

Computers in the Writing Center

A Cautionary History

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IN RECENT YEARS HISTORICAL INQUIRY HAS FOUND A NICHE IN WRITING CENTER scholarship. Most of this history has addressed macro issues—such as the professionalization of writing centers (Riley 1994), global notions of center theory or practice (several in *Landmark Essays* 1995), the development of writing center organizations (Kinkead 1995), the nature of early centers (Carino 1995 “Early”), and models for historicizing the center (Healy “Temple,” Carino 1996). Micro issues such as tutor training, one-to-one techniques, or computers in writing centers have received less attention as the scholarship has first tried to trace a broader historical arc. Yet these smaller matters certainly underpin macro-histories. Computers in particular present a challenge for center historians because from the early workbook-on-screen programs such as the Comp-Lab modules, to the cumbersome heuristics of early CAI programs such as WANDAH, to today’s OWLs, MOOs, and MUDs, computer applications in writing centers have been so varied that it is difficult to draw historical generalizations.

Further complicating this project are the entanglements of center history with larger institutional contexts. While centers can usually reach at least uneasy consensus on matters such as tutor-training, attitudes toward students, and the like, computer use in the center is more closely tied to local funding, technological expertise, and politics—matters further outside the control of directors and tutors than, say, one-to-one pedagogy. For example, at one university a center, without asking, receives twenty networked computers because the administration must spend a large technological grant or state allocation. The center then must craft a pedagogy to include the technology, though lacking the expertise to do so. On a campus less flush the center may have to make do with hand-me-down hardware despite its expertise. These are extremes, but various scenarios in between have governed the acquisition and implementation of technology in writing centers. While many have often risen to the occasion, the technology has at least partly determined the direction of many more.

And technology can be a determining force in more ways than one. As Neil Postman (1992, 8-9) writes, “technology imperiously commandeers our most important terminology. It redefines ‘freedom,’ ‘truth,’ ‘intelligence,’ ‘fact,’ ‘wisdom,’ ‘memory,’ ‘history’—all the words we live by. And it does not pause to tell us. And we do not pause to ask.” While Postman speaks here of the larger culture, the same effect obtains in technological applications in writing centers, as computers have contributed to defining center pedagogy and the notion of the center itself. Indeed, at many institutions in the 1980s newly-created computer classrooms were designated as “writing labs,” appropriating a term that had been long filled by face-to-face (f2f) centers. In the grip of such forces, centers have not always “paus[ed] to ask,” happily implementing technology to satisfy larger campus entities such as a writing program or central administration. This response is somewhat understandable given the romance of technology—its promises of efficiency and ease, its promises of status in terms of funding and a recognized place on the cutting edge, whether on campus or in the profession. Other times, centers have “paused to ask,” indeed have paused to scream with Luddite recalcitrance, taking the humanist high ground to fend off perceived threats of obsolescence.

This tension between technological endorsement and technological resistance marks writing center discourse on computers since the early 1980s, providing several sets of polarities from which a historical view of computers in the writing center might be drawn, a historical view that, like many other histories, reveals only conflict as its thesis. Though this thesis may seem obvious, unpacking it allows for investigation of several less obvious issues regarding centers and computers. Thus, it is within conflict that I want to situate this history of computers in writing centers.

Viewing the techno-history of centers as conflict necessarily excludes other possible constructions, such as ameliorative notions of progress—and there has been progress—or Marxist critiques of economics, politics, and technological determination. Though these structures, like others, could easily drive this history, foregrounding progress would ignore some of its costs and capitulate to the global capitalism which computers help support, while a Marxist perspective would engender too easy a chic radicalism that condemns the system in which center professionals willingly participate and from which they benefit. Likewise, I could place pedagogy at the center of this history, tracing and demonstrating the ways in which centers have struggled, usually creatively, to implement technology to help student writers. Though not centered, issues of progress, economics, politics, and pedagogy will necessarily arise in various combinations as polarities or intersections from the broader thesis of conflict.

This is not to say that centering conflict renders a master narrative delivering The Truth, and certainly I recognize my own situatedness as a writing center director conflicted by technology. That is, I am not among the more zealous who imagine computers can enable centers to do everything on campus but take over

the athletic program, nor as I oversee a beginning OWL in my own center am I a romantic technophobe, though I like to proceed more slowly than some, as the cautionary title and tone of this history indicate. From this position, I choose conflict as the organizing principle of this brief history, for I believe it allows the largest number of voices to speak. I am not saying these voices, a sample of roughly fifteen years of scholarship on writing centers and computers, will not be inflected by my own; nevertheless, I believe that, set in conflict, they can provide a richer sense of computers in the writing center than other histories I might construct. But before turning to writing centers, it is necessary to outline briefly the broader context of computers and composition against and within which center history unfolds, for composition history demonstrates some of the same technological conflicts centers encounter while simultaneously standing as another point of opposition and commiseration against which to trace the writing center's individual history.

COMPUTERS AND COMPOSITION

Computers and the Teaching of Writing in American Higher Education, 1979-1994: A History, by Gail Hawisher, Paul Le Blanc, Charles Moran, and Cynthia Selfe (1996) provides a detailed history of computers in composition, and, as I hope will be evident, adumbrates some of the same issues relevant to writing centers. This work contextualizes a sixteen-year pedagogical history in the technological developments that made electronic writing instruction possible: early experiments on mainframe computers, the personal computer, LANs, hypertext, WANs, email, the pentium chip, and computer mediated communication systems such as real-time chat, MOOs, and MUDs. Situated in these technologies, computers and writing instruction are historically examined, perhaps a little too incrementally but nevertheless effectively, in five periods beginning from 1979 through 1982 and in three-year segments through 1994:

1. *1979-1982: The Profession's Early Experience with Modern Technology.* Here Hawisher et. al. identify a struggle between current-traditional and process pedagogy, with grammar-drill programs and style checkers existing side by side with such early CAI developments in process software as Hugh Burns's Topoi, Selfe's and Billie Wahlstrom's Wordsworth, William Wresch's Writer's Helper, and Lisa Gerrard's SEEN, among others. The key development technologically in these years is the availability of the micro-computer (as opposed to main frame instructional systems such as Brigham Young's TICCIT and the University of Illinois's PLATO) which made it possible to view the computer not only as a data processor "but as a writing instrument." (46)

2. *1983-1985: Growth and Enthusiasm.* In these years, computers and composition professionals grew in number and visibility with a special interest group at CCCC (dubbed "the fifth C") in 1983 and the Assembly for Computers in English (ACE)

recognized by NCTE in 1985. Additionally, journals (most notably *Computers and Composition*) and newsletters were founded, the first Computers and Writing conference was established, instructor developed CAI software began to be distributed commercially, and NCTE published *Computers in the English Classroom: A Primer for Teachers* (1983) and an edited collection of essays, *The Computer in Composition Instruction: A Writer's Tool* (1984). Pedagogically, as new and easy word-processing software began to appear, word processing, with its composing and revision potential, began to challenge CAI for dominance in classrooms. Technologically, the first LANs began to appear in classrooms, and the first hypertext program for microcomputers was released.

3. *1986-1988: Research, Theory, and Professionalism*. As the chapter title indicates, these years are celebrated as a time of further growth, with increased visibility within composition (9% of the sessions at the 1987 CCCC), the growth of professional organizations and journals, the increasing publication of books on computers and writing, and the dovetailing of LAN technology and early email use with post-process collaborative learning and constructionist pedagogies. At the same time, research anxieties began to appear over the fact that “Most studies failed to discover important differences between students writing on- and off line” (147).

4. *1989-1991: Coming of Age—The Rise of Cross Disciplinary Perspectives*. This chapter might just as well have been called “growing pains,” for while the authors report rapid advances in hypertext, LAN, and WAN technologies, they also report the lagging behind of classroom practices due to a lack of knowledge and/or funding. There is, nevertheless, a “coming of age,” as scholars in the field began to politicize and theorize their work on computers and writing, in keeping with the shift from the individual writer of process pedagogy to the politicizing and contextualizing of all acts of composing in social pedagogies. In doing so, scholars and teachers began to confront the unsettling possibility that, imbricated in the larger culture, “electronic writing classes . . . supported only a limited potential for change.” (201)

5. *1992-1994: Looking Forward*. While the authors here speculate on technological developments in computer mediated communication (CMC), next generation processors, multimedia, and the internet, among others, they also lament the beginnings of a fragmentation in the field and the increasing division between privileged researchers and the underclass of graduate and adjunct teachers who actually teach beginning writers. In terms of pedagogy they speculate on how computers fit in with composition's increased interest in the cultural politics of literacy, which has sometimes fostered feminist and cultural studies analyses that question the notion that new computer technologies provide “the egalitarian social spaces promised in the research literature.” (250)

This snapshot of Hawisher et al.'s history is necessarily reductive and can in no way do justice to the book's depth and texture. While the incremental organization of the book may seem lockstep (and my summary definitely does), the authors are also aware of the synchrony of history, recognizing that some of the grammar drilling and style checking programs they locate in current-traditional beginnings persist today or that the macro history they construct in narrating a sixteen-year period may at times recur in a local setting in a compressed time frame. At whatever point in time, Hawisher and her colleagues also discuss numerous issues affecting those involved in using computers to teach writing and in researching this practice: among others, community formation, struggles for respect in English departments, battles to have computer work valued in tenure and promotion decisions, fights with administrators for funding, attempts to educate colleagues, the commitment to improving student writing, fear and enthusiasm toward technology, and feelings of marginalization both on campus and in the profession. Such issues writing center professionals know all too well, yet despite these shared concerns, Hawisher et. al. barely mention writing centers. "Writing Laboratories" are listed only once in the index, and they discuss labs only in the context of conference teaching, erroneously reporting them as facing the prospect of being transformed into computer classrooms:

The writing rooms described by Garrison and Murray, and the conference-centered or tutorial based pedagogy, whose literature was assembled by Muriel Harris in *Tutoring Writing: A Sourcebook for Writing Labs*, foregrounded the student writer's writing and the teacher/editor's intervention. With the advent of the microcomputer in the 1980s, the already established writing labs and writing workshops became computer-writing labs and classrooms, with teacher editors conferring, one-to-one, with student writers. (29)

While some blurring of boundaries likely occurred as many computer classrooms were designated as "writing labs," I think the thousands of peer tutors working f2f during the years discussed would be surprised to learn that they had been replaced by teacher/editors working on computers. Thus though Hawisher, LeBlanc, Moran, and Selfe offer a finely detailed and historiographically sophisticated document on the entrance and continued presence of computers in composition, though they provide a socio-techno-cultural context for thinking about writing instruction and computers, it is necessary to look elsewhere to attempt to document the impact of computers on writing centers, a task to which I will now turn.

It would be tempting to adopt the same chronological sequence for writing centers that Hawisher and her colleagues construct for composition, but though much of their chronology applies to writing centers, the trajectory of center history differs as centers likely began implementing the technology after composition programs (an assumption based on the scholarship as well as on institutional

funding hierarchies). Furthermore, as a different pedagogical space, centers had as many different as similar problems and successes. Because of these differences and due to limitations of space, I will create a somewhat different chronology, but though proceeding chronologically I will attempt to address the recurring issues that demonstrate that history is also synchronic.

FEARS AND HOPES: THE EARLY YEARS, 1982-1986

It is difficult to pinpoint the first public expression, either in print or at a conference, about computers in writing centers. In the first four years (1979-82) that Hawisher et. al. designate for historical treatment, no articles in the *Writing Lab Newsletter* discuss computer tutorials. Similarly in the first book on centers, Muriel Harris's 1982 collection of essays *Tutoring Writing*, only one article treats computers: Don Norton's and Kristine Hansen's "The Potential for Computer-Assisted Instruction in Writing Labs." As its title indicates, the piece is optimistically speculative, but it evidences many of the same tensions that will continue to define the writing center community's future discourse on computers. On the one hand, Norton and Hansen conclude that "CAI may yet make it possible that across the nation learning will occur more effectively at computer terminals than in more traditional settings" (161). On the other, the authors lament the costs of terminals and fees to plug into the instructional programs of the TICCIT and PLATO mainframes, the difficulty of creating software (a concern shared in composition circles), and the limitations of computers at that time to teach more than discrete skills.

Since it seems likely that microcomputers and word processing, both then commercially available, would have been big news in those days, the lack of articles in *The Writing Lab Newsletter* before 1982 and the limited coverage of the Norton and Hansen piece suggest that centers had not yet received the technology in significant proportion. But a spurt of discourse on computers in writing centers only a year later bears out the cliché that technology moves fast. The *1984 Writing Lab Directory* (compiled in 1983) lists 88 of 184 centers as having at least one computer, and center professionals began to make their voices heard, with three articles directly treating computers and two discussing them within broader topics in the *Proceedings of the Writing Center Association Fifth Annual Conference* (1983) and at least one paper delivered at the First Midwest Writing Centers Association Conference the same year.

These six articles outline the same conflict between CAI and word processing application found in composition circles. Evidently early CAI programs for pre-writing, such as Hugh Burns's Topoi or Lisa Gerrard's WANDAH, had not reached writing centers, for to writing centers at this time CAI usually meant current-traditional grammar drills or at most style checkers. Countering these were word processing programs, hailed as a powerful tool for process writing. At the Writing Centers Association (now ECWCA) Conference, Mary Croft extolled the use of

word processing to “diminish the concern over the physical act of writing and the worry over neatness and correctness,” arguing that computers allow for “thorough revision not merely surface revision” and “encourage students to be both abandoned experimenters and disciplined self editors” (58-59). Croft denounces a CCCC presentation she saw the previous year on a CAI program used to flag grammatical errors, claiming it turned the computer into “just a big, expensive red pencil” (59). She also cautions against grammar software, saying “I haven’t seen any I really believe our students can’t live without” (60). Like Croft, Beatrice Johnson, in the same proceedings, celebrates the potential of word processing: “From free writing through final proof reading, writers find the Apple an efficient tool” (105). Finally, Janice Neuleib in an article on center research challenges directors to forego “merely putting on a computer exercises that do not work in books” and to implement instead the “valuable tool” of word processing (215-216).

In contrast, at the same conference, two articles promote grammar instruction via CAI. Frances Key, of Ball State, arguing the benefits of multi-media autotutorial programs, claims that flagging surface errors on computer forces the student into “precision in thinking” (137)—though never really explaining how. He also values the privacy of autotutorials, computer assisted and otherwise. Don Payne, of Iowa State, offers “a comprehensive sequence of lessons dealing with spelling, proofreading, vocabulary, and error” (239), though concluding his piece with hopes for developing pre-writing heuristic programs. Payne’s accommodation of the technology is clearly the most current-traditional of the six. But while endorsing his pedagogy, he also apologizes for it, opening the essay with a discussion of an “administrative arrangement [that] means we have a narrower focus than many writing centers, that we concern ourselves more with mechanics than with general compositional skills” (239).

Considering the range of positions here, one wonders how these presenters may have reacted to one another had they attended one another’s sessions. On the one hand, this diversity testifies to the writing center community’s tendency (still healthily in place) to tolerate a variety of opinion. Indeed, well before this conference center professionals were implementing instruction beyond grammar and identifying themselves with the by then entrenched process pedagogies, yet Payne’s and Key’s papers were welcome. On the other hand, while demonstrating the community’s capacity for accommodation, these articles also, and more importantly, indicate its situatedness in the same pedagogical debates going on in computers and composition and in larger cultural debates regarding technology. Recall the plight of Don Payne at Iowa State. In an institution with a large engineering program, his lab was technologically rich in terms of the software development resources he reports coming out of the university’s Computation Center. These riches, however, result in graduate students in computer science assigned to program for his writing center. Though working with the programmers, he has difficulty maintaining control: “For instructors accustomed to more autonomy in

developing instructional materials, this mixture of managerial and consultative roles may convince them that indeed they are the ones being integrated into some other system” (242). Payne’s lament echoes the early caveats by scholars in computers and composition that teachers, not programmers, must control software development (Hawisher et. al., see also Wresch). In larger cultural terms, Payne warns that though the title of his essay speaks of integrating computers in the center, “one of the first things you discover when you begin working with CAI is that in many ways you are fitting into another discipline, not just incorporating technology” (241). Here Payne echoes Neil Postman’s contention that when a new technology enters a culture, the result is more than additive; that is, what results is not the old culture with something new added but a new culture.

The anxieties of these early discussions are laid bare by Dennis Moore in a paper presented at the 1983 Midwest Writing Centers Association Conference with the provocative title, “What Should Computers Do in the Writing Center?” To this question, Moore flatly answers that we don’t yet know and then forcefully derides what he sees as the techno-evangelism of the voices in the 1983 issue of *College Composition and Communication* dedicated to computers. For instance, when Collette Daiute (in an article deemed “seminal” in the editor’s note to the issue) claims that the cursor “reminds the writer that the program is waiting to receive more input, which encourages the writer to say more and to consider whether what is written makes sense,” Moore rightly asks how a mere blinking light can accomplish all that for a beginning writer. In addition, in response to Richard Lanham’s early style-checking program, Homer, Moore notes, as many others have, that style checkers merely count words and flag particular grammatical and stylistic elements (-tion words, to be verbs etc.) without any regard for context or rhetorical purpose: “There seems little point in telling a basic writing student that she has written 205 words in 17 sentences with an average of 12.05 words per sentence—a typical Homer item” (8). To be fair to Lanham, he himself recognized the program’s limitations in print. Nevertheless, Moore’s near jere-miad asks the writing center community “to take a critical attitude toward educational computing: to learn all you can about it and to keep asking questions” (2).

It would be easy to dismiss Moore as a Luddite or to argue that the conflicts I cite are more pedagogical than technological in that they pit grammar-drill-on-screen against word processing, current-traditionalism versus notions of process writing at the time. However, one wonders how the technology affected the persistence and implementation of both pedagogies. Take, for example, the Comp-Lab modules, a self-paced workbook series with audiotapes that had enjoyed some popularity in writing centers before computers (see Epes 1979; Epes, Kirkpatrick, and Southwell 1983; Baker and Whealler). One would think that contemporary with Maxine Hairston’s process clarion, “The Winds of Change: Thomas Kuhn and the Revolution in the Teaching of Writing” (1982), such materials would die a rapid death, but two years later Comp-Lab’s software version was

featured in an essay by Michael Southwell in Willam Wresch's NCTE collection, *The Computer in Composition Instruction: A Writer's Tool* (1984). Southwell touts computerized autotutorials as transferring "responsibility for learning to the learner" (93), a nice alliterative phrase but one that collides with the collaborative pedagogy and tutor talk being championed in the same year by such revered writing center scholars as Steven North and Kenneth Bruffee. Nevertheless, despite its current-traditional moorings, Southwell's article enjoyed status alongside numerous others by some of the most notable scholars, then and now, in computers and composition, most of whom, in contrast, were looking to adapt process pedagogy electronically. Granted that Comp-Lab may have been one of the better autotutorials of its time, I do not think it cynical to say that had it not gone electronic, it would have withered on the shelves of most writing centers by 1984 and would never have seen print in an NCTE publication, least of all in one hailed as "a breakthrough" (Hawisher et. al. 84).

As in composition studies, computers continued to engage writing center scholars following the earliest work. This it not to say there is a large body of work following the initial pieces, but certainly interest was growing. Jim Bell (1989) reports that between 1984 and 1988 *The Writing Lab Newsletter* published thirteen articles and nine software reviews, making computers the second most popular topic, and essays continued regularly in regional conference proceedings. While these essays express some of the same tension as the early work, they begin to take on a less conflicted tone, demonstrating more confidence and resulting in a genre I will call "the success story." Essays in this genre begin by raising concerns about technology, usually to ease humanist anxieties, and then move to an ameliorative narrative of successful pedagogical implementation. For example, Richard Marshall's "Word Processing and More: The Joys and Chores of a Writing Lab Computer" (1985) rehashes all the problems of implementing computers—technological fear, software needs, possibilities of losing documents, maintaining the equipment—but concludes confidently with several solutions and a plea: "Please Santa, send us a few more computers" (181). In a similar "success story," Robert Royar (1986) discredits studies that were claiming word-processing does not change the revision habits of inexperienced writers, arguing that instruction in revision and the right software will do the trick. Charles E. Beck and John A. Stibrany (1985) corroborate Royar's claim in a study of graduate students at the Air Force Institute of Technology.

It would be redundant to recount the many essays in the "success story" genre. Suffice it to say that they tend to illustrate what Stuart Blythe (1997) has called "a logistical view" of technology: the assumption that technologies are neutral tools whose benefit or bane depends on those implementing them. This view, Blythe argues, ignores the possibility that technology transforms culture, an argument that had long been advanced by noted technological critics such as Postman, Joseph Weizenbaum, and Hubert Dreyfus. Postman's position has already been

cited, but Weizenbaum (1976), an early developer of artificial intelligence (AI),¹ warns that technology transforms the very way we think of ourselves in our surroundings. He notes that AI, for example, tends to cast computers in human metaphors (witness also the cute anthropomorphic names often assigned to composition programs: Wandah, Homer, Wordsworth, or more specific to writing centers, OWL). Weizenbaum argues that this attitude reciprocally causes us to think of humans as machines, in terms of a Cartesian rationality long considered limited in philosophical tradition. Weizenbaum's positions are bolstered by Dreyfus in his seminal challenge to AI, *What Computers Can't Do* (1971, 1979) and his revised edition, *What Computers Still Can't Do* (1992).

It would be unfair to charge early center professionals working in computers with technological naivete in confidently ignoring such questions in their "success stories" (in fact some of their trepidations show they were not ignoring them completely), for they were using computers to help students write and to solidify the institutional place of their centers. Given institutional constraints, the lack of time to reflect on technology, and the need to create more effective pedagogies, it is not surprising that success stories, as a genre, continue in subsequent years side by side with more restless discourse.

NEW TECHNOLOGIES, NEW PEDAGOGIES, NEW QUESTIONS: 1987-1991

As LAN and hypertext applications began to make their way on to campus, the number of articles in the *Writing Lab Newsletter*, as well as in conference proceedings of the time, indicates a continual but not significantly increasing stream of commentary. The notable exception is the special issue of *The Writing Center Journal* entitled "Computers, Computers, Computers," and its appearance governs my choice of 1987 as the point of demarcation for a new historical segment. Closing this period, Jeanne Simpson's and Ray Wallace's 1991 collection of essays, *The Writing Center: New Directions*, despite its forward looking title, contains only one article on computers, and after its dedicated issue *The Journal* surprisingly published only one more article in these years (in the 1991 Tenth Anniversary Issue) and not another until 1997. This lack of a marked increase in publication on computers in writing centers may be attributable to the increase of LAN and hypertext technology. Not only was this technology likely beyond the budget of most centers, LANs also lent themselves more readily to creating user groups in classrooms than to tutoring one to one. Thus it is not surprising that many articles on computers and writing centers (see, for example, Berta 1990 or Brown 1990) duplicated the logistical success stories previously discussed, concentrating on microcomputer applications for various purposes, usually with the typical anxieties of previous years ameliorated by claims of student success and without much technological or cultural reflection.

The special issue of *WCJ*, however, demonstrates that center professionals, though still seeking instructional applications, were returning to the critical

perspectives prevalent in the initial work but glossed over in the success stories. Fred Kemp's lead article, "Getting Smart with Computers: Computer-Aided Heuristics for Student Writers," challenges binary thinking that would see computers as threat or panacea, arguing that "computers can do marvelous things for us in our classrooms and learning labs, but only if we are imaginative enough to forsake the anthropomorphic prejudices of robotry and develop truly innovative instruction based upon characteristically computer abilities" (9). With this stance, Kemp aligns himself with artificial intelligence researchers such as Weizenbaum to argue that the difference between human intelligence and artificial intelligence is "so vast, especially in terms of Natural Language Processing, the similarities are theoretical, not practical" (9). Though observing the benefits of computers, Kemp advises writing center professionals to "to employ a very sophisticated, and possibly new, understanding of the writing process" (9).

Kemp's admonition parallels what Hawisher and her colleagues trace in the composition community at large: that by the mid- to late eighties, more social and politicized notions of context were beginning to create a post-process, culturally-interpellated, constructivist model of composing that questioned the simplicity of the student-centered, often stage-model notions of the process movement. That post-process models rendered composing far more complex an activity than CAI programs then could represent or address begins to surface in Jeanne Luchte's bibliographic essay on process software available in 1987. Luchte organizes her essay in terms of pre-writing, organizing, drafting, revision, and editing—the steps of the process model—and then evaluates the degree to which computers might facilitate each step. Yet as she concludes her essay she is not fully confident in this model: "Though I am delineating the five processes to examine how using the computer can help teach them, I should stress that the most viable computer applications will be those that address the process integratively and cohesively" (18). With this statement Luchte recognizes that composing is recursive—one of the earliest arguments challenging step-models of process—and implies that CAI software had yet to account for recursiveness. Luchte's reservations emerge more prominently in the issue's paired reviews, by David Partenheimer and Bill Emmett, of WANDAH, which by this time combined CAI features and word processing and was entering the commercial market as HBJ Writer. Partenheimer essentially trashes WANDAH, arguing that its heuristic, editing, and revision features are intrusive and cumbersome and (echoing Kemp) that the program "encompasses only a fraction of the skills involved in effective writing" (53). Even Emmett, taking the pro position, lukewarmly contends that WANDAH/HBJ Writer gives beginners "one more tool" but concedes that the program soon "will be outdated" (58).

While neither Kemp, Luchte, Partenheimer, nor Emmett directly allude to social notions of writing, they implicitly and explicitly doubt that the software fits what was known about composing. This stance separates them from early objectors to

computers and writing, who couched their fears more in terms of traditionally humanist objections to machinery. Conversely, these later commentators base their objections on informed experience with the technology. Situated thus, they repeat not only the disappointments of composition studies (Hawisher et. al. chapters five and six) but also those of AI researchers, who were beginning to realize the difficulties, if not impossibility, of programming computers to account for all the social subtleties encoded in language and the “consensus knowledge” humans employ in making decisions in complex acts such as writing (Dreyfus 1992, xvi). Faced with this problem, the U.S. Department of Defense had discontinued funding for all AI research except neural-network modelling by the late 1980s, and the Japanese government had discontinued funding AI research altogether.

Because post-process pedagogies such as social construction, feminism, and cultural studies rhetoric deflated some of the early promise of computers, writing center scholars sometimes turned from pure pedagogy to begin investigating ways in which computers affected social situations related to composing. The beginnings of this line of inquiry are illustrated in Pamela Farrell’s “Writer, Peer Tutor, and the Computer: A Unique Relationship” in the special *WCJ* issue. Farrell reiterates the same pedagogical claims for the computer as writing tool as earlier advocates had, but adds that the computer promotes collaboration among students of “varying social, educational, and ethnic backgrounds” (29). This happens, according to Farrell, because tutors and tutees, often hampered by social difference (which would be quite powerful in Farrell’s high-school setting), direct themselves toward the computer, an interest they share, and away from the writing deficiencies of the tutee or the social positions of either party. Farrell’s essay, given the complexities of social difference that subsequent scholarship has revealed, is, in retrospect, a bit too much the happy tale, the success story. However, in 1987 her introduction of the social element into discourse on computers in the writing center implies that she was starting to reflect upon the technology in ways beyond its obvious application as a tool for teaching process writing.

This focus on social dynamics also occupies Maurice Scharton two years later in his “The Third Person: The Role of Computers in the Writing Center” (1989). Scharton presents four case studies that demonstrate how various aspects of computer writing helped four different students with four different writing processes. One student learned to ask for help (no small accomplishment); another discovered possibilities of macrostructural changes, working with a tutor who encouraged her to play with the block-and-move function like a video game; a third overcame his obsession with grammatical correctness; and a fourth realized that document design and appearance are often part of the social contract between author and audience. In each case, students surmounted their problems because the computer, Scharton implies, defused some of their previously inhibiting behaviors. Like Farrell, but with less obvious enthusiasm, Scharton argues that “the computer supplies a social basis for that relationship [tutor-tutee] because it

represents a common interest and a new language with which to discuss that interest" (40). While one might argue that Farrell and Scharton barely scratch the surface of social theories of composing, their work signals an increasing awareness of new questions and a more sophisticated stance toward technology.

In addition to concerns grounded in newly developing social pedagogies, writing center scholars, though not in large numbers, were beginning to examine uses of technologies other than word processing and CAI—but again not without conflict. Joyce Kinkead's "The Electronic Writing Tutor" (1988), in *The Writing Lab Newsletter*, is likely the first work that considers email tutoring. Kinkead endorses email as a means of reaching commuting students off-campus or students in distance education courses. Simultaneously she raises issues that show an awareness of the social complexities of writing and the politics of institutional culture. On the former, she argues that though email "combats the problems of time and distance," it does not equal the "value of dialogue in a f2f conference" and is no "replacement for the immediate questioning and discussion of tutorials" (5). Kinkead not only demonstrates an allegiance to the collaborative dialogue underpinned by social theories of composing but also warns against administrators who, lacking theoretical sophistication, might view email tutoring as a more efficient and cheaper method of delivering tutorials. A pioneering anachronism, Kinkead's essay, in its concern with distance learning and electronic tutoring, foreshadows themes and conflicts that become increasingly important for writing centers of the 1990s.

Irene Clark's "The Writing Center and the Research Paper: Computers and Collaboration" (1991) is another work that turns its attention to the possible effects of then new technologies. In possibly the first writing center article to discuss hypertext applications, Clark describes "Project Jefferson," a program in which students working with tutors access a pre-programmed bank of texts online to research and write a documented essay. She stresses the collaborative nature of the tutor's role in helping to find, evaluate, and use information, citing, like Farrell and Scharton, the computer as a social intermediary. Though sometimes representing research writing in the "steps" of early process pedagogy, Clark recognizes that tutors must explore with students "different models of the research process" rather than a right way (212). What is significant here in terms of future applications is Clark's emphasis on "evaluating the quality and relevance of the articles" accessed to discern "the relative merit of one source over another" (213), a function that will become crucial with the availability of unregulated internet sources of information such as news groups, listservs, and, of course, the world wide web. Clark expands on this concern in a 1995 essay (to be discussed below) on teaching "information literacy," but her position is already outlined in this 1991 piece.

Before turning to the years both Kinkead's and Clark's work implicitly predicts, I would like to close this section by examining Janice Neuleib's and Maurice Scharton's essay, "Tutors and Computers, An Easy Alliance" (1990). Published in the prestigious tenth-anniversary issue of *The Writing Center Journal* issue, looking

back on the eighties and forward to the nineties, describing a center with a variety of state-of-the-art hardware and software, and demarcating the year with which I end this period, this essay expresses numerous hopes and reveals numerous anxieties as centers were moving from one decade to the next and from a pedagogy largely dependent on free-standing microcomputers to more widespread network applications.

In many senses, Neuleib's and Scharton's essay reads as if they do not want to utter an unkind word about computers, and perhaps in the tenth-anniversary issue of *WCJ*, they don't, preferring rather to argue that the writing center community had confidently and effectively accommodated technology. And to a degree they show it had, if their center represents others. Indeed, they touch on nearly all relevant issues of the 1980s: the aggressiveness needed to secure funding, the efficacy of word processing in the face of the limits of CAI, the effect of computers on the social aspects of writing, the use of computers as a public relations device, the need for directors to educate themselves in new hardware and software, the differences in resources among institutions. However, though Scharton's and Neuleib's is an informed and savvy essay, beneath its varnished seamlessness lurk several tensions worth noting. To begin, the essay is at times disconcertingly enthusiastic, as these outcroppings attest:

The six years [since the introduction of computers in the center] have reflected the national revolution in computer use. (49)

Tutors' assumption that everyone writes or ought to write on computers suggests to us that a revolution in our tutors' thinking has indeed occurred. (52)

[Writing] becomes more like singing. In the computer world, we can all have a voice like Pavarotti's. In comparison, with text produced on a color monitor, print on paper is a pale and lifeless imitation of writing. (54)

We explain to our visitors [administrators and "a steady stream of dignitaries" (56)] that the computers are there to close the personal distance between writer and tutor. So far electricity has warmed our tutoring atmosphere; we hope to keep it that way. (56).

This enthusiasm masks several unreconciled conflicts. Neuleib and Scharton speak of modelling writing behaviors by refusing to write themselves, "short of grocery lists and postcards," without a computer and take pride in the fact that several of their tutors feel the same way. "Thus a powerful force," they claim, "is operating in the tutoring situation to socialize writers to the new medium of transmission of knowledge" (53). They compare those who resist this "powerful force" to poor readers remembered from their childhoods: "The few who still do not like to use the machine are all too sadly familiar as the non-readers who struggled and eventually fell by the wayside unable to understand the symbols that would give them access to the world of text. We can still see their faces" (55).

To some degree, this subtle coercion and open condescension can be attributed to the satisfaction Neuleib and Scharton must have deservedly felt in securing equipment and implementing technological pedagogy. But one wonders that if all were so electronically well at their center, why three-quarters of their tutors, in answer to a survey, preferred discussing papers with tutees in hard copy, that “pale and lifeless imitation of writing.” Neuleib and Scharton chalk this preference up to the tutors’ desire to resist the temptation, promoted by the malleability of text on screen, to appropriate the tutees’ texts and revise for them, a writing center taboo. But rather than leave it at that, they further support their tutors’ resistance, saying it accords with their “strong feeling, voiced in conversation with our new president, that the computer has as much potential for impairing as for improving communication” (55). However, earlier in the essay they report making this argument to quell the new president’s desire for grammar drill software, not to validate hard text revision. On the plus side, they also note that they want students to “consider text, as a human not a mechanical issue” (55)—good point and one I believe they believe—but curiously they never return to how computers might impair communication, or how the computer interfered with one-to-one revision, a fundamental element of center pedagogy, choosing rather to pile on excuses for the tutors’s preference for hard copy.

Despite the essay’s glossy veneer, the conflicts show through like scratches too deep to be sanded smooth and in hindsight (always 20-20 I know) raise the possibility that the community had not fully understood the implications of the technology with the same success as it had implemented it. These shortcomings can be largely attributed to the authors deserved pride in their lab’s successes and the essay’s occasion. The tenth-anniversary issue of *The Writing Center Journal* would not have been a likely venue to address the fear Hawisher et. al. cite in the composition community that “electronic writing classes . . . supported only a limited potential for change” at a time when almost 80% of the centers in the 1991-92 *National Directory of Writing Centers* reported using computers. This fear and new expectations, however, would continue to be contested in the 1990s as new technologies began to enter the writing center on a wider scale.

OWLS, LANS, MOOS AND WEBS: 1992-PRESENT

I choose 1992 as the opening of this last period in this history because it marks the year WCENTER, the writing center listserv, began and the establishment of Eric Crump’s regular column, “Voices from the Net,” which recounts selected WCENTER discussions in *The Writing Lab Newsletter*. I will not examine WCENTER, for it could be the subject of another essay, nor is it a direct delivery system for tutoring students. Rather I see it as the symbolic entrance of computer mediated communication (CPC) into the community on an increasingly wider scale. In addition, I would argue that the success of WCENTER positively contributed to the community’s confidence in implementing new technology, serving as both

an example of technological potential and a source for hashing out new technological issues.

While most center scholars began to assess new technologies and new concerns, others once again demonstrated the synchronicity of history with some articles focussing on concerns of the previous decade (see, for example, Vasile and Ghizzone 1992 and Simons 1995). I will not treat work that goes over old ground but only that which confronts and attempts to negotiate the potential conflicts and possible changes wrought by new technologies. Much of this work appears in 1995 in the special number of *Computers and Composition* dedicated to writing centers. Needless to say the articles here often touch upon conflicts previously discussed: funding, the relationship of pedagogical and technological expertise, social issues in writing, and the like, but these issues are raised in relation to the implementation of new online systems. And although some of the authors, like their predecessors, ensnare themselves in their own enthusiasm, the majority speak in a more evenhanded tone and demonstrate a critical sophistication sometimes missing in earlier work. Yet even the more sophisticated pieces are not always able to resolve the problems they raise—not because these authors are obtuse but because the problems are complex and in flux.

Muriel Harris's and Michael Pemberton's "Online Writing Labs (OWLs): A Taxonomy of Options and Issues" surveys various technological applications available, from online storehouses of handouts accessible from a home page to synchronous chat systems. They also advise directors to consider local contexts in implementing anything, noting that computerized centers vary greatly depending on their purposes, funding, and available technological expertise. Although Harris's and Pemberton's essay is primarily informational, their concerns surface to show the power (positive and negative) of the technology to transform center pedagogy and the way we think about it. Most obviously, in response to synchronous chat tutorials, Harris and Pemberton warn of "the losses in this faceless disembodied world as the lack of the personal contact may seem to dehumanize a setting that writing centers have traditionally viewed as personal and warm" (156). However, recouping this loss, they pose the possibility that chat systems create "a world where gender, ethnicity, and race are not immediately evident" and where the shy might be more inclined to speak. There may be some truth to this claim, but it had been challenged in earlier work in the wider field of computers and composition. For example, in a study of discourse on Megabyte University, a list-serv on writing and computers, Cynthia Selfe and Paul Meyer in 1991 found online talk to be dominated by "men and higher status members of the academic community" (read tutors for writing center chat) and to be much more adversarial than the egalitarian space initially imagined (qtd. in Hawisher et al 2009).

Though hashing out the ups and downs of synchronous chat, Harris and Pemberton sound surprisingly neutral in their treatment of automatic file retrieval, by which clients access handouts stored on a website. Often these handouts offer the

same type of grammatical instruction and information centers have distributed from file cabinets for years. This use of the technology evokes the storehouse metaphor of the writing center constructed by Andrea Lunsford in 1989 to denounce current-traditional center practice based on correctness and grammar drill. Much previous and subsequent center scholarship joined Lunsford in using this metaphor to repudiate the practice it represents. But Harris and Pemberton remain silent on the issue. To be fair, their essay, as its title professes, is more an informational taxonomy than a polemic. Furthermore, I believe Lunsford's metaphors gained an undeserved currency.² After all, people use handbooks for reference, and placing a corollary online can only provide good will for a center. Rather I raise this question to demonstrate how the technology can reshape our views of a pedagogy. Other than convenience, there is no evidence that handouts accessed online are any better than handouts pulled from a file cabinet. File cabinet or computer, each is a storehouse, a point I doubt Harris and Pemberton would contest. Yet redecorated by technology, the storehouse, generally regarded as a disreputable image of the writing center, is now redeemable, which may be good or bad, depending on the way we feel about storehouses. But however we feel, we need to recognize the pressures technology exerts on our feelings.

Ultimately, Harris's and Pemberton's work provides a useful compendium of the possibilities of technology, and though I would like to hear more from them about the issue of storehouse centers, essentially they avoid the seductions of technology that sometimes plague others. Also in the same issue, David Coogan's "Email Tutoring, A New Way to Do Old Work," though enthusiastic about the method, demonstrates that center scholars, in many cases, have become more guarded, more reflective. Though Coogan finally endorses email as an alternative, he recognizes many of the problems Kinkead had pointed out back in 1988, admits that he is not unreservedly "ready to recommend email to writing centers" (179), and concludes modestly that "Email gives [tutors and tutees] a chance to write and a chance to explore the meaning of writing" (180), a claim one could just as easily make for live tutoring. This same caution is evident in the article by Cindy Johaneck and Rebecca Rickly, who in describing a survey of responses to a series of synchronous LAN interchanges among tutor trainees, temper their overall enthusiasm, pointing out that this application is "not intended to replace f2f discussion" and that "Negative responses should be attended to to help implement [the practice] more productively not only for the majority but for all tutors" (245).

In contrast, Virginia Chappell's discussion of a similar tutor-training effort, using asynchronous email discussions she calls "Party Line," illustrates that the unqualified "success story" is not a dead genre. Chappell does show, through quotations from her students' dialogues, the wonderful potentials of the medium as students collaboratively make knowledge about their tutorial experiences. However, with her assertion that "Email discussions allow students to write about, read, and respond to a broader spectrum of experience than do private

journals, with all the vividness inherent in an electronic medium" (231), she lapses into the blinding assumption that the electronic way is always the better way. First, it is suspect to suppose that students will feel free to say the same thing (though they might say different things) in a group discussion, online or otherwise, that they would say in a "private journal." (Not surprisingly, privacy is often a casualty of electronic enthusiasm). Furthermore, Chappell's claims about "the vividness inherent in an electronic medium" recall McLuhan's cautions to a world where "the medium is the message." To be fair, Chappell demonstrates significant learning going in the "Party Line" group, but her essay lacks the temperance of Johaneck and Rickly.

This temperance, as well as an innovative use of the technology, also informs Jennifer Jordan-Henley's and Barry Maid's "Tutoring in Cyberspace: Student Impact and College/University Collaboration," but their concomitant enthusiasm shows how technology can take us unawares. Maid and Jordan-Henley present an impressive method of synchronously connecting graduate-student tutors at Maid's four-year institution with tutees at Jordan-Henley's community college via MOO technology. The result is cyberspace tutorials as the miles between Arkansas and Tennessee disappear through the fiber-optic looking glass. Negotiating the difference between f2f and online tutoring, Maid and Jordan-Henley weigh the advantages and disadvantages of both—like Harris and Pemberton, the negative loss of personal cues in f2f tutorials but the positive loss of social pressure—and caution that "Solid writing center theory applies in cyberspace as it does in the traditional center" (212). All in all, this is impressive stuff, and Maid and Jordan-Henley are to be commended for their imaginative application of one of the newest technologies.

However, their essay contains a rather disturbing subtext. On the surface, it is evident that Maid and Jordan-Henley proceed carefully, but a closer look at their rhetoric indicates that center scholars, in their enthusiasm, are not always fully aware of the transformations technology can bring about without their knowing it. First, Maid and Jordan-Henley too easily fall into casting the non-electronic writing center as the "traditional center," a term used throughout. Were America a culture that valued tradition, this would be one thing, but in a nation cultishly dedicated to "the new," the f2f writing center—which has long celebrated itself as a space for anything but traditional pedagogy—is subordinated in a binary hierarchy with cybertutoring as the privileged term. Second, Maid and Jordan-Henley confess that they were "disappointed" (215) with students resistant to the technology. While their disappointment is understandable given their efforts, less understandable is their subsequent reference to these students as "dropouts" (215), a stigmatizing term associated with academic failure and reminiscent of Neuleib's and Scharton's casting of the less technologically enthusiastic as "slow readers." One wonders how the "dropouts" fared when Maid had to assign them grades in the tutor-training seminar in which this work was done, or how Jordan-Henley assessed the work of those who did not warm to the cyber tutors. While certainly

introducing students to new and enabling technologies can be valuable, demeaning those who prefer other means of work violates the democratic principles “traditional” centers have long cherished. I doubt Maid and Jordan-Henley chose these terms—“traditional” and “dropout”—consciously, but that is exactly the point: technology can think in us if we are not careful. Thus one begins to worry when they conclude their essay with an enthusiastic flourish, suggesting the obsolescence of live centers: “Perhaps cybertutor Joel English was overstating the case when he said, ‘I believe that virtual reality will continue to revolutionize writing instruction and education as a whole,’ but then again, perhaps he was not” (218).

Indeed “perhaps he was not” if we can believe Dawn Rodrigues’s and Kathleen Kiefer’s 1993 essay in *Writing Centers in Context*. This book, as many writing center professionals know, contains descriptions of model writing centers at various types of institutions, from Harvard to community colleges. Rodrigues and Kiefer, of Colorado State, start out describing a marginalized center moved all over campus, lacking peer tutors, and dedicated to basic writing courses. Though this center makes some strides, the primary thrust of the essay (given a privileged space as the last in the book) details plans for CSU’s Electronic Writing Center, a facility dedicated to a WAC initiative, to exist parallel with the old center. The new center will include cross-disciplinary efforts for developing software for writing in the disciplines, a large capacity for online tutoring, and access to electronic handouts as well as to the internet. Though this electronic center was largely in the planning stages at the time of the essay, one wonders how long the old center lasted, given its checkered history and the institutional commitment to the new one. In fact, a cluster diagram of the new center’s place on campus accentuates its centrality with several campus entities, including the old center, as satellites. I am not questioning the wisdom or the efficacy of such a center at Colorado State. On a campus emphasizing “the sciences and engineering” (216), it is likely appropriate to its context. My fear rather is that such a center will become the benchmark for judging others and the desired norm in contexts where it may not be as appropriate. This possibility becomes evident when Rodrigues and Kiefer disclose that “some cynics began to suspect that the university as a whole valued computers over personal instruction” (216). This is a valid concern, but once again *ad hominem* is deployed to contain the more technologically cautious.

Computers will not go away, and we would be fools to want them to, but we would also be fools to ignore the wisdom Dave Healy shows when he writes, “Online writing centers represent a window of opportunity. Our challenge is to be reflective and self-critical while the opportunities before us are still fresh” (192). Healy’s “From Place to Space: Perceptual and Administrative Issues in the Online Writing Center” (1995), as its title suggests, approaches technology in terms of its effects on the autonomy of the center as place, as opposed to (cyber)space, and on human relations such as the director’s relationship to tutors as employees. On this latter point, Healy wonders how tutors might feel knowing every response they

make to a client could be monitored electronically by the director. He also worries about the possible loss of “work-place community” and the knowledge transfer that occurs when tutors hear other tutors at work. Drawing on Geoffrey Chase’s claim that “the ways in which our centers are designed—physically and socially—imply an ideology” (qtd. in Healy 191), Healy poses several questions directors would be wise to heed: “What is the ontological status of a virtual writing center, and what kind of relationship will clients develop with it? How will it be perceived by the rest of the academy? What possibilities and what threats are opened up by going online?” (191).

Like Healy, Stuart Blythe in his “Networked Computers + Writing Centers = ?” recommends caution, as he calls for a critical theory of computers in the center. Blythe reiterates several of the questions raised by Healy and also points out how center scholars have either looked at technology through “instrumental theories” that view it as a neutral tool or “substantive theories” that view it as a strong determining cultural factor. He finds both views inadequate, the first because it is naive (my term, not his); the second, because it leads people to believe they lack power to manipulate the technology. Both theories, for Blythe, “place technology beyond the need or ability of human beings to intervene” (102). Blythe recommends that center professionals begin to ask questions, to intervene, to attempt to come up with theory that enables us to proceed “without feeling that we are trapped into a choice between accepting whatever comes our way or remaining adamantly anti-technological” (102). Rather than this “take-it-or-leave-it” view, Blythe calls for theory that “prompts us to consider how we have implemented current technologies and who has been involved in that process” (105). Despite their cautions, neither Blythe nor Healy can be called a Luddite. Both recognize several possible benefits of computers. Furthermore, Healy, a few years back, managed a listserv for peer tutors, and Blythe coordinated Purdue’s OWL and wrote a dissertation on technologies in writing centers. But for each, enthusiasm is balanced with a measured thoughtfulness too often missing in writing center discourse on computers.

Content to move more rapidly is Cynthia Haynes-Burton in her “Intellectual (Proper)ty in Writing Centers: Retro Texts and Positive Plagiarism” (1995). Masterfully written in a frenetic style possibly meant to mimic in print the rapidity of hypertext, Haynes-Burton’s essay moves with the speed of a Pentium II chip to challenge accepted definitions and prohibitions of plagiarism—long a thorny issue for writing centers. She metaphorically constructs current prohibitions as “a fortress” protecting capitalist principles of private property and implicating writing centers in a “punitive system that brings students in line with a particular morality and a dominant economy” (88-9). Arguments about plagiarism have regularly entered writing center discourse with the emergence of social-constructionist pedagogy. Haynes-Burton adds to this debate by contending, as others have, that free access to electronic knowledge on the net (or “Infobahn” as she prefers to call it) challenges “our current system of accountability, academic

scholarship” (89). She locates a model for an alternative to academic scholarship in postmodern art forms that pastiche together, allude to, and parody traditional artworks, as well as in the work of “Designers Republic,” a design firm that appropriates and reshapes recognizable corporate logos to say something new. To the question of how these efforts might play out in writing—that is, what form “positive plagiarism may take” as an alternative to current forms of scholarship, she turns to the *MONDO 2,000 Users Guide to the New Edge*, suggesting that “a hypertext user can create a whole basket of links and ‘publish’ this as a kind of sampler, anthology, or work of criticism” (92).

There are some problems here. First, Haynes-Burton bases much of her justification for these alternative texts on contemporary challenges to the idea of authorship. In literary theory, these challenges certainly have been valuable in debunking naive notions of individual genius and have shown how culture contributes to textual production, yet theory has yet to account for why particular individuals in a culture—James Joyce or Toni Morrison, for example—become the ones who construct exceptional texts from their situatedness while others do not. In composition and writing center theory, critiques of individual authorship have been inscribed (and reified) in pejorative representations of expressionist rhetoric and “garret” centers, against which to portray the culturally situated writer of social construction. These representations of the individual author, however, have often relied on overstatement, constructing her as an isolated figure, when even a cursory historical glance indicates such an autonomous view of authorship never existed. Even formalist critics recognized that historically known authors often enjoyed cross-fertilizing relationships. We know that Melville talked to Hawthorne, that Emerson brought Whitman “to a boil,” that the Bronte sisters read their works to one another, that Pound helped Eliot revise “The Wasteland,” and that authoritative texts of Shakespeare’s plays are difficult to establish because the plays were often revised by stage managers and even actors. One could catalogue more of these great moments in peer tutoring. In short, neither literary critics of earlier times nor expressionist theorists in composition have ever thought of individual authors as enjoying the degree of autonomy that Haynes-Burton and others posit to deconstruct. As for authors of scholarly works, though their names may be on a title page, their “collaborators” are recognized in the text and bibliography. And it is not for nothing that we call these references “citations,” a word which not only signifies honorific recognition of others but which also shares Latin roots with *city* and *citizen*, evoking community rather than individualism. Second, Haynes-Burton’s comparison of “positive plagiarism” to postmodern art and avantgarde design ignores the fact that the works appropriated in such pieces are so well known that they are self-citing or they could not elicit their intended effect. And finally Haynes-Burton does not recognize (at least not overtly) that the kind of writing she proposes would require a high-degree of literacy to discern the value of one text from another, something

many student writers lack. Certainly every hot dog stand on Haynes-Burton's Infobahn does not serve the same grade of meat.

Though I have been rough on Haynes-Burton's essay, it is not one to dismiss, for it enters into new textual spaces that beckon writing centers to blaze some trails. Haynes-Burton attempts such trailblazing, boldly going where no one has gone before, but rather than scrap what she calls an "outdated notion of scholarship that is at odds with the digiototalitarian state in which we now live" (86), I think writing centers would do better to reject anything we can call "totalitarian," digio- or otherwise, and listen to Blythe to interrogate the substantive view of technology in which Haynes-Burton's essay eagerly participates. Irene Clark's "Information Literacy in the Writing Center" (1995) tenders a pedagogy for this effort. Clark defines information literacy as "the ability to access, retrieve, evaluate, and integrate information from a variety of electronically generated resources" (203). She goes on to describe a program in which writing center tutors work with novice writers to produce research papers from electronic and print sources. I give Clark's essay the final word in this discussion of new developments in the 1990s, for I believe it offers exactly the kind of advice writing centers need as they move into the next century. In short, Clark knows that anyone can operate a computer but only the literate can use it, and her emphasis on evaluating rather than merely accessing information makes her pedagogy the sort of driver's ed. course students will need to navigate future textual spaces, cyber or otherwise.

CONCLUSIONS AND FUTURES

If we have not already noticed, distance education is one of the hottest topics in administrative and legislative forums. It is cheap, it serves a broad clientele, and it can be tailored to individual student needs. Indeed it may not be long before universities begin pooling resources to offer courses by distance that could count toward degrees in any of the allied institutions. Such an arrangement is already in the works with the newly formed Western Governors University, whose campus, it is projected, will be totally in cyberspace. We in writing centers will need to be versed in technology if we are to be part of these efforts. At the same time we will need to assert what we know about live pedagogy to prevent the mere placing of services online simply because they can be, rather than because they should be.

As the world wide web expands with digital speed, chances are that it will continue to replicate our culture with cyber shopping malls, infotainment, virtual spaces for socializing, and the like, more than it will provide scholarly information. Yes, libraries are and will continue to be on the web, but libraries are on campuses and street corners too, competing, usually unsuccessfully, with designer boutiques, movie theaters, Super WalMarts, sports bars, video arcades, strip clubs, and amusement parks to shape the American consciousness. I suspect the proportions differ and will differ little, if at all, on the internet. Just as students have to learn to negotiate material culture, they will need to do the same in cyber culture.

This is not to say technology will not generate change, but as it does and as we develop pedagogy to respond, we should remember with Joseph Weizenbaum that “rejection of direct experience was to become one of the principal characteristics of modern science” (25). Granted direct experience is not always welcome—living in a house, a product of many technologies, is as sensible as it is comfortable. Likewise accessing a writing center tutor via computer to avoid walking across a dark campus at night is an intelligent decision. Nevertheless, we should maintain, as Michael Spooner does, that “flesh and blood is richer stuff than fiber optics” (8). If OWLS are going to carry us into flight rather than eat us like rodents, if MOOs are going to produce more milk than dung, if we are going to cruise the information superhighway without becoming roadkill, we will need to remain vigilant against the intoxication of our enthusiasm.

NOTES

1. Weizenbaum, an MIT computer scientist, created one of the first interactive programs, ELIZA. ELIZA mimicked Rogerian therapy, asking such questions as “How do you feel?” and then after the user responded, “Why do you feel that way?” Weizenbaum wrote the program as an experiment and initially was amused that people would engage with it but was horrified when professional therapists thought it could be effective in real therapy.
2. My position here is corroborated by Angela Petit in a 1997 article in *The Writing Center Journal*. Petit argues that such metaphoric definitions often divide writing centers into “rigid ideological categories” turning them into “purified spaces” (a term borrowed from Min-zhan Liu) that do not account for the fluidity of diverse student needs.