# Re: The future of computers and writing:
# A multivocal textumentary ☆

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☆Starring: Nick Carbone, Michael Day, Joel English, Trish Harris,
Bill Hart-Davidson, Johndan Johnson-Eilola, Steven D. Krause,
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*Camera cuts back and forth between close-ups of writing activity in what appears to be a classroom computer space. Shots (e.g., of hands typing, mousing; screens with text editors, email, web browsers open; groups viewing documents on an overhead screen, etc.) don't allow us to see exactly where we are. From opening-sequence montage, fade to Ball State University in Muncie, Indiana, site of the 2001 Computers & Writing Conference; fade to Normal, Illinois, site of the 2002 Computers & Writing Conference; fade to West Lafayette, Indiana, site of the 2003 Computers & Writing Conference.*

## Scene 1: Context for the question

*(Steve Krause, Bill Hart-Davidson, Nick Carbone, Trish Harris, and Ted Nellen sit on folding chairs at Computers & Writing 2001, at the front of a large and generic lecture-hall style classroom. Krause stands up.)*

KRAUSE: The resolution for our debate today goes like this (Carbone, Harris, Hart-Davidson, Krause, & Nellen, 2001): Resolved: In the near future, the field/interest/sub-discipline of computers and writing will cease to be different from the field/interest/larger discipline composition and rhetoric because all composition specialists shall be expected to understand the importance of using computers and other technologies to teach writing. All right, let's begin. . .

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*(Jump-cut to a page of text—Gail Hawisher's (1987),* "Research and Recommendations for Computers and Writing Instruction"; *zoom in on a passage:)*

> Those of us who taught with computers and studied the influence of computers on writers and their products approached our research with high expectations. It is not a surprise, then, that in our ebullience, we sometimes expected so much of the computers and word processing that our research became "technocentric." (p. 44)

HART-DAVIDSON:  Worries about being technocentric—a term Hawisher attributed to Seymour Papert (1993)—echo throughout the history of computers and writing. Are we so focused on the technology itself that we fail to see the people involved? Questions like this one came, and still come, from a desire to understand computers as tools for doing and teaching writing.

*(Jump-cut to another text—John Theismeyer's (1989), "Should We Do What We Can?" Zoom in on:)*

> We can help students attend more to composing than computing by writing our own operating instructions, paring down the user's manual to the functions students most need... We can learn to teach effectively with open-topic prewriting aids by making sure students understand their purpose and by analyzing effective and ineffective models of completed exercises. In short, we can show students when, why, and how to use these programs. Even the computer's most benign features require such instructor intervention... We need to remember that the computer is an additional tool in the classroom, not necessarily the primary one. (pp. 88–89)

## Scene 2: The question begins

*(Fade back to the session and to the speakers at front of room.)*

HART-DAVIDSON:  In 2003, the assertion that computers are merely a tool among others rather than an overwhelming force to be reckoned with not only in the writing classroom, but in all areas of communication, has become more and more difficult to defend. Because the identity of the field of computers and writing hinges upon the status of the machine relative to the activity and study of writing, the rise of the computer as a writing tool is as troubling as it is vital to the continuing relevance of the field.

*(Nick Carbone addresses the crowd, which we see for the first time; we recognize many of the faces as* Computers and Composition *contributors.)*

CARBONE:  Technologies become invisible quickly. Before computers we talked about writing atechnologically, as an act that primarily happened in the writer's brain, whether that brain be cognitively determined or socially constructed. Studies of composing processes—the research that tried to figure out what the process was/is in process writing—never paid much attention to the role technology played in that process.

Computers changed that, because people behaved differently when they wrote with computers, and the change startled us. The technology of writing was no longer fixed and invariable; it was/is/will be a factor in writing processes. Computers and writing exists, in part, to emphasize the roles of technology—for teachers, scholars, and writers—in the acts of writing. That's the essence of this field, and I think it's still distinct from composition and rhetoric as a whole.

*(Six months later, Mike Palmquist typing at his computer. Through the window of his office, the Colorado woods in the distance.)*

PALMQUIST: I've been thinking that rhetoric and technology might be a useful name to consider. It's been proposed before, by Eric Crump among others, and it seems apt. It covers communication and writing, and it allows us to think productively about other sorts of technology coming around the bend—or even so far down the road that we can't yet conceptualize it. I'm working with video more and more these days—mostly in the service of web-based instructional materials for writers. Even though most people today will read the materials via computer, others will perhaps soon read the materials on personal digital assistants (PDAs).

CARBONE: (*typing at his machine*) I think, on an institutional organizational level, English departments will want to keep the teaching of writing in their units, if only for the funding a required course brings; this might mean that we'll have to lose the word writing—although I hate to let it go. It's a good word, and its connotations grow with technology. If writing is as much mental as it is technological, if it is as much a way of seeing and organizing, whatever the tools at hand, then there's no reason to lose the word. I like the idea of being a writer better than I do the idea of being a technical communicator. So maybe we're back to the arguments Richard Lanham (1993) put forth: Rhetoric will once again underlie all instruction and study.

   It may be that computers and writing, broadly and elegantly construed, with all that computer comes to mean and all that writing—with its mental, emotive, rhetorical and technological root systems already contain—will remain, for the field, such as it is: a small off-shoot that we entered via composition. For now.

*(Back to Carbone a year earlier at the front of the lecture halls.)*

CARBONE: The future of computers and writing isn't just related to the future of computers and the evolution that more changes in computer technologies and learning will bring. In fact, if we as a field tie ourselves only to studying and writing about and trying to understand only the latest thing to ooze from the broadband, we might just evolve ourselves out of being and break apart. To stay a field, we should be in those niches to be sure, in overlapping kinds of ways, but we really need to get better at understanding the writing technologies we've had and used for a while: Do we really know how word-processing software changes the way people write? What have been the effects on writing as a composing process now that we've had a generation or two of students who may have barely ever seen a typewriter let

alone typed with one? Do we teach word-processing techniques more effectively as part of writing than we did 14 years ago, or 10 years ago, or even 8 years ago?

KRAUSE: Where is the boundary? With so many key terms in contention—writing, rhetoric, computers, composition—each becomes a point of departure for further reflection and research. But how far afield can we go before we are in another field altogether?

## Scene 3: Debating, talking, and typing with our mouths full

*(Spring 2002. A nondescript restaurant, recognizable as being in Chicago only because of a few local posters and pieces of sports memorabilia on the walls. The restaurant is deserted, except for the cast of this textumentary gathered around a large table. The group is having a good time—eating, drinking, talking, laughing, and even writing. Cut to Rich Rice, who has his laptop open and is fervently typing. He responds to Krause's question.)*

RICE: I've been reading a lot of Lanham (1993), Ilana Snyder (1998), Jay David Bolter (1991), Marshall McLuhan (1964), Peter Lunenfeld (1999) and the like while I'm reading about the history of portfolios. I wanted to look at meaningful learning and teaching differences between fixed media portfolios and digital portfolios. Focusing just on the electronic now, I've been thinking about computers and writing. Paper portfolios. Electronic portfolios. What I'm coming up with, well, is kind of simple, but here it is: Most people generally teach composition or technical communication by moving through stages, like reflection → reflexion → action. The idea is that you use writing or composing to learn, to make a change in how you see yourself, and then to make a change in society: reflection → reflexion → action. Now add Jay David Bolter and Richard Grusin (2000): immediacy → hypermediacy → remediation. Immediacy is when technology becomes transparent; hypermediacy is when you highlight the technology to learn something specific about the content, the writing. Then there's remediation, when you choose to use one technology over another to compose or present something. Usually this is something like choosing chalk over Microsoft POWERPOINT—remediating back to some tool.

I'm trying to think about digital portfolios in terms of combining the computer and the writing, because that's what electronic portfolios are. So here are some terms, combined: *reflective immediacy*, *reflexive hypermediacy*, and *active remediation*. Basically—because what I'm coming up with is a way of looking at portfolios, a rubric, really—I've been thinking about how this rubric might work with everything. Every kind of composing.

## Scene 4: Is it writing? Is it communication? Is it over?

*(Hart-Davidson, typing an email message on a laptop in a hotel room. He chuckles as he writes.)*

HART-DAVIDSON: Blasphemy alert: Increasingly, I find myself arguing that writing, per se, is beside the point. Writing as a collective term for a fairly diverse set of

technologies and practices associated with—to quote Bolter (1991), "the arrangement of discrete signs on or in a surface" (p. 45)—is a name for an implementation of a set of activities better described by the five canons of rhetoric. We use writing to invent, arrange, style, remember, and deliver information—and it's a damn fine platform for engaging these acts. But it's just an implementation. I think computers and writing can be about developing extensions to the writing platform. These extensions would, of course, build on the foundational implementation of the arrangement of discrete signs on or in a surface. We might seek to develop new technologies that optimize the way these signs move or change for specific kinds of purposes.

Johndan Johnson-Eilola's (1996) argument that technical communication's relationship with text has always been shaky can be extended, I would suggest, to just about everybody who uses (makes, reads) texts as resources to help them do other things. I'm not only talking about software manuals or directions for putting together a new vacuum cleaner. I also mean texts that help us make decisions, help us write other texts, and help us learn. These are things we hope writing will help us to do: We don't often want to write—writing is not our end goal, although we often do it because it is a powerful way to support other aims. We don't often want to focus on making a good text, but rather on doing something else.

*(Switch to the front of the room at Computers and Writing 2001.)*

HART-DAVIDSON: I think our field will, of course, continue to pioneer discussions regarding how best to teach writing with computers. But I don't think our discussion here, for example, will be a discussion that differs in major ways from the one going on at, say, the Conference on College Composition and Communication. I believe our field will continue to push beyond the boundaries of the question "why teach writing with computers?" to engage a question like how might literate activity—the things people want, need, and love to do with reading and writing—be better supported given the network of technologies we now have available?

This question, I submit, would place the folks whose research interests have been computers and writing more squarely with academic and industry fields such as human–computer interaction or information technology. And it wouldn't be a radical shift in the focus of most folks who attend and present at the Computers & Writing conferences, and who are already routinely teaching, researching, and otherwise behaving as if writing is an information technology—if not the information technology upon which most others are based. What would constitute a shift, though, would be the degree to which we become the chief visionaries of, designers of, and patent holders for communication technologies that support literate activity.

The challenge all of us are faced with, I would contend, is to begin to dream and invent beyond the limits of the formidable implementation we

have of the five conceptual features of written communication represented by the canons of rhetoric: invention, arrangement, style, memory, and delivery. It has been a successful implementation, to be sure. And we have all heard and agreed with the histories of writing technologies that explain why it is so difficult for us to uncouple the fundamental powers of a shared system of signs with the powerful feature-set of print. But we must do this.

KRAUSE *(who hums an REM song)*: It's the end of computers and writing as we know it (and I feel fine). I think that the end of our sub-disciplinary status and entrance into the mainstream of composition studies is a good thing. I believe the distinction between computers and writing and composition-in-general is largely over, because our colleagues—once uninterested or even against the use of computers in the teaching of writing—have come over to our side. Essentially, the battle that has been fought for the last 20 or so years and that has been so clearly documented is over. We won.

Even those compositionists who don't incorporate computer technology in their teaching acknowledge the value of it and the connection of it to the teaching of writing. It's a bit like teachers who don't use the chalkboard in their classes but acknowledge that chalkboards are an acceptable and even useful teaching tool: Today, those who would say that computers are harmful or not useful in the teaching of writing are few and far between, and, I would argue, considered to be crackpots. This might seem like common sense, but I think this shift is a significant one indeed. About seven years ago, Bill Hart-Davidson and I were in graduate school together at Bowling Green State University. Shortly after we set up an email discussion list between our two sections of first-year composition, we were hauled into the writing program administrator's office. I don't recall the conversation exactly, but we were asked something along the lines of "what the hell are you doing?" No one's asking that now; in fact, I suspect this same administrator is encouraging her current teaching assistants and adjuncts to use email lists in their classes.

When the field of computers and writing ceases to be different from the larger discipline of composition and rhetoric because all compositionists will be expected to understand the importance of using computers and other technologies to teach writing, we should celebrate rather than feel threatened. It is not so much the end of the subdiscipline of computers and writing as it is the beginning of the awareness of technology for all of us invested in the teaching of writing.

*(The restaurant, Chicago, Spring 2002. Rice reads from the passage he has just composed.)*

RICE: In the context of my study, theoretically it is the juxtaposition of the potentialities of digital portfolio presentation and assessment alongside traditional linear text composing or compilation processes that provides perceptual growth. Reflective immediacy is a core category that signifies teaching and learning properties that do not consider the

impact of the digital medium, but focus on self-awareness or individual growth. The reflexive hypermediacy core category includes phenomena I observed, which focus on the medium and in so doing enable the teacher or learner a perspective that reflects on the self objectively. Active remediation denotes instances in which the teacher and students view one media construction, presentation, and/or assessment type as decisively better than another and indicates that a digital format directly impacts writing content.

## Scene 5: Looking at composition, again

TRISH HARRIS *(at Computers & Writing 2001)*: I stray from the subtext of the resolution. It's true that technological ubiquity will become reality. Our classroom and scholarly practices—no longer wholly print- or classroom-bound—will become more expressive, pliant, creative, and thoughtful. The assumption that all composition and rhetoric faculty use computers in the classroom will be the standard. We struggle with ways of naming our discipline and our professional work at a time when we still have old paradigmatic practices in our sights. The luxury of such a struggle will footnote the variety of practices possible when technological ubiquity has become reality.

　　The names of our departments will probably change. But will we be more closely allied in practice and theory with human–computer interaction and information technology? I don't think so. We will still be teachers of writing, growers and encouragers of budding and practicing writers; we will simply all use technologies and tools to mediate those practices. Our focus will remain composition and rhetoric; yes, a few of us may dissolve into the mists with the artificial intelligence folks. But the bulk of us will still study composition and rhetoric, will be more generalist in our coursework as we prepare to teach writing, and will maintain writing and its related pedagogies and practices as our center.

　　Will the everywhereness of instructional technology mean the end of computers and writing scholarship, and composition and rhetoric scholarship, as we know it? Yes. Will the scholarship, however, end? Of course not. The next era of scholarship in our field will be less schismatic and more diverse, will reflect the emerging range of practice as it informs theory. Composition and rhetoric professionals might use but not study the new technologies, and my fear is that we will, as a body, stop studying technological literacy, electronic pedagogies, and digital divide politics.

　　The moment of resistance is past, and in the not-too-distant future we will be defined by our activity and practice rather than the soon-ubiquitous level of technical proficiency as composition and rhetoric becomes infused at every level with ubiquitous, invisibly functional technology. But when will this happen? In the near future? Around the corner? I'd argue that next is *now*, that each new hire represents a profound shift in the direction of ubiquitous skills, that each

evolved practice informs and revises each of the old ones, that we have been for some time reinventing—and that we continue to reinvent—our departments and discipline.

I see a future in which we return to job postings that do not list technical skills or computer-mediated teaching experience—not because they are not important or not expected, but because it's understood that *all* candidates will have those skills and experiences. I unhappily see a future in which composition and rhetoric as a discipline will have subsumed computers and writing as a subdiscipline because the perceived need for separation, and a separate scholarship, will no longer exist.

*(Cut to Becky Rickly. We see her at home; she types deliberately and with the fluency of a concert pianist.)*

RICKLY: First, the naming—I recall participating in the multi-user, object-oriented domain (MOO) transcript at the end of *Computers and the Teaching of Writing in American Higher Education* (Hawisher, LeBlanc, Moran, & Selfe, 1996), and in that MOO Eric Crump and colleagues (1996) suggested that computers and writing didn't fit anymore—that what we did was *technology and rhetoric*. I remember thinking "that's it!" and I honestly believe that since then, I've translated computers and writing to technology and rhetoric in my head. But it's actually through the experience of immersing myself in rhetoric again and being part of a wonderful technical communication and rhetoric program that has helped me to see how this all fits—at least in my mind.

What I find interesting is how much of the initial thrust of the field was based on pedagogy, but also on production, of sorts—I remember papers and conferences on writing and word-processing, often emphasizing a how-to approach. We then started to look at how word processors seemed to enhance the writing process (and later, several scholars, notably Gail Hawisher, 1987, looked at how they might actually hinder the writing process). We don't hear or see those papers much anymore, because computers as tools in the writing, thinking, and production process are a given—aside from access and literacy issues, which are issues, albeit marginalized ones now.

But in the tiny slice of evolution I cited before, I see a pattern of sorts that makes me come back to rhetoric. James Kinneavy (1990) used to say that anyone studying rhetoric should look at five areas: history, pedagogy, administration, critical analysis, and production. And that's a lot of what we do in this field: study the applications of rhetoric. That's what I did, too, as a technical writer at AT&T. That's what I do as a teacher. Heck, I'd even go so far as saying that's what I do as a parent. But all of these ideas, to me, come back to the source: rhetoric.

Although I don't locate my rhetoric in the idealism of Plato or pragmatics of Aristotle, I do embrace the rhetoric of Isocrates (and I just saw yet another book championing his work, this time in technical communication; Whitburn, 1999)—a very practical, pedagogically oriented rhetoric based around the concepts of *phronesis* or practical wisdom, of *philosophia* or savvy critical judgment, and the ultimate

goal of helping folks to become responsible participants in a democratic society. Isocrates spoke of a rhetoric of production, announcing that we need to produce texts/information/people as well as merely talk/critique.

What computers and writing or technology and rhetoric (C&W/T&R) does well is allow for boundary pushing; create re-definitions; establish (some) inclusion; lend a sense of rhetorical application; apply nicely to pedagogy; offer great potential for administration and publishing; encourage critical enthusiasm; make collaboration easy(ier); and make us re-think concepts such as human–computer interfaces, usability, and the cyclical nature of history, pedagogy, administration, critique, and production. What C&W/T&R doesn't do well is establish a more evident interplay of rhetorical areas—permeable boundaries with conscious overlap. C&W/T&R doesn't lend itself to traditional assessment—we should find ways to assess and value what we do in terms of what others also value. Bottom line: Rhetoric is vast, and it contains multitudes. Composition, technology, pedagogy, administration, critique, and production are all *applied* rhetoric. So are the different areas of technical communication: usability, human–computer interaction, production, etc.

## Scene 6: Looking at writing and communicating, again

KRAUSE: What the field is becoming is always embedded within a larger, perhaps more important question, what writing—as activity, as artifact—is becoming. What is writing?

TED NELLEN *(at Computers & Writing 2001)*: Writing is incorporating other technologies: hypertext, color, art, graphics, video clips, sound. Composition got sidetracked from the original forms of communication—orality, drama, and visual arts—to focus just on the alphabet and text. Books made the slow transition from words to include illustrations and the like—just look at the growth of multimedia in textbooks in the last couple of decades. Writing became too refined a discipline with spelling, grammar, and form. With the growth of technologies in the classroom, teachers of all disciplines are able to better utilize word-processing to incorporate the rigors of English conventions, and to incorporate other forms of communication in their classes—storyboarding, hypercard, hypertext, Macromedia FLASH and DIRECTOR.

I attended a conference in New York City for art teachers, and it opened my eyes to how middle school art teachers are teaching writing skills through high-end technologies and are getting reluctant students who wouldn't want to write to caption their art, and to thus move to a higher level; the technologies expand the horizons of composition and rhetoric. After all, what is the function of composition and rhetoric but to communicate? New technologies are allowing us to widen options for students, and thereby allow for a more inclusive and expanded field of composition and rhetoric.

Our word writing connotes letters and words, whereas the Greeks and Romans had *gram* and *graph*, which roughly translate into writing and drawing; these terms were interchangeable for the Greeks, but not for us. Composition and rhetoric became the tools of scholars and as such became a restricted area at the end of one's academic career and only if chosen—the PhD, of course. But if we bring the practices of our scholarship—make it public, peer-reviewed, and shared—back into schools at, let us say, the kindergarten class, we will be opening up composition and rhetoric. That we have restricted composition and rhetoric to the alphabet and to words is too bad, and has limited us. Now we have the opportunity to open things up and be more inclusive.

*(Cut to Joel English working in a home office.)*

ENGLISH:  At Old Dominion University, we have a collegial relationship with communications. And get this: We offer a distance-education degree program shared between communications and professional writing. All classes are offered over satellite, and students decide an emphasis—either professional writing or communications—while taking required classes in both. The degree is called Professional Communications, and is a morph of writing and communications. I'm thinking about this fusion of communications with composition and rhetoric, and dang it if it isn't the most natural-feeling curriculum combination I've ever found myself teaching. Whether students emphasize writing or communication, they all study common foci: rhetoric, technical communications, technology, composition.

JOHNDAN JOHNSON-

EILOLA  *(hunched over a keyboard. Through a window near his computer, we see snow blowing and drifting)*: This is something I've thought about a lot recently (over the last couple of years), as I've edged slowly out of computers and writing and toward technical communication (and at this point, I think I've even edged out of technical communication and into something else, maybe Johndan Studies or something).

I agree in general with the shift that Bill and Steve are positing. Computers and writing (and, for that matter, composition and rhetoric) have increasingly seemed of limited use to me. The most applicable work, as Bill has suggested, comes from an interdisciplinary amalgam of human–computer interaction and usability, along with more obviously culturally aware areas including postmodern geographies and architectures, advanced design theory (of the Lupton and Miller school, 1999), etc. This seems like an obvious—probably too obvious—nit to pick, but the inclusion of the term "writing" in computers and writing rather than "communication" strikes me as part of the problem. Communicating with/across/within a computer is no longer about writing as a primary activity—even though we're often largely locked into it—but about *design* in the broadest sense of the term: not just graphic design or visual design, but architecture, product design, video, audio, and more. That's

not to say that there might not continue to be a field of computers and writing, but I think that field will continue to be an increasingly small subset of composition and rhetoric.

## Scene 7: Rallying cries?

KRAUSE: Although significant questions remain, there seems to be no shortage of rallying cries, but which should we heed? The technological ones?

HART-DAVIDSON *(at Computers & Writing 2001)*: It's time to pay attention to the ways information technologies are all built upon what is, to us, a familiar operating system—the same system that drives the strategic use of written discourse. Our expertise, our passion, and our experience is, at this historical moment, the very set of competencies that can drive further innovation in information technology. What was once the study of computers and writing is bound, I predict, to become a host of other important endeavors—all of which advance the design of information technologies meant to support literate activity.

RICE *(In the restaurant again, he keeps typing away)*: What's important isn't the computers in computer and writing. What's important is that we deconstruct or reflect on the tools used, whatever they are, to communicate something. I did a course a few years ago with Carole Clark Papper where we had students do crazy things like write clay, cuneiform business cards and illuminated manuscript lesson plans on deer skin. The medium isn't the message. The medium and the message is the message. You can have state-of-the-art ideas with old media types or communication modes like those in oral or chirographic cultures—active remediation. Writing isn't about computer technology. It's not about computers. It's about technology in the sense that all tools are technologies, and it's about composing. Or, decomposing. Deconstructing. Rather than computers and writing, how about technology and composing, or just plain old composing? I compose... therefore I am.

HART-DAVIDSON: And as rallying cries go, what about well-reasoned hedges? Part of paying attention—thank you for the enduring anthem, Cindy Selfe (1999)—means knowing when *not* to use computer technologies. Consider these three questions Michael Day posed.

*(Cut to Michael Day, standing in front of a large projector screen.)*

DAY: For me, it's a question of balance, the balance between the technical efficiency of job training and the expressivist free-ranging exploration of writing that has been a hallmark of the liberal arts education. So I pose these three questions:

1. Some of us still believe that the liberal arts education can and maybe even should provide a learning environment protected from the exigencies of business and industry, all of which would call for practical writing skills, of course using the machines of

efficiency. Could we imagine some value in allowing a computer or Internet-free space for some writers? Or, because most writers will have grown up using word-processing software on computers, in showing them alternative composing methods?

2. The dot-com downturn may be showing us that the move into a work world populated with computer and Web jobs might not occur on such a grand scale; we cannot expect every student will be working with computers and the Internet. Therefore, is it really necessary that they get computer training in our classes? More and more of them learn it on their own, anyway.

3. We also need to think about the consistency of computer and Internet training as we prepare students for practical writing tasks versus the need for balance, variety, different approaches for different learning styles, and the freedom to escape from computers. Just how much should program administrators dictate specific uses of technology in writing classes?

     When I think of how we are saying that computers and writing has been subsumed by or is subsuming composition and rhetoric, I wonder how we might begin to rethink our answers to the questions about required computer labs, required online writing, job training, and electronic literacy on a programmatic level.

## Scene 8: New technologies, new resolve, familiar questions

*(The corridor of an inner-city high school in New York City, although from the looks of the building, we could be at just about any school, anywhere in the United States. A large multi-purpose room buzzes with conversation.)*

KRAUSE:  If Michael Day's questions sound a familiar note, it is no doubt because questions like these have been asked, more or less emphatically, throughout the last 20 years. We might say, in fact, that a defining feature of the scholarship in computers and composition is the raising of such questions, the continued problematization of the relationships between writing technologies, writing pedagogy and curricula, writing theories and practices.

*(In the multi-purpose room, we see groups of writing teachers scattered around the room in twos and threes, sitting at large desks haphazardly clustered in what is one of several ad hoc arrangements of the space. We are looking at a teaching-with-technology workshop at the 2003 Conference on College Composition and Communication annual convention in New York City [Benninghoff, Day, Hart-Davidson, Krause, Nellen, Rehberger et al., 2003]. On each desk, illuminating the faces of the teachers, sits a laptop computer; we see the LCD screens and recognize wireless web browsing going on. And that isn't the only network in the room— Michael Day works with a group of three teachers; he is pointing to something on one of the screens while one of the teachers glances rapidly back and forth between the screen and the touchpad that moves the mouse pointer. As the camera fades on this scene of technorhetoricians working and talking, Bill is overheard saying: "Does this wireless network change everything or what?!")*

FINIS

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