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Theory and Practice in New Media Studies

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If there is already a field of new media studies, it is a combination of strategies established for understanding and working with earlier media. New digital media constitute a cultural and economic phenomenon; our society is willing to spend a great deal of money on the development of such forms as computer games, Web sites, and computer graphics for film and television. So it is not surprising that many academic disciplines are turning their attention to these forms, at least in part to claim a share in the resources that new media are generating. Computer science and computer engineering have a de facto claim, and at least some sociologists and economists as well as humanists in literature, art history, and musicology are seeking to show that their disciplinary perspectives are also relevant to this digital revolution. Some of these humanists want to use digital technology to further their traditional research and teaching; others may simply want to assert that their fields remain important to our culture's assimilation of new digital media forms.

Although academic humanists are attempting both to use and to theorize about new media, they tend to keep the two (use and theory) separate. There has been a great deal of theorizing. In a sense, we could say that the humanities in the second half of the twentieth century became

media theory, that is, the study of technologies of representation and communication, beginning with but no longer limited to printed books and the literary forms of print. The influential media theories, however, developed before the explosive popularity of digital media and media forms. Such theories were occasioned by earlier technologies (above all, the printed book, film, and television) and may be inadequate to the task of understanding new media, especially because these theories were not designed to improve the practice of these earlier technologies. Our culture's practical engagement with such digital forms as the World Wide Web may compel us to rethink the relationship of media theory and practice in the humanities.

To see why this rethinking may be necessary, let us begin by reminding ourselves about the different uses of the term "theory" in the sciences, the humanities, and the arts. Researchers in cultural studies know how subtle and varied are the uses of the term in empirical and theoretical sciences (and the public's perception of these sciences). Because I cannot do justice to the nuances here, let me limit myself to the notion of theory in computer science. Theoretical computer science includes the work of logicians (theory of automata) and mathematicians (computability theory and numerical analysis). In various subdisciplines of computer science (such as databases, operating systems, compilers, and programming languages) the formalism of mathematics and logic provides a foundation for the work of building effective systems and applications. Ultimately in computer science, theory always affirms practice, and practice justifies theory. Although the theory of computer science might be said to predate the computer itself (for example, in the 1930s work of the logician and mathematician A. M. Turing; see Hodges 1983), there would never have been a flourishing field of computer science without the existence of the machines themselves. The use of computers as corporate and now consumer products justifies the importance attached to computer theory. We might wonder how many mathematicians would be interested in the theory of automata without the cultural importance of the computer. And the theory of computing seeks to make computers work more efficiently or effectively.

If the abstract theories of computation are ultimately grounded in practice, then so are the fields of human-computer interaction (HCI) and software engineering. Drawing on cognitive psychology and using empiri-

cal techniques such as usability studies and surveys, HCI researchers critique existing and developing computer systems. Their critiques may be severe, but their purpose is to enable these systems to respond more effectively to the needs of those who use the systems. HCI aligns itself with the social sciences in using qualitative and quantitative methods to come up with principles of good design. In its practical intent, however, HCI more closely resembles the theoretical aspects of the industrial or fine arts, for example, graphic design.

Famous and accomplished graphic designers (such as Jan Tschichold, Herbert Bayer, and Paul Rand) have written books to explain their practice for other designers, and there are countless textbooks of design that codify practice into more or less formal principles (Meggs 1998). In *Designing Visual Interfaces* (1994), for example, Kevin Mullett and Darrell Sano offer a primer on graphic design explicitly for designers of computer interfaces. They present a vocabulary to describe values for which designers should strive (clarity, harmony, balance, and so on) and illustrate this vocabulary with examples drawn from modernist graphic design, principally the International Style of the 1940s and 1950s. Although Mullett and Sano's principles are abstract, or, as they claim, "timeless," in fact, their purpose is practical and immediate: to improve the visual attractiveness and effectiveness of user interfaces, to show how dialogue boxes can be improved by learning from the practice of Bayer or Müller-Brockman. All theories of graphic design have as their goal to produce better visual artifacts.

For the applied arts as for computer science (which is the paradigm of postindustrial engineering), the purpose of theory is to affirm and enhance practice. I make this obvious point because this emphasis on the practical is what separates theory in engineering and the applied arts from theory in the humanities. What we as humanists learned to call theory in the twentieth century, beginning with the poststructuralists or earlier with Marxist critics, does not seek to affirm practice, but rather to critique practice or to deconstruct it altogether. It is usually the case that critical theory is usually negative, especially when the objects of study are forms that elite Western culture has highly prized (the literary or artistic canon) or forms to which popular culture gives high economic value (popular films, music, and advertising). In recent decades the academic community

has come to prefer theories in part on the basis of the critical distance that they establish from the media that they examine, which is why “ideological” theories have gained ground at the expense of formal theories.

Formal Media Theory

The media theories of Walter Ong and Marshall McLuhan were formal theories. To claim as McLuhan (1964) did that media were “extensions of man” and that the medium was the message was to suggest that formal properties of media determined their use and significance. Ong occupied a similar position by suggesting that writing restructures consciousness (*Orality and Literacy*, 1982: 78–116). Because of this apparent technological determinism, many cultural critics have always regarded McLuhan and to some extent Ong with suspicion. Far more influential in the 1970s and 1980s, at least within the academy, were the poststructuralists. The poststructuralists were media theorists who confined themselves mainly to verbal media. Poststructuralist theories, including deconstruction, were also strategies of formal critique. Their goal was to examine the formal limits of language and writing, often through a close reading of the text or through a careful analysis of the practice of reading. It was not clear how to derive any precise ideological analysis from the deconstruction of philosophical and literary texts by Jacques Derrida or Paul de Man. The ideological implications of the work came from the fact that these theorists were calling into question the universal significance of traditional authors and their texts. On the other hand, it was clear that the poststructuralists did not frame their critique in such a way as to further practice. Unlike the formal critiques of graphic design, for example, poststructuralist criticism was not aimed at helping new fiction writers improve their work. The poststructuralists would have assured us that new works would be subject to the instability of meaning that they found in the classics. Finally, these critics did not address digital media, or even earlier audiovisual media, in any central way: they worked on texts as embodied and transmitted in print or, secondarily, handwriting. Gregory Ulmer’s *Teletheory* (1989) was notable in its attempt to extend Derridean theory to television.

In the 1990s, however, a number of hypertext critics did apply poststructuralist theory to the new digital media. Ulmer himself wrote *Heu-*

retics (1994), in which he sought to apply poststructuralist theory specifically to hypermedia. George Landow made the definitive case in *Hypertext* (1992) and *Hypertext 2.0* (1997). Landow (1997) argued that “hypertext has much in common with some major points of contemporary literary and semiological theory, particular with Derrida’s emphasis on decentering and with Barthes’s conception of the readerly versus the writerly text. In fact, hypertext creates an almost embarrassingly literal embodiment of both concepts, one that in turn raises questions about them and their interesting combination of prescience and historical relations (or embeddedness)” (32). For Landow and others, hypertext became the electronic realization of poststructuralist theory. Many of the qualities that the poststructuralists had been claiming for print—the instability and the intertextuality of the text, the loss of authority of the author, and the changed relationship between author, text, and reader—were realized in a literal or operational way in the computer.

This linking of hypertext to poststructuralist theory, however, did not have the impact on the critical community that some had anticipated. It did not lead to widespread engagement with or acceptance of hypertext in humanities departments. For a number of reasons, the study of hypertext remained an esoteric activity of relatively few scholars. One was that interest in poststructuralist theory was waning at precisely this time in favor of various forms of postmodern theory, feminist theory, and cultural studies, which were overtly ideological, as poststructuralism was not. Hypertext theory was therefore identified with formalist theory at a time when formalism was particularly out of fashion. Hypertext fictions themselves certainly looked like formalist exercises, because of their emphasis on node-and-link structures and even structure diagrams (later known on the World Wide Web as image maps). Hypertext theory also seemed to be associated with technological determinism in the tradition of McLuhan. Like the claims of McLuhan for print and television and Ong for writing itself as technologies, the proponents of hypertext seemed to many to be claiming that computer technology itself could change the way we as writers communicate (Haas 1996; Grusin 1996). The idea that technologies could work as autonomous agents of social change has been explicitly rejected by cultural studies and by Marxist critics since Raymond Williams (1975). From the perspectives of such critics, it is society that

develops and molds new technologies to meet its cultural or economic needs.

Not only was hypertext associated with an obsolescent body of critical theory, but hypertext theory was also too closely associated with practice. The hypertext critics (Joyce, Landow, Moulthrop, Douglas, and others) were creative writers or teachers using hypertext with their students. Their theoretical writings explored and affirmed their Web sites, interactive environments, and stand-alone hypermedia. In other words, they were working not in the tradition of critics like Fish or Derrida, but rather in the tradition of graphic designers like Tschichold or Rand, generalizing from and justifying their own practice. Although they would certainly argue that this dual role was an advantage, their practical engagement made them guilty of special pleading as critics.

For these reasons hypertext as a practice has had only a limited influence on the method of the humanities. The potential influence still remains great, because of the ubiquity of the World Wide Web as global hypertext. Humanists are using the Web as well as other forms of hypermedia to make available teaching materials and research papers. These materials, however, have usually been composed for the medium of print and then repurposed for the Web. Written in the conventional style of linear argument, these research papers are sometimes dumped into a single Web page, sometimes broken into multiple pages corresponding to the various sections. In either case they are still meant to be read from beginning to end. Even the fully electronic journal *Postmodern Culture* (www.jefferson.village.virginia.edu/pmc) offers its readers more or less traditional, linear essays. Despite ten years of argument by critics such as Landow, the hypertextual essay hardly exists as a genre distinct from the printed essay, except in exercises assigned to students in courses on hypertext. Very few scholars have exploited the possibilities of multilinear rhetoric. On the other hand, there are many developing genres on the Web (the Webcam, the home page, the fan site, the marketing and sales site, the corporate public relations site, the Web radio station, and so on), but these are popular or business forms, not scholarly forms. Even the proponents of hypertext continue to describe their theories in linear essays destined for print (Landow 1997; Joyce 2000; Douglas 2000; Bolter

2001), because they know that the printed monograph is the media form through which they can reach their academic audience.

Ideological Critique

The dominant critical strategies in the humanities today are the many varieties of postmodernism, feminism, and cultural studies, all of which reject the formalist tendencies of poststructuralism. Applied for decades to magazines, newspapers, radio, film, and television, these strategies seek to expose and explore the ideological frameworks that control media—to show how the dominant (capitalist) ideology informs the purposes and messages of these media. The goal dates back at least to Theodor Adorno and Max Horkheimer's critique of the "culture industry" in the *Dialectic of Enlightenment*, published in the mid-1940s, with its vitriolic condemnation of contemporary mass media, such as Hollywood film and jazz music, as economically determined: "Interested parties explain the culture industry in technological terms. . . . No mention is made of the fact that the basis on which technology acquires power over society is the power of those whose economic hold over society is greatest. A technological rationale is the rationale of domination itself. It is the coercive nature of society alienated from itself. Automobiles, bombs and movies keep the whole thing together" (1993: 31). Times do change: contemporary cultural critics may now prefer to regard jazz as the creative expression of the marginalized African American minority. But the conviction remains that mass media are largely under the control of capitalist ideology and that the task of the media theorist is to expose the means of control that might otherwise lie hidden to popular consciousness.

One now classic example of this theoretical project was provided by film studies in the 1970s and 1980s, when critics argued that the very apparatus of film was hopelessly tainted by capitalist and sexist ideology. According to the psychoanalytic film theories of Metz, Baudry, and Mulvey, the very structure of film spectatorship affirmed the capitalist or male-sexist hegemony (Bordwell 1996). In this case critics carried the value of critique so far as to condemn the entire media form they were devoting their academic lives to studying. The purpose of their scholarship was to

free themselves from the ideological grip of the cinematic apparatus, from which they and other spectators could not hope to get free while actually in the theater. In this case to be a spectator was to make oneself complicit. To produce a film would presumably also make them complicit, because of the tenacious grip of the imaginary (in the Lacanian sense) or of the male gaze imposed by the camera (Mulvey 1986). Avant-garde or counterculture films could perhaps explore alternative “subject-positions,” but such films are seldom made by film critics. It would be unlikely that anyone would give such critics the resources needed to produce a full-scale film. Even in its European form, less devoted to spectacle than the Hollywood variety, film is a capital-intensive mass medium that requires a great deal of money and a large, skilled crew.

The point is that film critics were and still are examining a mass medium to which they will not in general make a practical contribution. The same has been true for the critics of radio and television and to some extent even the mass print genres of magazines, newspapers, and trade fiction. Cultural critics of media—in this respect like the psychoanalytic critics of film, although in other ways very different—often assume that the audience, including themselves, will not have access to the means of production. They must expect that their critique will influence practice only indirectly. For this reason, they often concentrate on forms of what they call “resistance,” the means by which apparently passive consumers of these cultural products can divert or distort them to meet their own cultural needs. As Bordwell (1996) puts it, “culturalists of all stripes promote reception studies, whereby audiences are often held to appropriate films for their cultural agendas. Indeed, within the Cultural Studies position, notions of subversive film have given way to conceptions of resistant readers” (10). When cultural studies critics now approach digital media, they often assume that these new media must follow the same pattern of hegemonic production and resistant reception. They look for examples of new media forms that can be characterized as mass media, because they are comfortable with the broadcast model in which the control of the media form is centralized.

For this reason, they focus on electronic commerce on the World Wide Web, which certainly exhibits excesses of late capitalism. American cultural studies critic Andrew Ross has published (on the Internet)

www.ljudmila.org/nettime/zkp4/28.htm) an essay on Silicon Alley, in which he applies the notions of alienation and exploitation to the new media entrepreneurs of New York City. Another good example is the two-part essay “Digital Diploma Mills” in which historian David Noble (1998a, 1998b) attacks the commercialization of universities moving into Web-based teaching. Arguing that the hegemony of new media is also an international phenomenon, cultural critics point to the ways in which the Western (primarily American) entertainment industry is exploiting new media (computer software, games) as well as old (film, television, audio CDs) to extend its control of entertainment and information in the less developed world.

Although often valuable and compelling, these arguments do not tell the whole story, because new media are not exclusively mass media. Although the Web sites of information companies like Yahoo! and amazon.com do share many qualities with the mass publication and retailing industries, it remains possible for individuals and small groups to create Web sites and CD-ROM or DVD applications and make them available to others in their community of interest. The open architecture of the Internet and the World Wide Web means that an individual’s Web site is in principle just as accessible as amazon.com. One or two skilled programmers can work with a designer to create highly professional multimedia applications. Unlike broadcast television or film, then, “resistant reading” is not the only available strategy for digital media, because individual practitioners can produce their own alternative forms. And unlike the theorists of film and television, at least some new media theorists have the opportunity to become new media practitioners.

The combination of theory and practice is common among those who study online environments—chat rooms, multi-user dungeons (MUDs) and MUD-object-oriented (MOOs), and threaded discussion groups. They see these environments as places for the construction of postmodern identity and the testing of cultural notions of gender and race. Some cyberenthusiasts, such as John Perry Barlow in his 1999 “Declaration of Independence for Cyberspace” (www.eff.org/pub/Publications/John_Perry_Barlow/barlow_0296.declaration) claimed that the Internet offered a social and political environment free from the political and social limitations of the physical world; they implied that racial

and gender bias may be overcome on the Internet, which was, according to Barlow, the home of Mind. Cultural critics have descended on this claim, arguing that online environments both reflect and promote the sexual and racial stereotypes of the rest of our culture. Computer games, sometimes violent, sometimes pornographic, sometimes trivial, reflect cultural constructions and stereotypes as well. The critics (such as Allucquère Rosanne Stone [1991], Lisa Nakamura [1999], Beth Kolko [1998], Cynthia Haynes and Jan Rune Holmevik [1998], and many others) have argued that cyberspace is an extension of our culture, not a refuge from it.

Although these theorists can be extremely critical of the misreadings and misuses of new media, they do not necessarily maintain a critical distance from the forms they study. There is an anthropological strain in cultural studies, so that some critics immerse themselves through extensive interviews, as did Sherry Turkle for both her books *The Second Self* (1984) and *Life on the Screen* (1995). Some cultural critics, such as Stone and Kolko, study new media environments by making use of them, particularly for education or digital performance. Some, such as Kolko and Haynes, believe that electronic environments like MOOs can further educational goals. Like other academics, many cultural critics employ new media at least to the extent of creating Web pages for the classes they teach.

Yet even in these cases theorists may find it difficult to establish a connection between their critique and their own practice, because the ideological theories of media are simply not framed in such a way as to promote practice. It is much easier to relate formal critique to practice. In graphic design, what passes for theory can often be expressed as rules of thumb for beginners to follow. In computer science, HCI is a search for formal parameters that can be put into practice. Whether qualitative or quantitative, formal theories focus on aspects that are by definition under the control of the designer or producer. Cultural theories place their focus elsewhere. In showing how the weight of global capital defines new media production, a cultural theory seems to be taking control away from the individual designer or producer. In showing how sexual or racial stereotypes are reproduced in cyberspace, the critic seems to be suggesting that the individual producer or production team is reinscribing larger cultural values. It is not that cultural critics believe that individual artifacts

are determined by larger economic or social forces. In fact, they may also espouse forms of resistance, but the rhetoric of resistance seldom leads to concrete proposals for improving practice. And at least in some cases the most powerful critical voices are adamantly opposed to a practice that must seem to implicate them in capitalist ideology. The assumption of critical distance is deeply engrained in critical theory.

Theory and Practice in American Universities

Despite the so-called triumph of theory in the 1980s among academic researchers, the humanities as taught in the universities are not exclusively theoretical. In fact the tension between theory and practice arose long before the advent of new digital media. In European educational systems, at least in the past, this tension was perhaps mitigated by the traditional division between theoretical work in universities and practical or artistic work in technical high schools and conservatories. American universities, however, have for decades offered technical, preprofessional, and even business-oriented education along with the arts and sciences, so that the practical, theoretical, and historical dimensions of a subject have found themselves together on the same campus and even in the same department. These cohabitations have sometimes led to engaged debate, but perhaps more often simply a struggle for resources.

In American universities, the division between theory and practice becomes visible as academic fault lines within departments. In film schools or mass communication departments, there is a division between theorist-historians and practitioners. In the case of the best film schools, the practitioners may enjoy the potential for prestige and economic reward, which tends to enhance their status. Unlike in some European countries, the work of film scholars in the United States is considered quite separate from film production, and scholars are generally not held in high regard by filmmakers. In music departments, there may be a tripartite division between music theory, musicology, and performance. If the performers are not located in a separate department or conservatory, then the department as a whole may have a cast toward performance or toward theory and history. In foreign language departments, the teaching of the languages is usually accorded a lower status than the study of the literatures. The same

is true in English departments, in which theorists and historians of literature generally regard composition and technical writing as necessary evils, services that the department must deliver to the university. Those who make the teaching of expository or technical writing their research field seldom achieve the same renown as literary theorists. Where there are creative writers in English departments, they tend to enjoy a higher status than teachers of writing, but such writers are almost always a small minority.

Computer technology has improved the status of teachers of writing and rhetoric, who were in fact among the first faculty members in the humanities to embrace the new technology. It was clear to teachers of writing that word processors and then chat rooms and MOOs constituted a compelling new space for their pedagogy. It was (and remains) easier to see how the computer can change the practice of writing than to imagine how this technology could affect the work of literary and cultural theory. Although teachers of writing must still struggle with the prejudice against practice in English departments, the importance of computer technology in the university and the popularity of electronic projects with administrators and funding sources have meant that their influence is increasing. Scholars in literary theory may react in one of two opposite ways to the success of their colleagues. Some may simply resent the rising importance of practice within the university, whereas others may seek to garner resources by developing electronic pedagogical or research projects of their own.

New Media and Print

Teachers of writing have accepted new media as part of their field. They understand writing by computer as a new form whose continuity with and differences from writing for print are worth exploring. The success of teachers in defining new forms of writing suggests that cultural theorists may have been premature in lumping electronic media together with mass, audiovisual media such as television and film. The difference is that mass media necessarily cast us in the role of consumer, and mass audiovisual media make viewers into consumers of simulated perceptual experiences.

With traditional mass media, it is true that we must function largely as a consuming audience. We consume films and television and radio broadcasts, all of which are products that the entertainment industry prepares for us and over which we have only the most indirect forms of control—through audience ratings, for example. These products are perceptual experiences: film and television make very sparing use of textual representation, and radio of course can make none. As Martin Jay has meticulously documented in *Downcast Eyes* (1993), French critical theory has had a prejudice against the image throughout the twentieth century. Popular mass media forms have therefore been suspect on two counts: as promoters of both capitalist ideology and visual representation.

Although certain new media forms (the World Wide Web and computer games) do share some of the characteristics of mass media, they are not so relentlessly unidirectional, nor are they capital intensive to the same degree. The World Wide Web draws people into the production process on a much larger scale than television or film has ever done. Millions of people participate in the creating of Web pages and the planning and maintaining of Web sites. The popular Web browsers (*Netscape* and *Internet Explorer*) include simple editing modes, so consumers can also become producers. It is relatively easy and inexpensive to put a site on the Web, and it will remain easy so long as the current hypertext transfer protocol remains in place. Similarly, e-mail, newsgroups, MOOs, and chat rooms are open, participatory applications that encourage recipients to add to the stream of messages that circulates throughout the Internet. It is precisely these applications that the writing community has exploited to define computers as writing environments.

This shift from consumption to production should matter to cultural theorists, if only because the role of producer may allow resistance to the dominant ideology to take new forms. As a consumer, one can only redirect the intended effects of media artifacts, but as a producer one can change the artifacts themselves. In this respect new media forms resemble some forms of handwriting and print to a greater degree than they resemble film or television. We do not have to be utopian in our assessment of either print or new digital media. Handwritten or typed forms (the letter, the postcard) have always served our needs as media of

communication that were actively possessed and shaped by millions of literate writers. Only a relatively small group of writers could get their extended writing published as books and articles. But that small group, which of course includes academic humanists, remains much larger than the number who can produce a movie or television show.

Cultural theorists of media themselves have an ambiguous relationship to the medium of print. If many forms of print (magazines, trade books) are expressions of mass culture and global capitalism, it is nonetheless print that has enabled these theorists to frame and publish their critiques. Critical theory is indispensably linked to publication in the form of the scholarly essay and monograph. Cultural critics do address to some extent how their prose forms articulate with their theory. For example, they have considered whether the scholarly essay needs to be expanded in order to provide an appropriate vehicle for cultural critique. Cultural studies and feminist writers have experimented with first-person expression and the use of personal history as part of their work. But the theory community seems unwilling to extend its experimentation to electronic forms such as the linked hypertext or hypermedia document.

There is a greater willingness among academics in the humanities to experiment with hypertext and other forms of electronic writing for teaching purposes than for research. As we have remarked, teachers of writing have come to acknowledge electronic environments as part of the practice of writing, because of the acceptance of e-mail, Web pages, and other electronic forms on the part of the business and bureaucratic communities. Some humanists have also begun to experiment with hypermedia for the teaching of literature or humanities subjects. Since the 1980s, George Landow has pioneered multimedia applications and Web sites to provide supporting material for Victorian and postcolonial literature. Landow's sites combine visual and verbal materials: not only literary excerpts and descriptive and analytic essays, but also digitized images, including pre-Raphaelite paintings, book illustrations, and political cartoons. Such educational applications for new media do not subscribe to Jay's "anti-ocularist tradition" but instead openly explore the relationships between verbal and audiovisual forms of representation. A number of stand-alone multimedia applications for education refuse to follow the traditional hierarchy (still assumed by the theory community) in which

images are subordinate to text. Gunnar Liestøl's (1996) *Kon-Tiki Interactive* presents the expeditions of Thor Heyerdahl in images and sounds as well as words. Likewise, the multimedia application *Griffith in Context* by Gregory vanHoosier-Carey and Ellen Strain (2000) allows students to examine both the formal innovations and the cultural contexts of D. W. Griffith's film *Birth of a Nation*. Within the interface to *Griffith in Context*, the user moves easily among segments of film, still images, and units of text. The authors of this application understand that writing in the new digital environment can be a hybrid form of communication in which words instantiate and inform images as well as the reverse.

The Circle of Theory and Practice

If new media are becoming accepted in pedagogy, the question remains whether and when humanists will extend their notion of critical research beyond print to include new media forms. Will they be willing to redefine scholarship to include the multilinear structures of hypertext or (what may be even more radical) the multiplicity of representational modes afforded by digital multimedia? There are powerful institutional forces working against change: for example, the tenure system in the United States, which recognizes printed books and articles as the highest forms of scholarly production. But would anything lead us to expect change?

There is a precedent for such change in poststructuralism itself in the 1970s. The most radical and influential deconstructionists not only defined a method of inquiry, but also developed a new kind of writing—indeed, the writing was the method. The jargon-ridden and elliptical style of Derrida and others, so easy to parody, was nevertheless a remarkable achievement. Traditionalists at the time complained that deconstructionist prose was impenetrable, but the prose of deconstructionists had to be “difficult” in order to enact the breakdown of meaning that they were finding in traditional literature. In this sense theory and practice *did* merge for the poststructuralists. Their own writing was not just an exposition of their theory, but the very embodiment of theory. Derrida's *Glas* (1976), a book whose pages consisted of two parallel columns of two different texts, enacted the fragmentary and unstable character of linguistic reference. At their best, the poststructuralists closed the circle of theory and

practice: their theory grew out of practice and returned to inform practice. Closing the circle of theory and practice is what poststructuralism as an esoteric form of textual criticism has in common with graphic design as an eminently practical form of visual communication. Cultural studies researchers today write with greater clarity and accessibility than did the earlier poststructuralists, precisely because they are reasserting the conventional distance between the object of study (cultural artifacts) and the means of expression (the journal article, conference paper, or monograph).

The poststructuralists were able to close the circle of theory and practice because poststructuralism was in fact a critique of the assumptions of the medium of print from within that medium. Could the same strategy work for new digital media? Current cultural critics set out to explore the ideologies that inform new media from the critical distance assumed to be afforded to them by the medium of print. Although they themselves recognize that it is not possible to remain outside of the systemic work of ideology, nevertheless the history of the academic essay gives the work the appearance of scholarly distance. For this very reason, it might prove more compelling to fashion new media pieces that serve the goal of cultural critique. What is now recognized as digital performance art often serves this goal, but there is no analogous critical form for academics. Creating such a form would require the combination of formal and ideological criticism, a new form that would bridge the apparent gulf between academic theory and new media practice in the humanities. Do we need a new methodology to call forth this new media form? What we need is a hybrid, a fusion of the critical stance of cultural theory with the constructive attitude of the visual designer. This new media critic that we are imagining wants to make something, but what she wants to make will lead her viewers or readers to reevaluate their formal and cultural assumptions.

References

Adorno, T., and M. Horkheimer. (1993) "The Culture Industry." In S. During (ed.), *The Cultural Studies Reader*. London: Routledge, 30–43.

Bolter, J. D. (2001) *Writing Space: The Computer, Hypertext, and the Remediation of Print*. Mahwah, NJ: Lawrence Erlbaum.

- Bordwell, D. (1996) "Contemporary Film Studies and the Vicissitudes of Grand Theory." In David Bordwell and Noël Carroll (eds.), *Post-Theory: Reconstructing Film Studies*. Madison: University of Wisconsin Press, 3–36.
- Derrida, J. (1976) *Glas* (trans. J. P. Leavey Jr. and R. Rand). Lincoln: University of Nebraska Press.
- Douglas, J. Y. (2000) *The End of Books—Or Books without End? Reading Interactive Narratives*. Ann Arbor: University of Michigan Press.
- Grusin, R. (1996) "What Is an Electronic Author? Theory and the Technological Fallacy." In Robert Markley (ed.), *Virtual Realities and Their Discontents*. Baltimore: Johns Hopkins University Press, 39–53.
- Haas, C. (1996) *Writing Technology: Studies on the Materiality of Literacy*. Mahwah, NJ: Lawrence Erlbaum.
- Haynes, C., and J. R. Holmervik (eds.) (1998) *High Wired: On the Design, Use, and Theory of Educational MOOs*. Ann Arbor: University of Michigan Press.
- Hodges, A. (1983) *Alan Turing: The Enigma*. New York: Simon & Schuster.
- Jay, M. (1993) *Downcast Eyes: The Denigration of Vision in Twentieth-Century French Thought*. Berkeley: University of California Press.
- Joyce, M. (2000) *OtherMindedness: The Emergence of Network Culture*. Ann Arbor: University of Michigan Press.
- Kolko, B. (1998) "Bodies in Place: Real Politics, Real Pedagogy, and Virtual Space." In C. Haynes and J. R. Holmervik (eds.), *High Wired: On the Design, Use, and Theory of Educational MOOs*. Ann Arbor: University of Michigan Press, 253–265.
- Landow, G. P. (1992) *Hypertext: The Convergence of Contemporary Critical Theory and Technology*. Baltimore: Johns Hopkins University Press.

- Landow, G. P. (1997) *Hypertext 2.0: The Convergence of Contemporary Critical Theory and Technology*. Baltimore: Johns Hopkins University Press.
- Liestøl, G. (1996) *Kon-Tiki Interactive* [CD-ROM]. New York: Voyager.
- McLuhan, M. (1964) *Understanding Media: The Extensions of Man*. New York: McGraw-Hill.
- Meggs, P. (1998) *A History of Graphic Design*. New York: Wiley.
- Mullett, K., and D. Sano (1994) *Designing Visual Interfaces*. New York: Prentice Hall.
- Mulvey, L. (1986) "Visual Pleasure and Narrative Cinema." In P. Rosen (ed.), *Narrative, Apparatus, Ideology: A Film Theory Reader*. New York: Columbia University Press, 198–209.
- Nakamura, L. (1999) "Race in/for Cyberspace: Identity Tourism and Racial Passing on the Internet." In V. Vitanza (ed.), *Cyberreader* (2nd ed.). Needham Heights, MA: Allyn and Bacon, 442–452.
- Noble, D. (1998a) "Digital Diploma Mills. Part 1: The Automation of Higher Education." *October* (Fall 1998), 107–117.
- Noble, D. (1998b) "Digital Diploma Mills. Part 2: The Coming Battle over Online Instruction." *October* (Fall 1998), 118–129.
- Ong, W. J. (1982) *Orality and Literacy: The Technologizing of the Word*. London: Methuen.
- Stone, A. R. (1991) "Will the Real Body Please Stand Up?" In M. Benedikt (ed.), *Cyberspace: First Steps*. Cambridge: MIT Press, 81–118.
- Turkle, S. (1984) *The Second Self: Computers and the Human Spirit*. New York: Simon & Schuster.

Turkle, S. (1995) *Life on the Screen: Identity in the Age of the Internet*. New York: Simon & Schuster.

Ulmer, G. (1989) *Teletheory: Grammatology in the Age of Video*. New York: Routledge.

Ulmer, G. (1994) *Heuretics: The Logic of Invention*. Baltimore: Johns Hopkins University Press.

vanHoosier-Carey, G., and E. Strain (2000) *Griffith in Context* [CD-ROM]. Available at (<http://griffith-in-context.gatech.edu/>).

Williams, R. (1975) *Television: Technology and Cultural Form*. New York: Schocken Books.