun to describe and catalog these choices and these processes (307, 313). How, then, should we understand the relationship between author and reader, and how should we understand the processes by which authors and readers work together to achieve self-expression or creative collaboration?

### THE FORMATION OF IDENTITIES AND COMMUNITIES

Studies of the new digital media also explore some of the purposes and outcomes of communication in digital spaces: not only persuasion for the purpose of moving audiences to action or belief, but also self-expression for the purpose of exploring individual and group identities and participation and creative collaboration for the purpose of building communities of shared interest. Warnick’s analyses, cited above, show how the new media—“symbolic action as carried out through visual images, specialized argots, hypertext patterns”—are used to form identity and community (12, 15). Other analyses explore the processes of forming identities and communities as complex interactions, both online and offline, between ourselves and others, thus providing context and meaning for the term “interactivity.” Sherry Turkle explains the processes of identity formation as interactions among multiple versions of our online selves and between these and our real selves: “As players participate [in Multiple-User Domains, or MUDs], they become authors not only of text, but of themselves, constructing new selves through social interaction. One player says, ‘You are the character, and you are not the character, both at the same time.’ Another says, ‘You are who you pretend to be.’ MUDs provide worlds for anonymous social interaction in which one can play a role as close to or as far away from one’s ‘real self’ as one chooses” (11–12). But these interactions between ourselves and others are not entirely of our own choosing. In some online environments, such as hypertext environments, these interactions encompass not only our selves as authors, but also our own and others’ selves as readers. As Johndan Johnson-Eilola points out, “a hypertext not only invites readers to partici-

pate in making the text, but forces them to do so, requiring both readers and writers to become ‘co-learners’” (145).

Such processes of identity formation through social interaction are reminiscent of the traditional rhetorical concept of *ethos*. As Carolyn R. Miller observes, identity formation as the creation of human character is closely associated with Aristotle’s understanding of *ethos* as “more than our knowledge of someone’s prior reputation but...also, importantly, a product of the ongoing performance itself, made on the fly, in the course of interaction” (269). But what is the nature of this interaction? Surely it is something more than an interaction between speaker and audience in the traditional sense but, rather, a complex negotiation between various versions of our online and our real selves, between our many representations of our selves and our listeners and readers, and, not least (as Manovich suggests), between our many selves and the computer structures and operations through which we represent these selves to others.

Similarly, the formation of communities of shared interest is an outcome of processes of interactions, both online and offline, between ourselves and others. Numerous studies have documented the close connection between online and offline communities. Anabel Quan-Haase and Barry Wellman, for example, observe a reciprocal relationship between online and offline communities and a net increase in social ties: “Rather than weakening other forms of community, those who are more active offline are more active online—and vice versa” (320). Similarly, Sorin Matei and Sandra J. Ball-Rokeach claim a “the more, the more” relationship between online and offline communities, and they also claim that this relationship holds across differences in gender, income, age, education, and ethnicity (406, 420). As a graphic illustration of this relationship, Michael Arnold, Martin R. Gibbs, and Philippa Wright offer a comment by a participant at a social gathering (with free food and alcohol) held by developers promoting new homes with intranet connectivity in a suburb of Melbourne, Australia: “Yes, an intranet is all very well, but do we still get free beer and a barbeque?” (187–88, 193).

### IMPLICATIONS FOR RHETORICAL STUDIES

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. Suppose, for example, that scientific inquiry were situated within the context of digital spaces with the characteristics and potential outcomes and the strategies of self-expression, participation, and collaboration that we now associate with these spaces. What kind of rhetoric of science

would we find within these spaces? What is the potential of Internet2 (<<http://www.internet2.edu>>) to foster creative collaborations, to promote the development of scientific communities, and to produce new ideas and significant research results? What is the potential of digital discussion spaces such as Slashdot (<<http://slashdot.org>>, especially the Science section) to cultivate interest, disseminate information, and encourage discussion on current issues in science and technology among both scientists and nonscientists? A theory of digital rhetoric that recognizes how the traditional rhetoric of persuasion is being transformed in digital spaces invites such questions and thus offers new opportunities for inquiry in rhetorical theory and criticism and an expanded vision of what the rhetoric of science and technology might become within the next decade and beyond.

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