

Terms of Uncertainty: Technological Change and Writing in the Digital Age

by

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For Andy and Alison Gunsberg  
and  
For Andrea

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## **Chapter 1**

### **The Old Promise of New Writing**

*The new spaces for words will be competitive and self-conscious. They will require a new conception of rhetoric, a new doctrine for teaching expression in an electronic attention economy (257).*

-Richard Lanham

In *The Economics of Attention*, rhetorician Richard Lanham associates the rise of digital media with the proliferation of new “attention structures” that compete for our time, money, and (of course) attention. Lanham argues that these structures—blogs, social networking sites, video games, and so forth—combine different modes of expression, such that language-only practices and artifacts lose some of their luster. As Lanham and others have noted, the struggle for attention is not only observable in textual consumption; an ever-growing list of applications and inscription devices also makes it relatively easy for people to produce multimedia texts. Moreover, the Internet extends the range of people’s powers of expression, driving the competition for attention to global proportions. Student writing, once confined to notebooks and classrooms, can be distributed around the world in seconds. In addition to alphabetic text, much of this writing includes images, sounds, and interactive elements. Celebrated by some, lamented by others, these developments have generated questions and controversies around the teaching of writing at all levels of schooling. Working at the nexus of these controversies, writing teachers are often placed in the difficult position of having to make sense of their changing roles and responsibilities amidst the material and conceptual transformation of literacy education.

The broad aim of this dissertation is to develop analytical concepts that shed light

on the relationship between technological change and writing instruction in the digital age. The more focused purpose of this project is to refine language for connecting the changes happening in classrooms to broader controversies around transformations to reading and writing. Developing such language is useful because it creates opportunities for theoretical arguments and empirical studies of classroom interaction to mutually inform one another. The concepts developed here are also meant to link contemporary uncertainties about new media composing to historical developments in the field of composition studies. To illustrate the “linking” function of these concepts, forthcoming chapters juxtapose theoretical, historical, and classroom-based studies of writing pedagogy responding to technological change. This multidirectional approach to inquiry reflects my efforts to underscore the ways theory, history, and practice mutually inform one another. It is important to attempt such integrative approaches to inquiry because uncertainties around writing instruction in the digital age come to bear on teaching and scholarship from all angles. As mentioned earlier, writing teachers work at the nexus of these forces, a predicament that can be both invigorating and disorienting. My hope is that this account provides teachers and scholars with conceptual tools for managing the uncertainty that arises around the study and teaching of writing amid our precipitous digital revolution.

This effort is best regarded as a provisional attempt to advance investigation into topics that are only now coming into focus.<sup>1</sup> It is also very much motivated by my own feelings of uncertainty, which developed in response to teaching college writing and attending graduate school in English and Education at the University of Michigan. I include my personal reflections throughout this dissertation because, like others who study literacy in the digital age, I am entangled in the phenomena I aim to understand: I currently teach college writing courses in a computer lab, where my “assistants” include a SMARTboard and a digital projector.<sup>2</sup> At least once a week, I receive emails from

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<sup>1</sup> According to John Dewey’s (1938) theory of inquiry, working hypotheses are “provisional, working means of advancing investigation” (142). As political scientists Patricia M. Shields and Hassan Tajalli suggest, inquiry organized around working hypotheses signal conceptualization in its preliminary stages, and this is very much the case for my efforts here. See “Intermediate Theory: The Missing Link in Successful Student Scholarship,” pages 319-320.

<sup>2</sup> Louise Wetherbee Phelps highlights the importance of the field’s reception to practitioners’ reflections, suggesting that the field’s distinctive contribution “lies in the experimental relationship it establishes



educational publishing companies scurrying to produce web-based versions of instructional texts. Students enter my classes toting an assortment of devices—smart phones, laptops, e-readers, iPods, tablets—all of which can accommodate (depending on one’s ability to pay for memory), larger or smaller fractions of human knowledge currently being digitized by Google and affiliates. The changes I have witnessed since I began teaching in 1996 are profound and dizzying, and the scope of transformation seems to broaden with the introduction of every new piece of software or inscription device.

It is important to consider the effects of technological change on my own and other teacher’s sensibilities because writing instructors cultivate students’ understandings of the literacy practices and artifacts that “count” towards academic and professional success. This cultivation of students’ conceptions of composition occurs at all levels of schooling. Indeed, my first teacherly glimpse of the uncertain relationship between novel computer technology and writing instruction occurred in 1996, while teaching middle school in Newark, New Jersey. Tuesday afternoons, Sue Willis, a novelist and volunteer from Writers in the Schools, would visit my seventh-graders and enthusiastically encourage them to pursue all manner of writing projects. Stories, poems, essays, raps, riddles, and comic books—Sue was not concerned with *what* was written so much as the act of writing itself. The one rule we enforced was that students were to focus on their work for the entire hour. While many students enjoyed Sue’s visits, those seventh graders who struggled with school-based literacy often became frustrated. Though some students remained focused, others avoided writing altogether, preferring to talk with friends for most of the period. Inevitably, Sue and I faced challenges related to motivation and classroom management, challenges that put us in the unfortunate position of having to coax and cajole students who refused to write. After a month or so of working in my classroom, we brought students to the school computer lab. To my surprise, these visits dramatically transformed students’ behavior; even the most recalcitrant and rambunctious students worked quietly for much of the hour. Talking and other distracting behaviors ceased. All signs pointed to the fact that students were now much more invested in their writing than before entering the lab.

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between the general principles of inquiry posited and systematically pursued in science and philosophy, and the normative practice of these principles in ordinary discourse and everyday life” (237).

What changed? Most obviously, students no longer wrote, they *typed* their work. Few of my students had computers at home, so the challenge of typing likely required a good deal of concentration. Perhaps students were motivated by this novel act of inscription? Then again, students' heightened motivation and attention could have been due to the rather striking material differences between my classroom and the computer lab. Unlike my classroom, the lab was stocked with new computers, whose sleek encasements and resplendent screen savers stood in stark contrast to the abandoned buildings and broken street lamps outside the school. In my classroom, students saw the same breed of chalkboard they had seen since kindergarten. In the computer lab, they faced glossy whiteboards. In my classroom, they sat on hard, plastic chairs attached to desks. In the computer lab, they sat on plush, office chairs with wheels that, in one swivel, allowed them to turn from their computer to a large conference table in the center of the room. For some, it might have been the pleasure of sitting in a plush chair. For others, it might have been the mesmerizing appeal of a new computer. Whatever the reason, or host of reasons, the change of context put a spell on students that influenced the attention they devoted to their work.

More recently, a college student told me that he was more proud of the website he had created for my course than any other writing he had completed at the university where I teach. Had it been only one student, I might not have blinked, but nearly everyone in the class agreed; the website was significant, one student said, because it would "last longer and affect more people" than the essays she wrote for other classes.<sup>3</sup> My purpose in placing these college students' comments alongside my middle school anecdote is to point to ways students' evaluations of literacy artifacts and practices are shifting in response to the proliferation of Internet and digital technology. "Technology is one hundred percent the defining characteristic that will—I don't know—save your skin," one English major told me during an interview.<sup>4</sup> Really? And what about those hard won essays—the hours of research and revising? Are the artifacts and composing practices we associate with print-based writing diminished in the wake of technological change? How should writing teachers understand themselves and their responsibilities as the boundaries

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<sup>3</sup> I noted these students' comments following a class held 2-18-2009.

<sup>4</sup> From an interview with Leah, 12-11-2008.

of literacy flex to accommodate multimedia texts and novel inscription devices? These questions highlight the degree to which the uncertainty around writing instruction in the digital age prompts reconsideration of what and how to teach as readily as it calls into question basic assumptions about literacy education, particularly with regards to the primacy of print-based texts. While these developments energize me, they also complicate my thoughts on writing instruction and composition scholarship. As previous examples illustrate, these complications arise from my sense that our interactions with novel technologies inflect our evaluations of ourselves, others, and contexts of schooling.

These complications surface in a number of recent books that discuss the cultural and cognitive effects of digital and Internet technology. Nicolas Carr, among others, argues that the Internet degrades our powers of concentration and imagination, precipitating large-scale cognitive decline. Critical and popular acclaim for *The Shallows* figures a reading public fascinated by the idea that technology is propelling humanity headlong into a dreary, dim-witted future. We want to know what technology is doing to us, sensing perhaps that we are being programmed for distractibility and led, as Carr suggests, into the shallows. Or perhaps, as Clay Shirky argues in *Cognitive Surplus: Creativity and Generosity in a Connected Age*, we are in the midst of a cognitive and cultural renaissance made possible through widespread access to the Internet and large-scale collaboration. While Carr and Shirky's accounts make for good reading, my sense is that the effects of digital media on consciousness and culture cannot be summarily figured as either shallows or depths.

My distrust of such conclusions is based on my understanding of the way language and literacy function within and across cultures. As the work of Sylvia Scribner and Michael Cole (1981), Shirley Brice Heath (1983), and Deborah Brandt (2009) and others attests, the influences of literacy technologies cannot be entirely abstracted from local contexts of use. Heath, for example, illustrates how different communities in close geographic proximity can embrace entirely different literacy practices, differences that prove consequential for the development of young people's school-based literacies. Heath's groundbreaking ethnographic account, *Ways With Words*, relies on relatively coherent conceptions of culture and community, demarcated by geography, race, and class. Members of each community are shown to reflect the values of their respective

groups in regards to oral and written language, and Heath illustrates how these values manifest in schools and classrooms. Giving full credit to the brilliance of Heath's efforts, I want to propose that in many contemporary contexts, the notion of culture and community has been fragmented to such a degree that it becomes difficult, perhaps impossible, to make assumptions about the values one inherits from one's supposed culture or community.<sup>5</sup> As Lester Faigley suggests in *Fragments of Rationality*, destabilizations of identity and dispersals of subjectivity may be perpetuated by interactions with digital and Internet technology because rapid changes in the ways we communicate alter not only our habits, but our attitudes and expectations as well.

With muddled conceptions of culture and community, individuals' attributions of value cannot so easily be understood to reflect national, regional, or even familial origins. These are significant developments if, as Walter Fisher claims, "one cannot be rhetorically competent without the ability to discern the presence, relevance, consequences, and consistency of values expressed or projected for expression within a specific rhetorical situation" (115). Fisher's statement suggests that there is a pressing need to consider the uncertainty that arises in the wake of technological change, particularly as that uncertainty inflects the teaching of reading and writing. While this uncertainty might be approached from many angles, I narrow the scope of this dissertation by juxtaposing three sources of uncertainty that inflect my sense of writing instruction in the digital age. What follows is a breakdown of the ways these sources figure into forthcoming chapters.

The first source of my uncertainty encompasses controversies that circulate in scholarly texts and mainstream media about changing conceptions of literacy. These accounts, whether based on cutting-edge brain research (*The Shallows*) or one man's adoration for reading (*The Gutenberg Elegies*), make me think twice about integrating "new" media into my writing courses. Should I champion print-based literacy amidst the potentially corrupting influence of *clicks* and screens, or do I have a responsibility to my students to teach composing processes that involve images, sounds, and interactive

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<sup>5</sup> This idea has been expressed most forcefully by anthropologist Daniel Miller, whose studies of Londoner's relationships with things suggests a range of subjectivity so broad that one could not classify the individuals' representations of value as particular to Londoners, or even to British culture. This leads Miller to conclude nothing less than a repudiation of what he calls, "the initial premise of social science."

elements as well? The latter argument, which has been presented forcefully by a number of prominent scholars in composition and literacy studies, asserts that it is incumbent upon teachers of writing to integrate digital media into instruction because these are the media students turn to outside of school and the tools they will use to meet workplace demands. In Chapter 3 I present four broad controversies that highlight how the promise of technological enhancement is often accompanied by concerns about the catastrophe of technological diminishment. This tension, I argue, both destabilizes conceptions of composition and reconfigures the responsibilities of writing teachers.

Chapter 4 focuses on fault lines that emerge from longstanding debates around “skills-based” pedagogical approaches. These debates intersect with my uncertainty about writing in the digital age because learning to compose with novel hardware and software often requires specialized knowledge and skills. Such requirements raise questions about the need for explicit instruction in the functional and procedural aspects of new technologies, the need to address what Stuart Selber refers to as “functional literacy.” After all, one must have at least some modicum of functional knowledge in order to make rhetorically savvy decisions in the heat of composition. What kinds of interpretive responses can we expect from students as they attempt to learn how to use these technologies? What role does human-to-human interaction play in helping students think critically about their interactions with digital media? In chapter 4 I point out that such questions have roots in debates that date back to the earliest days of composition studies. The focus of this chapter is the debate between Francis Christensen and James Moffett, two influential composition scholars who introduced innovative, though very different, approaches to writing instruction during composition’s disciplinary consolidation in the 1960’s. The debate between Christensen and Moffett offers a glimpse of the historical tension between representations of composition as a natural versus a technical process. In this chapter, I illustrate how such tension persists today by extending my analysis of the natural/technical dichotomy to pedagogical responses to new media.

The third source of my uncertainty exists at the level of classroom-practice. In my experience, departing from the familiar terrain of print-based literacy often feels risky because many students are unfamiliar with the technology I ask them to use. Lessons and assignments involving the creation of Internet and multimedia texts seem experimental,

which would be fine if not for my lingering sense of obligation toward teaching print-based writing. How, I wonder, do teachers experienced with integrating new media into their classrooms negotiate this sense of uncertainty? Chapters 5 and 6 address this question by reporting on a semester-long ethnographic study of two college English courses (English 418) led by teachers who have developed innovative approaches to integrating digital and Internet technology into their courses. In Chapter 5, I compare the ways the different styles of these two courses direct students' composing efforts toward different objectives and divergent conceptions of composition.

Chapter 6 offers a more focused look at students' and teachers' involvement with a particular computer application. Here I examine participants' interactions with Adobe Flash, a popular website design and development program. I analyze how Flash, in concert with other actors, influence students' evaluations of the different elements of their multimedia projects, such as interactive buttons, visual effects, and written text. I attend to students' appraisals of these different elements, discussing how and why this ordering of values takes shape, with specific attention to Flash's central paradox: its maddening and alluring inscrutability. The material discussed in Chapter 6 is important to my broader effort because it illustrates how a competitive dynamic between different representational modes when students compose multimedia texts. The findings of this chapter suggest that this competitive dynamic has the potential to complicate composition instruction, particularly when alphabetic writing is deemed less important than other facets of students' multimedia projects.

Though my ethnographic account of English 418 appears in later chapters, I should emphasize that my observations of these classes and interviews with students catalyzed this dissertation early on. Indeed, the idea of reflecting on the uncertain relationship between writing instruction and technological change began as an effort to conceptualize my uncertainty about what was going on in these two classrooms. I initially believed that by attending these classes and by interviewing teachers and students, I would gain insight into how to best teach composition with an array of digital tools. The teachers of these courses were early adopters of digital technology, and I imagined that my interviews and observations would illuminate productive ways to integrate similar tools and teaching strategies into my own classes. What I came to

realize, as I attempted to analyze field notes and transcripts, was that I had few concepts that allowed me to link the classroom-based material I had collected to theoretical and historical uncertainties related to technology and the teaching of writing. It was this dearth of conceptual grounding that became a central concern of this project.

My efforts to make sense of the data I gathered during the study of English 418 prompted me to think more deeply about those aspects of writing pedagogy that are most profoundly affected by the rise of digital media. Reviewing my field notes and interview data, I became interested in responses and observations that revolved around three general themes. The first two themes pertained to participants' perceptions of personal enhancement. I used the term "potency" to organize observation and interview data that related to participants' sense of power and influence. Similarly, I used the term "distributedness" to organize material reflecting participants' sense of being enhanced by the range and speed of Internet technology. The third theme, "style," was used to organize material that reflected repeating patterns of organization and appearance related to classroom space, teaching materials, and student texts. Recognizing that these themes might be used to consider the relationship between technological change and writing pedagogy outside of classroom practice as well, I developed them into analytical concepts, configuring them within a "networked" perspective toward pedagogy. In sum, I expanded the themes that emerged in the classrooms I observed into concepts that could be used to examine broader theoretical and historical uncertainties related to writing instruction and technological change. This "bottom-up" approach to inquiry, which began as an effort to understand two sections of English 418, diverges from scholarship that applies ready-made interpretive frameworks onto classroom-based instruction. The approach I adopt is consistent with Shirley Brice Heath and Brian Street's sense of the value of ethnographic of inquiry, namely that it helps researchers "develop new theories of explanation for events and practices" (24). Rather than using a pre-articulated framework to explain pedagogical phenomena, my classroom-based reflections prompted me to generate the concepts, which then became the tools I used to interrogate broader theoretical and historical uncertainties around writing instruction the digital age. In the next chapter (Chapter 2) I introduce these concepts and explain how they help me think

critically and constructively about the exciting and disorienting predicament of teaching writing amidst rapid technological change.

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As Louise Wetherbee Phelps notes, the field of composition studies develops in response to a productive tension between theoretical, historical, and practical uncertainties around the teaching of writing.<sup>6</sup> Because teachers/scholars of writing operate at the nexus of this tension, it is useful to find ways to put all three domains into conversation with one another. The organization of forthcoming chapters and the concepts developed throughout make strides toward this broader effort. I should add that this study differs from accounts that express unqualified anxiety or enthusiasm about the fate of literacy in response to the rise of digital media. Rather than lamentations or celebrations of the “revolution,” my hope is that forthcoming chapters will be read as attempts to gain analytical purchase on emergent controversies related to the teaching and study of writing. This project is also driven by my sense that other teacher/scholars might benefit from my efforts to conceptualize and interrogate the theoretical, historical, and practical sites of my uncertainty.

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<sup>6</sup> See *Composition as a Human Science*.



## Chapter 2

### Tracing Technological Change through Pedagogical Networks

During my time in graduate school many people—friends, salespeople, university administrators—have suggested that my writing courses would be enhanced by new technology. In response (out of curiosity and fear of superannuation), I experimented with a range of digital media, asking students to compose wikis, blogs, and websites. I designed and piloted a first-year writing course tailored to a so-called “enhanced classroom.” I incorporated sound, video, still images, and interactive elements into my own writing and asked students to do the same. These efforts were spurred by broader institutional changes I witnessed while pursuing my Ph.D. in English and Education at the University of Michigan. A few years ago, the university’s writing center began offering digital writing courses to undergraduates. Already in place were graduate-level literature and creative writing courses that encouraged a mix of print-based and multimedia writing. The library, a world-class center for print-based research, began digitizing its vast collection. These examples highlight just a few ways my experiences as a teacher and student were bound to broader transformations to college literacy practices prompted by digital media. Throughout this dissertation, I use the term “network” to represent this sense of connectedness. The “network” metaphor is popular these days, largely because of the ways we connect with others through social networks (e.g. Facebook), cell phone networks, wifi networks—the list goes on. Though these highly corporatized versions of the “network” metaphor stray somewhat from my use of the term, they do capture the basic logic of interdependence I am trying to convey.

The idea of pedagogical networks taken up in this chapter shares many of the basic assumptions of open systems (or “ecological”) perspectives toward educational phenomena. Such perspectives emphasize the dynamic relationship between classroom phenomena and broader cultural trends and processes. As Stuart Selber notes, these systems are both “pluralist” and “complex” (Selber 190).<sup>7</sup> Selber goes on to suggest that systems thinking is particularly useful for helping teachers understand continuity and

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<sup>7</sup> To clarify distinctions between open and closed systems, Selber draws upon the work of Lars Skyttner. See *Multiliteracies for a Digital Age* (190-192).

change in educational contexts because it prompts them to “look well beyond their own classroom contexts, in both upwards and downward directions as they contemplate and work toward the changes they would like to see” (191). The multidirectional gaze Selber refers to resonates with the disciplinary gaze of composition studies, which builds knowledge by looking “up” to broader cultural changes as readily as looking “down” to practice. In addition to looking “up” and “down,” in forthcoming chapters I look “back” to historical controversies around writing instruction in order to offer a multidirectional perspective on the interlocked legacy of technological and pedagogical change.

The challenge of taking a network perspective toward pedagogical phenomena is that it solicits overwhelming complexity. Selber stresses this point, suggesting that open systems are “living systems, constantly in flux.” In the following passage, he describes how this complexity operates on different hierarchical levels: “Educational systems are nested in communities and the larger society; educational systems are greater than the sum of their parts; change in one part of an educational system affects other parts; and educational systems organize and mutate over time” (191). To take a network perspective toward pedagogical phenomena is to admit all of this plurality and complexity into one’s thinking. Though I share Selber’s sense of the advantages of taking an open systems view of continuity and change in education, for my purposes, I find it helpful to specify the general characteristics of pedagogical networks related to writing instruction, qualities that distinguish these networks from other open systems. I do this in three ways: first, I consider foremost, in order to better understand how pedagogical networks may be responding to technological change it is necessary to stipulate the meaning of “technological” in regards to the teaching of writing. The purpose of this chapter, then, is to describe pedagogical networks in greater detail and to articulate three analytical concepts—potency, distributedness, and style—that help me examine the relationship between technological and pedagogical change. The larger goal of this chapter is to develop concepts that help me relate broader cultural controversies around literacy instruction to historical and practical uncertainties that complicate writing instruction in the digital age.

To think in terms of pedagogical networks is to give credence to the many

influences—both inside and outside of school—coming to bear on pedagogical activity. This perspective on pedagogical activity is not new. As Lev Vygotsky (1986), Kenneth Bruffee, (1986), Shirley Brice Heath (1983), and many others have illustrated, one’s experience of literacy pedagogy is bound to the practices one inherits from home as well as the materials—books, magazines, computers—one uses outside of school. Indeed, social practice perspectives on literacy are premised upon well-supported presumptions that learning and development are influenced by one’s interactions with other people and the environment in which one is raised. Patricia Bizzell (1982), David Bartholomae (1985) among others have attempted to capture the intersubjective texture of pedagogical phenomena by describing these collectives as “discourse communities.” As the term implies, “discourse communities” are most concerned with spoken and written language, a point substantiated by Anne Beaufort’s definition of discourse communities as “a social group that communicates at least in part via written texts and shares common goals, values, and writing standards, a specialized vocabulary and specialized genres” (179). As Beaufort points out, the “shared values” of discourse communities are instantiated in the written texts and spoken language that holds the community together.

Those who see pedagogical collectives as “communities of practice” also attend to the values instantiated in discourse, but they expand the circumference of influence to include people’s behavior as well.<sup>8</sup> There are disagreements, however, as to whether or not school-bound collectives, such as students enrolled in particular courses, should be understood as communities of practice.<sup>9</sup> These disagreements revolve around questions of volition; communities of practice, as defined by Lave and Wenger (1991), are comprised of willing participants, and students are not always willing members of a class or willing participants in pedagogical activities. My choice to use “pedagogical network” to refer to the collectives I examine obviates the questions of volition raised by communities of practice. Moreover, my choice of “network,” is meant to give credence to the material aspects of these collectives, aspects often overlooked or glossed in

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<sup>8</sup> See Milbrey McLaughlin and Joan E. Talbert’s “Developing Communities of Practice in Schools” (2008).

<sup>9</sup> See, for example, James Gee’s contribution to *Beyond Communities of Practice* (2005).

accounts that fashion these collectives as discourse communities.<sup>10</sup>

A “network” vision of pedagogy resonates with scholarship in literacy and composition studies, particularly work by Christina Haas (1996) and Deborah Brandt & Katie Clinton (2002) that strives to account for the cultural and material actors that comprise literacy phenomena. The idea of pedagogical networks also resembles Lester Faigley’s appropriation of Lyotard’s theory of postmodern knowledge in *Fragments of Rationality*. Faigley argues that such knowledge “not only grants space for agency but also insists that subjects are like nodes in networks of discourses that combat entropy of the overall system by constantly innovating” (218). Though my vision of pedagogical networks runs parallel to this work, it stems most directly from the work of sociologist Bruno Latour and cultural critic Donna Haraway, both of whom propose ontological visions that emphasize the hybridized, socio-material aspects of being and becoming. Both Haraway and Latour conceptualize “the social” as relations between human as well as nonhuman actors. Though my concerns do not directly pertain to issues of ontology, I draw upon Latour and Haraway because they conceptualize agency outside of symbolic action. Latour (1999), for example, shows how agency is instantiated in objects such as speed bumps, which “act” upon drivers in ways that shape entire traffic patterns.<sup>11</sup> The ways objects direct our nonverbal actions, Latour argues, is at least as important as the effects they have on our attitudes and verbal judgments. Moreover, as Latour’s colleagues working in Science Studies have demonstrated, the cryptic histories of objects often reveal a great deal about the way agency and value circulates between people and things.<sup>12</sup>

In “Limits of the Local: Expanding: Expanding Perspectives on Literacy as Social Practice,” Deborah Brandt and Katie Clinton suggest that by attending to the connections between people and things, literacy researchers might trace how local practices relate to other places and other actors, thus extending social practice approaches to the study of literacy beyond local contexts. Such a perspective, they argue, brings into focus “the

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<sup>10</sup> John M. Swales’ *Other Floors, Other Voices: A Textography of a Small University Building* is an exception in the sense that the discourse communities Swales studies are shown to thrive within clearly defined spaces and in collaboration with those material tools that maintain scholarly activity.

<sup>11</sup> See *Pandora’s Hope* (1999), page 187.

<sup>12</sup> Michael Callon (1986), for example, has traced one such history in his study of the domestication of Scallops in St. Brieuc Bay. Sociologist John Law maintains an online resource for Actor Network Theory: <http://www.lancs.ac.uk/fass/centres/css/ant/antres.htm>.

various hybrids, alliances, and multiple agents and agencies that simultaneously occupy acts of reading and writing” (347). One of the concepts that Brandt and Clinton appropriate from Latour germane to my effort here is “folding in.” A somewhat slippery term, “folding in” can be understood as the process through which things become delegates of human action. In the following passage, the authors summarize Latour’s example of a shepherd folding the act of tending sheep into a fence:

The fence has a different ontology from the shepherd; it is not, strictly speaking, an extension of the person. But it does extend the relationship that the shepherd has with his sheep—he has folded the act of tending them into the fence. This delegation of shepherding to the fence also changes the social world of the sheep, who now nuzzle against wooden slats instead of human flesh. Surveillance of the sheep is both displaced and enhanced—the shepherd’s relationship with the sheep goes on without his constant vigilance or the need for his physical presence at all. (353)

Brandt and Clinton compare Latour’s description of the shepherd fencing his flock to their own construction of a literacy object: “As authors of this article, we fold ourselves into a thing called the *Journal of Literacy Research*, which will disseminate our article and engage our readers while we are doing others things” (353). Such a description suggests that “selves” are folded into media through various acts of inscription. Brandt and Clinton could be said to maintain a distributed conception of selfhood, a self who, through the process of folding, can influence others through time and space, apart from one’s biologically constrained self. The idea of “folding in” is useful for illustrating how social interaction is constituted by interactions with things as well as people. It also resonates with my sense of pedagogy as comprised of interdependent actors within a network. But what can we say about these people-thing “folds”—these hybrids—once we suppose that they represent our networked-being?

To flesh out a network vision of pedagogical phenomena such that it reflects qualities and processes we associate with writing classrooms and composition scholarship, I find it useful to start with a basic premise of most pedagogical activity related to writing: that writing is a means of individual and societal enhancement, a technology for bringing about improved states of being—better, wiser, more capable versions of our selves and our communities. Indeed, glancing at virtually any writing

textbook published in the past half-century, one finds instances of authors presenting writing as a means of self-improvement. Take, for instance, the following passage from Donald Murray's *Write to Learn*:

Writing can bring attention to you or your ideas. It can add to your job skills, and it can improve your grades. Writing can give you power, for we live in a complicated technological society, and those people who can collect information, order it into significant meaning, and then communicate it to others will influence the course of events within the town or nation, school, or university, company or corporation. Information is power. (Murray 4)

The promises embedded in his passage are commonplace—by becoming a better writer one is likely to become both a better student and a better employee. Murray also suggests that writing can grant power in relation to our “complicated technological society”—power to control information and thus influence local and global institutions and events. Twenty years prior to the publication of *Write to Learn*, William W. Watt summarized the importance of learning to write well in similar terms: “Any improvement in [students’] writing and language sense will help them talk more effectively, read and listen more perceptively, and think more clearly.” In *An American Rhetoric* Watt goes on to describe what he calls the “more tangible dividends” that come before and after graduation:

In many college courses, students are required to write literate reports and essay answers for instructors who do not or cannot take the time to teach composition.... After graduation, the ability to write may be a prerequisite to success in business or professional life or in the fulfillment of community obligations. (5)

Becoming better students, better employees, and better citizens—these are the tangible rewards Watt and Murray use to warrant the existence of their textbooks and, presumably, to motivate students’ composing efforts. Both authors allude to less tangible rewards as well, with Watt suggesting that improved writing leads to improved speaking, listening, and thinking. For Murray, the more abstract benefits of studying writing are related to the acquisition of power and influence. In short, while Murray’s *Write to*

*Learn* and Watt's *An American Rhetoric* are published over twenty years apart, both writers hold out promises that connect their exercises and assignments to conceptions of enhancement bound to the technology of writing.

Beyond attesting to the enhancement narrative underlying writing pedagogy, these examples highlight the fact that writing pedagogy strives to facilitate degrees of shared value, or intersubjectivity, around particular matters of concern. I am not suggesting that pedagogical actors, such as teachers and administrators, insist that students agree at all times. Rather, I submit that writing pedagogy strives toward basic congruencies and understandings. A syllabus, for example, strives to shape students' and teachers' practices and concerns ("We shall all meet here at 1:00 and for one hour agree that writing is worthy of our attention"). Likewise, a lesson or assignment organizes activity such that students partake in shared experiences and develop shared understandings. Every lesson, every assignment, every classroom, I would argue, is not only an effort to establish basic congruencies in understanding and practice; these pedagogical actors are also expressions or instantiations of value. These values, I should point out, do not necessarily originate with a teacher. Other pedagogical actors—software, curriculum committees, classroom space, disciplinary conventions—influence this evaluative dynamic as well.

I want to say more about how I see "value" circulating between humans and nonhumans within networks qualified as "pedagogical." Fundamentally, I see this dynamic maintained by *attributions* and *instantiations* of value. Though there is some play in the way I use these terms, I tend to use "attributions of value" to refer to those occasions when value manifests as signs—a gold star, a happy face, "I love that book"—these are common attributions of value.<sup>13</sup> I generally use "instantiations of value" to describe the more basic value associated with something's presence. Though these two interpretations of value often overlap, I find it helpful to clarify this distinction. Words of praise quite obviously qualify as attributions of value, as do expressions of gratitude, pleasure, and effort. Instantiations of value, by contrast, express value by simply existing in space and time. This way of thinking about value is particularly suited for examining

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<sup>13</sup> These examples allude to C.S. Peirce's tripartite conception of the way a sign denotes its object—as icon, index, or symbol.

the material aspects of classrooms and instructional tools. If students are presented a worksheet comprised of ten numbered sentences and told to circle verbs, value is instantiated in both the materiality of worksheets as well as the symbolic processes associated with the identification of grammatical features in sentences. Likewise, when an assignment asks students to create a video and post the video on YouTube, value is instantiated in video production, YouTube, as well as the global circulation made possible by the Internet. My basic point is that the different media, artifacts, and processes enrolled into pedagogical networks can instantiate the values of teachers, institutions, and disciplines even if value is not explicitly attributed to them. The proliferation of digital media in schools and classrooms instantiates the value of these technologies within the network as a whole, while simultaneously affirming the style of representation and communicative practices associated with those technologies.

As noted earlier, Lanham sees these developments resulting in competitive writing spaces, where “words no longer have it all their own way” (xii). Now that print competes with digital media, the examination of teachers’ and students’ interpretations of these different instantiations of value becomes a more pressing matter of concern. This is particularly true in pedagogical contexts that encourage multimodal composition because those media and modes of representation to which more value is attributed may be deemed more compelling. Recall the student who put more effort into designing his website than writing essays because he thought his website would last longer and affect more people than his printed work. Though I cannot say for sure why this student attributed more value to website creation than essay writing, one can assume that it had something to do with his sense of the range and durability of digital artifacts. In other words, he associated the value of website composition to the spatiotemporal qualities of digital media technology. Though I had explained to this student why I felt it was important for students to design professional looking websites, my sense is that this student’s attributions of value to website creation was more than a mere echo of my ideas. He had his own reasons for valuing websites, reasons that inflected the value he attributed to the written work he was completing in other courses. This example is meant to highlight two assumptions I make about the way value circulates in pedagogical networks. First, and most obviously, pedagogical actors, such as teachers and students



often maintain this dynamic through discourse.<sup>14</sup> Secondly, though teachers possess more power and authority in classroom contexts than students, students do not necessarily attribute the same value to the same things as their teachers.

The latter point relates to *recontextualization*, a process I take to be fundamental to all pedagogical activity. In short, recontextualization is the process of making something one's own through physical alteration or by understanding phenomena in terms of one's own interests and concerns. As anthropologist Daniel Miller notes, the concept of recontextualization presumes that one's interpretations are not simply cultural reproductions driven by the ideological mechanisms of those in power, but rather acts of recreation (176). Though a teacher may be required to use a particular textbook, in most cases she has some power to recontextualize the textbook such that it suits her own purposes. Similarly, though students have less authority than teachers, they too can recontextualize the textbook by skimming reading assignments or using the book as a door-jam. The ways teachers and students recontextualize pedagogical materials are quite obviously influenced by the value they attribute to those materials. By examining the differences and congruencies between actors' recontextualizations of different media and modes of representation, then, one gains a sense of the way value circulates and morphs between teachers, students, and pedagogical materials.

The rise of digital media and the ease of distribution afforded by the Internet make it possible for individuals' recontextualizing efforts to reach a global audience and, in cases such as the Arab Spring or the Occupy Movement, enroll audiences into major reform projects. Such efforts can be directed toward smaller, more personal goals as well. Take, for instance, Lindsay Blackwell, a recent college graduate who engineered an online campaign to be hired as the University of Michigan's first-ever Social Media Director. Rather than beginning the application process via conventional institutional channels, namely by completing the university's online application, Blackwell created a website, [www.dearlisarudgers.com](http://www.dearlisarudgers.com), which she advertised in an email to friends and family. In her email, Blackwell urged readers to contact Lisa Rudgers (Search Committee Chair) and direct her attention to the website. Thus began an unconventional

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<sup>14</sup> This claim resonates with a great deal of educational research rooted in constructivism. See, for example, *Discourse of Opportunity* (2006).

quest for employment that resulted not only an interview with Ms. Rudgers, but coverage from local media outlets, as well as job offers from across the country and around the world (not to mention a date with an admirer who visited the site).<sup>15</sup> Though Blackwell did eventually submit her application through the university's traditional channels, her website was what commanded the attention of thousands of viewers, many of whom supported her campaign on Twitter, Facebook, and other social media. This example illustrates the power digital and Internet technology grants savvy, knowledgeable users to recontextualize forms and processes toward their own interests by disrupting, or in some cases circumventing, the regimentation imposed by powerful stakeholders.

As my description of recontextualization suggests, instantiations and attributions of value are open to interpretation and resistance. For example, while I might instantiate the value of blogs and blogging by asking students to maintain a blog for the entire semester, students could very well recontextualize the assignment by refusing to comply, by parodying blogging in their posts, or by expressing their dissatisfaction with the blog form. While any assignment or other instigation to make meaning might be recontextualized, some are more difficult to recontextualize than others. This difficulty is prompted by the resistance one encounters while attempting to recontextualize something according to one's own interests and concerns. For instance, I once taught an introductory writing course in a very small room—so small, in fact, that students walked sideways to get to their seats. This might have been manageable if not for the fact that I planned for students to do a good deal of group work. In addition to making it difficult for students to break into groups, the materiality of the classroom—its small size and one large desk—made it nearly impossible for students to communicate with one another. They had to strain their necks to make eye contact, and because we were in such close quarters, individual voices were drowned out by the larger group's cacophony. Recontextualizing the classroom would have required sledgehammers and a good deal of labor. The materiality of the classroom, in other words, offered so much resistance that I simply gave up on the possibility of group work.

The fact that I chose not to break down the walls of my classroom points to a

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<sup>15</sup> This summary of the “Dear Lisa Rudgers” campaign is informed by casual conversations with Lindsay, as well as recorded interviews.

more internal form of resistance one might encounter while attempting to recontextualize someone or something else's instantiations of value: one's sense of the consequences of recontextualization. The sledgehammer solution would have undermined my reputation and professional status, so I wisely chose to forego my trip to the hardware store. As much as students might loathe posting weekly blog entries, most understand that it is in their best interest to comply, as dismissing the assignment would hurt their grades. I bring up this point about the resistances actors might face during acts of recontextualization to introduce the notion that in pedagogical contexts, such as schools and classrooms, attributions and instantiations of value are often forms of regimentation, or control. As sociologists and critical theorists have suggested, these mechanisms of control often have long histories bound to culture and class.<sup>16</sup> For my purposes, however, I want to simply point out that the material-semiotic characteristics of some actors within pedagogical networks—worksheets, computer programs, classrooms—are more strictly regimented than others, and that such regimentation influences the prospects and possibilities for recontextualization.

To suppose that actors can recontextualize pedagogical materials and activities to suit their own agendas runs somewhat counter to those who view the intersection of pedagogy and value in terms of “ideology.”<sup>17</sup> I do not use “ideology” as an explanatory concept in this dissertation, in part, because of the term's great instability. This point is echoed by Terry Eagleton, who writes “nobody has yet come up with a single adequate definition of ideology.... because the term ‘ideology’ has a whole range of useful meanings, not all of which are compatible with each other (1). Indeed, the term's instability is one of the reasons I refrain from using “ideology” when discussing continuity and change in educational systems. A second reason for my resistance to the term is that it is often used to link classroom phenomena—writing assignments, instructional materials, and so on—to larger political and economic entities based a priori explanatory frameworks. Consider, for instance, James Berlin's mobilization of “ruling elites” to explain the origins and maintenance of “expressionistic” pedagogical rhetoric.

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<sup>16</sup> See Pierre Bourdieu (1990), Basil Bernstein (1996), Cynthia Selfe (1999).

<sup>17</sup> See Berlin's “Rhetoric and Ideology in the Writing Class.”

It is indeed not too much to say that the ruling elites in business, industry, and government are those most likely to nod in assent to the ideology inscribed in expressionistic rhetoric. The members of this class see their lives as embodying the creative realization of the self, exploiting the material, social, and political conditions of the world in order to assert a private vision, a vision which, despite its uniqueness, finally represents humankind's best nature. (487)

This passage illustrates Berlin's tendency to use macro structures, such as *capitalism* and *ruling elites* to explain why expressionistic rhetoric continues to thrive in high schools, colleges, and universities. The generalizations move quickly from a few passages taken from pedagogical texts to globalizing claims about the place and power of these texts in relation to business, industry, government, and human nature. In short, Berlin suggests that micro social phenomena, such as Peter Elbow's celebration of "voice" in *Writing with Power* ("If I want power, I've got to use my voice," quoted in Berlin) should be interpreted as complicit with the aims of ruling elites, who herd everyone into capitalism's alienating vortex:

Even those most constrained by their positions in the class structure may support the ideology found in expressionistic rhetoric in some form. This is most commonly done by divorcing the self from the alienation of work, separating work experience from other experience so that self-discovery and fulfillment take place away from the job. For some this may lead to the pursuit of self expression in intellectual or aesthetic pursuits. For most this quest results in a variety of forms of consumer behavior, identifying individual self expression with the consumption of some commodity. This separation of work from authentic human activity is likewise reinforced in expressionistic rhetoric, as a glance at any of the textbooks it has inspired will reveal. (487)

The reason why one need only "glance" at the textbooks is because according to Berlin a quick look is sufficient for revealing the actors constituting this global drama. The trouble I have with Berlin's Marxist framework is that it claims to identify the underlying (and somewhat insidious) motives maintaining Elbow's pedagogical approach. I do not discount Berlin's sense of foreboding, particularly in light of capitalism's obvious deleterious effects on our physical environment. Nor do I disavow the potential benefits of critical pedagogy. My disagreements with Berlin originate with the ease with which he

relates a few sentences abstracted from a few textbooks to geopolitical and economic forces. In more general terms, I would argue that his strong case against the global interactions facilitated by expressionist rhetoric are weakly linked to the deleterious effects he relates to the ordering principles of capitalism.

My resistance to Berlin's use of "ideology," then, does not originate with his commitment to Marx or dialectical materialism more generally, but rather his assumptions about the effects specific texts have on teachers, students, and society at large. Does Peter Elbow's textbook divorce the self from the alienation of work? Is the "separation of work from authentic human activity" reinforced in expressionistic rhetoric? If so, how is such separation manifested? To begin to answer such questions, one must observe people's behavior, talk with students and teachers, and, perhaps most importantly, take participants' responses at face value rather than assuming a spell of false consciousness. From an ethnographic perspective, the problem with presuming that false consciousness or any subconscious motivational drive is in play is that it becomes the default explanatory model. So while it may be tempting to view writing pedagogy and technological change through Berlin's ideological lens, I take a different approach, one that does not presume naïveté or powerlessness on the part of students, teachers, and scholars.

Without the explanatory power of ideology, how might we consider the interlocked legacy of technical and pedagogical change related to writing? For my purposes, I find it helpful to begin by interrogating the meaning of "technical." What does it mean to say that one media or act of inscription is more "technical" or "technological" than another? To answer this question, one must have a way of gauging degrees of technicality. Unfortunately definitions of "technicality" lead to tautology. The *Oxford English Dictionary* informs us that "technicality" pertains to "the state or quality of being technical," as well as "the use of technical terms and methods." To gauge degrees of technicality, we must first secure a definition of the technical.<sup>18</sup> On this point, we are helped by Anthropologist Alfred Gell, who offers a relatively streamlined conception of the technical by referring to "a certain degree of circuitousness in the achievement of any given objective." Gell elaborates as follows:

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<sup>18</sup> I am drawing from the online edition of the *OED* ([www.oed.com](http://www.oed.com)).

Technical means are roundabout means of securing some desired result. The degree of technicality is proportional to the number and complexity of the steps which link the initial givens to the final goal which is to be achieved. Tools, as extensions of the body which have to be prepared before they can be used, are an important category of elements which 'intervene' between a goal and its realization. But not less 'technical' are those bodily skills which have to be acquired before a tool can be used to good effect. ("Technology and Magic" 6)

Gell's conception of the "technical" and thus "technicality" includes tools and techniques, both of which comprise the "roundabout means" for securing some goal or objective. As Christina Haas notes, writing has been technical from the start: "It is technology that makes writing possible.... Literacy acts—acts of reading and writing—cannot exist prior to technology but are always inescapably technological" (205). Turning back to an outdated and admittedly reductive definition of literacy as "the ability to read and write," one could say that literacy instruction comprised of more steps and procedures is more technical than those comprised of fewer steps and procedures.<sup>19</sup> As Gell points out, however, technicality is not simply a function of the number of steps; the complexity of these steps—both as individual steps and as integrals of a technical system—can be understood to qualify degrees of technicality as well. Gell's conception of technicality informs this study by offering preliminary grounds for comparing the relative "technicality" of different actors comprising pedagogical networks.

Also useful are Gell's insights into the relationship between technicality and value, which he explains in terms of *resistance*. "Valued objects present themselves to us surrounded by a kind of halo-effect of resistance," Gell suggests. "It is this resistance to us which is the source of its value" ("Technology of Enchantment" 48).<sup>20</sup> This halo of resistance occurs on two planes, Gell tells us. First, there is the material resistance bound to one's sense of the effort required to possess valued objects. The more difficult something is to possess, in other words, the more value it tends to accrue. Gell points out

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<sup>19</sup> A more progressive definition of literacy is Deborah Brandt's sense of "a growing metacommunicative ability," which she elaborates as, "an increasing awareness of and control over the social means by which people sustain discourse, knowledge, and reality" (32).

<sup>20</sup> In the section of "The Technology of Enchantment and the Enchantment of Technology," referred to here, Gell elaborates upon Georg Simmel's treatise on the *Philosophy of Money* (1979), which focuses on the relationship between exchange value and money.

that the halo of resistance also manifests in an intellectual sense, which is to say, one desires to understand, perhaps master, whatever means of manufacture brings the valued object into being. It is this intellectual sense of resistance as it relates to value that Gell uses to explain the hold technically sophisticated objects and processes have upon our imagination. Following Gell's lead, we might suppose that the value attributed to contemporary literacy objects—books, websites, podcasts, and so forth—is influenced, to some degree, by one's desire to possess the skills of manufacture associated with such objects and, moreover, that this desire is somewhat contingent upon the resistance one encounters while trying to understand an object's creation. Connecting these ideas to writing instruction, one might say that the promise of technology is partially a function of the resistance, or difficulty, one encounters while trying to acquire the skills or means of manufacturing different kinds of texts/artifacts.<sup>21</sup>

The desire for technical mastery, of course, is catalyzed by more than simply a sense of difficulty or complexity. As Gell notes, the value one attributes to technical objects is also influenced by the value one attributes to socio-technical network of which it is a part. The value that Trobriand Islanders and their trading partners attribute to the dazzling prow boards Gell examines is bound to other highly valued objects and practices within Melanesian culture (e.g. canoes, sea travel, magic, and so forth). Likewise, the value attributed to literacy objects depends upon the value attributed to larger systems of exchange. Not long ago print artifacts were considered the primary means of literate production, consumption, and exchange. The rise of digital media, however, has led to the proliferation of new and hybrid genres as well as innovative inscription and display technologies. Given the way all manner of technical objects and techniques now compete for our attention, it seems useful to examine the ways literacy theorists', teachers', and

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<sup>21</sup> Gell elaborates these ideas in *Art and Agency*, proposing that the inferential schemes we bring to objects are frequently very like, if not actually identical to, the ones we bring to bear on other people. This leads Gell to posit the idea of “distributed personhood,” wherein the artifacts we produce throughout our lives—books, paintings, websites, and so on—are perceived by others as constitutive of our identity and agency. Gell summarizes his symmetrical orientation as follows: “Because the attribution of agency rests on the detection of the effects of agency in the causal milieu, rather than an unmediated intuition, is not paradoxical to understand agency as a factor of the ambience as a whole, a global characteristic of the world of people and things in which we live, rather than as an attribute of the human psyche, exclusively” (20).

students' notions of value inflect and are inflected by the various degrees of technicality instantiated in different literacy practices and artifacts.

While Gell's theorizing around technicality offers a useful point of departure, his ideas require elaboration if they are to inform the study of literacy in the digital age. To begin this effort, one might ask how notions of the technical have come to bear on literacy in the past? This question elicits a two-pronged response, because conceptions of "the technical" are often divided into two categories of concern, the first bound to techniques associated with literate practices (*techne*), and the second bound to the tools of inscription, delivery, display, and so forth. Moreover, the degree of technicality associated with a particular literacy artifact, whether printed essay or website, can be understood in relation to the technicality of the tools and techniques used to create it. But as Gell suggests, not all techniques and artifacts are equally "technological." Do high degrees of technicality infuse literate practices and artifacts with value given the broader cultural shift toward reading and writing online? If so, through what means and by what measure? To recast this question in terms of Latour's fence metaphor, what happens when students and teachers "fold" themselves into the novel media and inscription devices associated with digital-age composition?

Such questions highlight the need to develop analytical concepts for examining the effects of technological change on different actors circulating within pedagogical networks. As noted above, these changes affect more than simply the material configuration of classrooms. They transform pedagogical communication and inflect students' and teachers' sense of their own power and influence. The plurality and complexity of pedagogical networks, however, makes developing such concepts a challenge. These concepts must be flexible enough to highlight the texture of change at different points of the network—whether these points manifest at the level of classroom practice, such as students interactions with novel podcasting software, or at points seemingly removed from classrooms, such as transformation to educational publishing, or innovations in display technology. For the remainder of this chapter I discuss three terms—*style*, *potency*, and *distributedness*—that help me interrogate the relationship between technological and pedagogical change at various points of the pedagogical networks I examine. These terms are useful because they allow me to draw connections



between the theoretical, historical, and practice-based uncertainties that arise around writing instruction in the digital age.

### *Style*

As noted in the Introduction, I began to think through these three concepts while comparing two sections of English 418, courses that required students to compose Internet and multimedia texts. Beyond differences associated with classroom space, these courses were organized around very different learning principles and emphasized divergent patterns of interaction. This would likely be true of most classroom comparisons, but one of the things that struck me about the differences I observed was that the technology enrolled into these classes expanded the stylistic range, and thus variation, between these two sections of English 418. As I discuss more thoroughly in Chapter 5, these stylistic differences manifested in teachers' representations of self online, the configuration of pedagogical materials, and in the style of student-teacher interaction. The issue of *style* thus emerged as a central concept through which I organized my observations and reflections.

By "style" I mean to invoke pattern, or what anthropologist Daniel Miller refers to as "an overall organizational principle that may include balance, contradiction, and the repetition of certain themes in entirely different genres and settings" (293). This conception of "style" is quite obviously not confined to art or instructional artistry. Although I believe that teaching can be deemed artful, for my purposes, pedagogical style must be understood to burden effective and ineffective teachers equally, and perhaps more controversially, it must also be understood to manifest entirely apart from teachers. As such, a textbook, computer program, or classroom can be understood to exhibit pedagogical style as readily as a human being. Granted, the pedagogical styles of objects generally remain more subdued than those we associate with a teacher's manner, but they can be nonetheless felt and interpreted, and my observations of English 418 suggest that they are becoming more apparent and influential as networked and programmable technology proliferate in homes, schools, and classrooms.

As writing instruction becomes increasingly populated by Internet and digital technology, a broader range of pedagogical styles are made available. At one time, such

variation was largely confined to print-based course materials, instructional manner, and teacher-student discourse. We now have online courses, online universities, wikis, blogs, websites, podcasts, just to name a few of the more novel actors now constituting pedagogical networks. This material, representational, and practical expansion of pedagogical style suggests that we are not only developing different values and ways of valuing around writing and instruction, we are also developing different conceptions of what things are available for such evaluations. In Chapters 5 and 6, I build upon this assertion illustrating how different pedagogical styles render different narratives around writing, which in turn affect students' composing practices by priming their motivations to compose.

### *Potency*

Other questions that emerged during my study of English 418 pertained to matters of influence: what human and nonhuman actors constituting these courses were having the most influence on students' sense of the relevance of their composing efforts? While studying English 418, I noticed that many of the students I interviewed regarded learning to compose with digital media as opportunities to improve themselves and to influence audiences who could potentially support their goals and interests. In my notes, I classified such responses as reflecting students' sense of their own *potency*, or power and influence, in relation to the media they used. In philosophy, the term "potency" is associated with Aristotle's *Metaphysics*, which distinguishes between what is possible ("potency") and the fulfillment of possibility ("actuality"). Conceived broadly as a substance or quality that encourages or resists change, my understanding of potency is not bound to metaphysics. Rather, I take a pragmatic view of "potency," casting it as a something that human beings attribute to themselves and others. Quite simply, I equate potency with the power to initiate or resist change, power to influence others. This conception of potency originates from the pragmatist assumption that human beings tend to identify and enroll into their efforts those ideas, objects, and techniques that seem useful for attaining their objectives while resisting or ignoring those that do not. To qualify something as more or less "potent," then, is to suggest that it has more or less power to influence events and sway peoples' attitudes, beliefs, and conduct.

While the term “potency” is often attributed to singular entities, I am interested in the concept as it applies to relations between actors—relations between teachers and students as well as those ubiquitous digital devices that now permeate schooling. Rather than wedded to a book or computer, then, potency can be understood to qualify associated entities such as [student + *The Great Gatsby*] or [teacher + SMARTboard]. Psychologist J.J. Goodnow’s reflections on her conflicted attitudes about learning to type illustrates how “potency” might be understood to qualify people-thing relations.<sup>22</sup> As a girl, Goodnow refused to become a competent typist because she feared she would automatically be associated with girls predestined for secretarial work—“girls who were not expected to do well academically” (282). Learning how to type well, she believed, was antithetical to serious study, something that would compromise her academic and professional aspirations. Goodnow’s reflections point to the ways our evaluations of different technological objects and acts of inscription circulate through, and are thus inflected by, larger socio-technical networks, whose evaluative colorings arise from historical circumstances as well as one’s unique attitudes and experiences. For Goodnow, the act of typing was one strand in a potent network, a network she felt she needed to resist in order to realize her goals. Goodnow’s resistance emerged from a sense that her very being would be diminished by strengthening her attachments to nodes of a typing network, such as typewriters, typing courses, and girls who type.

Goodnow’s case might be explained as resistance to being identified (and identifying herself) as a future secretary. In both rhetoric and social psychology, “identification” is generally associated with efforts toward affiliation with someone or some group through the appropriation of that person or group’s qualities.<sup>23</sup> As discussed above, Goodnow’s resistance extends beyond a single person or group, encompassing a range of practices and materials. Sometimes overlooked in discussions about the rhetorical dimensions of identification are the ways in which the material qualities of actors in the assemblage—typewriters, say—encourage or discourage efforts toward

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<sup>22</sup> See J.J. Goodnow, “The Socialization of Cognition: What’s Involved.” In *Cultural Psychology: essays on comparative human development* (1990).

<sup>23</sup> Freud was the first to discuss identification as a fundamental human trait. His classic definition comes in *The Interpretation of Dreams*: “[Identification] is not mere imitation but assimilation based on the same aetiological claim; it expresses a just like and refers to some common condition which has remained in the unconscious” (104). In *A Rhetoric of Motives*, Kenneth Burke proposes “identification” as an alternative to “persuasion” as the basis for all rhetorical activity.

identification. It is interesting to consider the fact that during Goodnow's early schooling, typewriters were large, heavy objects; the size and weight of these inscription devices cannot be divorced from the limited mobility associated with secretarial labor. Moreover, the forms of symbolic regimentation around typing, such as measures of words-per-minute, might have seemed restrictive to an intellectually curious person such as Goodnow. My point is that the material, symbolic, and political entailments of secretarial work were wrapped into a typing assemblage, which, depending upon one's subjectivities and efforts toward identification, might be viewed as more or less appealing. From Goodnow's perspective becoming a good typist was a step toward *being* a secretary, with all the limitations that way of being suggested to her.

### *Distributedness*

The feelings of power and influence (*potency*) English 418 students expressed while discussing their efforts to compose with digital media were often bound to the vast and speedy circulation afforded by the Web—a sense of *distributedness* that students generally felt could not be rivaled by print. Similar to the way Goodnow's sense of self was bound to a particular inscription device, students seemed to envision their own futures very much bound to their interactions with digital media. Indeed, many students associated their motivation to learning how to compose with new media to the ways this technology allowed them to connect with other people and collectives outside of the classroom. Because the extent of one's distributedness is bound to the media into which one is folded, it follows that one's sense of potency might be inflected by the media one uses as well. If I attribute great potency to print-based literacy artifacts and practices, I may be more likely to attribute potency to a strand of myself distributed through print. If, on the other hand, I attribute great potency to video, I may be more inclined to attribute potency to that strand of myself distributed through video.

As the Goodnow example suggests, distributed folds of self need not be autobiographical accounts or videos starring one's person; they might be ideas, arguments, or aesthetic expressions that exclude any explicit representation of the author. Moreover, Goodnow's case illustrates how distributedness is not simply realized by content; it is intrinsically bound to qualities of the media into which we are folded. If, as

Latour suggests, we imagine the things we create and use as delegates of ourselves, then qualities such as durability, speed, and range are not simply qualities of our tools—our computers, smart phones, and such—but qualities of our very selves, fragmented and distributed as those selves may be. This perspective raises a number of interesting questions for literacy researchers and theorists: How and to what extent do literacy artifacts and practices distribute the self? And to what extent do these practices and artifacts feed back into one’s sense of being a potent teacher, author, or student? These questions, which occurred to me as students in English 418 discussed their efforts to compose multimedia and Internet texts, suggest that the relationship between technological change and writing pedagogy has important implications for the ways students and teachers view themselves in relation to the media they use.

So far, I have confined my discussion of to schools and classrooms, but this focus appears somewhat limited in light of a network-vision of pedagogy, where actors, such as educational publishing companies, curricular mandates, and budgets, circulate outside classrooms as well.<sup>24</sup> If, as Latour advises, we view phenomena in terms of assemblages, or what he calls “actor-networks,” dizzying questions of influence arise. Casting such questions in concrete terms, one might be prompted to wonder who or what is influencing continuity and change in classrooms, schools, and disciplines: Is the teacher deploying the textbook or is the textbook publishing company deploying the teacher? Are standardized tests leveraging publishing companies? When one considers that conceptions of literacy are strongly bound to the language practices one inherits from home, it becomes even more difficult to disaggregate the many influences coming to bear on pedagogical activity related to reading and writing.<sup>25</sup> Such contingency underscores the impossibility of making generalizable claims about the ways technological change shapes pedagogical activity. Though the complexity of pedagogical networks resists generalization, I believe it is important to forge connections between the broader cultural and historical controversies around writing instruction and classroom-based matters of

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<sup>24</sup> This idea approximates Deborah Brandt and Katie Clinton’s conception of “literacy-in-action,” as discussed in “Limits of the Local: Expanding Perspectives on Literacy as a Social Practice.”

<sup>25</sup> Shirley Bryce Heath’s *Ways with Words* is notable for its study of the interactions between home and school literacy practices. Deborah Brandt refers to some of these influences in terms of “literacy sponsorship.”

concern. In this chapter I have introduced a number of concepts that help me make such connections.

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As composition instructors assimilate new technology into their courses, writing pedagogy enters into new human purposes, affords new kinds of actions, and suggests new projects. While exciting in many ways, these developments also generate uncertainty around the teaching of writing. Some teachers may shrug aside this uncertainty and proceed unabated, but others (me, for instance) feel destabilized and wish to develop concepts and perspectives for managing the uncertainty that follows in the wake of technological change. I have begun such a project in this chapter, proposing a vision of writing pedagogy that takes into account the ways human and nonhuman actors are intertwined into pedagogical networks. In forthcoming chapters, I build upon these ideas, using the concepts introduced here to examine the relationship between writing pedagogy and technological change.

## Chapter 3

### Technological Change and Controversy

*To say writing is artificial is not to condemn it but to praise it. Like other artificial creations and indeed more than any other, writing is utterly invaluable and indeed essential for the realization of fuller, interior, human potentials.*

-Walter Ong

As the quote above suggests, Walter Ong has a decidedly optimistic view of the enhancing powers of writing, and he is quick to remind readers of writing's fundamental technicality, recognizing, perhaps, that most people "take writing so much for granted as to forget that it is a technology" (30). Ong's work is controversial for positing vast differences between oral and literate ways of knowing and for suggesting that writing operates autonomously upon cultures in predictable and deterministic ways, bringing about enhancements that have "potentials far outdistancing those of the simply spoken word" (31).<sup>26</sup> Ong's vision of writing as a technology of enhancement, however, has been contested by a long list of critics. Brian Street (1984), Harvey Graff (1978), and Sylvia Scribner and Michael Cole (1981) among others, refute Ong and other "Great Divide" theorists by offering evidence illustrating the varied ways communities shape literacy artifacts and practices to mesh with diverse needs, histories, and contexts.<sup>27</sup> Literacy, the critics argue, is not an autonomous technological force that molds individuals in predictable ways but rather highly variable across cultures and finely tuned by local factors.

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<sup>26</sup>Though Ong suggests that writing alienates people from oral culture's more "empathetic" and "communal" ways of knowing, he argues that that it ultimately "can enrich the human psyche, enlarge human spirit, set it free, intensify its interior life" (*Orality* 81).

<sup>27</sup> Reviewing this evidence, Deborah Brandt points to Kenneth Lockridge's *Literacy in Colonial England*, which suggests that literate Puritans did not possess more cosmopolitan outlooks than their illiterate neighbors (339-340). Graff's *The Literacy Myth* and Scribner and Cole's *The Psychology of Literacy* also refute Ong's sense of literacy as an autonomous agent of enhancement.

When one reviews these “Great Divide” debates one finds they have a different tenor than debates around the fate of literacy in the digital age. This is because Ong’s critics, while wary of his technological determinism, rarely oppose the idea of reading and writing as a potential means of enhancement. The debates around the effects of digital technology on literacy learning, by contrast, are complicated by anxieties about whether or not our interactions with this technology may be leading to our diminishment rather than our enhancement. In the previous chapter, I suggested that changes prompted by the proliferation of digital and Internet technology have generated unprecedented uncertainty around the study and teaching of writing. In this chapter I support this claim by examining some of the broader controversies that arise from this uncertainty. While the primary focus of this analysis is scholarship in rhetoric, composition, and literacy studies, I also draw from journalism and popular nonfiction because controversies around literacy in the digital age often transcend disciplinary boundaries as well as distinctions between academic and popular writing. In terms of its relationship to the dissertation as a whole, the controversies examined in this chapter provide a useful backdrop for issues that emerge within the more circumscribed analyses comprising later chapters. What follows, then, is a brief review of recent controversies that feed the uncertainty around writing instruction in the digital age.

### *Controversy 1: The Potency of Language-only Literacy*

In 1996 an influential group of literacy theorists known as the New London Group proposed a pedagogical shift away from language-only conceptions of literacy, suggesting the term “multiliteracies” to address the “multiplicity of communications channels and the cultural and linguistic diversity of the world today” (60).<sup>28</sup> Multiliteracies, the authors suggested, should take into account “the increasing multiplicity of modes of meaning making, where the textual is also related to the visual, the audio, the spatial, the behavioral, and so on” (64).<sup>29</sup> In support of their proposal, the

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<sup>28</sup> The New London Group consists of twelve leading language and literacy theorists from the United States, Great Britain, and Australia.

<sup>29</sup> Stuart Selber also uses the term “multiliteracies” to reimagine the ways literacy instruction might accommodate lessons in the functional, critical, and rhetorical aspects of computer technology.



authors pointed to new technologies and communicative practices, as well as the transformation of work life. “Revolutionary changes in technology and the nature of organizations,” the Group noted, “have produced a new language of work” (66). Literacy instruction must change, they argued, if it was to remain relevant to students’ interests and workplace demands. Though the New London Group’s proposal points toward a new phase in literacy pedagogy, the idea that we should expand notions of literacy beyond language has a longer history. The social practice perspective on literacy, informed by Vygotsky (1986), Scribner and Cole (1981), Heath (1986), and others provides theoretical and empirical grounds for allying literacy with a wide range of media and modes of representation. Deborah Brandt summarizes this perspective, conceptualizing literacy as “an increasing awareness of and control over the social means by which people sustain discourse, knowledge, and reality” (32). This definition clearly expands the boundaries of literacy to accommodate all manner of meaning making. And like the New London Group’s multiliteracies proposal, this expanded definition makes room for the diverse range of artifacts and communicative practices associated with Internet and digital technology.

Many scholars in rhetoric and composition have made arguments that resonate with the New London Group’s proposal. Carolyn Handa, for example, argues that writing pedagogy should include a focus on visual rhetoric because “[students] are and will be constantly exposed to new media throughout their personal, academic and professional lives” (12). Like the New London Group, Handa suggests that the vision of enhancement associated with language-only writing pedagogy appears outdated and meager in light of technological change. Handa’s imperative to align composition teaching with technological innovation is not confined to instruction; there is evidence to suggest that a broader disciplinary transformation is underway as well. During the 2004 Chair’s Address to the Conference on College Composition and Communication, for instance, Kathleen Blake Yancey pointed to “the proliferation of writings outside the academy” as well as to genres emerging from new technologies as reasons for colleges and universities to develop undergraduate majors in writing. Yancey’s argument for the disciplinary expansion of composition studies echoes the refrain of the New London Group, Handa, and others who suggest students need to learn how to deploy the new tools of inscription

in rhetorically savvy ways. For this to occur, students require courses that encourage the production and analysis of multimedia texts. These examples point to just some of the ways digital technology is transforming conceptions of writing as a means of personal, academic, and professional enhancement.

Though it is difficult to say whether or not Yancey's call has led to the growth of college majors in Composition or Writing Studies, we have evidence to support the claim that digital technology plays an increasingly prominent role in college writing courses. Such markers of institutional change are visible in Nick Carbone's summary report of "Portraits of Composition in America," a study providing an overview of the ways digital technology is being integrated into college composition instruction.<sup>30</sup> Supported by Bedford/St.Martin's Press, "Portraits of Composition in America" compares faculty survey responses to questions related to technology and the teaching of writing. One of the more striking intervals in this data set shows that 23% of faculty felt that technology was integral to their teaching in 2004, compared to 40% of faculty surveyed in 2010.<sup>31</sup> This 17% difference quite obviously raises questions about the *ways* computers are being integrated into the teaching of writing. The report addresses these issues in a very general way, showing that the most popular digital assignments, as of 2010, were those that required students to work with prose online, such as electronic peer review, teacher response, research writing using web sources, and online discussions (Carbone 1).<sup>32</sup> Carbone characterizes such approaches as "fairly conservative" because, according to survey results, writing instructors tend to direct their use of technology toward text and language-based practices as opposed to the multimodal composing and analyses called for by Handa and members of the New London Group. Conservative or not, the survey results suggest that digital technologies are becoming increasingly potent actors in college writing instruction.

Amidst these changes, some authors worry that interactions with computer technology may be diminishing students reading and writing skills. Indeed, the past two decades has given rise to anxious accounts speculating about the way Internet and digital

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<sup>30</sup> See Carbone's blog for the complete summary: <http://teachnet.blogspot.com/>. I should add that Carbone is an educational technology consultant for Bedford/St.Martin's Press.

<sup>31</sup> See <http://teachnet.blogspot.com/> for a more complete summary of the survey results.

<sup>32</sup> Electronic peer review (mid 40%); teacher response (near 60 %); research writing using web sources (mid 80%), online discussions (low 60% range)"

technology may be influencing our reading habits. Recently, these worries have been associated with the more profound (and ominous) possibility that interactions with technology may rewire our brains. Here we enter Nicolas Carr's "shallows," where the author himself laments, "the Net is chipping away at my capacity for concentration and contemplation." Carr builds a case for the idea that we are experiencing intellectual decline as a result of our interactions with digital and Internet technology, interactions that supplant the more cognitively enriching practices of print-based reading and writing. To relate Carr's account back to my own purposes, one could say that *The Shallows* falls in with earlier arguments that represent the potency of computer technology primarily as a foil to the intellectual and cultural enhancements associated with print technology.

An earlier, similarly pessimistic attitude can be found in Sven Birkert's homage to print, *The Gutenberg Elegies*. To briefly summarize, Birkert is concerned that computer technology profoundly alters the experience of reading, such that readers' affective and cognitive responses to literature are undermined. Drawing upon his longstanding love affair with literary texts, Birkert argues that reading, as a means for both personal and cultural transformation, is very much bound to books. It is literature's transformative potential that is compromised, he argues, when peoples' reading and writing habits are drawn into the dizzying pace of computer technology. Though the new literacies emerging in our cultural moment may not yet reflect either Carr's or Birkert's anxious vision, it is clear that computers are swiftly populating Americans' literacy practices. Indeed, a number of recent reports support Carr's and Birkert's claims, suggesting that digital media may be undermining both our inclination to read and our ability to comprehend texts. The National Endowment for the Arts study on American reading trends, "To Read or Not to Read," for example, correlates the rise of digital media with decreases in time spent reading for pleasure as well as the decline of Americans' reading skills. These drop-offs are most dramatic for teens and young adults, who "read less often and for shorter amounts of time than with other age groups and with Americans of the past" (7). Citing a 2006 study conducted by the Kaiser Family Foundation, the report concludes, "even when reading does occur, it competes with other media." This

multitasking, the author's suggest, results in "less focused engagement with text" (10).<sup>33</sup> This study lends support to Lanham's hypothesis about the competitive dynamic between different representation modes in the digital attention economy. It also adds credence to those who suspect that interactions with digital media may diminish rather than enhance us.

Katherine Hayles speculates that young people's lack of engagement with reading, as evidenced by the Kaiser Family study, is likely due to the biological effects of interacting with networked and programmable technology. In "Hyper and Deep Attention: The Generational Divide in Cognitive Modes," Hayles speculates that prolonged interaction with digital media may be tuning young people's nervous systems toward hyper attention, a mode of cognition she associates with "switching focus rapidly among different tasks, preferring multiple information streams, seeking a high level of stimulation, and having a low tolerance for boredom" (187). Hayles notes that the shift toward hyper attention creates problems at all levels of education, largely because classrooms and curricula are designed to expect and foster deep attention, which she associates with a propensity for ignoring outside stimuli and maintaining prolonged focus on a single information stream (187). Hoping to ease the potential cultural and educational incompatibilities brought about by this divide, Hayles concludes by encouraging educators and "practitioners of the literary arts" to consider the ways deep and hyper attention interact in print and digital texts.

Hayles notes that media content produced over the past few decades has increased in both volume and tempo of stimuli, while the amount of time it takes for users to access and respond to such stimuli has sharply decreased (191). Supporting her thesis that a generational shift toward hyper attention is underway, Hayles puts these developments into conversation with anecdotal accounts from educators, a report on the media habits of youth, and medical evidence pointing to a rise in reported cases of attention deficit and hyperactivity disorder.<sup>34</sup> In examining representations of the potency of computer technology as it relates to literacy, one can see that Hayles account diverges from

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<sup>33</sup> See The Henry J. Kaiser Family Foundation, *Media Multitasking Among Youth: Prevalence, Predictors and Pairings* (# 7592), 2006.

<sup>34</sup> Hayles' explicitly links her hypothesis to report Kaiser Family Foundation's *Generation M: Media in the Lives of 8-18-Year-Olds*.

predecessors, such as McLuhan, Ong, and Birkerts in light of recent advances in neurobiology. These earlier authors were not privy to the evidence, provided largely from magnetic resonance imaging, which suggests that our nervous system is constantly being tuned by our interactions with the environment.<sup>35</sup> Such findings become significant actors in Carr's account as well, driving the potency of computer technology into our very cells such that we might imagine our synapses flaring, our cognitive architecture shifting as we engage with different media. McLuhan may have been aware of this possibility, but only recently has the potency of the media officially entered the depths of our physiology.

Scholarship linking neuroplasticity to peoples' interactions with different media, such as work cited by Carr and Hayles, attests not only to the social but also biological controversies embroiled in our interactions with technology. Now that these interactions are believed to influence us at the cellular level, we are forced to think in new ways about how all technologies—language-based or otherwise—penetrate our being from a microscopic web of nerve cells to the macroscopic web of nation states. To what extent *we*—part and parcel of these networks—are enhanced or diminished by such developments remains an open question. At this juncture, one can simply acknowledge that human biological responses to novel technologies are becoming increasingly important actors in debates about reading and writing in the digital age.

While such considerations may seem somewhat distant from writing teachers' day-to-day concerns, I mention them here to emphasize the ways controversies around reading and writing in the digital age might complicate teachers' sense of their professional responsibilities. Carbone's survey results reveal that computer technology is becoming more integral to the teaching of college writing. These results seem to support The New London Group's efforts to broaden conceptions of literacy to those texts and practices linked to digital and Internet technology because they illustrate the increasingly important role such technology plays in college writing instruction. At the same time, Birkerts and Carr offer counterstatements that warn of intellectual decline precipitated by

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<sup>35</sup> I am referring to research attesting to "neuroplasticity." Carr notes that this idea was first expressed by William James in *Principles of Psychology* and later proposed by British biologist J.Z. Young. Carr also refers to Eric Kandel's experiments on *Aplysia* (sea slugs) and V.S. Ramachandran's studies of the brains of humans who have lost limbs.

the degradation of print-based reading and writing. Hayles, meanwhile, puts the onus on educators to negotiate this tension. Though I agree that teachers work at the center of these controversies, my own efforts to integrate new media composing into writing instruction suggest that challenges of such transitions can be great.

A few years ago I began incorporating website building assignments into my first-year writing courses. In preparation, I constructed my own site using iWeb, a website building tool that came loaded on my Macintosh Powerbook. I chose this program over others because it required no programming knowledge and because it could be accessed for free in the Mac lab, two qualities that I thought might be enticing to my students. Most of these students had little experience with web design, and I anticipated that my familiarity with iWeb would make the program more attractive because it meant that I could answer students' questions. Indeed, I told them as much when I distributed the assignment, thinking that my own expertise with the program would encourage them to use iWeb as well. To my surprise, most students chose to use Wix, a free online website builder. Like iWeb, Wix required no programming, but it was different because it could be accessed through any networked computer. Another notable difference was that the Flash-based programming at the heart of Wix allowed students to generate animations relatively easily. Of the eighteen students in my class, fifteen chose to use Wix, two chose iWeb, and one particularly tech savvy student chose to build his site using the open-source content management platform Drupal. With this diversity came uncertainty. I had not expected students to choose Wix, and I very quickly found myself in the uncomfortable position of not being able to answer students' questions about their sites. My sense that I had to learn the program immediately, created a sense of urgency and anxiety that I had not anticipated.

Students liked Wix because it allowed them to animate their webpages. While these animations added professional polish to the sites, the attention students apportioned to choosing colors, buttons, and images became the primary focus of students' efforts. I had not anticipated the time it would take for students to create these sites, and I worried that students' interest in creating visual effects would distract them from matters central to the course, namely academic argumentation. While feelings of uncertainty accompany the teaching of most new assignments, the sense of uncertainty generated by this

assignment was more acute and uncomfortable than those I encountered with print-based assignments. I offer this reflection simply to highlight the fact that teaching students to compose with new media can result in a host of unexpected challenges at the level of classroom practice. These pedagogical challenges, while central to conversations in composition studies, do not appear to take hold of the cultural imagination with the same gusto as concerns about neurological wiring. Indeed, teachers' changing roles and responsibilities amidst the rise of digital media can sometimes fall out of focus. As I illustrate in Chapters 5 and 6, the way teachers manage digital and Internet technology in their classrooms can profoundly affect the value students attribute to alphabetic writing compared to the other representational modes enrolled into their digital texts. In addition to being incomplete, abstract claims about shifting conceptions of writing that do not account for classroom practice diminish the important role teachers can play in *shaping* these conceptions.

### *Controversy 2: The Potency of Teachers*

Carr's and Birkert's evaluation of the potency of digital media is fairly one-sided; both authors are pessimistic about the future of literacy unless the genius of print can be salvaged. Hayles, by contrast, offers a more positive assessment, suggesting that literacy practices associated with digital technology are neither better nor worse than those associated with print, simply different. She writes that it is incumbent upon educators to help students negotiate the different potentialities of hyper and deep attention. Hayles suggests that educators play an important role in negotiating controversies related to literacy in the digital age, asserting that teachers can be potent actors in helping students become aware of "the frustrating, zesty, and intriguing ways in which the two cognitive modes interact" (198). As rhetorician Carolyn Miller illustrates, however, the proliferation of computer technology in classrooms raises more fundamental questions about the potency of teachers. Miller's recent "thought experiment" starring a fictional assessment machine offers insight into the way teachers' attributions of value to a computers feeds back into their sense of their own potency. In "What Can Automation Tell Us About Agency?" Miller analyzes teachers' survey responses to the appearance of

a new computer system capable of automatically assessing oral performance in public speaking called AutoSpeech-Easy™ (139). As Miller notes, the system takes into account the stream of oral language, including vocal inflections marking emphasis, attitude, and the like, as well as visual data about body language and gestural expressiveness. Students deliver their speeches in front of a camera and receive a score, which is sent to the teacher or administrator, who, as Miller notes, “records it without ever having to hear or see the student’s work” (139). What Miller initially elides in her detailed description of AutoSpeech-Easy™, is that the system is fictional (a point she later admits). Teachers participating in Miller’s study answered survey questions meant to elicit their evaluations of this not-yet-realized form of automated assessment. Analysis of these responses, Miller argues, reveals important information about teachers’ intuitions about agency.

Summarizing her conclusions, which she refers to as “informative supplements” to her own speculations, Miller suggests that instructors’ intuitive resistance to automated assessment of oral performance in public speaking is evidence of a generalized “commitment to agency” that depends upon transactions with a human audience. At the risk of downplaying Miller’s attention to agency, I want to argue that her thought experiment is also useful for what it reveals about these teachers’ sense of their potency in light of technological innovation.<sup>36</sup> Though the likelihood that a machine would be capable of assessing speeches performed live may seem farfetched, Miller’s analysis suggests that, fictional or not, the very possibility of AutoSpeech-Easy™ threatens the potencies teachers attribute to their professional identity. Because the professional hierarchy of formal schooling, particularly at secondary and post-secondary levels, depends upon the idea that teachers’ expertise prepares them to assess students’ work, the prospect of the AutoSpeech-Easy™ eliminates a significant marker of teachers’ sense of their power and influence.<sup>37</sup> According to the responses that Miller cites, teachers attempted to reassert their potency in the face of this threat by insisting that “a speaker’s audience must be rhetorically available to the speaker through interaction.” Teaching students how to respond to the feedback of a live (*human*) audience, these teachers

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<sup>36</sup> Indeed, such concerns are central to the ethnographic strand of this study (Chapters 3 and 4).

<sup>37</sup> One could argue that agency is at stake as well, in the sense that reduced potency leads to dispensable workers.



believe, is part of their job. To eliminate such an audience not only strips teachers of the potency associated with their expertise (upheld by their institutional charge to assess students' work), it also eliminates the key pedagogical objective of helping students learn to respond to live audiences, thus further diminishing their potency. Miller reveals her concern for the fate of teachers' potency when she proposes that her definition of agency could help determine "how and where to draw the line—between the human and the nonhuman, between the symbolic and the material—and how to make our case to others" (152). My sense is that Miller's effort to draw lines can be traced to fears, articulated most famously by Marx, about people becoming mere appendages of machines.<sup>38</sup> Additional concerns arise from the very real possibility that hybrid conceptualizations of agency, whereby machines are humanized and humans are technologized, will encourage educational administrators to replace human teachers with machines.

Popular American culture registers this concern in movies such as *The Matrix*, a dystopic vision of the future where most humans exist as batteries to power a nightmarishly mechanized world. Creators of *The Matrix* push anxieties about our interactions with technology to its terrifying limits by inverting the power asymmetries we tend to associate with our relations with machines; the hegemonic, networked consciousness views humans as nothing more than a means to augment its power.<sup>39</sup> Such a vision, fantastic as it may seem, attests to fears about the fate of humanity in light of the possibility that technological enhancement might eventually result in humanity 1.0's obsolescence. My point is that technological enhancement carries with it not only the fear of biological diminishment, as suggested by Carr's warnings, but also the possibility of existential diminishment, or replacement. Miller's sci-fi thought experiment alludes to the fact that pedagogical controversies around technological enhancement are not abstracted from those broader cultural concerns that sometimes register in popular representations of humans struggling for survival against machines.

Miller's thought experiment also alludes to the many ways in which teaching is changing in response to Internet and digital technology, particularly in regards to the

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<sup>38</sup> See Marx, *The Communist Manifesto*.

<sup>39</sup> The basic plot of *The Matrix* is driven by those few non-battery humans who, aware of their sorry state, marshal their critical faculties, upload a Bruce Lee box-set worth of kung fu, and fight a guerilla war against the hegemon's minions.

longstanding conventions around face-to-face, reciprocal styles of pedagogical interaction. To discuss these developments in greater detail, I want to transition from my focus on potency to distributedness. In the previous chapter, I proposed the concept of distributedness for addressing aspects of enhancement that pertain to the range, speed, and durability of pedagogical mediation. While I cannot possibly account for the many ways this idea surfaces in conceptions of literacy prior to and amidst our digital age, I do want to address a number of the more important developments, particularly those related to reader-response theory, collaboration, and writing workshop. Following a brief review of these pre-digital notions bound to the distributedness of literacy, I address more recent controversies related to online learning and self-distribution over the Internet.

### *Controversy 3: Distributed Meaning and Distributed Selves*

Before Louise Rosenblatt, Stanley Fish, and Wolfgang Iser argued otherwise, many literary critics understood the “true” meaning of a work to be locked within the text. The basic principle of reader-response theory, which suggests that the meaning of a work is generated through a transaction between a reader and the text, is now thoroughly intertwined with our sense of reading and interpretation. In pedagogical terms, the rise of reader-response criticism in the 1970’s marks a move toward the more equal distribution of textual meaning from the written work to the student. Following her transactional vision of meaning-making, Rosenblatt, for example, discourages teachers from imposing upon students any preconceived interpretation of a work.<sup>40</sup> Stretching Rosenblatt’s sense of distributed meaning-making even further, Stanley Fish proposes “interpretive communities” as the source of our understanding of a text.<sup>41</sup> With “interpretive communities,” Fish extends the interpretation of texts beyond both the reader and the work, such that the reader’s personal and cultural background is brought into play.

I should add that by the time Fish proposed “interpretive communities,” issues of community and culture were already well in play among scholars interested in directing English education toward pedagogical models that accounted for the cultural, racial, and

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<sup>40</sup> Rosenblatt first offers these pedagogical suggestions in *Literature as Exploration* (1938).

<sup>41</sup> The idea of interpretive communities is first introduced in Fish’s essay, “Interpreting the *Variorum*.”

economic diversity of America. “Students Right to Their Own Language,” a resolution on language and teaching first published in *CCC* in 1974, proposes “students' right to their own patterns and varieties of language—the dialects of their nurture or whatever dialects in which they find their own identity and style” (1).<sup>42</sup> This resolution, which remains a watershed moment for the field of composition studies, relates to both the degrees of potency attributed to particular types of languages and dialects as well as the distributedness of that potency in pedagogical contexts. The resolution remains an emphatic, though still controversial, statement regarding the centrality students’ personal and cultural backgrounds should play in the teaching of English. Though the resolution is often associated with matters of diversity, I am highlighting the fact that it also marks a formal move by the field of composition to distribute the authority of language learning upon the web of students’ personal histories, a move which necessarily unspools the authority of canonical texts and strictures of grammar and usage that had dominated writing pedagogy for decades.

Before either “Students Rights” or “interpretive communities,” both of which distributed meaning-making well beyond the text-centered approaches often associated with New Criticism, the teaching of English had already moved toward a more distributed pedagogical model. These developments came to a head during the Dartmouth Conference (1966), a three-week seminar conducted at Dartmouth College, England, which corralled leading scholars and teachers associated with English Studies from the United States and Great Britain.<sup>43</sup> The conference is credited with changing the orientation of the teaching of English from product to process, a change marked by greater emphasis on collaborative workshops and student-centered instruction. Like the distribution of meaning from text, to reader, to community, the Dartmouth Conference directed the teaching of English, particularly the teaching of writing, toward pedagogical approaches that distributed more authority and control to students. One of the more durable approaches to take root in composition instruction following the Conference, the writing workshop, is still widely practiced today in various configurations. It is common

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<sup>42</sup> <http://www.ncte.org/library/NCTEFiles/Groups/CCCC/NewSRTOL.pdf>. This statement was originally presented to the Executive Committee of CCCC at its meeting in 1972.

<sup>43</sup> The Dartmouth Conference brought together leading minds in literary studies, linguistics, psychology, rhetoric, and writing.

practice in composition courses, indeed common practice at nearly all levels of American education, for students to be granted control over the discussion and interpretation of texts. This shift signaled a change in literacy education's broader enhancement narrative; rather than channeling a text's "truth" through "correct" readings, the means of enhancement were open to negotiation and multiple interpretations.

Writing workshops encourage students to envision composition as a social and collaborative process. Though the Dartmouth Conference sparked interest in collaborative pedagogy, it was not until the 1980's that the movement really took hold in colleges and universities.<sup>44</sup> While I do not have space to review the many rich arguments related to collaborative writing, I should note that some scholars have proposed that such practices lead to more egalitarian classroom interactions.<sup>45</sup> In speculating about the potential benefits and drawbacks of collaborative writing, it is interesting to consider the ways Internet technology quite obviously transforms the scope of collaborative activity. With the introduction of Googledocs and other online, collaborative editing services, writers can now compose in great numbers even when separated by great distances. In short, digital media has made collaboration easier and more various. Moreover, as search engines and automated aids to composition, such as spell check, become integrated into our literacy practices, one could argue that we are collaborating with machines in more profound ways than ever before. The theme of distributedness, then, must also account for the fact that "meaning" is now made—or at least assisted—by those complex, often proprietary, algorithms guiding our interactions with computers and other digital devices.

To highlight another way in which the distributedness afforded by digital technology is affecting schooling, I turn to a recent article in *The New York Times*, which addresses the recent surge of online courses offered by colleges and universities.<sup>46</sup> "Still in Dorm, Because Class is on the Web" focuses on the University of Florida, where budget cuts have catalyzed the growth of computer-mediated pedagogy.<sup>47</sup> University

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<sup>44</sup> In *Writing Groups: History, Theory, and Implications*, Anne Ruggles Gere illustrates how collaborative writing was practiced regularly in the eighteenth and nineteenth centuries.

<sup>45</sup> Arguments for the egalitarian effects of collaborative writing have been proposed by Bruffee (1986), Smit (1989), Gilligan (1982), among others.

<sup>46</sup> See *The New York Times*, November 5, 2010: "Still in Dorm, Because Class is on the Web."

<sup>47</sup> According "Still in Dorm, Because Class is on the Web," 4.6 million students took courses online during the fall of 2008, a 17 percent increase from the previous year.

Provost, Joe Glover, who is optimistic about online education, cites low national graduation rates as proof that face-to-face instruction has not served students well.<sup>48</sup> “At the very least,” Glover adds, “we should be experimenting with other modes of delivery of education.” At Florida, such experimentation has given rise to student-to-teacher ratios unimaginable twenty years ago; *Times* reporter Trip Gabriel refers to an economics course with 1,500 students and a statistics course with 1,650 students. While critics worry that online classes may not be as effective as their brick-and-mortar precursors, Gabriel notes that some students enjoy having the freedom to determine when and where to view lectures as well as the ability to stop and rewind for improved comprehension and recall. For other students, however, the purported merits of these courses do not outweigh their shortcomings.

The article concludes with a quote from a senior psychology major, who, after taking 10 or so online courses expresses frustration about the format: “ ‘It’s all the same,’ ” she says. “No comments. No feedback. And the grades are always late” (A3). The student’s frustration with the lack of feedback in her online courses can be understood as dissatisfaction with a particular pedagogical configuration, which she feels not only limits physical proximity to teachers, classmates, and classrooms but dialogic exchange as well. While online courses may grant students control over some aspects of time and space, the current state of the technology may limit the dialogic intimacy granted by brick and mortar college courses. Citing her preference for the more traditional classroom experience, the student says, “ ‘I’m someone who sits toward the front and shares my thoughts with the teacher.’ ” For this student, physical proximity to the teacher (sitting at the front at the class) fosters the dialogic exchange she values. In other words, what this undergraduate finds lacking in her online lectures is mediation that is mutually constituted by her efforts in direct, real-time coordination with her teacher and classmates.

The student reveals that her sense of potency hinges upon establishing real-time, face-to-face reciprocal relationships with her instructors when she laments not being able to sit near the front of the class and share her thoughts with teachers during online

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<sup>48</sup> *Times* reporter Trip Gabriel quotes the University’s provost as saying, “We see this as the future of higher education.”

lectures. The student's comments illustrate how the enhancing potential of schooling is bound to conceptions of space as well as the materials within those spaces (e.g. front rows). This example also highlights the ways in which the interpersonal and the *interobjective* are thoroughly enmeshed in this student's sense of herself as a student.<sup>49</sup> In other words, we are reminded of the rather obvious fact that the student's attribution of value to sitting at the front of the class requires the material reality of a classroom. In the absence of the classroom, the student feels her own potency as a student diminished. By contrast, some students might view the affordances of online courses, such as being able to view lectures from their dorm room, as more valuable than physical proximity to the teacher.<sup>50</sup> As the featured undergraduate's preference for brick-and mortar-classes suggests, students' experiences in school are intractably bound to their evaluations of the different media and modes of representation into which they are folded and through which they are expected to interact. This student's perception of her own distributedness and the distributedness of her instructors' influenced her affective responses to her courses and inflected her sense of her own potency as a student.

While control over the time, place, and pace of class may seem appealing, other dynamics between control and distributedness are more worrisome. Legal scholar Robert A. Heverly is concerned that children's "entanglement" with digital artifacts may have pernicious effects on their futures.<sup>51</sup> As Heverly notes, the risk is particularly acute for those experimenting with visual media, where representations of self might reappear later in life—"especially if they appear at inopportune moments or are found by people who would use them against their subjects" (211). The danger of losing control of one's distributed self or being unwittingly distributed is tragically apparent in the suicide of Rutgers' freshman Tyler Clementi, which occurred after his roommate outed him on Twitter and posted a video of a romantic encounter involving Clementi online. While criminal charges were pressed against the perpetrators in Clementi's case, Heverly explains that neither intellectual property law nor privacy law provide much help in

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<sup>49</sup> For a clearer sense of the debate around the term "interobjective," see the responses to Bruno Latour's "On Interobjectivity" in *Mind, Culture, and Activity*, 1996, Volume 3, Issue 4.

<sup>50</sup> My use of "affordance" in this sentence is closer to Norman's conception of "perceived affordance," than to Gibson's more general evolutionary theory of affordances.

<sup>51</sup> Heverly's use of the term "entanglement" approximates the conception of distributed selfhood presented in the previous chapter.

retrieving embarrassing or potentially incriminating material posted online. Strands of self—images, texts, audio recordings—continue to circulate, allowing embarrassing events to persist in cyberspace. As the Clementi case illustrates, these unwieldy strands of one's distributed self can have devastating effects upon one's personal life.

One's professional life is also jeopardized by the persistence of one's online, distributed self. Consider the case of Social Intelligence, a company whose aim is to scour the Internet "for anything prospective employees may have said or done online in the past seven years" (Preston A1). The creation of such companies speaks to heightened cultural awareness and surveillance of the potential influence of selves performed online. My sense is that employers use services like Social Intelligence to weed out rotten fruit and to protect their own and their company's reputation. These are reasonable concerns given the increasing "intelligence" of search engines to locate specific artifacts on the Web as well as the fact that online artifacts persist over time, creating an archive of one's self that may or may not be flattering and upon which one may or may not exert control. With employees online selves preserved indefinitely, it makes sense that employers would sanction or turn away those who might diminish the company's reputation. Such developments attest to the ways interactions with technology that distribute the self, do not necessarily lead to enhancement.

As Heverly reminds us, "There is potential harm, and potential long-term unanticipated harm, to children from the creation of and their entanglement with digital media artifacts." Such problems are exacerbated by the ease with which one might copy, edit, and distribute all manner of artifacts—videos, recordings, still images—using relatively inexpensive digital devices. Heverly's insights regarding the negative effects of distributedness are germane to notions of literacy in the sense that the digital compositions created as coursework could very well persist online well beyond the duration of a course, influencing students' lives in consequential ways. For example, consider the possible consequences for the student who loses control of an essay in which she chooses to support an unpopular or outlandish claim, a la Swift's, "A Modest Proposal." If the essay appears on someone's blog or becomes the topic of a Youtube video, will the author be red-flagged by companies like Social Intelligence? Will the author's professional potency be undermined for years to come? Here we are reminded,

once again, of Socrates' critique of writing, scorned for its potential to influence others beyond the rhetor's corporal self. Unlike Socrates, however, Heverly is concerned with the collateral damage caused to the rhetor when control of one's distributed self is compromised.<sup>52</sup>

What do controversies around distributedness tell us about the relationship between technological change and writing pedagogy? Most obviously, Heverly's work reminds us that to be distributed over the World Wide Web is not necessarily a means of enhancement, that the consequences for losing control of one's distributed self can be devastating personally, professionally, and academically. Rather than focusing on the ascendancy of playful, dialogic, disembodied selves, which Johndan Johnson-Eilola among other composition theorists associate with "postmodern theories of culture and value" (30), Heverly's focus on the legal dimensions of this controversy reminds us of the sometimes paradoxical effects of global distributedness: a need to sequester the self—the very opposite impulse compelling distribution. As Socrates warned Phaedrus long ago, the more distributed we become, the more vulnerable we are to being misappropriated, misunderstood, and mishandled by those who would do us harm or abuse communities and institutions we hold dear. Though social networking sites, blogs, and Internet chat rooms might appear to affirm the ascendancy of playful, dialogic, disembodied selves, commentators are wise to add the caveat that the consequences of distributedness can harm individuals and communities.<sup>53</sup> To be "technologically enhanced" in the midst of such developments requires as much vigilance as play, meaning careful and critical consideration of such things as privacy settings and other

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<sup>52</sup> The theme of distributedness as it relates to literacy in the digital age is also instantiated in controversies related to plagiarism. With the access to so many texts and the ease of copying and pasting, the issue of plagiarism has generated a great deal of controversy. These controversies tend to revolve around students' apparent disregard for intellectual property rights, a fact exemplified in the ubiquitous practice of file sharing. Drawing upon surveys conducted by Donald McCade, co-founder of the Center for Academic Integrity at Rutgers University, the *New York Times* reports, "about 40% of 14,000 undergraduate students admitted to copying a few sentences in written assignments" (Gabrial 1). Moreover, the percentage of students who believe such copying constitutes a "serious cheating," has declined from 34% to 29% between 2006 and 2010. At first glance, plagiarism may not appear to relate to distributedness, but my sense is that this tendency to copy someone else's words, images, and sounds suggests an inclination to attach one's self to other distributed selves online.

<sup>53</sup> This is certainly not news to most Americans, as email and social networking sites posturing as playgrounds, have led to the well-publicized downfall or disgrace of numerous politicians, athletes, and celebrities.



technical procedures that protect us or make us vulnerable to those who may want to control or exploit our distributed selves.

As mentioned earlier, the issue of control, as it relates to distributedness, cannot be divorced from the programming at the heart of every digital application and device. This level of technicality, however, is rarely made visible to the layperson. Only recently, with the introduction of “Critical Code Studies” and conceptions of “Procedural Rhetoric,” have scholars in the humanities begun to view computer programming as a significant form of representation, loaded with the ideological freight more commonly associated with books, movies, paintings and the like. And only recently, as notions of literacy have expanded to accommodate digital media and multimodal representation, has attention turned to the technical skills required to create digital artifacts. In the next section, I address some of the literacy-related controversies that I associate with the theme of technicality. Once again, I cannot hope to address all of these controversies, which run much deeper than my gloss might suggest. For my purposes, I find it useful to focus on the longstanding (and fraught) relationship between writing instruction and notions of *techne*, by which I mean to suggest instruction that emphasizes writing as a discreet set of skills—a craft.

#### *Controversy 4: Technical Skills and the “Natural” Defense*

In the previous chapter, I associated the concept of “technicality” with Gell’s roundabout means for achieving one’s goals. This very broad definition, while useful for establishing preliminary comparisons between different pedagogical sites and actors, fails to provide more nuanced distinctions. In this section, I provide examples of some of the ways notions of technicality have inflected literacy pedagogy, with particular attention to developments in the field of composition studies. Throughout this account I have noted the competitive representational dynamic emerging from the rise of digital media. To limit this competition to acts of “representation,” however, does not do justice to the scope of these transformations because the acts of inscription associated with digital composing are fundamentally bound to technical devices, technical procedures, and technical attitudes. I elaborate on the idea of technical attitude in later chapters. For

now, I simply want to raise the possibility that certain pedagogical approaches to literacy might instantiate attitudes that are more or less “technical” than others. The controversies around literacy pedagogy and notions of technicality, I would argue, are fundamentally bound to concerns around the perpetuation of technical attitudes.

Though many popular applications allow you to create multimedia texts with little programming knowledge, one must still become familiar with the interface and the protocols of the program, and the discreet techniques associated with every new application or device are not necessarily intuitive. This fact prompts Stuart Selber to argue for “systematic instruction in computer use,” as long as the instruction avoids “the pitfalls of certain functional approaches to literacy (31). Despite longstanding objections among composition scholars to functional conceptions of literacy, Selber chooses the heading of “functional literacy” to encompass a major strand of computer literacy he believes should become part of writing and communication instruction. Selber’s effort to refurbish functional literacy is bound to his sense that such approaches are crucial for the success of schools, teachers, and students. In the following passage he summarizes his rationale for freeing functional literacy from its unsavory history:

First, in order to achieve educational goals in academic settings, students must be able to control technological resources, a task that requires certain knowledge, skills, and attitudes. Second, in order to evaluate the efficacy of computers, students, (as well as teachers and administrators) must be able to understand the ways in which writing and communication activities are organized in on-line environments. Third, in order to compete for rewarding work in the digital age, students must be able to demonstrate technological proficiency, because computer literacy requirements in recent years have increased dramatically for all job levels; this is especially important for people in the many sectors of the U.S. population who are systematically discouraged from using computers in K-12 schooling. Fourth, in order to enact change, students must have access to the language of the powerful, including the discourse of technology. (35)

I include this large passage in its entirety because I want to highlight the ways in which Selber’s rationale echoes many of the arguments made by the New London Group. Selber’s four points also chime with recent arguments made by genre theorists and proponents of literacy pedagogy drawn from Systemic Functional Linguistics, all of

which call for more explicit and systematic approaches to writing instruction.<sup>54</sup> Here, however, Selber is referring to systematic instruction in the use of computers as part of literacy and communication pedagogy. In other words, language is no longer the central technology under consideration. Rather, a whole range of tools and techniques are invited under the tent of “multiliteracies.”

As Selber’s careful handling of the history of “functional literacy” illustrates, invocations of the technical tend to raise warning flags because they signal a slippery slope toward psychometric testing and mechanistic orientations to literacy. To conceive of literacy learning as mechanistic is to view meaning making as the sum of discreet skills. The technicality of this approach arises not simply in the division and categorization of skills, but also in those tools deployed toward skills-based instruction.<sup>55</sup> Lingered controversies around skill-based instruction come into relief when one considers on-line responses to Michael B. Prince’s recent *Chronicle of Higher Education* article, “A Rescue Plan for College Composition and High-School English.” Prince’s plan calls for a renewed focus on “craft,” by which he means a return to “the practices of grammar, recitation, paraphrase, summary, explication, and imitation” (5). Predictably, responses to Prince’s article on *The Chronicle’s* website ([chronicle.com](http://chronicle.com)) divide according to the field’s longstanding dichotomies. One respondent, siding with Prince, writes,

As one can see from the comments from those outraged by Prince's article, he has certainly hit a nerve, but I also think he has hit the mark dead center. Process pedagogy is only a part of the grand affirmation movement that has now created more than one generation of young people who quickly find themselves as disabled learners as they enter their school of higher education. ([chronicle.com](http://chronicle.com))

A second, more critical response reminds readers that Prince’s argument echoes a litany of historical warnings about literacy crises in America:

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<sup>54</sup> See work by Swayles, Schleppegrell, and Hyland.

<sup>55</sup> I should note that the tool metaphor has played a central role in shaping contemporary social practice perspectives of literacy, due in large part to theories of learning and development proposed by Russian psychologist Lev Vygotsky.<sup>55</sup> According to Vygotsky and his colleagues, human beings develop two types of tools through interactions with others and the physical environment: “Psychological tools” are complex systems used for communication, such as spoken and written language, maps, artwork, and diagrams. “Physical tools,” by contrast, pertain to the world of objects.

As one of the comments points out, this crisis and rescue is longstanding (Harvard, 1870s)—the view that the problems are only a result of process pedagogy since the 70s or 80s is simply myth. I wouldn't accept this replacement of myth for argument from one of my students—poor process, poor product. (chronicle.com)

Though not all of the responses to Prince's article are as tendentious as these examples, many suggest that the notion of "craft" proposed by Prince is too reminiscent of writing instruction that emphasizes basic skills over issues of invention and argumentation.

Though Prince's article casts basic skills against the critical thinking movement, earlier objections to skills-based approaches were based on the fear that such approaches would lead to the degradation of students' natural propensity to acquire literacy. In his influential text *Teaching the Universe of Discourse*, first published during composition's disciplinary consolidation in the 1960's, James Moffett proposed that writing instruction should follow students' natural developmental trajectory as well as their natural curiosity about language use.<sup>56</sup> I take up this dichotomy between the natural and the technical more thoroughly in the next chapter. For now, I simply want to point out that Moffett refuted skills-based approaches, arguing that they were antithetical to students' "natural" development. In regards to the broader aim of this dissertation to trace relationships between technological change and writing instruction, Moffett's work represents an early effort to resist a technical view of writing. Indeed, he configures students' writing development as more natural than technical and, as I argue in the next chapter, this configuration had implications for the types pedagogical actors that could be enrolled into instruction.<sup>57</sup>

The dichotomy between technical and natural approaches to literacy learning also registers in debates around the pedagogical value of encouraging student-writers to discover their unique voices. Like Moffett's call for writing pedagogy to follow the natural curve of students' interests, "voicist" pedagogy, such as that proposed by Ken Macrorie, Peter Elbow, and Donald Murray, is cast as a process of discovery. To

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<sup>56</sup> Moffett's ideas are based on Piaget's stage theory of development as well as notions of learning espoused by the progressive education movement catalyzed by the work of John Dewey.

<sup>57</sup> Rather than emphasizing rules or techniques, Moffett associates conceptions of natural literacy development with students' biological development as well their "natural" curiosity about language.

discover one's voice is to come into contact with unique and valuable aspects of one's self. Voice is understood to exist naturally, but to find it one must initially ignore the technical impositions of grammar, structure, coherence and so forth. The discovery of one's voice, in other words, comes about through the messy process of loosening language from the yoke of propriety and sense. "The habit of compulsive, premature editing doesn't just make writing hard," Elbow warns. "It also makes writing dead" (6). He goes on to associate the potency of voice with one's natural ways of communicating: "In your natural way of producing words there is a sound, a texture, a rhythm—a voice—which is the main source of power in your writing" (6). A focus on craft, or technique, Elbow suggests, should only come after one's unique voice has emerged. Like Moffett, Elbow is interested in distancing a writer's development from technical means of enhancement and, moreover, in casting writing as a natural extension of speech.

Though Elbow's work is oriented toward language-based conceptions of literacy, one finds parallels with his valuations of "natural" learning processes in recent calls to expand literacy such that it encompasses other modes of signification. One of the arguments used to support the move toward "multiliteracies," for example, is that students' reading and writing practices now revolve around multimodal texts made widely available through digital technology. Members of the New London Group believe that conceptions of reading and writing should expand to accommodate the diverse media and modes of representation associated with networked and programmable technology because students' spend a good deal of time online. The idea is that such a conception of literacy is more consistent with students' interests and concerns; students will naturally gravitate toward the composition of multimedia texts, the story goes, because such texts are frequently enrolled into students' out-of-school literacy practices. What the New London Group tends to overlook, however, is the diverse array of skills and materials often required to create multimedia texts. While the procedures allowing for the reading of such texts may not involve more than a few mouse clicks, the composition of such texts can involve numerous steps, sometimes requiring sophisticated knowledge of hardware and software.

Keeping in mind the diversity of skills and materials that crowd under the umbrella of "digital composition," I want to return to Stuart Selber's call for an

instructional emphasis on functional literacy, or what he refers to as “the skills associated with writing and communication processes as teachers have come to understand them in the digital age” (44). Selber’s insistence that multiliteracies be supported by systematic, skills-based instruction illustrates how far such notions of literacy travel from Elbow and Moffett’s view of natural processes of literacy learning and composition. This difference is brought into relief when one considers the sheer volume of programs one might use to create multimedia and Internet texts. In addition to popular applications offered by Adobe, such as Photoshop, Dreamweaver, and Flash, one can point toward Garageband, iPhoto, and iWeb (which now come loaded on every Macintosh computer). As if this list needed to be extended, many programs can download from the Web, each requiring familiarity with technical terms and procedures associated with a particular brand and/or interface. Rhetorically effective use of this software and related hardware (e.g. cameras and microphones) require different techniques to capture and manipulate sounds, alphabetic texts, images, and so forth. Bump Halbritter, for example, is quick to note that capturing audio through digital devices is not simply a matter of pressing record.<sup>58</sup> One must understand how different microphones capture and process sound in order to make rhetorically savvy decisions about microphone placement, editing, and composition. Likewise, to create a rhetorically savvy still images or videos, one must possess some degree of technical expertise related to such matters as lighting and shutter speed not to mention familiarity with editing and production software. With the many image and sound capture devices now on the market, each with different capabilities and functions, the range of knowledge required to create multimedia and Internet texts becomes increasingly diverse. Unlike the “natural” processes Moffett and others associate with literacy learning, composing multimedia digital texts often requires adherence to application protocols, or else the realization of one’s efforts—getting ideas from head to screen—simply will not happen. Such developments hint at the troubling possibility that the discursive and material regimentation associated with digital technology might orient writing instruction toward skills-based, or functional, approaches rather than matters associated with invention, argumentation, or critique.

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<sup>58</sup> Halbritter, Bump. “Aural Tools: Who's Listening?” *Digital Tools in Composition Studies*. Ed. Joyce Walker, Byron Hawk, and Ollie Oviedo. Hampton Press. 2010.

Does the scale and diversity of objects, protocols, and modes of inscription increasingly enrolled into education encourage more technical approaches to composition? Rhetorician Carolyn Miller adds credence to this possibility through an analysis of the ways interactions with computer technology have shaped public decision making over the course of the nineteenth and twentieth century. Drawing heavily on Theodore Potter's *Trust in Numbers*, Miller argues that these interactions have resulted in a "technical *ethos*" that emphasizes good sense (*logos*) over goodwill (*eonoia*) (200).<sup>59</sup> This transformation of *ethos* into *logos*, she posits, encourages communities to view technical discourse as factual evidence rather than as "an advocate in a rhetorical situation" (204). Though she quite clearly associates expert systems with computer technology, Miller suggests that technical *ethos* extends beyond machines to inflect the communities into which expert systems are enrolled, priming a community to think and act in certain ways. She links this persuasive power to the character of the system itself, which embodies the values of speed, consistency, precision, and tirelessness (200). Miller's insights, though not directly related to pedagogical issues, allude to concerns about the transformational effects of technical thinking and technical attitudes on the teaching of writing. The expansion and intensification of technical *ethos*, described by Miller, raises questions about the pedagogical consequences of asking students to use novel technologies to compose multimedia and Internet texts. If composing such texts requires a good deal of practice following the protocols and procedures of different applications, are students' and teachers' perspectives on learning and writing then more thoroughly bound to rules and regimentation as well? Are such developments in the best interests of students and schooling? These questions point to yet another controversial issue related to technological enhancement—the possibility that so-called "natural" writing processes will be lost or supplanted by rules and protocols that instantiate machine-like regimentation.<sup>60</sup>

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<sup>59</sup> See "Expertise and Agency: Transformations of Ethos in Human-Computer Interaction." Here Miller draws heavily on *Trust in Numbers* to illustrate some of the ways the presuppositions of technical *ethos* shaped public decision making over the course of the nineteenth and twentieth centuries. See Miller's contribution to *The Ethos of Rhetoric*.

<sup>60</sup> Here we return to long-debated controversies regarding the ideological undertow of skills-based instruction and current-traditional rhetoric. See James Berlin's *Rhetoric and Reality* for an extended critique.

Miller's essay speaks to the broader implications of our increasing entanglements with digital media. Her concerns are directed toward the ways such interactions might prime communities for action, particularly when expertise is commodified "as a programmable combination of knowledge and reasoning," detached from both from the experience and judgment of human experts (204). According to Miller, "the discourse of expert systems creates asymmetric yet ordered and systematic space where some are experts with knowledge and authority and some must be supplicants to expertise, where the only mode of the relationship is through knowledge" (213). Do pedagogical actors' orientations to action become more technical as digital media infiltrate the spaces and practices of composing? If so, what qualities might be associated with such developments? And finally, what might we say about the ways these developments affect students, particularly with regard to the value they attribute to various inscription devices, composing practices, and forms of writing? Before answering such questions it is necessary to consider the differences between more or less "technical" approaches to writing and writing instruction. I begin this task in the next chapter by comparing pedagogical material that, I argue, represents opposite ends of a spectrum between "natural" and "technical" perspectives toward writing development.

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In this chapter I supported my earlier claims about technological change being a source of uncertainty by reviewing four broad controversies related to literacy instruction in the United States. I have focused on the second half of the 20<sup>th</sup> century, drawing primarily from scholarly and journalistic accounts. Admittedly, this has been an all too brief review, which excludes significant developments in literacy and composition studies. In addition to limiting my discussion of plagiarism to a footnote, I have only skimmed the surface of shifting conceptions of epistemology associated with postmodernism. As such, I have bracketed theoretical controversies related to the social construction of knowledge and the identity of the subject, which Lester Faigley discusses in *Fragments of Rationality*. Similarly, I have not given proper attention to important contributions by Cynthia Self (1999), Anne Wysocki (2004), John Trimbur (2000) and others who remind scholars in literacy and composition studies to attend to the critical



dimensions of the relationship between literacy instruction in the United States and computer technology. Nor have I broached topics related to technological change and disability, such as questions of access discussed by Melanie Yergau (2011). Despite these omissions, this chapter supports my earlier claim that technological change is entangled in central controversies related to the teaching of writing. In the next chapter, I historicize some of these controversies by contrasting two innovative approaches to composition instruction that competed for attention and influence during the field's consolidation in the 1960's.

## Chapter 4

### Natural and Technical Attitudes toward Literacy

Controversies related to technology and writing instruction are clearly bound to a broad range of media and inscription devices these days, but as anyone familiar with the field's history knows, such questions surfaced well before the digital revolution.<sup>61</sup> In this chapter, I suggest that the origins of these controversies are linked to competing attitudes toward literacy learning—one deemed “natural” and the other “technical.” I broach this topic by examining a formative struggle between Francis Christensen and James Moffett to shape composition pedagogy in the United States during the field's disciplinary consolidation in the 1960's. While this debate is often viewed in light of broader disagreements around product and process approaches to composition, I suggest that Moffett's response to Christensen establishes a particularly durable appraisal of what “technical” writing pedagogy means for teachers, students, and the field of composition studies. More specifically, I argue that “technicality” emerges as a negative alternative to pedagogical approaches, such as Moffett's, that claimed to be aligned with students' “natural” development and “natural” curiosity about language. Though the initial historical emphasis of this chapter may appear somewhat tangential to questions about the influence of digital media on composition, this retrospective account is useful because it offers opportunities to compare recent controversies around technological change to concerns that surfaced during the field's nascence. In the second half of this chapter, I illustrate the durability of the natural/technical dichotomy by analyzing Richard E. Miller's pedagogical approach “Reading in Slow Motion” in light of the debate between Christensen and Moffett.

In Chapter 1 I suggested that the technicality of writing transcends the tools of inscription to encompass knowledge about writing, such as how to write a letter of

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<sup>61</sup> As Robert Connors, James Berlin, Andrea Lundsford and others have shown, these questions often pertain to the value of teaching grammar.

application, an essay, or a sonnet. The teaching of writing, too, remains a thoroughly technical activity, whether or not the techniques and technologies deployed—the circuitousness in achievement—vary from one approach to the next, one teacher to another. Conceptions of “natural” literacy development professed by some composition and literacy scholars are interesting in light of this thinking because they express a desire to eclipse the technical aspects of reading and writing such that they resemble the directness and immediacy of speech. Louise Wetherbee Phelps relates efforts to infuse literacy with “naturalness” to “the Natural Attitude,” a concept proposed by German philosopher Edmund Husserl.<sup>62</sup> Husserl viewed the natural attitude as a conscious state untouched by philosophy or scientific thought, “a practical consciousness,” Phelps writes, “by means of which all individuals necessarily and unquestioningly dwell in the human world.”<sup>63</sup> In Phelps’ mind, attributing “naturalness” to literacy development, expresses a “nostalgia for the immediate that is constantly undercut by the critical, reflective impulse” (110). Moreover, she argues that invocations of natural literacy development reflect “the desire to recapture and refigure the at-homeness in the cultural world that is associated with speech” (111). Two questions come to mind after reading Phelps’s discussion of the “Natural Attitude”: First, if the least technical (read “natural”) pedagogical approaches tend to be bound to the directness and immediacy of speech, what stylistic entailments are bundled into more technical approaches? And finally, how do these entailments prime audiences for action by cultivating different attitudes toward writing and learning? Though I only scratch the surface of these questions in this chapter, the comparative analysis featured here is useful for my larger project because it historicizes and refines the idea of the “technical” in light of competing pedagogical notions bound to “naturalness.”

While this chapter maintains a dichotomy between the “natural” and the “technical,” I am well aware that aspects of the pedagogical approaches analyzed here might be associated with either so-called natural or technical perspectives. As the forthcoming discussion illustrates, however, the instructional programs I examine tend to face opposite directions when set side-by-side. Moreover, I should reiterate that my goal

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<sup>62</sup> See “Literacy and the Limits of the Natural Attitude” in *Composition as a Human Science*.

<sup>63</sup> As Phelps and others have observed, Husserl’s notion of the natural attitude is bound to his concept of the *life-world*, or that pre-reflective domain into which we are born.

is not simply to point out that Moffett's work projects the natural attitude or that Christensen's exemplifies a more technical one. Rather, I am interested in the ways the stylistic entailments of these perspectives, as reflected in pedagogical materials, might prime audience's expectations and actions by establishing very different conceptions of learning and expertise. By "entailments" I mean *that which follows*—those things that tend to arrive in the wake of pedagogical efforts aligned with natural or technical perspectives. In the previous chapter, for instance, I noted that composition scholars who emphasize "voice" tend to align its powers of enhancement with the naturalness of speech, while simultaneously setting their instructional strategies and theories of composition against more regimented and systematic approaches. The comparisons featured here elaborate this idea, bringing into relief those stylistic qualities of pedagogical phenomena that appear to align with more or less natural/technical perspectives toward writing and learning. In accordance with the broader aims of this dissertation, this chapter sheds light on the uncertainty associated with technological change by interrogating composition pedagogy deemed "natural."

#### *Francis Christensen's Generative Rhetoric Program*

In 1967 Francis Christensen consolidated his approach to teaching writing in a collection of essays entitled *Notes Toward a New Rhetoric*. The next year Christensen published a classroom-oriented boxed set comprised of student workbooks and overhead transparencies based on the principles proposed in earlier essays. By the early 1970s, a number of studies reported that this program, referred to as "Generative Rhetoric" or "the Christensen method," improved the syntactic maturity of students' sentences as well as the overall quality of their writing. Unfortunately, Christensen's death in 1970 preceded these reports. His wife, Bonniejean Christensen, continued promoting and defending Generative Rhetoric, coauthoring, in 1976, the textbook, *A New Rhetoric*, which included passages from her husband's essays. While a number of high schools and

universities adopted Christensen's program, Generative Rhetoric never achieved the widespread application its author envisioned.<sup>64</sup>

Disciplinary change played a role in Generative Rhetoric's demise. In the late 1960s, just as the program was attracting attention from scholars and educational publishing companies, its formalist assumptions were under siege. In their intellectual history of composition studies, Nystrand and his co-authors describe the epistemic turn taken by scholars at the end of the 1960s, citing James Moffett's collection of essays, *Teaching the Universe of Discourse* as an influential marker of the field's shift away from formalism.<sup>65</sup> Nystrand and company offer a formidable cadre of scholars inside and outside of English departments whose work spearheaded the assault. James Berlin, for example, synthesized the work of psychologists, linguists, and philosophers to condemn what he called "dummy-run" exercises—writing assignments that encouraged students to compose in prescribed forms, such as those included within Christensen's Generative Rhetoric Program.<sup>66</sup> Along similar lines, Robert Connors cites Moffett's work as the first systematic effort to undermine sentence-based pedagogy.

There were those, however, who remained interested in Generative Rhetoric. Indeed, a number of studies conducted in the late 1960s and early 1970s offered evidence in support of Christensen's method.<sup>67</sup> The largest and most rigorous of these studies, conducted by Lester Faigley through the University of North Dakota, suggested that Generative Rhetoric enhanced the syntactical maturity of students' sentences and improved the overall quality of their writing. While the promising findings of Faigley's study encouraged a flurry of debate and inquiry, the attention lavished upon Generative Rhetoric was short-lived. As composition coalesced in English departments in the 1970s, resistance to formalism and to the empirical methods associated with much sentence-

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<sup>64</sup> Christensen's work did have a notable impact on first-year writing courses at The University of North Dakota and Portland State University where, for a number of years, Generative Rhetoric was the foundation of all first-year writing courses. The program was also translated into a high school curricular unit material for the Nebraska Curriculum Development Center, under the title *The Rhetoric of Short Units of Composition*.

<sup>65</sup> See Nystrand, Greene, and Weimelt's, "Where did Composition Studies Come from?" *Written Communication*. 10.3 (1993): 267-333.

<sup>66</sup> Berlin likely took this phrase from John Dixon, who argued, "language is learnt in operation, not by dummy runs." See Dixon's *Growth through English* (1967).

<sup>67</sup> See Charles A. Bond's "A New Approach to Freshman Composition: A Trial of the Christensen Method," *College English* (March 1972) and Lester Faigley's "Generative Rhetoric as a Way of Increasing Syntactic Fluency." *College Composition and Communication* (May, 1979).

level research anticipated the program's demise. This transition was also encouraged by James Moffett's explicit rejection of Christensen's work in *Teaching the Universe of Discourse*. I will argue that Moffett's critique helps establish a particularly negative view of "technical" writing pedagogy by opposing Christensen's program to his own approach, which he characterizes as "natural" and "organic." Before analyzing Moffett's critique of Generative Rhetoric, however, I want to briefly review Christensen's program, attending most closely to those aspects of the program that Moffett ultimately rejects.

First published in *College Composition and Communication* in 1963, "A Generative Rhetoric of the Sentence" proposes a transformation of writing instruction based on Christensen's linguistic analysis of well-known novels, short stories, and nonfiction, mostly published during the first half of the twentieth century.<sup>68</sup> From this study, Christensen concludes that the difference between professional writers—"those who live by their skill in using language" (xii)—and college undergraduates is the frequency with which the pros deploy free modifiers and fashion grammatical constructions Christensen calls "cumulative sentences." One of the primary goals of Generative Rhetoric is thus to teach students how to fuse free modifiers into cumulative sentences—a practice that, Christensen believes, will help students write like the professional authors he admires. In this brief review of Christensen's approach, I focus my attention on Generative Rhetoric's central pedagogical device, a schematic heuristic Christensen refers to as "levels of generality." Dividing sentences into levels of generality requires one to segment passages of text into hierarchical arrangements, like so:

1 He dipped his hands in the bichloride solution and shook them,

2 a quick shake,

3 fingers down,

4 like the fingers of a pianist above the keys.

Sinclair Lewis (*A New Rhetoric* 31)

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<sup>68</sup> Christensen analyzed these texts (which he refers to as "good modern prose") using Immediate Constituent Analysis (ICA). The practice, which involves dividing linguistic elements into successive layers, is applied in many modern systems of grammatical analysis.

In this sentence, the step-like arrangement emphasizes the way each subsequent free modifier is subordinate to the clause or phrase that precedes it. It is important to recognize that Christensen’s semantic conception of sentence-level “subordination” departs from the conventional grammatical definition. For Christensen, a subordinate phrase or clause is one whose *meaning* elaborates on the meaning of a previous phrase or clause. In this way, subordination is not marked by the appearance of subordinate conjunctions but by the degree to which subordinate elements offer semantic specificity to more general ideas or descriptions. The Lewis sentence above exhibits four levels of generality; the first level, what Christensen calls the “main” or “base” clause, presents a complete idea—a subject and predicate. The noun, absolute, and prepositional phrases, (2, 3, and 4 respectively) add specificity to the *dipping* and *shaking* introduced in level 1. In other words, all three subsequent phrases modify and elaborate ideas presented in the main clause.

In Christensen’s estimation, once students are comfortable writing cumulative sentences and deploying free modifiers in exercises that emphasize narration and description, the same types of schemes can be applied to exposition. When moving to lessons in expository writing, Christensen proposes that the unit of analysis change from the sentence to the paragraph. Now sentences, rather than phrases and clauses, are arranged into levels of generality. As the following example illustrates, leveled paragraphs accentuate the movement between general ideas and those that are more specific:

- 1 The process of learning is essential to our lives.
  - 2 All higher animals seek it deliberately.
    - 3 They are inquisitive and they experiment.
      - 4 An experiment is a sort of harmless trial run of some action which we shall have to make in the real world; and this, whether it is made in the laboratory by scientists or by fox-cubs outside their earth.
        - 5 The scientist experiments and the cub plays;  
both are learning to correct their errors of judgment in a

setting in which errors are not fatal.

6 Perhaps this is what gives them both their air of happiness and freedom in these activities.

J. Bronowski, *The Common Sense of Science* (Vintage), p.111.

The unique appearance of leveled texts attests to the fact that Christensen's approach conceives of writing instruction in visual terms. Also striking about Generative Rhetoric is Christensen's faith in precisely sequenced procedures, a faith that infuses his textbooks and workbooks with uncommonly strict regimentation over the scope and sequence of instruction. Leveled texts are visual heuristics designed to help students *see* the part-to-part and part-to-whole relationships within and between sentences and paragraphs, but unlike a heuristic that simply asks students to imitate another writer's style, levels of generality are meant to open and transform the model text such that the inner-workings of "good" style are revealed. By offering exercises that repeatedly ask students to divide texts into levels of generality and to compose leveled texts, Christensen's Generative Rhetoric approach encourage students to perceive writing as a systematic process guided by and oriented toward the creation of textual objects. The systematic division, indentation, and numbering of phrases, clauses, and sentences is purported to result in enhanced textual objects capable of imparting to students the powers of professional prose writers—powers figured as enhanced vision. It is this systematic, strictly regimented, highly visual orientation to writing instruction that James Moffett attempts to undercut in his seminal book, *Teaching the Universe of Discourse*.

Moffett leverages writing instruction away from Christensen's focus on structural linguistics by defining discourse as "any verbalizing of any phenomena, whether thought, spoken, or written; whether literary or non-literary" (9). This definition helps direct the nascent field of composition studies away from formalism and towards theories of language based on social interaction and human development. Here Moffett undermines the pedagogical potency of linguistics, writing, "From the viewpoint of language *production*, there are only options about how to parcel out thought into syntax. No grammar can tell us how people play these options, for the reasons are psychological and



social, not linguistic” (187). Yet another attack on linguistics comes with the assertion that “rational inquiry into language must not be allowed at its very outset to fall prey, like composition, to the overblown influence of sentence analysis” (186). Punctuating the chapter’s final paragraph with an agonistic flourish, Moffett adds, “It’s about time the sentence was put in its place” (187). Where is this place, one wonders and, similarly, why does he argue that sentence analysis obstructs rational inquiry into language? The answer is that Moffett believes sentence analysis distracts from the natural processes of language acquisition and learning. Moffett’s motives become more obvious when he associates his pedagogical approach with these processes. In the following passage, notice how the terms “authentic,” “naturalistic,” and “organic” are contrasted with the “precisely sequenced” tasks associated with Christensen’s program and John C. Mellon’s sentence-combining exercises:

In sum, the activity of combining sentences undoubtedly constitutes a powerful teacher of syntax—if related to will and choice, and if will and choice are exercised during authentic discursive tasks. What Mellon and Christensen try to do by arraying sentence types in sequential exercises can be better done, I submit, by exploiting the sentence-combining activities ordinarily entailed in naturalistic tasks. Although embedding-transformations cannot in this way be precisely sequenced, the trading of systemization for organic learning may prove a wise bargain. (178)

Though Moffett never uses the term “technical,” this is what “precisely sequenced” is meant to connote when contrasted with the “naturalistic” and “organic” styles of enhancement he associates with conversation. And though he does not explicitly accuse sentence-based pedagogy of being “inauthentic,” we are led in that direction when he later refers to such writing tasks as “dummy sentences,” as in “combining dummy sentences outside the real writing situation divorces syntax from judgment” (176). With these words, Moffett suggests that the systematization and regimentation of Christensen’s program will likely result in the creation of automatons—students stripped of their powers of judgment. Once filled with dummies, Christensen’s approach loses its vitality, particularly when compared to lively, dialogic alternatives proposed by Moffett in his hypothetical classroom anecdotes:

Let's say that one student has written:

The assistant manager fussed over him and wiped a cut on his leg with alcohol and iodine. The little stings made him realize suddenly how fresh and whole and solid his body felt.

By any number of means, the teacher can suggest that students consider other structures for this sentence sequence. The class may express some difficulty in understanding the passage or some concern about the style, in which case the teacher invites some suggestions for revision. Or the teacher may simply change some sentences, in the spirit of tinkering, and ask for reactions to different versions. (179)

This passage indicates that Moffett clearly values open-ended conversations between teachers and students over the systematic regimentation of Christensen's program. Such conversations, Moffett suggests, are more in line with peoples' natural communicative processes. By contrasting the "naturalness" of his approach to Christensen's program, I believe Moffett establishes a negative contour for the meaning of "technical" writing pedagogy, a meaning, I would argue, that is bound to the strict regimentation, systematicity, and explicitness of Christensen's Generative Rhetoric program. Indeed, I argue here that Moffett's critique of Christensen helps establish a persistent natural/technical dichotomy in composition studies that resurfaces in later efforts to resist the effects of digital media on college students' reading and writing practices.

To witness the persistence of this dichotomy, one can look to Richard E. Miller's essay "Reading in Slow Motion." In this essay Miller describes a course developed to "make time for students to have embodied experience of learning" —a rarity, Miller feels, amidst the formal requirements of schooling and the abundance of information at students' fingertips. Indeed, the course (which shares the title of his essay) grows out of Miller's concerns that digital technology—the Internet in particular—threatens to undermine deep thought and sustained inquiry.<sup>69</sup> To understand how Miller's description of his course reflects a natural attitude toward literacy, one must examine the rather unique "rules" of Reading in Slow Motion. Students spend an entire semester reading one book of nonfiction, with 15-20 pages as the maximum number of pages assigned

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<sup>69</sup> Miller connects these concerns to Nicholas Carr's thesis in *The Shallows*. Such concerns—particularly those related to the fate of deep thought and sustained inquiry—also relate to Katherine Hayles' discussion of hyper and deep attention.

each week.<sup>70</sup> Miller also requires that students meet for three hours at a time. The duration of these weekly meetings, he explains, is strategic:

Serious learning requires sustained encounters with unknowing, ambiguity, frustration, boredom. One three hour meeting, once a week, provides the time and space for such encounters. It gives us time to have silence stretch out after a difficult question; allows for reading a challenging passage together and then reading it again; makes room for all the essential ingredients for bringing ideas to life—spontaneity, digression, immersion.

In this passage, the natural attitude surfaces in Miller’s claim about “serious learning,” which, he argues, requires sustained encounters with the “unknowing.” This proposition aligns with Phelps’ observations about attributions of “naturalness” to literacy, particularly with regard to the representation of the creative processes that accompany reading and writing. According to Phelps, the natural attitude is expressed as “mysterious and unamenable to rational intervention, systematic control, or formal instruction” (113).<sup>71</sup> The value Miller attributes to “spontaneity, digression, and immersion” also shares a great deal with Moffett’s pedagogical vision. Both Miller and Moffett argue that “real” learning happens spontaneously, through instructional practices that promote dialogue and curiosity. In order to model curiosity, Miller, for example, chooses a book somewhat distant from his library of expertise because he does not want to know ahead of time “where the argument is or might be going.” In this sense, mystery, or unknowing, becomes a potent pedagogical actor; far from simply the stage upon which Miller’s pedagogical play unfolds, the cultivation of mystery and its development over the course of the semester becomes the phenomena that, he believes, catalyzes students’ motivation to read and write. Miller chooses a key text that he does not know well because he wants to be reading “according to the same rules” as his students, adding, “I am not modeling what it is to know, but rather how it is that one comes to know” (4). At the heart of Miller’s effort to “naturally” enhance his students’ literacy skills is the cultivation of

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<sup>70</sup> Miller states that his broader goals are “to cultivate curiosity... foster attentiveness...encourage inventiveness...[and] lay the foundation for the mind to have a life beyond the gated community of the classroom” (2).

<sup>71</sup> Phelps lists three other concepts related to the Romantic ideal type of natural literacy as well, but to describe them here would take me astray.

curiosity via a three-hour encampment of “unknowing.” In this way, Miller, like Moffett, generates a negative contour for the idea of “technical” pedagogy by setting it against conceptions of natural literacy development.

For Miller, the most profound enhancements associated with reading and writing come about through mysterious encounters that fundamentally alter one’s sense of self and the world. Miller outlines the inscrutability of this process with a string of questions about writing and inquiry:

So, what does *real* research feel like? Not like the checking off of externally imposed requirements. Is it possible to move from the mysterious alchemy of the individual encounter with the words on the page and the words in one’s head to the mysterious alchemy that begins to bubble away when curiosity is awakened within? When a question *out there* becomes a question *in here*? When a new idea begins to shift one’s perspective, to reorganize all that inbound data, to alter one’s sense of one’s place in the world? (8)

In this passage I am struck by Miller’s efforts to configure “*real* research” apart from “externally imposed requirements,” which, he suggests, limit opportunities for spontaneity and digression. I should add that Miller’s conception of “real research” is not only a function of *reading* in slow motion; *writing* is brought into play as well. In Miller’s words, the course is meant to encourage students to “use writing as a technology for thinking new thoughts” (15). The goal, as Miller puts it, is to encourage composition that occurs “at the edge of one’s understanding” (15). In his efforts to encourage this process, Miller eschews a number of key conventional means of systematic control of the class. The course, for example, has no syllabus (8). Likewise, Miller takes steps to undermine what is perhaps his most potent means of pedagogical control—his own expertise—by placing an unfamiliar text at the center of the course. If, as I have argued, the stylistic features of Miller’s course register the openness and ambiguity associated with natural attitude toward literacy learning, what might we say about the qualities and stylistic features of its presumed antithesis—the technical perspective? To answer this question, I want to briefly return to Christensen’s Generative Rhetoric Program.

I have already suggested that the systematic and strictly regimented qualities of Christensen’s approach are antithetical to Moffett’s sense of “natural” literacy

development. I would add that Christensen's workbooks, replete with specific writing tasks and protocols, constitute a coherent vision of likely results—a system marked by explicit goals for students' composing efforts. One could say that Christensen's program presents teachers and students with a clearly defined road to enhancement; again and again, students fill in blanks and follow protocols such that their writing might display the surface features of Steinbeck, Huxley, and Virginia Wolf. Christensen believes that these exercises impart a conscious awareness of the sentence-level choices that constitute good style. It is not so much Christensen's goals that Moffett criticizes, but rather how regimented, systematic, and explicit—how technical—the program appears. My point, once again, is that Moffett's critique establishes a dichotomy between the natural and the technical that persists in Miller's work. Indeed, one could view both Moffett's critique of Christensen and Miller's essay "Reading in Slow Motion" as efforts to protect literacy instruction from being colonized by technicality. For Moffett this means stemming the influence of linguistics on the teaching of writing. For Miller it means resisting the rising tide of digital media, which he believes threaten the students' ability to experience the curiosity and wonder he associates with real learning.

I should add that Moffett and Miller are not the only ones that to keep technicality in check; Peter Elbow, Donald Murray, and Ken Macrorie and others who champion "voice" in composition pedagogy do so as well. For a clearer sense of the overlap between voicist pedagogy and the natural attitude, consider Darsie Bowden's observation that the metaphor of "voice" is meant to configure the resources of dramatic narrative in ways that signal writing's debt to oral language. Bowden views this comingling of oral and written modes in voicist pedagogy as an effort to manifest one's body in writing:

The voice comes from the body; the body is utterly personal and this personal-ness somehow, in this pedagogy, is powerful. Spoken language is naturally closer than writing to the lifspring, to consciousness, and to presence—all significant attributes of an orientation in which the spoken voice is the privileged term. Speech (conveyed by the human voice) gets closest to what's real, genuine, legitimate, or in other words, the endpoint or final objective of our meaning-making or communicating and does so in the most powerful way, through personal presence. (182)

A precursor to voicist pedagogy, Moffett's approach also emphasizes the relationship between naturalness and speech, and his objections to Christensen's program are largely due to his sense that Generative Rhetoric corrupts students' natural interest in communicating with other people, thus wasting opportunities for students and teachers to use language as a means of discovery and personal growth. My point in highlighting the similarities between Moffett, Miller, and voicist pedagogues is to suggest that some scholars in composition view systematic, strictly regimented, and explicit pedagogy as a threat to natural literacy development, a fact that destabilizes the idea of technological enhancement with regard to writing instruction.

I want to now consider the possibility that such resistance is ultimately bound to fears, articulated in the previous chapter, that pedagogy deemed too technical will diminish the role of human beings in the teaching of reading and writing. For evidence of this fear, one can look to Miller's concern that students' interactions with Internet and digital technology are fundamentally altering their understanding of the time required for "real" learning. As the passage quoted earlier illustrates, time is not simply a contextual element in Miller's course, rather it is a potent pedagogical actor aimed at cultivating what he refers to as an "embodied experience of learning," an experience intimately bound to students' affective responses to reading, writing, and discussion. Indeed, the three-hour block set aside for each period is meant to expose students to those thoroughly human feelings of "ambiguity, frustration, and boredom," as well as the thrill of discovery.

Miller deploys time—dead time between questions, the lag of silence—to provide students with a "feel" for an experience that he worries may be on the verge of extinction. This strategic deployment of time is directed toward giving students opportunities to experience something he believes eludes them as a result of the swift and highly mutable stream of information fed to them via computers and other portable electronic devices. Students have missed out on opportunities for enhancement, Miller argues, as a result of the velocity of digital stimuli. Indeed, the one thing *Reading in Slow Motion* strives very hard to control is the speed of students' interactions with one another and with different media. This is because Miller's conception of "embodied learning" requires prolonged deliberation rather than the snap judgments he associates with surfing the World Wide

Web. In essence, Reading in Slow Motion is meant to resist the technologizing sweep of digital media by giving students more time to think and feel—more time, in Miller’s mind, to be human.

What does this analysis reveal about the idea of technological change as it relates to writing instruction? Foremost, I think it reveals that there has been and continues to be resistance to writing pedagogy that deviates too widely from the immediacy of speech and face-to-face communication. This strikes me as healthy resistance toward those who would supplant writing teachers with workbooks or websites. Indeed, I would argue that such resistance has been a key factor in allowing the field to thrive. For a glimpse of how such resistance might have shaped the field in a positive way, consider Charles A. Bond’s final assessment of Christensen’s materials:

I believe that this program offers many advantages, not only to the instructor but to the college as well. It is flexible in that it can be offered to both small and large groups; initial instruction is limited only by the size of the auditorium available. (627)

This passage suggests that Christensen’s program has implications for not only how writing is taught but also *where* it is taught. Bond’s recommendation is a telling example of the way pedagogical materials exist within larger sociotechnical systems that allocate power and wealth not only to design constituencies (in this case Christensen and his publisher), but to stakeholders, such as colleges and universities, who have little say in the actual creation of pedagogical material. One can imagine the economic impact of using Christensen’s program in an auditorium that accommodates hundreds of students. As Bond points out, this scenario would likely impact a university’s bottom line, as figured by the school or department’s ability to educate the same number of students with fewer teachers. Bond’s sense that Christensen’s program would allow institutions to scale-up writing instruction to the size of an auditorium underscores the degree to which the style of pedagogical materials might enroll or reject certain types of instructional spaces. Literacy pedagogy inflected by the natural attitude, such as Moffett’s, would be unlikely candidates for auditoriums and large numbers of students because these

approaches emphasize the cultivation of face-to-face, dialogic interaction between teachers and students.

Bond's suggestion to use Generative Rhetoric to scale up writing instruction to the size of auditoriums illustrates how the style of Christensen's workbooks and overhead transparencies might have altered the development of composition studies through the transformation of classroom space. Though such a transformation never came to pass, it reminds us that the relationship between writing instruction and technological change is intimately bound to the style of those technologies enrolled into pedagogical activity. As classrooms, instructional materials, and students' backpacks are increasingly populated by digital technology, it is important to consider how the style of these media inflect things such as classroom space as well as teachers and students interactions and identities. I take up these issues more thoroughly in the next two chapters, both of which comprise the ethnographic strand of this dissertation.

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Pedagogical approaches to literacy vary in their explicitness, their artfulness, and their popular reception, but they are all presented in the hope that teachers and students will invest their imaginations in them and thus be susceptible to the enhancement narrative underpinning the pedagogy. In this chapter, I have suggested that Moffett's critique of Christensen's program helped establish a dichotomy between natural and technical conceptions of learning and expertise in composition studies, a dichotomy that persists in Miller's description of Reading in Slow Motion. This chapter contributes to my examination of the relationship between technological change and writing pedagogy by illustrating how Moffett's efforts to align his pedagogical approach with "natural" processes simultaneously traced a negative contour for the meaning of "technical" writing pedagogy. When viewed in opposition to those approaches deemed natural, the idea of technicality appears pejorative, adding credence to my earlier claim that technological change is inherently controversial when cast in terms of writing pedagogy. The analysis featured here suggests that the controversial aspects of "technicality" have a history as long as the field and that such controversies may stem, in part, from leading scholars' commitments to natural perspectives toward literacy. Though the work of



Christensen, Moffett, and Miller is richer and more varied than my analysis suggests, these comparisons have been useful for clarifying the uncertainty that accumulates around writing pedagogy and technological change.

## Chapter 5

### Technological Change and Pedagogical Style

#### *Ethnography of English 418*

The next two chapters are drawn from a semester-long study of two sections of English 418, an upper-level English course that requires students to produce multimedia digital texts, such as websites and blogs.<sup>72</sup> I spent the semester observing these classes, interviewing participants, and learning about the technology they used to compose their multimedia projects. As will become apparent, my analysis elaborates the relationship between writing pedagogy and technological change discussed in previous chapters by attending to participants' sense of their own potency in relation to their interactions with digital and Internet technology. The qualitative methodology I used to generate much of the material cited here is aligned with sociocultural theories of development and draws inspiration from ethnographic studies of educational phenomena. In the words of educational researchers Steven Athenases and Shirley Brice Heath, ethnography can provide researchers "with rich documentation of learning as it unfolds and varies over time, leading potentially to insights into cultural patterns, formulation of hypotheses for testing, and support for generation of theory" (263).<sup>73</sup> With the concept *potency* in mind, I am particularly interested in participants' feelings of power and influence in light of their interactions with novel technologies. As such, these next two chapters focus on

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<sup>72</sup> I have changed the course title as well as teachers' and students' names for privacy reasons.

<sup>73</sup> In *Discourse of Opportunity*, Lesley Rex echoes this sentiment, describing the central question of interactional ethnographic study of classrooms as "who can say or do what to and with whom, when and where, under what conditions, in relations to what actions or artifacts, for what purposes, and with what outcomes?" (7). Rex (2002) defines interactional ethnography as "inquiry into the dynamic relationship between the discursive practices of individuals and the cultural norms and practices of the group" (8). She cites Castanheira et al. (2001) and Green and Dixon (1993) as formulating this central question. She also traces the roots of interactional ethnography to the sociolinguistic work of John Gumperz (1982) and Dell Hymes (1972, 1974), and Deborah Tannen (1979, 1993). As well as the ethnomethodologies articulated by Harold Garfinkel (1967) and Irving Goffman (1974).

students' and teachers' efforts to make their influence durable, immediate, and wide-ranging through the use of different media and modes of representation.

Beyond the study of classroom interaction, these next two chapters explore the evolving character of Internet texts (Itexts) and multimedia composing, with particular regard for their impact on pedagogical activity. Studies emerging from a range of disciplines, including rhetoric and composition, education, communication, and cultural studies have offered fascinating, though preliminary, insights into the impact of the Internet and digital media technology on in-school and out-of-school literacy practices. Related efforts include studies of fan fiction communities (Black, 2004), English-language learners' use of technological tools to enhance and extend their literacy practices (Alvermann, 2002; Alvermann & Hagood, 2000; Chandler-Olcott & Mahar, 2003; Jenkins, 2004), and massively multiplayer online games (Steinkuehler, 2003, 2009). As Cheryl Geisler and other members of the Itext Working Group note, however, much work remains to be done.<sup>74</sup>

The next two chapters document college students' and teachers' interactions with digital media tools and Internet texts in two sections of English 418, courses taught at a large public University during Fall Semester 2008. The material I use to support this strand of my study originates from multiple sources, including observation notes, interview responses, emails, blogs, websites, and casual (unrecorded) conversation. I observed and interviewed 21 participants, attending to their composing practices as well as the physical and conceptual tools they used to organize and direct their efforts. I also attended to the representational emphasis of these tools, how they instantiated aesthetic and/or pedagogical value, and how these instantiations of value influenced students' sense of their own power and influence. Finally, I was interested in the relationship between the value students attributed to their Internet texts and multimedia projects and the value they attributed to the courses more generally.

### *Data Collection and Analysis*

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<sup>74</sup> See the IText Working Group (Geisler et al., 2001): "IText: Future Directions for Research on the Relationship between Information Technology and Writing."

During Fall semester, 2008, I observed and interviewed 21 participants (3 teachers and 19 students) in English 418.01 and 418.02. I attended and observed these classes, taking ethnographic field notes.<sup>75</sup> I also developed organizational charts of participants' interactions with one another and with the resources of the computer labs where the courses were conducted. Because my research design was based on naturalistic inquiry, I used preliminary analyses of introductory interviews and field notes to guide follow-up interviews. The questions I used to frame my interviews with teachers and students are included as appendices.

*Opening Interview:* Using audio-recorded interviews, I asked participants a series of questions meant to explore teachers' reasons for creating the course and students' reasons for enrolling in the course. These questions also probe participants' backgrounds with print-based writing and with digital media composing. Furthermore, these semi-structured in-depth interviews were meant to encourage students to discuss the writing projects they hoped to complete throughout the semester.

*Intermediate Screen-capture Interview:* During the second-half of the semester, I interviewed students using the screen-capture software iShowU HD Pro. This application allowed me to document, analyze, and archive students' new media projects. The audio record function aligned my interview questions and students' discussion of their work to the recorded screen shots. These screen-capture interviews allowed me to gather data related to the rhetorical decisions students made while working with digital media and Internet texts, how students marshaled text, image, sound, and so forth toward various rhetorical purposes. I was also interested in the ways students' projects aligned with or recontextualized teachers' pedagogical goals.

*Closing Interview:* Near the end of the semester, I conducted semi-structured, stimulated recall interviews in which I asked participants questions about (a) the new media project they produced; (b) the inscription technologies they used; (c) their feelings while working

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<sup>75</sup> See Emerson, Fretz, & Shaw, *Writing Ethnographic Field Notes* (1995).

on their projects and (d) any comparisons they might make between print-based composition and new media composition.

*Auto-Ethnographic Methods:* The auto-ethnographic strand of my study draws from what Patten (2002) refers to as *heuristic methodology*, which he defines as “a form of phenomenological inquiry that brings to the fore the personal experience of the researcher” (107). In an effort to understand students’ and teachers’ interactions with digital media and Internet texts, I created a website, using the same applications (included in Adobe Creative Suite 3) used by teachers and students in English 418.01. As I used these tools to create Internet texts, I maintained a journal where I reflected on my composing processes. These reflective practices deepened my understanding of digital media composition and allowed me to compare and contrast my experiences with those of my participants.

*Analysis:* Data analysis methods included interpretive analysis methods adapted from Grounded Theory (Strauss & Corbin 1998). I relied on thematic analysis of interview transcripts, observation notes, email, as well as students’ and teachers’ Internet texts and multimedia projects. Reading these documents and listening to audio recordings of interviews and classroom discussion, I became interested in students’ and teachers’ attributions of value to the media they used to create their Internet texts and multimedia projects, particularly in regards to their own feelings of power and influence. As noted earlier, I developed the themes of *potency*, *distributedness*, *technicality*, and *style* to organize this material. The analysis then proceeded in three stages. In the first stage I read over notes taken during the interviews, locating passages that focused on 1) students’ attributions of value and 2) expressions of power/influence in relation to the course or the media they were using to compose their Internet texts and multimedia projects. I identified the most potent pedagogical actors as those phenomena participants discussed most frequently. For example, students in one section of English 418 frequently attributed value to the Web design tool, Adobe Flash. I noted these examples and color-coded them with highlighters. From highlighted portions of notes and transcripts I identified those passages that exemplified common sentiments or those

sentiments that ran counter to what most participants were saying. From this material I abstracted comments that support the claims running through these next two chapters.

There are many limitations to this strand of my study, the most obvious being those associated with ethnographic work more generally.<sup>76</sup> I am aware that my claims do not take into account a number of potentially crucial factors. For example, I do not account for the false starts and hesitations that occurred as students composed their multimedia projects. Likewise, there is little discussion of students' and teachers' mental events. Such events only enter into the account if participants chose to reference such processes during interviews. This speaks to other substantial limitations, which arise from the relatively small scope and short duration of my study; I visited these courses for one semester, confining interviews to three teachers and eighteen students. A third limitation stems from my lack of experience working with some of the computer applications students used to compose their multimedia projects while enrolled in English 418. Though I helped design a website for a nonprofit eight years prior to observing these courses, I had not worked extensively with Adobe Flash, Dreamweaver, or Photoshop. To better understand students' interactions with these technologies, I attempted to learn them myself, following along when professors introduced unfamiliar hardware and software, and getting a feel for the joys and frustrations associated with such composing. My hope was that these efforts would focus my interview questions and help me comprehend the value students attributed to the technology they used, as well as their reflections on their composing practices.

I chose to study English 418 because it was the one course offered by the Department of English that included an explicit focus on digital media composition.<sup>77</sup> Beyond the now standard use of course management software and email, the teachers (who I refer to here as "Richard," "Allen," and "Lisa") required students to compose blogs, websites, and multimedia projects using a range of networked and programmable technology. As the central ideas of this study came into focus, I became increasingly interested in the value students attributed to the technology they used, particularly with regard to their motivations to compose. As I formed relationships with participants, it

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<sup>76</sup> See Shirley Brice Heath and Brian Street's *On Ethnography* for a sense of the limitations associated with ethnographic methods.

<sup>77</sup> See Appendix B for a complete course description.

became apparent that some students were more invested in their digital projects than others, and that these investments were, in part, the result of connections they envisioned between their coursework and their extra-curricular goals and interests.

While the previous chapter's comparative account of Christensen and Moffett's work centered on pedagogical texts and instructional materials, this chapter examines students' engagement with course material. My analysis focuses on students' evaluations of their efforts to compose with digital media as well as the importance they attach to their digital projects. These value judgments, I suggest, are primed by teachers' attitudes toward digital media composing. I illustrate how these different attitudes are instantiated in teachers' face-to-face interactions with students, their personal websites, and their interactions with classroom materials. These different types of interactions, I suggest, coalesce around distinct patterns and organizational principles, which can be discussed in terms of pedagogical style.

Though Richard, Allen, and Lisa are all senior faculty members at State University, when one examines the professional backgrounds of these highly accomplished teachers, writers, and scholars, one discovers three very different career trajectories. Lisa is a creative writer, Richard is a literary scholar, and Allen is a professor of library science. These disciplinary allegiances likely inflect their teaching philosophies and instructional styles, but given the scope of this study I do not make teachers' professional backgrounds the focus of analysis. Similarly, I do not attend to teachers' life histories or personal attributes, such as gender, age, or race. Rather, I am most interested in the ways these teachers, in concert with other pedagogical actors, influence students' sense of the relevance of their efforts to compose with digital media and the value they attribute to the course. Before moving to analysis, I want to provide some additional background information about the origins of these two sections of English 418.

The seeds of Richard and Allen's section were planted when the two professors collaborated on the design and implementation of professional development seminars meant to provide training in word processing and presentation software to faculty in Literature, Science and the Arts at State University. Given the success of these collaborative workshops, Richard and Allen proposed a course, centered on the humanistic implications of new technology, meant to provide students with similar

training. Initially, the training strand of the course was directed toward helping students become facile with common word processing and presentation software, such as Microsoft Word and PowerPoint, but with the rise of the Internet, the course evolved to include training in Adobe applications, such as Dreamweaver, Photoshop, and Flash. As noted by many of Richard and Allen's students, a great deal of time and effort went into learning these advanced applications. To construct multimedia websites addressing substantial issues in the humanities, students needed to swiftly acquire sophisticated knowledge of these programs.

Despite the matching course number and course title, Lisa's section of English 418 was radically different than Richard and Allen's section. According to a State University administrator, Lisa's course title/number mirrored Richard and Allen's by default; despite the many differences between the two sections, there was simply no other course description to which it corresponded.<sup>78</sup> Unlike Richard and Allen's course, Lisa's students were not required to demonstrate facility with particular applications. Few deadlines were established at the beginning of the semester other than weekly blog responses in which students were expected to reflect on course material and provide updates on the development of their semester-long projects. While Richard and Allen directed students toward individual and group projects that matched course requirements, Lisa's students were given the opportunity to pursue virtually any topic they could imagine—the wilder the better. “No matter how wild, don't suppress it,” Lisa told her students. “Don't suppress the idea, no matter what it is. Whatever the idea is, the more you know, the more possibilities that might occur to you” (Lisa 10-9). Lisa encouraged students to experiment with digital technology, but unlike Richard and Allen, she did not teach students how to use the software. Instead, she encouraged students to “play around” with the applications. Cultivating a playful, low-stakes learning environment, Lisa was more interested in fostering exploration than expertise.

As noted in the previous chapter, I associate such loose regimentation and ambiguous ends with the natural attitude. Richard and Allen's section, by contrast, was strictly regimented with clear ends-in-view—qualities I associate with the technical attitude. In the next section I illustrate how these attitudes were distributed through

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<sup>78</sup> This information was imparted to me during casual conversation (10-21-2008).



teachers' personal websites and their interactions with classroom materials. Previously, I suggested that natural and technical attitudes toward literacy were expressed not only through teacher-student discourse, but also through objects enrolled into pedagogical activity. I want to consider this possibility in greater detail by examining the ways Richard and Lisa's personal websites express more or less natural/technical attitudes toward digital composition.<sup>79</sup>

Richard's homepage reached out to students even before the course began. One student, for example, noted that she was "really impressed that the syllabus was all online" in August (Jill, 10-17-08). Richard often displayed his homepage during class, as it served as a point of reference to remind students of the material they had covered as well as the material they would be encountering in coming weeks. The site includes an image of Richard as well as a list of the courses he teaches, contact information, and links to supplemental course material. Examining Richard's homepage, one finds a clean design that mirrors many of the visual conventions of print: black text against a white page, with blue text signaling hyperlinks. Richard's image recalls the type of photograph one might find hanging on the wall of the English Department—a professional portrait meant to greet audiences with a direct gaze and a smile. Beside the portrait, one finds commonplace markers of professional identity: Richard's name, university address, office phone, fax, email, and office address. Below the contact information is a list of his courses as well as supplementary links related to his particular interests and areas of expertise.

There is an unmistakable parallel between Richard's homepage and a resume or curriculum vitae; the page is organized by headings and like a print document the website's background is white. There is very little here that would disrupt an informed reader's expectations of an academic's professional identity; the website is easy to navigate, with links clearly demarcated in blue, a navigation bar on the right, which easily allows users to peruse content. In short, Richard's homepage could be described as a conventional, professionally-oriented website. Clicking on the link for English 418

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<sup>79</sup> Though Allan co-taught the course, he tended to be less involved than Richard. This instructional asymmetry is exemplified by the fact that nearly all of the instructional materials for the course were available on Richard's website, which was often displayed during class. I have no memory of seeing Allan's personal website presented to the class, so I do not comment on it here.

takes users to the course syllabus, which includes a detailed “Overview” of the course (Appendix B). The site’s web address is explicitly bound to State University, making Richard’s homepage not only an extension of himself, but an extension of State University as well.

Lisa’s online presence appears in striking contrast to Richard’s. To begin, visitors to Lisa’s homepage might not even know it belonged to Lisa, as she prefers various pseudonyms to her real name. Though all instructors at State University are granted at least one megabyte of space on university servers, Lisa’s blogs, websites, and videos reside on non-university servers and thus do not include the institutional tag that accompanies Richard’s site (e.g. stateuniversity.edu). Compared to Richard’s home page, Lisa’s primary web site is replete with sounds, images, animation, and fonts of all shapes, sizes, and colors. Unlike Richard’s paper-like white background, Lisa’s background is alive with brown and white star shapes that pulse and rotate. When clicked, the faux-navigation bar lets loose a bright spiral of stars that expand across the screen—a site as ornate as Richard’s is unadorned.

Another very obvious difference between the two websites pertains to the linearity of navigation. As her faux-navigation bar suggests, one of Lisa’s goals appears to be misdirection. If I click on a link promising a more detailed description of Lisa’s poetic theory, for example, I am transported to a page that discusses taffy making. A careful reading of the textual portions of the website reveal that taffy making is a metaphor used to elaborate the principles of Lisa’s poetics, but these associations are, as one might imagine, figurative and ludic. For a sense of Lisa’s online aesthetic, consider the site’s subtitle: “Where the taffy is all about the flexibility of information.” Overall, one might describe the style of Lisa’s interlinked websites as elliptical; that is to say, the connections between pages are more associative than explicit. Unlike Richard’s site, which shares much in common with the layout of print-based texts, Lisa’s interconnected blogs, websites, and Youtube videos are meant to undermine the logic and linearity of print. There is an inscrutable veil over Lisa’s online presence, and beneath the veil a mischievous wink that defies academic convention, particularly those conventional online representations one generally associates with colleges and universities. Moreover, by rejecting a good deal of the conventional advice about website composition, Lisa’s site

reflects an aesthetic that favors disjunction, parody, and critique over coherence and clarity.

The differences between Richard and Lisa's websites can be understood as efforts to style their online identities in very different ways. My larger point, however, is that these different representations also color the pedagogical network that students constitute when they enroll in Lisa and Richard's courses. The question then becomes, how do students respond to such stylizations? Before commenting on students' responses to Lisa's course, I want to highlight stylistic continuity between Lisa's digital artifacts and on-line representations of self and the style of her classroom.

### *Lisa's Classroom*

A dizzying mashup of pillows, sculpture, and state-of-the-art computers, Design Space 3 (DS3), is like no other classroom on campus. The chairs and computer desks stand on wheels, inviting visitors to reconfigure furniture to best suit collaboration or exhibition. Indeed, Lisa's classroom is hands-on museum, computer lab, and robot repair shop all in one—a classroom William Gibson might design, minus the dirt and grime.<sup>80</sup> As with most unique and expensive environments, access to DS3 is limited. The door is flanked by a scanner and keypad; students enrolled in courses or workshops gain access by swiping their university identification cards or typing a code into the keypad. Deb, a full-time staff member who oversees DS3, grants access to students enrolled in DS3 classes after hours and on the weekends by placing their student identification number into a database that tells the scanner/electronic lock who is permitted in the room during off hours. Either Deb or her student assistants staff the space from 9-5, providing assistance and one-on-one tutorials to visitors.

DS3 is located on West Campus, an area that includes the School of Engineering, Art and Design, Dance, Music, and Architecture. This location is a point of interest because nearly every other English course—like the department itself—is held on East Campus. In other words, DS3 is far from most courses, offices, and events related to the State University's Department of English Language and Literature. Why is this distance

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<sup>80</sup> In addition to being credited for coining the term "cyberspace," William Gibson is known for gritty science fiction, which often portrays technology of the future in various states of disrepair.

significant with regard to pedagogical style? If, as I argued earlier, pedagogical style manifests in material and spatiotemporal relations as well as instructional practice, then DS3's estrangement from the English Department can be understood as a stylistic feature of the network. Indeed, Lisa sought this space specifically because of its distance from the English Department; having grown unhappy with what she considered to be a reductive view of poetry and poetics, Lisa craved a teaching environment that encouraged students to experiment with different media and modes of expression. Lisa's emphasis on the relationship between writing and discovery resonates with the previous chapter's discussion of Richard Miller's course. An important difference, however, is that the uncharted territory in Lisa's section of English 418 has nothing to do with books. Rather, it is DS3's unfamiliar hardware and software that piques students' curiosity and sustains their efforts throughout the semester. Indeed, Lisa suggested that students use their time in class to explore the many representational possibilities afforded by the programs loaded onto DS3's powerful desktop computers. Like the evocations of "natural attitude" toward literacy learning discussed in the previous chapter, Lisa encouraged exploration over expertise. Whereas Richard and Allen encouraged students to master software, Lisa encouraged students to use the software to explore new ideas and represent their subjects in unconventional ways. These different emphases and their stylistic entailments tended to direct the composing efforts of students in these two sections toward different ends.

During interviews, all nine of Lisa's students expressed appreciation for Lisa's willingness to let them pursue their own projects and move at their own pace. Todd, a senior English major, remarked:

It's refreshing to be with professor L. because she's just like very open to anything you want to do and it's a big change just to have the run of it for whatever you want to tackle and whatever you want to explore whereas, especially being an English major, you're writing the same papers for every class and you're trying to figure out what that English teacher wants from you, and she [Lisa] doesn't seem like you have to please her, she lets you kind of please yourself and explore your own interests, which is kind of rare. (Todd 11-19-08)

Kyle, a senior majoring in philosophy, echoed Todd's sentiments:

There's definitely a lot more freedom going into it to whatever the heck I want. I've taken a lot of courses that intersect directly with my personal interests, but with this one there's a lot more freedom to just take it and run. I never thought I would be designing an alternate reality game for a grade. I also never thought I would be going to graduate school to be studying collective narrative. So that's cool. (Kyle 11-5-08)

Though most students enjoyed having the freedom to pursue projects that aligned with their interests, their responses suggest that the process of defining and narrowing their projects' purpose required a good deal of thought and effort. Todd, whose earlier comments revealed apparent delight in being able to follow his interests, admitted that the course's lack of regimentation posed unexpected challenges:

At first it was just really overwhelming, because it's just so different. I mean just to have that sort of freedom is something that you don't often have in college. I didn't know where to start at first. You have to find a focus first, and once you find a focus it's been really fun. But for a while it was like ahhh! You're not giving me any direction. I mean I'm so used to being herded into "this is what you're supposed to write about" and "this is what you're supposed to do." (Todd 11-1-08)

Heather, a Junior studying neuroscience, expressed a similar blend of excitement and frustration:

I guess my main problem for the bulk of the class was just the lack of clarity and, like, an unwillingness to commit to an idea until I was forced to by the deadline. I guess my idea was too vague and too big and not focused enough to have any tangible form. (Heather 1-5-09)

What do Todd and Heather's comments reveal about the effects of Lisa's pedagogical style? Clearly such loose regimentation operates as both a source of excitement and anxiety for these two students, but there is more to say about students' responses to Lisa's course, particularly with regard the value they attribute to their processes of composing and their multimedia projects. In the next section I relate these evaluations to students' sense of digital media composing as a means for reflection and as a means to enhance themselves. One interesting aspect of these responses is Todd and Heather's shared sense that the expanded representational pallet of digital media (relative

to print) affords them more authentic and meaningful opportunities for reflection. This reflective, autobiographical tack, I should add was taken by all but two of Lisa's students.

Both Todd and Heather discuss the value of new media composing in terms of its ability to represent things they felt were difficult or impossible to capture in print. This was particularly important for Heather, who was interested in constructing a visual representation of the mind. For this project, which drew upon her substantial coursework in neuroscience, Heather used the online concept mapping software, Freemind. During one of our conversations she described the heuristic potential of this technology and its attendant style of inscription:

I think it helped me get out everything I was thinking in an organized form that was really organic and intuitive to me, and as soon as I had the map down I basically took certain elements and said, *well here's my video project*. That's what I want to focus on. Like it helps you recognize similarities between the different things that you're thinking about and patterns that you wouldn't have recognized without a visual recognition. (Heather 1-5-08)

Heather values Freemind because the program allows her to represent thought in more "organic" and "intuitive" ways than print. Indeed, Heather's personal investment in new media composing while enrolled in Lisa's section of English 418 revolves around efforts, such as those described here, to organize and represent thought itself in ways that seem more true to her own associative imagination, a style of thinking that she believes transcends the representational affordances of print. This sense of value came into relief when I asked if she preferred composing on the computer to composing on paper, Heather said:

Oh, yeah—Oh my g— I tried to do it on paper. It's cause digitally you can change it whenever you want and you don't lose any readability, and you don't lose any time trying to erase things and write over things, and you never need to tape paper together to make it bigger, and that's my biggest pet peeve is that the paper's never big enough, but on Freemind you can expand as much as you want—no limitations. (Heather 1-5-08)

Heather feels the physical limits of paper are a hindrance to her composing efforts. The fact that the paper is too small for her ideas suggests that Heather has another representational economy in mind—a sense of what is possible with regard to representing thought. This ideal template is quite clearly a function of her interactions with Freemind and other digital media. Had she not experimented with this software, she would not be aware of, or dissatisfied with, the limits of paper. Likewise, she would not be unhappy with the temporal entailments of print—the time “trying to erase things and write over things.” In short, Heather feels that Freemind is a better way to represent thought because it is more efficient and accurate than print media. Has Heather’s interactions with Freemind shaped her sense of how thought should be represented, or was she keyed to the representational limits of print beforehand? I suspect that Heather’s dissatisfaction with print is a direct result of comparison—only by thinking through Freemind, does she reflect upon print as a unsatisfactory medium for representing thoughts.<sup>81</sup> Heather’s comments point to ways in which composing with Freemind is more natural to her than composing with paper.

Heather’s classmate, Todd, discusses his interactions with Adobe Fireworks in a similar way to Heather’s discussion of Freemind. In the following passage, the value Todd attributes to the special effects software is bound to his sense that the 3D effects for his video project represents an accurate representation of how the mind works. Like Heather, he sees new media composing as a means to create more authentic representations of his thoughts:

I was kind of envisioning like a—I don’t know—it was just a jumble of things. I had done something similar to the set-up I have now, with the different things in degrees of 3D space in After Effects, so I thought that would be a really interesting way to weave around because I think it sort of parallels at least our conception of how the mind is organized.  
(Todd 11-19-08)

Here, Todd refers to his semester long project—a compilation of inspirational footage, which pairs triumphant episodes of his collegiate gymnastic career with video segments

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<sup>81</sup> It is also interesting to note that Heather invokes the natural attitude by deeming her interactions with Freemind “intuitive” and “organic.”

pulled from political speeches and the Olympics. Though Todd does not share Heather's background in neuroscience, he discusses his project in terms of its accurate portrayal of the mind. Indeed, both Todd and Heather discuss the value of their digital artifacts and composing efforts in terms of the accuracy with which these representations depict how the mind works.

Another similarity between Todd and Heather's reflections on digital composition pertains to their shared sense of audience and purpose. Both students view their projects as means to reflect on themselves, such that they might be enhanced—made wiser and better through practices of reflection.<sup>82</sup> As Todd and Heather's commentary suggests, digital media expands the representational possibilities for such acts of reflection. It is interesting to note that for both of these students, the migration of self-reflection from paper to screen precipitates comparisons that diminish the potency of print in the face of practices of reflection involving digital media. Todd, for instance, came to envision his video project as a monument to his resilience in the face of adversity. He makes this point explicit when I asked him to describe his project:

It's just like a compilation of things that have inspired me, I guess, through some tough times with my sport, and other things that have come out of my sport, because it's such a big part of my life being injured and two years ago being told that I would never do the sport again and coming back from that and getting hurt again (laughs) that was a pretty rough time when I was pretty down. I mean, some of it is politicians (referring to an image of Hillary Clinton) some of it's my own things that I've been trying to keep in mind, and some other athletes, and there's some stuff that I wrote during that time, and lots of things that kept me going. The interesting part about it is it can keep going forever because there will always be—I will always be looking for things that will inspire me even when I'm not a gymnast anymore. (Todd 11-19-08)

Todd's project is not simply a tool for thought, in the sense that it depicts the way the mind works, but additionally a tool for reflection, one that he believes will serve him well in the future by encouraging him to persist through difficulty. The last sentence clearly indicates that he views his project as an outlet to interests and objectives that exist apart

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<sup>82</sup> Here I am reminded of Michel Foucault's notion of "technologies of the self." Foucault offers an insightful discussion of the relationship between practices of reflection and the rise of writing in Hellenic culture in *Technologies of the Self: A Seminar with Michel Foucault*.



from English 418. What he finds most interesting, and I presume *motivating*, is that he can “keep going forever.” The statement is somewhat ambiguous; initially, I could not discern if he was referring to a continuous process of integrating video clips into the project, or that his project will continue to inspire him throughout his life. The answer becomes clearer, however, when Todd discusses his project as a motivational tool:

I guess it is kind of like a journal for me because it reminds me of how far I've come from when I was on crutches for three months, or like not able to run or able to do a calf raise or anything like that. I guess in that way, if I'm ever having a bad day in the gym or whatever I can pull it up and look at it. Or the same thing if things aren't going well in my non-sport's life, I can look at it and kind of remember that I'm being ridiculous and that there are a lot bigger issues that I need to be focused on. (Todd 11-19-08)

Here, Todd reveals that his multimedia project is bound to self-care. In this sense, the project is a technology of the self, which he envisions deploying during times of adversity. Michel Foucault describes technologies of the self as a “matrix of practical reason” that permits individuals to transform themselves in order to attain a certain state of happiness, purity, wisdom, perfection, or immortality” (17).<sup>83</sup> This conception of self-care is consistent with Todd's vision of his future interactions with the project. He imagines a future version of himself lifted from a dark mood, his happiness and motivation restored by watching the triumphant video unfold.

Though Heather's mind-mapping project does not serve the same motivational ends as Todd's work, her blog posts offer some indication of the ways her class blog served as a means to reflect upon the important decisions she was facing in the near future. In this way, Heather, like Todd, uses digital composing as a means to care for her self. The following post, for example, offers an explicit link between Heather's experience in English 418 and her decision to switch majors:

This class, in particular, encourages a way of thinking that is both wonderful and frustrating. In Lisa's class, we practice a mental (referring to all aspects of the mind, not just intellect) flexibility that almost makes it impossible to avoid developing an integrative/multidisciplinary

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<sup>83</sup> From: Martin, L.H. et al (1988) *Technologies of the Self: A Seminar with Michel Foucault*. London: Tavistock.

framework. So I've decided to design my own major [ICP], based on my interpretation/application of Lisa's theories. It's been torturous deciding to "drop" English. In more than one way; it's not only the intense reading regimen (that I would never be able to keep on my own) and forced development of writing/literary analysis skills I'd be "missing out" on, but also the way of life, almost, that is conferred by stability and security. This may be overdramatizing it (micro-crises occur on a daily basis), but sometimes I feel like I'm looking into a bottomless pit when I think about the decisions I've made recently about my almighty Future. What the hell am I doing not going to med school (parental voices reverberate)? It's a weird mix of residual immigrant mentality, Confucian notions of filial obligation, and, most of all, the desire to be (an) Independent and uh, "true to myself" whatever that means. But I'm already creating my curriculum for the ICP. For the first time, I feel like I'm the one designing my future, autonomous, completely accountable. It's fresh and exciting, but I wonder, if this falls through the floorboards, will I find myself wishing for the sweet, constricting lethargy that comes with following someone else's plan? (Heather's blog, 12-01-08)

This tenor of this blog post is consistent with most of Heather's blog entries, which is to say, Heather uses her blog to express both anxiety and enthusiasm about her future. Many of Heather's reflections have to do with the courses she intends to take the following year. This focus is a result of her decision to design her own major, an opportunity made possible by State University's Individual Curriculum Program (ICP). I believe that the focus for her blog and perhaps even her decision to enter the ICP is a result of Heather's experience in Lisa's course. This intuition is supported by Heather's many references to the impact Lisa's ideas have had on her thinking. The following blog entry, for instance, suggests that Heather uses Lisa's course as a lens through which to shape her individualized curriculum: "I've got about 11 classes on my short list for next semester, which means I'll be spending the first week shopping around. It is almost unfathomable how many wonderful Lisa-style courses there are in LSA alone" (Heather's blog, 12-01-08). Heather's decision to design her own major is both inspired and fraught; she is clearly energized by the prospect, but also anxious because she feels as though her interest-driven course selections represent a departure from her parents' wishes:

I'm excited to see how these classes will change my mental outlook, but also, very honestly anxious. I think my parents would be angry, maybe even disappointed that I'm allowing pure interest to direct my plans

(shouldn't it have been that way from the start? But i'm lucky I have the luxury to even think this way, to even believe in it.). I'm going ahead with it anyway, despite all that, and the fact that I wonder sometimes if I can even trust my own instincts. (Heather's blog, 12-01-08)

For both Heather and Todd, digital media composing becomes means to care for themselves. For Todd, this care manifests as a project that represents his resilience and athletic successes despite multiple injuries, a project that he intends to revisit in the future for inspiration. Heather's concept mapping project and blog represent two different technologies of the self. Her mind-mapping project serves as a way for her to understand her own thought processes and represent dynamics of the mind that are difficult to capture with print. The blog, by contrast, operates more like a traditional print journal with alphabetic text as the primary medium through which Heather considers future academic and professional endeavors. While occasionally frustrated by the lack of regimentation of Lisa's course, these students eventually created projects that helped them represent important events in their lives and reflect on feelings spurred by those events.

Not all the students in Lisa's section, however, considered the class blog a forum fit for reflection or means to enhancement. Lori, an avid blogger before taking Lisa's course, expresses reluctance about required weekly blog posts:

I'm having trouble keeping up with the class blog—there's almost nothing real about the process of doing this blog. The anxiety about this blog—if I don't complete it—then what? This one [her class blog] is driven by anxiety. My personal blog is protected from external pressure.” (Lori 10-29-08)

Unlike Heather, who uses her class blog to reflect on important life decisions, Lori finds the class blog unappealing because of “external pressure” associated with maintaining a required blog. The personal blog Lori created before enrolling in Lisa's course is much more important to her. Although she was told she could receive credit for simply merging her course blog and personal blog, Lori chose to keep the two separate, meaning that she maintained the “phony” class blog simply to meet the course requirements.

Lori's decision to separate her personal and academic blogs was driven, to some extent, by her wish to remain anonymous. The following comment highlights Lori's ambivalent feelings about the allure of anonymity:

I know now that my Dad reads my blog, and so the kind of privacy I need to do my work is compromised...I'm really torn about this. I really like the idea of collaboration—of having this [blog] tied to my physical being, but I'm really anxious about losing the freedom of the anonymity. (Lori 10-29-08)

I find this comment interesting for what it says about Lori's sense of the difference between blogging for English 418 and blogging for herself. Unlike Heather and Todd, Lori does not want to use her class blog as a technology of the self, primarily because the course blog resists her efforts to compose anonymously—an anonymity she associates with freedom.<sup>84</sup> Lori resents being required to post on the class blog because she feels it is less authentic than her personal blog. How does this point of tension relate to issues of technological change and writing pedagogy? One way to read Lori's negative response to the class blog is to suggest that even loosely regimented pedagogical styles impose a degree of regimentation on students' composing efforts that can harden the line between writing for one's self and writing for school. Although Lisa allows students to choose their own projects, pursue their own interests and so forth, even minimally regimented courses assert boundaries by existing within the institutional regimes of schooling. Lori's resistance to the blog requirement suggests that the global reach of a blog does not transcend the boundaries of the course; it remains a course blog, which is to say it originates with Lisa's vision of 418 rather than Lori's. Despite the freedom Lisa grants Lori, the *course-ness* of the blog remains unappealing to her. Lori's comments point to the fact that it is not simply the relatively loose or strict regimentation that affects students' sense of ownership of their digital texts, but rather the origins of this regimentation. Lori was motivated to maintain her personal blog entirely apart from Lisa's requirements prior to the course because it was unbound from course

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<sup>84</sup> Lori's personal blog does not include her name or any other identifying information, whereas the course blog includes "English 418" in the URL.

requirements, whereas the course blog was quite obviously bound to Lisa's pedagogical expectations.

Lori's negative feelings about the course blog raises questions about the value students attribute to digital media composing inside and outside of school. Unlike most of her classmates, Lori maintained a blog long before she entered Lisa's course, and this personal blog played an important role in her life. The devaluation of the course blog is a direct result of Lori's more authentic blogging experiences outside of school. She refused to compromise the authenticity of her personal blog by enrolling it into Lisa's course because she did not want to sacrifice the anonymity and freedom she associated with her personal blog. In short, the value Lori attributes to blogs and blogging has a great deal to do with her personal history, particularly her use of similar media outside of school. Lori's response somewhat contradicts the New London Group's assumption that that interactions with media outside of class make similar media attractive during school. Indeed, Lori's motivation to blog outside of class discouraged her from maintaining her course blog. Lori's example resists the commonly held belief that students are likely to be motivated to compose with digital media because it is central to out-of-school literacy practices. Indeed, her comments suggest that such out-of-school writing can, in fact, be the source of resistance and resentment to similarly mediated school-bound writing. For Lori, there is nothing "natural" about maintaining a school-bound blog, despite the fact that she naturally gravitates toward blogging outside of school. Rather than a means of enhancement, then, Lori views the imposition of a school-bound blog as a potential source of diminishment.

### *Professional Enhancement*

While students in both sections of English 418 discussed the role digital and multimedia composing might play in their future careers, Richard and Allen's students seemed much more attuned to the professional relevance of their efforts. Likewise, compared to Lisa's students, Richard and Allan's students were more invested in learning skills that might inform their future careers. I should add that English 418 is an upper-level elective, so these students may very well have entered the course presuming that it

would be relevant to their professional trajectory. My sense, however, is that the professionalizing sentiment expressed by Richard and Allan's students deserves further examination, particularly in light of Lisa's students more self-reflexive orientation to digital composition.

Richard and Allen's class was held in a traditional PC computer lab located adjacent to State University's largest computing hub. Computers lined three of the walls in horseshoe configuration. A large rectangular table was stationed in the center of the room, upon which the instructor's computer resided. Compared to DS3, this lab appeared plain, perhaps even antiseptic. Unlike the movable tables populating DS3, the furniture here was stationary and the computers were bolted to the tables. No one would mistake the room for anything other than what it was—a computer lab, plain and simple.

In terms of pedagogical style, it is interesting to note that Richard's website mirrored the plain functionality of his classroom. In contradistinction to Lisa's wildly ornate website/classroom pairing, the aesthetic principles informing Richard's website and classroom were conventional and subdued. Did the style of these pedagogical actors affect students' appraisal of their efforts to compose with digital media? It is difficult to say for sure, but I tend to believe that the businesslike appearance of Richard's website paired with the utilitarian classroom might have oriented students' sense of what it means to compose with digital media differently than the unbridled style of DS3 and Lisa's website. Indeed, students in Richard and Allen's course often discussed digital media composition in terms of its utility, particularly with regards to their career ambitions. In the following passage, for example, Nellie discusses multimedia composing as a means to break into the magazine publishing industry:

Two summers ago, I ended up interning for a [publishing company's] website, and I did a lot of on-line editorial. That's when I got really interested in multimedia and all of this technology, which is all stuff you don't necessarily learn in any other sorts of classes. This was all really interesting information that, one, counted toward my English major and, two, it's information like Flash and Dreamweaver, and all sorts of stuff that I never learned that I might want to use after graduation, which is like really good skills that not a lot of people know, so it makes me more employable, but it's also information I'm really interested in learning, just based on what I'd like to do with the rest of my life. (Nellie 10-02-08)

Nellie's summer internship experience allowed her to see first-hand the profound ways in which magazine publishing was being transformed by digital technology. Here she clearly attributes a great deal of potency to digital composing as it relates to her career ambitions. What I find most interesting about this passage is the rather limited language Nellie has for describing "all of this technology," this "stuff" that "you don't necessarily learn in any other sorts of classes." Nellie quite obviously attributes a great deal of value to this "stuff," these "really good skills," but she has not identified the particular skills that will lead to her enhancement. So while she expresses a good deal of enthusiasm for digital technology and multimedia composing, her attributions of value are directed toward a very general object—technology as it exists in the cultural imagination, a source of virtually unlimited potential and enhancement.

Leah, one of Nellie's classmates, offered a similar response when discussing her reasons for enrolling in the course. In the following long passage Leah discusses the value of the course in terms of its potential to enhance her English major, a process that hinges upon her ability to market herself through social media and the design of rhetorically effective professional texts:

The most critical thing young people can do right now is separate themselves out from this huge influx of educated people to get that one job that is particularly difficult to get nowadays. And I think the biggest way that we can do that is just market yourself and try to and at least these days what I'm trying to do is market myself as a package, so you know an English major is just not sufficient anymore to get a competitive job. I don't have a statistic I can pull out for you, but it is becoming increasingly common to have a BA in anything and so that no longer can be the defining quality. Even a Masters in something isn't as good as it was twenty odd years ago. So to have the presentation of yourself that you can give. And I've been very fortunate. I mean, I have a flashy job this summer. And I was talking with some friends from the news section of the newspaper, and they're having trouble finding jobs, and I've been trying to help people find new ways of marketing themselves, and I think one of the big contributors is just that I've had some very similarly motivated friends in the design world who have given me very excellent advice about how to have a resume that is designed that is not just written and have a business card that is designed and not just written, and you know to be able to become a vocal and visible advocate for yourself

because no one else is going to be out there doing it for you. Technology is 100% the defining characteristic that will—I don't know—save your skin. Social networking has been 100% critical for me getting the last couple jobs I've gotten. I mean, I was entirely, if we're talking strict resume, I was entirely under-qualified for my last job. (Leah 12-11-08)

Leah's response to my question about the value of English 418 clearly resonates with Nellie's sense of the course as a means to establish her professional identity, but these two responses differ with regard to *how* they understand the course providing the means to such opportunities. While Nellie values the course because it provides opportunities to learn digital composing skills that will make her more employable, Leah values the course as a means to market herself as “a package,” which is to say, a means to build her personal brand. This subtle, though important, difference hints at the ways students in Richard and Allen's section viewed digital composing as a means to care for themselves.

As noted earlier, Foucault defines “technologies of the self” as a “matrix of practical reason” that permits individuals “to transform themselves in order to attain a certain state of happiness, purity, wisdom, perfection, or immortality” (17). While both students viewed their presence in English 418 as a means to enhance themselves, their sense of the value of this enhancement differed: Nellie viewed the course as a means to learn skills that would increase her chances of finding and retaining a job in publishing, whereas Leah viewed the course as a way to learn skills that would allow her to enhance her personal brand. The meaningful differences between these two techniques of self-enhancement begin with different conceptions of the self, which can be compared through the lens of *distributedness*. The value Nellie attributes to learning “skills” associated with digital media composing suggests a form of enhancement that works upon a relatively consolidated version of self; Leah, by contrast, understands the acquisition of these skills in terms of her ability to create and distribute well-designed extensions of her personal brand via business cards, resumes, and websites. For Leah, in other words, care of the self is synonymous with care of the various texts and media that represent and distribute her professional profile—her brand—across space and time and, she hopes, into those professional networks that she hopes to enter.



Like their classmates, Leah and Nellie valued digital composition as a means to professional enhancement. Both students imagined that the skills they were learning in English 418 would not only help them break into their targeted careers (publishing and journalism, respectively), but would also grant them a more general advantage on the job market. Indeed, such statements were common among the students in Richard and Allen's section, but relatively uncommon among Lisa's students. These differences raise interesting questions about the way pedagogical style influences students' conceptions of their potency, as well as the value they attribute to different artifacts and composing practices. Students' very different goals and orientations to composing in these two sections of English 418 suggest that those patterns, contradictions, and repetitions constituting pedagogical style in highly mediated classrooms may not only organize students' interests but also tune their feelings of power and influence. The next chapter further examines the ways students' feelings of enhancement are bound to the media with which they interact by focusing on Richard and Allen's students' efforts to compose with Adobe Flash, a computer application that played a significant role in directing students' sense of audience and purpose.

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Students' attributions of value to digital media composing in these two sections of English 418 were very much linked to their sense of personal enhancement apart from academics. While teachers in both sections encouraged students to view digital composition as means to self-enhancement, the different sections generated very different results. Richard and Allen's students seemed much more attuned to the professional relevance of their efforts; they viewed digital media composing as a way to bridge the gap between school life and work life. Lisa's students, by contrast, viewed digital composing as a means to personal discovery and reflection. Though I cannot make definitive claims about who or what influenced students' orientations to composing, I suggested that these differences emerged, in part, due to the different pedagogical styles of the two classes. The results of this comparison also indicate that students in both classes viewed digital composing as a means of self-care that extended beyond grades or

classroom competencies. For Lisa's students this care tended to manifest as self-reflection, whereas Richard and Allen's students tended to equate self-care directly to becoming proficient with a range of web design software, which they imagined would make them more marketable. As I will illustrate shortly, Richard and Allen's students' sense of the enhancing power of digital composing was very much bound to a website design and development tool called Flash. The next chapter examines students' and teachers' interactions with Flash and considers its emergence as a particularly potent pedagogical actor in one section of English 418.

## Chapter 6

### The Potency of Flash

*I think that one of the things that makes this course feel good is a little bit of the marine mentality. And it's justified not just by the credit hours but by the fact that they really are doing something special. The common way to say things, you know, is that the younger you are, the better you are at technology. The profs don't know what's going on. The students are all doing Twitter and Facebook, but there's an 11-year old out there building Web 3.0. That's not true for this group. This group is beating the pants off that 11 year-old. They have a right to feel like marines—the few the proud.*

—Richard

*I just want to help design something cool.*

—Mindy

When Richard and Allen began teaching English 418, their instruction revolved around Microsoft Word and PowerPoint, but after a few years, most students entered the course familiar with these applications. In Richard's opinion, students' computer competencies diminished the purpose of the course, which was to make students sensitive to the psychological and philosophical implications of technological innovation. Reflecting on his decision to steer the course toward more advanced tools, Richard suggested Word and PowerPoint were "too simple to have that same visceral impact of making [students] aware of the technology" (10-17-08). In an effort to rectify the situation, Richard and Allen began requiring students to use Adobe Flash, a design and development program, to create websites and multimedia projects. As the Internet's popularity spread, Flash took on an increasingly important role in Richard and Allen's

course. Here I focus on the ways Flash directs students' interests and influences the value they attribute to different elements of their multimedia projects. I also consider students' attributions of value to Flash, which often relate to their sense of personal and professional enhancement as well as their sense of control over postulated audiences through the visual and interactive elements of their multimedia projects.

Students' interest in Flash was spurred by Richard's enthusiasm for the application. For a sense of this enthusiasm, consider the following passage, where Richard uses a musical analogy to emphasize the significance of Flash for the course's success:

I like to make a distinction between guitar technologies and violin technologies. If you have heard Itzac Perlman play a violin, you know how good a violin can sound. If you've heard Carlos Montoya play guitar, you know that the guitar is equally great. The thing is, you can learn to play sing along music on a guitar in half-an-hour, but you can't get people to stay within fifty yards of you with violin until you've had your first three months of lessons. Ultimately they are the same, but at the beginning guitars are simply more rewarding. One of the things we do in this course is exploit the possibility of guitar technologies, and as long as we have guitar technologies that can really be used, I think the course will go on because we can always stay a little bit ahead of what most people can do because not everyone plays guitar. But if we get to point where the things that they [students] want to do require violin technologies, then we're going to have to stop doing it—the same way we stopped PowerPoint. Now, if you wanted to teach a course on technology and rhetoric, you might have an exercise in PowerPoint, so as to focus on the rhetorical implications of PowerPoint, but this course has a wider range. It's actually trying to sensitize you to the technology and the humanities in total, so where it will go will depend upon where we can find guitar technologies, and I think we're at the edge now. I think that Flash—you know if I didn't have those examples that they could just grab—now I think back to Vygotsky—I think that the initial step into Flash is so hard, it really is a violin technology, and I think they would get discouraged by the screechy noises before they learn to make music, which is why I made those examples. (10-17-08)

I include this rather lengthy passage to illustrate the degree to which Richard calibrates the course's efficacy as a function of students' interactions with Flash. When he describes the program as “really a violin technology,” he underscores the steep

learning curve commonly associated with the program. Indeed, Flash is a professional website design and development tool that grants users a great deal of power and flexibility relative to other programs. With this power and flexibility, however, one encounters a good deal of complexity, which, for the novice user, can be overwhelming and demoralizing.

Flash is mainly used to create interactive elements for websites. Though the program shares many of the tools and keyboard shortcuts of other Adobe applications, it also requires that users become familiar with ActionScript, a developer-level scripting language. Learning to use ActionScript was a major hurdle for all students in English 418. Even Toby, who entered the course with a background in computer programming, struggled at times to gain command of Flash. Richard worked very hard to help students become proficient with the program, dedicating two class periods—three hours total—toward explicit instruction in Flash basics. These class sessions provided students with a general overview of the program as well as guided assistance for techniques, such as working with layers, creating buttons, and animating objects. Richard supplemented his instruction by posting Flash examples on his personal website, which students were encouraged to adapt for their own projects. The files remained open on Richard's personal website, meaning that students could study the syntax of the ActionScript and learn how this syntax generated the interactive animations Richard created. It should be noted, however, that Richard's three-hour crash course in Flash and the examples posted on his website offered students a useful but altogether preliminary sense of the program. As a result, most students visited Richard during office hours for extra help. While students often left these meetings with solutions to their Flash problems, there were times when Richard could not help.

Even with Richard's support, students often discussed their experiences working with Flash as a struggle. Indeed, all students experienced at least one frustrating, time-intensive Flash-related problem. Here, Mindy recounts the trouble she encountered while creating her individual project:

One of the buttons didn't work, and I could not figure it out. I took it to Richard and he was absolutely baffled by it, and I eventually figured it out on my own after not touching it for like a week and a half—really easily.

It's just like this is stupid, I don't understand why they made the script work like this. (Mindy 11-05-08)

Mindy was so frustrated by this experience, that she considered creating a Flash troubleshooting guide as one of her class projects. Indeed, despite her best efforts, she could not find solutions to her problems on Flash-related Web sites.

I couldn't find a single thing telling me what was wrong with my buttons on the Internet. You'd think there would be something other than just a tutorial to walk you through every single little thing. I just feel that if a program is known to have certain issues it should have an FAQ...like a trouble shooting guide. At least Adobe could point you to a helpful site and if they had good customer service and it would be to have a team that would post guidelines to making frequently made buttons or other things in Flash. (Mindy 11-05-08)

Mindy's sense of the inscrutability of Flash is consistent with other students' experiences working with the program. Despite these frustrating episodes, students persisted, and by the end of the semester became at least marginally proficient in the program.

Richard realized that by leading students outside their comfort zone, he courted their frustration. But this techno-shock was precisely what he hoped to elicit. Such discomfort was necessary, he believed, for his students to "feel" the ways technology altered their perceptions of the world. During our conversations, Richard expressed his belief that the discomfort and disorientation most students experienced while learning Flash granted them a critical understanding of the way the program influenced their compositional choices as well as their sensitivity to audience and purpose. In the following passage, he explains the aims of the course in relation to Flash:

I think these folks are coming out of this class having something really substantial that they can point to with pride. This is an experience they are not going to forget, and it makes a contribution. I still get emails from the public because I'm on the contact list for these websites that were done years ago. "I just used this in my paper, how do I cite it." These things make a real contribution, which is great. But the other part is, I think they generally have a deeper understanding now about the way technology matters, and the ways its mattering changes as you become more familiar with it. I think that whole process of technological change and what it

means psychologically and culturally that they now feel. Whether or not they can articulate it, I don't know because we don't give them that sort of test. But judging by their conversations and their emails about Flash, they're getting it. So that is the second most visible change—we've had to keep pushing them, keep making them work with something that makes them uncomfortable, unfamiliar, not for its own sake but because it can do good work. (10-17-08)

Some students echoed Richard's belief that the difficulty of Flash was, in fact, part of its value. Julie, for example, said that despite knowing how to solve her problems through other means, she was glad to be struggling with ActionScript: "I felt that was a way more complicated way of doing something that would have been relatively easy in HTML. But I think there's some value in practicing ActionScript, you know, to make it hard." Julie goes on to say that it was important to learn Flash because of its popularity and because unlike other programs "we experience it a lot without realizing it." During an interview, Julie described her sense of Flash's value as follows: "Well I guess that it's just the currency. So even though it's difficult, if you master that you have something over other people I guess in the workforce and your general life" (10-31). Julie's notion of Flash as currency is echoed by nearly every other student in the class, a fact that leads me to view Flash as a particularly potent actor in Richard and Allen's section of English 418.

### *The Value of Flash*

As discussed in the previous chapter, the motivation for many of Richard and Allen's students to enroll in English 418 was bound to their professional ambitions. When asked why they were taking the course, most students mentioned that by learning to compose with software such as Flash, PhotoShop, and Dreamweaver they believed they would be more appealing to future employers. Amy, for example, linked her interest in learning the rudiments of Web design to career ambitions related to publishing: "We're all in agreement that while this class is sort of wonky, it has taught me a lot of skill sets that a lot of people looking into publishing or online publishing don't have. And so it was really good to get these skills right now without having to play catch up later" (10-02-08). Julie, too, believed that technological skills were essential to her projected career

as an information professional: “Informational professionals are required to do vastly different things in different settings, but I think if I can pick up as much technology as possible, it will be beneficial in the future” (10-31-08). Opportunities for future employment were also a primary concern for Ava, whose “passion” for print layout and design was in crisis as a result of the rapid decline of the newspaper industry. Ava’s reasons for taking the course were very much informed by the particularly tight job market in journalism and related fields. English 418, she believed, would help her learn skills necessary to succeed as a designer in an increasingly Web-based newspaper design environment. This is why, on multiple occasions, she expressed anxiety about being “behind the curve” with regard to her on-line presence and her facility with Web site design applications.

Ava and her classmates understood proficiency with digital technology as a means to acquire professional potency. For Ava, and indeed for many students enrolled in English 418, learning to use website development software—particularly Flash—was an important step toward enhancing their professional opportunities. Ava’s experience working as a designer for the school newspaper made her something of an exception, in the sense that, unlike her classmates, she had a relatively clear sense of the types of software she might be expected to master as a professional. By contrast, most students’ attributions of value to Flash resembled Julie’s more general sense of personal/professional enhancement. As the course progressed, however, students accorded more specific value to Flash. One might say that students’ general sense of the importance of technology consolidated in notions of value pertaining to this particular program. Melinda, for instance, came to understand the value of learning Flash as a means to augment the professional potency of her English major. “I’m an English major, so, you know, anything you can do to make yourself more marketable is good, especially with computers. That’s why I want to learn to be better at Flash.” (10-15-08). Melinda’s comments highlight the transition from a general sense of the potency associated with learning to compose multimedia texts, to one oriented almost exclusively to Flash.

English 418 was not a course geared toward professional development, which is to say, Richard and Allen did not explicitly link facility with Flash to specific career opportunities during class. The topic did emerge, however, during my interviews with



both professors. Indeed, Allen viewed it as the most important reason for people with humanities backgrounds to take the course:

If you have an undergraduate degree in the humanities, to get a career you usually need some sort of skills. This is the kind of skill set that helps people either with a degree in English, or Journalism, or Art, or a degree in the School of Information. The whole idea of the School of Information, even from the days of library science, was to give people in the humanities and social sciences a career by teaching them technology on top of their subject skills. And today, that's absolutely necessary. (Allen 11-13-08)

Students' sense that they were acquiring extraordinary personal/professional potency in 418 was also reinforced by their conversations with friends and family. Indeed, nearly every student I interviewed mentioned that they had shared their websites with significant members of their social network.<sup>85</sup> This impulse to show off their newly acquired skills highlights the value students associated with their efforts in 418. Mindy, for instance, commented that "it's nice to have a class that you have to work hard on, but you have a result at the end that you can show people (11-5-08). Echoing this sentiment in her interview, Melinda offered a brief anecdote about her mother's reaction to seeing her individual project online: "When I showed my website to my Mom she was so happy. She was like, "You're actually learning something." Now she thinks it [State University tuition] is actually worth the money" (10-15-08). The fact that students' sense of self-enhancement was reinforced by friends and family suggests that the value attributed to website creation and design extended beyond the classroom. Students' attributions of value to Flash, in other words, were not simply the result of Richard and Allen's promotional efforts; they were bound to a broader network that granted the program and attendant composing practices a good deal of importance.

As students became more familiar with Flash, a world of possibilities opened to them, and this sense of possibility directed their ambitions with regard to their individual

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<sup>85</sup> Toby was the only student who did not mention taking pleasure from showing his website to friends and family during our semi-structured interviews. I did not explore this finding in follow-up interviews, but my sense is that it may have something to do with the very technical nature of his academic pursuits. My conversations with other computer scientists suggests that there is, in fact, a drop-off in prestige when one moves from working on backend issues to matters of design.

and group projects. Consider Nellie's response, when asked about the types of projects she hoped to complete for the course:

It's not so much the subject matter, which is also interesting, I'm in the baking group which is information that is very interesting to me, but I really hope to be able to develop really interesting websites, with lots of interesting stuff going on, so for my individual project I'm doing the zipper [referring to the topic of her individual project], and I don't have any ideas in my head except that I want to be able to do something on Flash where you unzip it, and that it is just something that would be so cool, and I don't know if I could actually do it, but it would be really fun to play around with Flash and see if that's something that I could take from my head to the computer, which is something that I've never been able to do before. (Nellie 10-02-08)

This sense of wanting to influence the audience by way of creating an interactive zipper encapsulates an orientation to audience that privileges the visual and interactive elements of websites over the textual and ideational elements. What is most important to Nellie is that visitors to her website can interact with a movable zipper. Indeed, this particular orientation to audience is what dominated most discussions around students' individual and group projects. This sense of value was articulated time and again during the presentation of students' individual projects. Before presenting the comments elicited by students' presentations, I want to include Richard and Allen's description of the assignment that precipitated the in-class conversation. Here is the assignment prompt that appears on Richard's homepage:

*Individual product:* A critical study of the humanistic implications of some technology as broadly conceived, e.g., alphabetic phonography, papyrus, telegraphy, sound movies, hypertext, microwave ovens. All individual products should be done primarily as Flash movies although, where appropriate, those movies may link to online PowerPoint presentations, flat Web pages, video clips, and so on. This assignment challenges students to pursue an unusual chain of inquiry: come to a definition of a technology that allows you to understand its fundamental nature and affordances, conceive of its potential applications, and consider why some of its potential applications did not work out while others did and the humanistic implications of both those that didn't and those that did. Of course one typically cannot do this in detail for every application of a given technology, but one can choose representative applications that

allow discussion of the most important humanistic implications. Choosing which applications to study extensively and to discuss, both hypothetical and actual, is part of the rhetorical and argumentative task. This overall effort helps get students to recognize that technologies only seem transparent and inevitable and it helps stretch one's imagination about both technology and the humanities. That this assignment should be executed using at least Flash if not other computer-based technologies challenges students to use new technology even while working on the implications of some other once-new technology. The use of new presentational technology should make palpable that rhetorical choices, like so much else in our lives, are in part shaped by the technologies one uses. Each presentation should represent as much finished work, and be of the same scholarly rigor, as one would expect of a traditional, tightly reasoned, well-supported, argumentative research paper of at least ten pages. Students should feel free to dovetail the work on their individual products with that on their group projects. Those who, in the light of later developments, wish to revise, may do so. If the first submission is judged serious and the revision judged substantial, the later grade will supplant the earlier. (Richard's website)

I present the assignment in its entirety because I believe it emphasizes the importance of the ideational rather than the design aspects of students' projects. Though Richard and Allen do note that students should be aware of the rhetorical nature of their design choices, the assignment description clearly gives more credence to demonstrating awareness of the humanistic implications of the technology, research, scholarly rigor, and so forth, than the creation of visual effects or interactive buttons. Nonetheless, students' comments to one another following these presentations pertained, almost exclusively, to matters of design, navigation, and interactivity. What I find most interesting about the commentary that took place during the two class periods dedicated to presenting and critiquing students' individual projects is the contrast between presenters' discussions of their websites and the feedback they received from teachers and classmates. Interesting because this feedback generally did not address the ideas pertaining to the history or humanistic implications of the technology. Rather, the majority of the comments were directed toward ways the site reflected the student composer's command of Flash. Clearly aware of her classmate's interests, Melinda went so far as to apologize for the amount of "dense information" and for not including "a lot of fun, interactive stuff" during her presentation. What I am suggesting is that the extra-textual affordances of

Flash—the animation of objects and the creation of interactive elements—directed students’ attention away from the core ideas and arguments their projects were meant to express. This example highlights the competitive dynamic Lanham associates with digital spaces; students directed their attention and commentary toward the visual and interactive elements of their classmates’ projects and virtually ignored choices related to alphabetic writing. Why, one wonders, did students focus their attention on the style rather than the substance of their classmates’ projects?

With this question in mind, I turn to an example illustrating the degree to which Flash-related concerns dominated students’ classroom conversations. This example is taken from a whole-class critique of Melinda’s website, which addressed the history of canning technology. Despite the obvious effort Melinda put into researching the history, impact, and humanistic implications of canning, students’ comments and questions were very much oriented to the visual and interactive elements of the site. What follows is a brief sample of students’ and professors’ comments immediately following Melinda’s ten-minute presentation:

Yvette: I like that you have a lot of text but it doesn’t look—I feel like it could be really overbearing and I don’t think that it is in your site. I think that you have a lot of information but it doesn’t seem impossible to get to.

Allen: I like the heavy concentration on implications because canning at its root is pretty simple technology.

Nellie: I think it’s cool. This is actually something I never even thought you could do—I don’t know why. But that your buttons are actually words and numbers because that was the thing with me; I was always making buttons and writing words over them, and I could have just made words (laughs), so it’s good that you actually figured that out.

Julie: I was going to say that I like your war buttons.

Toby: I like those too because they have the images with them.

Mindy: Me too.

Melinda: I tried to do that for the home button, and for some reason, I did the exact same thing that I had done for those buttons. And for some reason I couldn't get this "home" button to get bigger when you clicked on it.

Daniel: That home screen looks great.

Julie: Yeah, it really does. Nice font and that shiny metal can.

Ava: I like how the can is like continued down so it's really easy to tell what they have.

Richard: It's also nice that the can is tipped in the forward direction. If the can was just standing their flat, I don't think you would have this impulse to follow it. It looks like it's moving to the right, which is how you read in English. It's Photoshop—you could have made it any direction you wanted.

As this transcript indicates, with the exception of Allen's praise of Melinda's robust account of the implications of canning, most of the comments were directed toward the visual and interactive elements of the Web site. These responses were not atypical; the emphasis of nearly all the discussions following the presentations was on students' technical proficiency with Flash. Despite the fact that students' presentations were almost entirely focused on discussing the ideational aspects of the project, the follow-up commentary was directed toward matters of design.

As illustrated by the responses to Melinda's individual project presentation, there was a keen interest in students' facility with Flash and scant discussion of the history or

implications of the technologies students examined. One could say, then, that concerns often central to academic argumentation were virtually ignored in favor of commentary directed toward images, navigation, and interaction. I believe the emphasis on design, which was the primary concern expressed during whole-class discussions of students' individual projects, highlights the competitive representational economy that can emerge within the context of multimedia composition. Again, this example echoes Lanham's claim that in digital spaces "words no longer have it all their own way" (xii). In the next section I consider problems that can arise out of this competitive dynamic, particularly when design takes precedence over purpose.

### *Design before Purpose*

So far I have suggested that students' interactions with Flash established an ordering of values whereby conceptual issues were viewed as less important than the visual and interactive elements of students' multimedia projects. Students, in other words, tended to place interactivity and images above ideas and argument. During class discussion and interviews students rarely spoke about the portions of their multimedia projects that consisted primarily of alphabetic text. This abiding interest in the visual and interactive portions of their projects warrants further investigation, particularly in light of arguments aimed at promoting multimedia composing.<sup>86</sup> I want to proceed down this path, turning now to the ways in which the visual and interactive allure of composing with Flash influenced the creation of one group's final project—a website meant to explore the humanistic implications of typography.

During an early meeting with the five members of this group, Richard reminded students about the difference between print-based composing and website creation: "A website is a different environment," he said. "You have to ask yourself what is the integrity of our site? What's its contribution? Your site only exists as long as someone keeps looking at it" (10-28-08). In his verbal assessment of their progress Richard expressed concern that the typography group was working on the visual and interactive portions without a clear sense of purpose. He emphasized that the design of their site

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<sup>86</sup> See, for example, Carolyn Handa (2004), Anne Wysocki (2005), and Gunther Kress (2003).

should emerge from a focused mission statement, which he compared to the thesis of an argument. Here Richard encourages students to refine this aspect of their project:

What I don't yet hear is why I would stay with your site . . . for example, when I go to a cooking site, I often have a purpose—I want to learn how to cook something. I have a feeling that by having a spine—a story to be told, a skill to acquire, an experience to have—your site would be better. (10-28-08)

After viewing the interactive map, which had taken the group weeks to prepare, Richard said, “I think you might have jumped to design before thinking about the spine of the site.” Richard’s notion of spine relates to focus and purpose, and his main complaint was that the group’s interactive map served no other purpose than to look cool. In other words, he felt they had begun designing the map without considering the site’s overall mission.

Despite the students’ efforts to refine their mission statement, the issue remained the focus of Richard’s critique throughout the semester. Ten days after he expressed his initial concerns, he reiterated his sense of the project’s shortcomings: “I have that sense that you went on with the design without a narrative or purpose. I’m afraid that you’re locking yourself into something.” Interestingly, some group members stood by their choice to focus on design before settling on the website’s “spine.” Ava, proposed that they were using design processes as tools for discovering the project’s purpose. Their efforts to create the interactive map, she suggested, were means to invention. Attempting to reassure Richard, Ava commented, “the visual nature of the site could influence the purpose of the site” (10-30-08). This remark indicates that Ava (perhaps other students as well) believed that the design of the site could inform the project’s mission statement, in the same way that drafting or freewriting might help a writer refine his or her thesis. This model of invention, however, never fully satisfied Richard’s expectations. From his perspective, the typography group never clearly articulated the purpose of their project and as a result received a lower final grade than everyone in the group expected.

Why did the typography group focus their efforts on creating a visually appealing, interactive map despite Richard’s advice to focus on refining their project’s mission statement? Part of the blame lies with the representational economy of the World Wide

Web, which features enticing images and rapid-fire interactivity. This possibility is substantiated by Barbara Warnick's analysis of research on website credibility, which determined that for many users of the World Wide Web "the quality of performance" is a more important indicator of website credibility than markers of authorial trustworthiness or expertise. It is also important to note that Richard and Allen played a significant role in directing students' attention to images and interactivity. Richard, for example, reinforced the allure of Flash by emphasizing the rhetorical and aesthetic potency of interactivity. In the following passage, which emerged during a discussion of an interactive graph, Richard discusses interactivity as a necessary extension of the rhetorical power of visual images:

One of the reasons this is attractive as it may be, which is not as attractive as it potentially could be, we seem to agree, is because we get to interact with it, we get to play around with it. One of the reasons Allen and I want you to feel comfortable with Flash is exactly this, so that whatever you show, you can add that extra layer of interactivity that people clearly appreciate these days. (Richard 10-17-2008)

Throughout the semester Richard often encouraged students to consider the semantic implications of the visual and interactive elements of websites. This encouragement likely helped establish a representational hierarchy in the class, whereby alphabetic text and conceptual issues were somewhat diminished when compared to the novel representational pyrotechnics afforded by Flash. Though Richard and Allen's attributions of value likely had a significant impact on students' perceptions of the relative importance of various elements of their projects, I would argue that another factor maintained this hierarchy as well. In the next section I propose that students' attributions of value to Flash and their sense of the potency of highly interactive websites were a function of the program's inscrutability.

### *The Alluring Inscrutability of Flash*

During class discussion Reagan declared, "I think Flash is the coolest program ever because I can't wrap my head around it therefore I'm stupid, but the program itself



must be this amazing thing.” This quote offers an interesting—perhaps disturbing—reminder about the ways students’ interactions with novel inscription technologies affect their evaluations of themselves and others. It also speaks to the possibility that for these students the appeal of Flash had something to do with the program’s inscrutability. Before unpacking this possibility, I want to turn to a conversation that unfolded after students had presented their individual projects, a conversation that began in response to Richard and Allen’s request for students to reflect on the challenges they encountered while creating their websites. Richard instigated the following responses by asking students to comment on the ways they managed their text-based content, since all of the projects were relatively text-heavy compared to most of the websites they had analyzed during class. This question prompted an interesting discussion related to the challenges of revision when negotiating both textual content and design. Ava and Reagan, both English majors, were particularly sensitive to the way Flash altered their composing habits:

I found out pretty quickly from my first and second draft that if I didn’t have the purpose established. Like, often you can start writing, get a few paragraphs of a paper and you can be finalizing your thesis, and then look back. But here I had to have from the beginning a handle on what I wanted to say before I started building things. That was a little bit different and a little bit tricky for me. (10-21-08)

Reagan immediately followed up on Ava’s remark:

I had a very similar experience to yours... the hardest thing for me was trying to find balance. I think I see it now even in our group work, where it’s hard to know which comes first. And we’re saying, oh, the design should be this so the text should look like this. Oh wait, but our text should be this, so our design should look like this. So there’s kind of this constant process of tweaking the design a little bit and then going into the text and then going back into the design, and then going back and changing the design for that again. So there’s this slow, gradual progression that’s really frustrating when you’ve never tried to combine something like this before. Generally it’s just as easy as hitting “enter” or “tab” and your paper’s organized. (11-21-08)

These snippets of classroom conversation indicate that both Ava and Reagan found it difficult to simultaneously manage both content and design. The exchange takes an interesting turn when Toby, whose project was uniformly lauded by his teachers and classmates, announces that his work does not deserve such high praise:

I want to say that I don't know that you should praise my website so much. I just did a lot of design work before it. Because I went through a bunch of designs that I was like, "this looks stupid." So I didn't just come up with it. I mean I had to come up with terrible ones before I thought okay, I guess this one's alright. I mean I had to redo it a few times. (Toby 11-21-08)

Recall that Toby entered the course with sophisticated knowledge of computer programming and engineering. His response to his classmates illustrates that this knowledge made it much easier for him to create and appraise multiple drafts. Toby's comment sparks something of an epiphany for Julie, who goes on to discuss the drawbacks of not having the technical expertise to create more than one design:

So maybe it's that then, for me doing it once, that was a lot. So it was like, okay, this is it (laughs). Whereas maybe if I got better at it (meaning Flash), I think I could be faster at implementing different versions, and I would not be so necessarily in love with whatever it was because of the work that's married to it. You know what I mean. Like when you work so hard on something, it's sort of heartbreaking to trash it and start over. But if I could just quickly play with things. I could be more logical and less emotional. (Julie 11-21-08)

Julie's comments point to a way in which the revision process might be complicated by the introduction of novel inscription technology. Becoming proficient with a complicated application such as Flash takes many hours of practice. When first learning the program, the majority of students' efforts were directed toward negotiating issues related to layout and navigation. Julie's remarks indicate that the sheer emotional commitment to the first draft of her individual project was enough to dissuade revision. Only Toby, whose programming skills exceeded those of his classmates, was able to compare multiple drafts and move relatively smoothly between the rigors of design and content. This finding suggests that composing with novel technologies can complicate students' movement

through the writing process by imposing barriers to revision. In this case, Julie resisted restructuring aspects of her individual project because of the time and effort she invested in her first draft.

Julie's reflections suggest that interactions with some inscription technologies may negatively affect students' willingness to move through various stages of the writing process. This is an important finding for teachers because it suggests the need to adjust expectations with regard to revision when students are composing with novel or particularly complex technology. This finding also raises questions about the effects of different inscription technologies on students' attitudes and composing practices. By introducing novel technologies and techniques into college writing are teachers also shaping students' attitudes toward the writing process? This question is ripe for further inquiry and opens up possibilities for students to think critically and comparatively about their interactions with digital media.

I want to conclude this chapter by comparing Julie and Reagan's figurative commentary about Flash. Recall Julie's sense of being "in love" with her Flash project because of "the work married to it" and Reagan's unflattering comparison of herself ("stupid") to Flash ("this amazing thing"). While these comments share a tenor of intimacy, they obviously connote very different feelings about the program. Though such intimacy is often associated with writers' feelings towards their work, these remarks deserve special attention because of the particular challenges associated with learning to compose with Flash. I have already noted the complexity of Flash and the long hours and substantial effort students devoted to learning the application. I want to round out this chapter by theorizing the relationship between students' perceptions of Flash's complexity and their own feelings of power and influence. At first glance, this issue may not seem particularly relevant to teachers and scholars of rhetoric and composition, but as digital media becomes more integral to writing instruction, I believe it is important to consider how the difficulty associated with learning to compose with these technologies may influence students' and teachers' sense of themselves as well as what elements matter most in their digital compositions.

### *Enhancement and Complexity*

Reagan's description of herself as "stupid" compared to Flash ("this amazing thing") brings to mind Alfred Gell's understanding of the power dynamics that inflect our responses to technically sophisticated objects and works of art. Gell suggests that these responses are bound to one's comparative appraisal of the art object in light of one's own creative powers. In Gell's words, "the attitude of the spectator towards a work of art is fundamentally conditioned by his notion of the technical processes which gave rise to it" (14). Gell goes on to argue that "it is the way an art object is construed as having come into the world which is the source of power such objects have over us—their becoming rather than their being." At first glance this may remind composition scholars of process approaches to writing instruction, where the emphasis is not on the final product but rather the means through which such products are created. This would be true in matters of kind, but misleading in matters of emphasis. Gell emphasizes those processes of coming-into-being that transcend one's understanding—the seemingly magical forces that bring impressive objects into existence.

Here I am reminded of Reagan's belief that "Flash is the coolest program ever because I can't wrap my head around it therefore I'm stupid, but the program itself must be this amazing thing." Recall that most English 418 students entered the course mystified by the workings of Flash. As they attempted to learn various facets of the program, they became both frustrated with and enthralled by inscrutability of the program. Given Reagan's remarks, I wonder how Gell's idea might translate to student-writers' assessments of themselves in light of the complexity or inscrutability of the technology they use to compose? Reagan's remarks resonate with Gell's contention that the fascination prompted by technical achievement is augmented when the spectator cannot say why he or she is impressed. What concerns me most about these remarks, however, is Reagan's sense of her own diminishment in light of Flash's power. Our attributions of value to technical objects and, likewise, our abiding interests in acquiring and/or interacting with such objects, Gell would say, originate with a more basic desire for power and influence. This is certainly true for students in English 418, many of whom viewed their interactions with Flash as a means to enhancement. Reagan's comments, however, suggest that a more worrisome dynamic may be in play as well. If

students feel themselves diminished by such interactions, then the enrollment of complex and novel applications into writing courses might warrant more careful consideration. This is particularly true when one considers the “digital divide” separating different segments of the population. As Reagan’s comment illustrates, interactions with technology can simultaneously entice and alienate students, and such alienation may be particularly acute for those who already feel cut off from the dominant culture.

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When students entered Richard and Allen’s section of English 418, few possessed the skills to realize their ideas on screen. Gradually they learned to animate objects, control Flash movies, and fashion interactive buttons. To get behind the scenes and manipulate even a small slice of the World Wide Web was a thrill for these students, but it is important to recall that not all representational possibilities carried equal weight. Students’ contributions to class discussion as well as their interview responses suggested that their composing efforts were primarily directed toward creating visually appealing and highly interactive websites. These matters took precedence over conceptual concerns or those elements comprised primarily of alphabetic text. Though I cannot account for all of the influences coming to bear on students’ concerns while composing, my observations suggest that Richard and Allen’s discussions of the importance of creating interesting looking interactive websites played a role in directing students’ attention. This emphasis became problematic when the typography group prioritized the design of their website over establishing a clear purpose for the site. This episode is revealing for teachers who integrate website design or multimedia composition into their courses because it suggests that by promoting the affordances of a particular tool, one might also direct students’ attention toward some representational acts and not others. This asymmetry, I suggested, might also have been maintained in a more tacit way by the inscrutability of Flash, which contributed to students’ sense of the program’s power.

While proponents of multiliteracies might welcome Flash and other “amazing things” into composition pedagogy, the findings of this chapter highlight some of the challenges that arise when students are expected to compose with novel and complex

digital technology. English 418 students' sense of potency became closely linked to their competencies with Flash. While the program was attractive to nearly every student in the class, Reagan's remarks remind us that technical pedagogical actors have the power to erode students' feelings of self-worth as well. It is therefore wise to proceed cautiously when introducing novel technology into courses and take the time to assess students' knowledge and confidence ahead of time so that no one winds up feeling diminished or alienated. To connect this suggestion to the larger focus of this dissertation, I would say it is important for teachers to make technological change a topic of critical analysis. Such analysis might be particularly important in courses that require students to compose with novel and/or complex technology, as such tools appear to affect not only students' composing practices but their feelings of power and influence as well.

## Chapter 7

### Thinking through Pedagogical Networks: A Conclusion

*The followers of Zeus, then, want someone with a Zeus-like soul as their beloved. They look for someone with the potential to be a philosopher and a leader, and when they find him and have fallen in love with him, they do all they can to develop this potential in him.*

-Plato, *Phaedrus*

To a large degree, Socrates' argument against writing in *Phaedrus* is premised upon the belief that certain communication technologies are better than others for enhancing teacher-student relations. 'Speaking' through Socrates, Plato proposes that these relations are maintained by dialogue that, over time, leads to the mutual refinement of the teacher's and the student's thoughts and actions.<sup>87</sup> One of the major faults Socrates finds with the technology of writing is that it does not respond to questions; it fails to answer back or elaborate in ways that meet the particular needs of an audience.<sup>88</sup> In short, writing is unlikely to enhance teacher-student relations because it fails to facilitate mutual exchange. Though this section of *Phaedrus* is often viewed as an argument for speech over writing, it can also be seen as a pedagogical argument—an argument for a particular means of enhancing students' thinking and powers of expression. When Socrates proposes that dialogue is the best way to nurture the intellectual and moral

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<sup>87</sup> The ideal relationship described by Socrates is often translated as ideal "love." The maintenance of this relationship involves the proper pairing of student with teacher and the avoidance of the temptations of the flesh, such that the pair might focus their energies on mutual education. I should add that my use of "thoughts" and "actions" departs from Plato's metaphysical notion that dialogue refines students' and teachers' "souls."

<sup>88</sup> Plato's other major complaint about writing is that it leads to the atrophy of memory. As Walter Ong notes, "Plato expresses serious reservations in the *Phaedrus* and his *Seventh Letter* about writing as a mechanical, inhuman way of processing knowledge unresponsive to questions and destructive of memory" (24).

development of students, he suggests that pedagogical value is a function of voice—the media through which teachers and students interact. Nearly 2.5 millennia after Plato composed *Phaedrus*, concerns for the effects of “new media” on literacy education persist, particularly with regard to the rapid rise of Internet and digital technology. The surge in online courses and the seemingly endless introduction of new inscription technologies raise questions about the value students and teachers attribute to the media they use, particularly in relation to their own feelings of power and influence.

Although writing has been figured as a means of personal and societal enhancement for centuries, the particular shading of that enhancement, or what precisely writing is believed to do for people is variable and contested and, as I argue throughout this dissertation, increasingly bound to novel media and inscription technologies. These developments generate uncertainty around the teaching of writing. To gain analytical purchase on the relationship between writing pedagogy and technological change, I proposed conceiving of educational phenomena in terms of “pedagogical networks.” In the introduction I described this effort as “a provisional attempt to advance investigation into topics that only now are coming into focus,” but as Plato’s ambivalence about writing indicates, uncertainties around technological change and pedagogy are longstanding. What makes changes prompted by the rise of Internet and digital technology unique against the backdrop of this longstanding uncertainty is both the rate of and reach of change. These developments challenge teachers and scholars in composition to consider the changes they see happening at the level of classroom practice in light of those broader changes and controversies taking place outside of classrooms. Juxtaposing historical controversies around technology and pedagogical change with contemporary controversies and allowing these controversies to inflect my analysis of classroom interaction, was an attempt to highlight the relationships between these three sites of uncertainty. This multidirectional view of the relationship between technological change and writing pedagogy is also meant to exemplify the plurality and complexity of pedagogical networks. In this chapter, I extend this approach by considering the findings of my analysis of English 418 (Chapters 5 and 6) in light of those broader controversies I discussed in earlier chapters.



*Controversy 1: The Potency of Language-Only Literacy*

I began this dissertation by referring to Richard Lanham's belief that the integration of digital technology into writing pedagogy compels a fundamental shift whereby language-based literacy is put into competitive relations with other media and modes of representation. In many ways my observations of students' interactions with Flash substantiate Lanham's sense of the competitive dynamic that arises when alphabetic text "enhanced" by the digital media shares space with images, sounds, and interactive elements. Moreover, these observations would appear to validate the fears of those who lament the diminishment of language-only conceptions of literacy in the face of competition posed by other modes and media. In Chapter 6, for example, I discussed how students attended more closely to creating interactive buttons and visual effects than to the written portions of their websites. I noted that an ordering of values took shape whereby compositional concerns generally associated with print-based writing were viewed as less important than those related to visual/interactive portions of their projects. I tied this ordering of values to the attention teachers gave to these modes of representation during class discussion as well as the struggle students experienced while learning to compose with Flash. As someone who spends a good deal of time thinking about the teaching of print-based writing, the representational hierarchy that appeared to develop around Flash is somewhat troubling because it suggests that alphabetic writing may receive the least amount of attention when students compose multimedia texts using novel technology.

It is important to note that the representational hierarchy that developed around Flash is likely the result of a confluence of very local factors. The status of alphabetic text, when compared to images and interactive elements, would likely be different in a different classroom context. Moreover, the particular hierarchy that developed around Flash might not have developed around a different website builder. Students may have attributed less value to the alphabetic text included in their projects because these were the least "flashy" elements. Creating animations and interactive elements was exciting for students, in part, because these elements enlivened their texts with movement. Richard Lanham would agree with this assessment, as he associates the competitive

dynamic that emerges between alphabetic writing and other modes of representation as a function of style. Lanham argues that “words no longer have their own way” because of the highly visual, interactive, rapid-fire stimulation of Internet and multimedia texts. With this dynamic in mind, he posits that the stylization of texts is becoming increasingly important—perhaps even more important than the content of messages. While this may be the case, my observations of English 418 students suggest that a different competitive dynamic emerges when viewed from the point of view of the production, rather than consumption, of multimedia texts.

To some extent, my observations support Lanham’s argument about the importance of style in multimedia contexts, as students’ critiques of their classmates’ projects as well as their interview responses attest to the importance they accorded the stylistic affordances of Flash, particularly those related to images and animations. The value students attributed to these aspects of their projects, however, extended beyond a concern for style; the value students accorded to these portions of their websites was also the result of the novel challenges associated with learning Action Script and other functional aspects of the program. Indeed, the resistance students encountered while trying to create their individual and group projects appeared to infuse Flash-based composing with value, particularly those interactive elements and animations that required the most facile use of the program. The amount of time and effort required to create these elements, in other words, appeared to have some influence on students’ sense of the importance of these elements relative to the alphabetic text.

Having long since mastered the rudiments of alphabetic writing, students focused the majority of their attention on learning those skills and techniques that would allow them to represent subjects and convey meaning in ways that extended beyond the affordances of print. These observations, while limited to one class and primarily to one application, suggest that there is much to learn about the relationship between students’ efforts to learn functional aspects of computer technology and their negotiation of different modes of representation within the same text. The concern, of course, is that alphabetic writing may fall out of focus in contexts that require students to balance image, sound, and interactivity. On the other hand, by focusing on learning Action Script, students gained an appreciation for all the work that went on behind the scenes to make

Internet texts function. Students began to view websites in terms of the code underlying the websites they visited, which is rather remarkable given that most students had no computer programming experience before taking the course. In sum, students' interactions with Flash offer preliminary empirical evidence to support Lanham's sense of the competitive dynamics that emerge when students negotiate multiple representational modes in the same text. Findings from this study also build upon Lanham's ideas by suggesting that the competition is not simply a matter of style, rather the time and effort required to create the various elements appears to have some bearing on students' assessment of its value as well.

Because of the very localized nature of this study, it is unwise to try to abstract more general pedagogical lessons from these insights. I believe, however, that these findings speak to the need for writing teachers to be aware of the ways representational hierarchies may emerge when students are asked to compose Internet and multimedia texts. Indeed, students' responses to Flash suggest that this awareness may be particularly important when students face challenges related to the basic functional aspects of novel applications.

### *Controversy 2: The Potency of Teachers*

In Chapter 1, I recollected my middle school students' responses to writing in a fancy new computer lab. I used this anecdote to highlight the ways novel technology can capture students' attention and infuse their composing efforts with relevance. In many ways, this anecdote resonates with English 418 students' responses to learning Flash; like my wide-eyed middle schoolers, students in Richard and Allen's section were enamored with the enhancing powers of the software they used to build their websites and multimedia projects. In retrospect, however, I am somewhat troubled by these two examples because, while they may attest to the influence of technology on students' composing efforts, they deemphasize the role teachers played in facilitating students' writing as well as their interactions with technology. This oversight, or blind spot, is important to consider because it offers a telling reminder of the ways novel technology

may have drawn my attention away from other important influences on classroom dynamics, namely the influence of teachers.

Why did I fail to mention my interactions with students in the middle school computer lab? The obvious reason is the limitations of memory; I simply cannot recall those interactions with much certainty. I vaguely remember circulating through the lab and touching base with students about their writing. I likely read drafts and provided hushed feedback, so as not to disturb other students. What figures prominently in my memory is the sheen of the new Macintosh computers and students' eagerness to interact with the machines. Vague, nearly forgotten, are those low-key interactions with students about the meaning of the words they typed onto the screen. This blind spot is disconcerting because what falls out of focus when these interactions go unrecognized is my potency as a teacher and the value of teaching more generally.

Similar blind spots exist in my account of English 418. The value students attributed to Flash was such a common refrain that I worry I failed to notice important ways Richard and Allen influenced their students. For example, I did not join students during their visits to office hours, nor did I attempt to record those semi-private one-on-one conversations that occurred between students and teachers during class. These omissions are significant because these conversations likely affected students' efforts and concerns. Indeed, my own experience as a student suggests that such one-on-one interactions with teachers can be extremely valuable. And yet I have few records of such interaction—not because they did not occur, but because they were either too subtle or too private. Without a record of these interactions, I feel my account of English 418 may not attest to the role that teacher-student interaction—particularly one-on-one interaction—may have played in these two courses.

A similar omission has to do with teachers' assessments of students' projects. Though I solicited these assessments, none of the students in either course volunteered them. I know from speaking with Richard and Allen's students that these responses did help them to focus their revisions, but I remained naïve to teachers' written feedback because students were unwilling to share these assessments with me. Perhaps students felt that interactions around assessment, like interactions during office hours, or the low-key conversations that sometimes occurred between teachers and students, were private.

This is understandable given that I was not a student in the classes. By not having access to these assessments, however, I missed an opportunity to consider teachers' influence on students' composing efforts. This omission, as well as the omissions related to students' and teachers' private conversations highlight the difficulty of fully appreciating teachers' roles within highly technical pedagogical networks. Granted, all studies of classroom interaction have blind spots. What is worrisome to me about these missing links in the network is that I may have lost sight of teachers' significant contributions amidst the flash and sheen of novel technologies and students' enthusiastic responses to creating multimedia and Internet texts.

Like the computers crystallized in my memory of the middle-school computer lab, I wonder if my interest in students' interactions with novel technology may have captured my attention more readily than teacher-student interactions. I have identified two reasons for these potential blind spots, one being the subtleness of teacher-student interaction and a second being their private nature. Did the novelty of students' interactions with the technology capture my imagination and divert my attention away from teachers' influences on the course? If so, Lanham's argument about the shifting economics of attention might reach into the pragmatic concerns of classroom-based researchers. Indeed, I believe the blind spots present in this account raise questions about the study of classroom interaction in technologically rich contexts. By reflecting on my study of English 418, I have come to realize that it may be difficult for researchers to keep the potency of teachers in sight when studying interactions that take place in sites such as computer labs. The blind spots I refer to here highlight the need for a heightened degree of mindfulness of teachers' roles in these richly mediated contexts. To reduce the likelihood of losing sight of teachers' roles within classrooms replete with novel technologies, future studies might involve video recordings of classroom interactions in addition to the collection of "live" observational data. Another strategy for ensuring that the potency of teachers' remains in sight would be to deliberately focus on teachers' roles at timed intervals, such that every five or ten minutes the teachers' efforts became the focus of attention. A third useful strategy would be to include more than one observer in the room, such that observational responsibilities were split between students' interactions with technology and teachers' interactions with students. These

methodological adjustments could mitigate the risk of diminishing the important role teachers play in guiding students' composing efforts with novel technology.

### *Controversy 3: Distributed Meaning and Distributed Selves*

In Chapter 2 I suggested that digital and Internet texts could be regarded as facets of composers' distributed selves. What I did not consider in this earlier discussion of distributedness, however, was the ways teachers' distributed selves online might affect students' orientations to new media composing. As I noted in Chapter 5, Richard and Lisa's on-line representations of self—their websites, blogs, and videos—revealed very different orientations to composing with digital media. I contrasted the conventional style of Richard's personal website to the playful and ironic style of Lisa's work. These differences appeared to extend and reinforce the orientations to digital composing teachers expressed in person. Richard advised students to create sites that obeyed the central tenets of web design whereas Lisa encouraged students to experiment and defy expectations. The style of teachers' online selves, I suggested, reinforced these messages and may have contributed to the different “enhancements” students associated with their interactions with digital technology in these courses. Recall that Richard and Allen's students tended to view the creation of Internet and multimedia texts as a means to professional enhancement, whereas Lisa's students tended to discuss their work in terms of personal expression and reflection. Granted, these differences might have taken shape without the influence of teachers' online selves coming into play, but the differences between these two classes, raises questions about the role teachers' websites played in influencing students' understandings of the purpose and value of their work. By exemplifying two very different attitudes toward new media composing, Richard and Lisa's Internet texts may have helped set the tone for students' efforts. Indeed, these strands of self acted on students by soliciting their enrollment in the course before the semester began; one of Richard's students and two of Lisa's students reported that they decided to enroll in the course after viewing their respective teachers' websites. Distributed actors, therefore, clearly had some effect on the constitution of each of the courses by attracting some students and, perhaps, by repelling others.

These findings, while preliminary, point to the ways teacher-student interaction is redefined by Internet and digital technology. What happens when such interactions are no longer bound to the spatial and temporal limits of classrooms and courses? And how might those who study teacher-student interaction account for these changes? The study of English 418 offers a few points of entry. First, such inquiry might begin with the assumption that teachers' distributed selves operate as full-fledged pedagogical actors—actors that can reach out and influence students before courses begin as well as throughout the semester. Such inquiry might take into account the ways these actors exemplify, contradict, or extend teachers' embodied selves—those selves who students interact with in real time during class, office hours, and so forth. Moreover, such inquiry might examine the ways these distributed actors direct students' efforts and shape their attitudes. I have suggested that the concept of style is a useful means for exploring this relationship because it offers a way to compare teachers' on-line selves to those created by their students. Like embodied qualities, such as vocal intonation, gesture, and appearance, the styles of teachers' online-selves say something about who they are and what they value. As selves migrate online and distribute across networks, the study of these issues becomes increasingly vital to understanding the relationship between technological change and writing pedagogy.

Another issue related to distributedness brought to light by my study of English 418 pertains to students' sense of digital composing as a means to increase their own power and influence. In Chapter 5, I referred to Leah's belief that her frequent Twitter and Facebook updates would help her secure a summer internship opportunity. Keenly aware of professional opportunities bound to social networking savvy, Leah was one of the most vocal advocates of digital composing. I found it interesting, therefore, that she decided not to include her individual project as a model text on Richard's personal homepage. When asked about this choice during casual conversation, Leah reported that she was not entirely satisfied with her project; she did not want her Web presence diminished by a project that did not appear professional enough for the discriminating design community she hoped to enter.

Leah was aware of the ways her on-line selves operated as delegates who could both enhance and compromise her professional status. She refused to post her project on

Richard's public site because she suspected it might very well undermine her career aspirations. This speaks to the ways the distributedness associated with much new media composing blurs lines between college students' academic concerns and their emerging professional identities. Leah's reluctance to make her work public attests to the double-edged potential of composing texts that circulate online. While the possibility of global distribution can increase students' motivation, it also runs the risk of being less forgiving than, say, writing a paper that is unlikely to circulate beyond the classroom. By studying English 418, I have become more aware of the stakes involved in composing online. Students like Leah may be well aware of these stakes, but other students may not have such a clear sense of the relationship between their personal and professional well-being and the status of their distributed selves. Leah's careful calibration of her distributed selves informed her decision to keep her individual project private. I should add that Leah was the only student in Richard and Allen's class who expressed such a well-honed critical appraisal of her own distributedness. My sense is that the cultivation of this type of awareness may be an important facet of teaching composition in the digital age.

*Controversy 4: Technical Skills and the "Natural" Defense:*

Chapter 4 focuses on what I refer to as a "durable dichotomy" between natural and technical representations of writing development in composition pedagogy. I examined an early manifestation of this dichotomy by comparing the work of James Moffett and Francis Christensen, and I suggested that similar tension persists in pedagogical arguments related to writing in the digital age. This historical comparison was meant to raise the possibility that natural perspectives toward writing entail particular pedagogical tendencies and styles, such as an emphasis on discovery and improvisation rather than the mastery of skills. Connecting this dichotomy to Richard E. Miller's essay "Reading in Slow Motion," I suggested digital technology complicates this dichotomy, particularly with regard to skills-based instruction. I want to now revisit these issues, taking into consideration my study of English 418.

In Chapter 5, I noted that Lisa's teaching reflected a natural perspective toward composing because of the freedom she granted students to plan and create their semester-



long projects. She provided very little explicit instruction in the functional aspects of technology and granted students a very limited sense of her expectations beyond a general push toward experimentation. This unregimented approach was deliberate and consistent with Lisa's view of her course as a site for discovery. Though it is difficult to generalize about the effects of Lisa's teaching style, it did seem to encourage students to interact with a wide range of technologies. Evidence for this broad range, could be seen when students presented their final projects to their classmates. While watching these presentations I was struck by the fact that each student tended to use a different application to create his or her project (see Appendix C for a full list of students' projects). The wide range of technologies deployed by Lisa's students contrasts sharply with the more narrow range used by students in Richard and Allen's section.

Recall that students in Richard and Allen's section were given explicit instruction in Flash and Photoshop and, moreover, that they were expected to use both programs to build their individual and group projects. As discussed in Chapter 6, Flash was a particularly potent actor in Richard and Allen's section for the way it affected students' composing efforts. Flash was also a significant topic of conversation; students often asked one another for help or consoled one another when buttons and animations did not function properly. As a pedagogical actor, then, Flash was not simply a tool for composing but a topic of conversation and a mechanism for building students' relationships with one another. Indeed, the challenges of learning the functional aspects of the program, particularly those associated with learning Action Script, seemed to spark students' interactions with one another. These interactions are interesting in light of the reputation of skills-based approaches to close down rather than open opportunities for conversation. Of course, one cannot discount the nature of these conversations. Though I did not attempt a fine-grained analysis of discussions around Flash, my sense is that they tended to center on the difficulties students faced while learning the program. So while students' exchanges around Flash may have facilitated conversation and solidarity among students in Richard and Allen's section, these interactions could be viewed as diverting students' attention away from conceptual issues that extended beyond the difficulties of learning Action Script.

Student-to-student interactions in Lisa's course, by contrast, were relatively isolated and subdued. Rather than turn to one another for help, students tended to refer to online guides and instructional videos, or solicit help from friends outside of class. In short, Lisa's section of 418 generated very little conversation apart from students' one-on-one conversations with Lisa. This is somewhat ironic given that the course was being held in a classroom specifically designed to foster collaboration. Despite the wheeled furniture in Design Space 3, students rarely reconfigured the classroom, collaborated, or even conversed. Though differences between students' propensity to interact in these two sections of English 418 was likely the result of many factors, it is interesting to consider these differences in terms of students' use of computer technology. I wonder, in other words, if the limited amount of student-to-student interaction in Lisa's course may have been precipitated by the fact that students were creating projects using different applications. Contrastingly, did the relatively high degree of student-to-student interaction exhibited in Richard and Allen's section have something to do with the fact that they were all struggling to learn the same program? Of course the differences between these two classes were likely the result of a confluence of factors, including the different personalities of students in each section as well as the fact that Richard and Allen's course was held at 10:00 in the morning, whereas Lisa's course was held at 6:00 in the evening. Though the influence of technology on student-to-student interaction cannot be abstracted from various other influences, I believe the differences between these sections points to the need to study the influence of different technologies on students' willingness to converse and collaborate, and the ways skills-based instruction might inflect this dynamic. Nevertheless, I find the contrast interesting for what it might reveal about how attention to learning the functional aspects of novel inscription technologies may cultivate conversation and solidarity between students.

How do these observations extend the idea of natural and technical attitudes toward composing, and what do they suggest about the relationship between writing pedagogy and technological change? As I noted in Chapter 4, the dichotomy I posited between the natural and the technical is a spectrum for thinking about orientations to composing. The spectrum has bearing on historical debates around writing instruction insofar as the natural attitude has been used to promote instruction that emphasizes

discovery and improvisation over regimentation and systematization. Students' focus on learning Flash sheds new light on this dichotomy by highlighting some of the ways students' interactions with the functional aspects of the program inspired solidarity. Indeed, Richard was keenly aware of the role Flash played in his course, delighting in the "marine mentality" students developed as they "battled" to learn the program. This perspective is different than Moffett's sense of skills-based instruction as "dummy exercises," because it points to the possibility that functional approaches may, in fact, serve broader social purposes in classrooms. Indeed, Flash cultivated solidarity among students—a sense of coherence, which emerged through their struggle to acquire the skills necessary to create their Flash-based websites. But it was not Flash alone that created this sense of solidarity. Richard was keenly aware of the role technology played in his courses. More than tools students used to compose websites, Richard understood how Flash functioned as a pedagogical actor in his course, one that cultivated a sense of pride and solidarity among his students. Richard's awareness of Flash as both a technology for composing his class and a technology for composing websites exemplifies the double-gaze that teachers must develop in order to feel empowered while teaching writing in the midst of technological change.

### *Thinking through Pedagogical Networks*

In this dissertation I have considered relationships between technological change and writing pedagogy from a number of different vantage points. I took this multidirectional approach to capture the plurality and complexity of these relations, relations I configured as comprising a network made up of actors operating both within and apart from classrooms. This multidirectional approach to inquiry also reflects my sense that teachers and scholars of writing are more likely to feel empowered in the midst of such change when able to conceptualize classroom-based interactions in light of broader theoretical and historical controversies. My choice to juxtapose theoretical, historical, and classroom-based inquiry was also an experiment to see if these sites of inquiry could mutually inform one another. I developed the terms *style*, *potency*, and *distributedness* to facilitate this cross-pollination between these sites of inquiry and to

construct multifaceted representations of the interlocked relationship between technological change and writing pedagogy. My choice to juxtapose these sites of inquiry also serves as a tacit argument for the importance of using classroom-based inquiry to build knowledge around the relationship between writing pedagogy and technological change. As I mentioned in the Introduction, my study of English 418 brought this dissertation to life by encouraging me to develop concepts for linking what I was seeing in these classrooms to those broader questions and controversies. In this chapter, I have reconsidered those broader controversies in light of the findings generated during my study of English 418. As teachers and scholars of writing, we are well positioned to conduct such inquiry because we have a front row seat for witnessing the effects of these changes and because we have the knowledge to consider these changes in light of historical and theoretical concerns about writing.

In her 2004 Chair's Address to the Conference on College Composition and Communication Kathleen Blake Yancey refers to the "new key of composition" that emerges in response to the popularity of digital and Internet technology. While Yancey points to a number of the important features of this transformation of the discipline, she does not discuss what it means for the shape of inquiry. This dissertation attests to the way classroom-based inquiry might inform and refine broader questions related to literacy in the digital age as it casts new light on historical uncertainties that continue to inflect the field in tacit ways. Anne Ruggles Gere writes, "composition theory resists boundaries and blurs distinctions between disciplines" (3). The "new key" of composition creates possibilities for the type of restructuring Gere has in mind because writing teachers work at the nexus of highly charged uncertainties about literacy education, uncertainties that are increasingly bound to the proliferation of digital and Internet technology. The catch phrase of Yancey's address, "we have a moment," rings true, not simply for the sake of expanding the discipline but also because composition scholars are uniquely poised between theory, practice, and history. It is precisely this multidirectional perspective we now need.

## **Appendix A: Interview Questions for Students**

### *Introductory Interview*

- 1) Why did you decide to enroll in this course?
- 2) What do you hope to learn in this course?
- 3) What kind of experience do you have working with the kinds of tools and technology available in Design Lab 1?
- 4) Do you have any fears or reservations about this course?
- 5) What kinds of projects do you hope to produce during the semester?
- 6) In what ways do you think this course will be different from other college writing courses you have taken?
- 7) Approximately how much time do you spend on the Internet each day? What do you generally do while online?
- 8) How is the writing you do online different than the writing you complete for your college courses?
- 9) How do you anticipate that you will be able to use the skills you learn in this course in the future?

### *Intermediate Interview*

- 1) What types new media/Internet technology have you worked with thus far during the course?
- 2) Had you used these technologies before taking the course?
- 3) Could you describe the experience of working in Design Lab 1?
- 4) How has the course met, exceeded, or failed to meet your expectations thus far?
- 5) What joys or frustrations have you experienced in the course thus far?
- 6) How have the instructional materials influenced your efforts thus far?
- 7) Have you spent more or less time/effort on this course than you expected? Explain.
- 8) Have you collaborated with anyone else thus far? If so, describe your collaborative efforts.

### *Closing Interview*

- 1) Are you glad you took this course? Why or why not?
- 2) What knowledge will you take away from this course?
- 3) Describe the work/writing you produced for the course?
- 4) In what ways was this course similar or different from other college writing courses you have taken?
- 5) How do you anticipate that you will be able to use the skills you learned in this course in the future?
- 6) How has the course met, exceeded, or failed to meet your expectations?
- 7) What joys or frustrations did you experience during the semester?
- 8) How did the instructional materials and the technology in Design Lab 1 influence your efforts?
- 9) Did you spend more or less time/effort on this course than you expected? Explain.
- 10) Did you collaborate with anyone else during the semester? If so, describe your collaborative efforts.

## Appendix B: Interview Questions for Teachers

### *Interview: Richard*

- 1) What led you to teach this course?
- 2) How has this course (Technology and the Humanities) changed over time?
- 3) What kinds of obstacles have you encountered while developing this course?
- 4) How has the University/English department responded to the creation and development of this course?
- 5) How have changes in technology affected what and how you teach?
- 6) How do you assess students' efforts?
- 7) What are the most rewarding aspects of teaching this course?
- 8) What is challenging about teaching this course?
- 9) How do you see this course changing in the future?
- 10) What do you want students to take away from this course?
- 11) Do you believe that more English/writing courses should be devoted to exploring the Humanities and technology?
- 12) Can you talk about how the technology students work with in 420 affects writing processes and the texts students produce.  
How has teaching the course affected your own writing/work?

### *Interview: Lisa*

- 1) What led you to teach a course that integrates Internet texts and new media technology?
- 2) How has teaching the course affected your own writing?
- 3) What kinds of obstacles have you encountered while developing this course?
- 4) How have you changed the course since you began teaching it?
- 5) In what ways does Design Lab 1 affect your teaching?
- 6) How do you assess students' efforts?
- 7) What are the most rewarding aspects of teaching this course?
- 8) What are the biggest frustrations?
- 9) How do you see this course changing in the future?

## **Appendix C: English 418 Course Descriptions**

### *Lisa's Section*

A Limited Fork Theory Perspective on Remix Culture  
(Technology and the Humanities)

This class will explore as many possibilities for what can emerge from junctures of high and low technologies and the Humanities as possible. The explosion of opportunities for text-based user content in social networking and other online interfaces will be studied to find ways to make such interfaces useful in generating and utilizing Humanities-related content. We will consider the impact that the ease of sharing and collaborating has on configurations of content as we increasingly function ideologically as a remix culture reshaping notions of ownership. Indeed, the position of the course is, as it is in Limited Fork Theory, that most everything is collaborative in nature, and has been collaborative long before the rise of remix culture. Students will set up and maintain a class presence on Twitter, Facebook, YouTube, iTunes podcasts, co-authored blogs, and/or websites. We will explore interfaces of multiple modes of digital discourse: time-based and static visual content, sonic content, and will focus on matters of access and formation of policy surrounding access and ownership. Mobile and portable devices will also figure into our interactions with digital technologies. With so much being automated now, students with no background in HTML or Flash will still be able to produce impressive-looking online presences, and there will be opportunities to learn basic HTML as well as other applications that can assist with the generation of digital work. We will also explore the future of the book and other paper-based Humanities-related objects as, through principles of Limited Fork Theory, we learn that the possibilities of paper have not yet been fully realized. You must be willing to share in order to succeed in this course. An iPhone and iPod touch friendly course.

### *Richard's Section*

How are we shaped by our tools? How can new tools foster new ideas? In this course students will learn, study, and use today's digital tools (like Photoshop and Flash) and techniques (like networked collaboration and text analysis) to create, gather, manipulate,



analyze, and present new ideas in the humanities. This upperclass and graduate-level course is appropriate for both those who are technically sophisticated and those who are novices. The course offers technical training, exploration of the implications of modern digital technologies, and the opportunity to develop both technical and scholarly skills in advanced research subjects in the humanities. The course fosters both sharpened general analytic and presentational skills and technical mastery of a broad range of modern computer-based technologies for collaboration and for gathering, manipulating, analyzing, and presenting electronic data in the humanities. The course begins with five weeks of intensive technical training and proceeds to five weeks of discussion of works that explore the impacts of technology. By the middle of the term, restrained only by time and their imaginations, students also will be working in self-selected groups on creating sophisticated multimedia products using a variety of techniques to address some substantial issue in the humanities. Technical topics include information gathering from digital sources, web authoring, hypertext documents or novels, collaborative technologies, image manipulation, text analysis, and the meaning of the digital revolution. Prospective students may want to look at course websites created by students in previous offerings of this course which can be found at Selected Student Humanities InfoTech Coursework, which is linked to my home page. The course calendar indicates specific tools and techniques to be discussed and demonstrated, topics and readings to be discussed, and work to be presented. As a group, we will also consider unscheduled subjects. Other tools, techniques, readings and topics will arise for individuals, for the whole group, and for particular project groups. Some of us necessarily will know more than others about one or more of these matters of technology or humanistic study. Working with research technologies in the humanities may sometimes be exhilarating and sometimes frustrating but always can be satisfying if those who can help do. Thus, we will maintain what might be called an open seminar environment in which we can all teach each other. Everyone will be expected to be fully responsible to the work, the project group, and what will doubtless be a class of people diverse in backgrounds and interests. These technologies can build communities; our greatest achievements are possible only if we take advantage of the class as a community and contribute to it accordingly.

## **Appendix D: Summary of Data Collection and Analysis**

### *Data Gathering and Selection Process*

With the exception of three classes, I attended every class of the two sections of English 418 I observed. These classes were held at different times and in different locations. Lisa's section was held on Tuesday evenings (6:00 - 9:00) in Design Space 3, which was located in a building associated with engineering, architecture, and art and design. Richard and Allen's course was held on Monday and Wednesday mornings, between 10:00 and 11:30. Seventy-two audio files, thirteen screen-capture videos, five hundred fifty email messages, and approximately three-hundred pages of ethnographic field notes were generated during my study of English 418. Additionally, I collected syllabi from both classes and read students' and teachers' evolving course blogs and websites.

I audio recorded student interviews before or after class in the computer labs where the classes were held. All individual interviews were conducted privately in order to encourage participants to speak freely about their composing efforts and their interactions with teachers and classmates. On those occasions when the computer lab was being used by other classes, participants and I conversed in empty classrooms nearby. My interviews with Lisa occurred after class in Design Space 3, and my interviews with Richard and Allen took place in their respective faculty offices. Like the student interviews, these conversations took place privately. I also audio recorded small group meetings between students in Richard and Allen's class. These meetings occurred during class, at those times when students were given opportunities to plan their group projects. I generally remained quiet during these meetings to avoid interrupting or redirecting students' discussions.

I recorded my classroom observations in spiral notebooks, drawing upon methods recommended by Emmerson, Fretz, and Shaw (1995) and Heath and Street (2008). These notes included 1) a running account of events in real time, 2) notable short phrases uttered by participants so that my audio files could be more easily coordinated with field notes, and 3) changes in audience and features of context that co-occurred with shifts in

language (Heath and Street 77). Following the recommendation of Wolcott (2001), I separated my reflections from the data by configuring the paper into a tripartite table as follows:

Time	Observations	Reflections

This configuration was particularly useful because I did not have the time or money to transcribe all of my audio recordings. When reviewing field notes, I could easily revisit those recorded moments that sparked a significant observation or reflection.

I initially organized my observational notes and reflections around matters related to the very general themes of style, potency, and distributedness. This early thematic analysis directed me toward more specific matters of concern, namely participants' attributions of value to the course. These attributions of value tended to fall under five main categories 1) preparation for professional responsibilities; 2) preparation for job-seeking activities; 3) preparation for other academic coursework; 4) personal expression; 5) artistic/aesthetic expression. I used these categories to code and then compare and contrast students' responses to the two sections. This process revealed that students in Richard and Allen's section tended to view their efforts as contributing to their professional objectives whereas Lisa's students tended to value composing with digital media because it offered opportunities for personal reflection and aesthetic expression. As table \_\_\_ indicates, this trend was not absolute. One student in Lisa's course focused his efforts on preparing a professional website. Unfortunately, I could not conduct follow up interviews with this student because he experienced health problem midway through the semester that prevented him from attending class.

My interest in the relative potency of the computer programs on students' composing efforts led me to focus on students' interactions with and responses to Flash. It was obvious to me that Flash was a very important actor in Richard and Allen's section, but to understand how the application functioned in conjunction with Richard and Allen's instruction, required that I look more closely at what students were saying

about the program. I identified Flash as a potent actor in the course early on, noting when students discussed the program in my observation notes. This made it relatively easy for me to return to those portions of the audio-recorded interviews where students were discussing the program relative to their composing processes. Identifying the important role Flash was playing in the course also prompted me to probe the reasons for students' interest in the program during interviews. All of the students mentioned that they viewed learning the program as a potentially important professional skill. I should add, however, that for some students this feeling waned somewhat as they encountered difficulty with the program.

## Works Cited

- Allen. Personal interview. 13 Nov. 2008.
- Alvermann, D.E. (Ed.). *Adolescents and Literacies in a Digital World*. New York: Peter Lang, 2002. Print
- Alvermann, D.E. & Hagood, M.C. "Critical Media Literacy: Research, Theory, and Practice in 'New Times.'" *Journal of Educational Research* 93.3. (2000): 193-205. Print.
- Amanda. Personal interview. 15 Oct. 2008.
- Amy. Personal interview. 2 Oct. 2008.
- Aristotle. *Metaphysics*. Web. 8 Oct. 2011.  
<<http://classics.mit.edu/Aristotle/metaphysics.html>>.
- Athanases, Steven and Shirley Brice Heath. "Ethnography in the Study of the Teaching and Learning of English." *Research in the Teaching of English* 29.3 (1995): 263-87. Print.
- Ava. Personal interview. 21 Oct. 2008.
- Ava. Group discussion. 30 Oct. 2008.
- Bazerman, Charles. *Shaping Written Knowledge: The Genre Activity of the Experimental Article in Science*. Madison: University of Wisconsin Press, 1988. Print.
- Beaufort, Anne. *College Writing and Beyond*. Logan: Utah State University Press, 2007. Print.
- Berlin, James. "Rhetoric and Ideology in the Writing Class." *College English* 50.5 (1988): 477-94. Print.
- . *Rhetoric and Reality: Writing Instruction in American Colleges, 1900- 1985 (Studies in Writing and Rhetoric)*. Carbondale and Edwardsville: Southern Illinois University Press, 1987. Print.
- Bernstein, Basil. *Pedagogy, Symbolic Control, and Identity: Theory, Research, Critique*. Taylor and Francis, 1996. Print.
- Birkerts, Sven. *The Gutenberg Elegies*. New York: Faber and Faber, 1994. Print.
- Black, R.W. *Anime-Inspired Affiliation: An Ethnographic Inquiry into the Literacy and Social Practices of English Language Learners Writing in the Fanfiction*

- Community*. Paper presented at the annual meeting of the American Educational Research Association, San Diego, CA, 2004. Print.
- Blackwell, Lindsay. Web. 7 Nov. 2011. <[www.dearlisarudgers.com](http://www.dearlisarudgers.com)>.
- Bond, Charles A. "A New Approach to Freshman Composition: A Trial of the Christensen Method." *College English* 33.6 (1972): 623-27. Print.
- Bourdieu, Pierre, and Jean-Claude Passeron. *Reproduction in Education, Society, and Culture*. Thousand Oaks: Sage Publications, 1990. Print.
- Bowden, Darsie. "The Rise of a Metaphor: 'Voice' in Composition Pedagogy." *Rhetoric Review* 14.1. (1995): 173-88. Print.
- Brandt, Deborah. "Sponsors of Literacy." *College Composition and Communication* 49.2. (1998): 165-85. Print.
- Brandt, Deborah and Katie Clinton. "Limits of the Local: Expanding: Expanding Perspectives on Literacy as Social Practice." *Journal of Literacy Research* 34 (2002): 337-56. Print.
- Bruffee, Kenneth A. "Social Construction, Language, and the Authority of Knowledge: A Bibliographical Essay." *College English* 48.8 (1986): 773-90. Print.
- Burke, Kenneth. *A Grammar of Motives*. Berkeley: University of California Press, 1969. Print.
- . *A Rhetoric of Motives*. Berkeley: University of California Press, 1950. Print.
- Callon, Michel. "Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of St Brieuc Bay." *Power, Action and Belief: A New Sociology of Knowledge*. Ed. John Law. London: Routledge & Kegan Paul, 1986. 196-233. Print.
- Carbone, Nick. Summary Report of "Portraits of Composition in America," Web. 20 June 2011. <<http://teachnet.blogspot.com/>>.
- Carr, Nicholas. *The Shallows: What the Internet Is Doing to Our Brains*. New York: Norton and Company, 2010. Print.
- Castanheira, M., Crawford, T., Green, J., & Dixon, C. "Interactional Ethnography: An Approach to Studying the Social Construction of Literate Practices." *Linguistics and Education* 11.4 (2001): 353-400. Print.
- Chandler-Olcott, K., & Mahar, D. (2003). "'Tech-savviness' Meets Multiliteracies:

- Exploring Adolescent Girls' Technology-Related Literacy Practices.” *Reading Research Quarterly* 38 (2003): 356-85. Print.
- Christensen, Francis. “A Generative Rhetoric of the Sentence.” *College Composition and Communication* 14.3 (1963): 155-61. Print.
- . *The Rhetoric of Short Units of Composition*. Nebraska Curriculum Development Center. Print.
- Christensen, Francis and Bonniejean Christensen. *A New Rhetoric*. New York: Harper & Row, 1976. Print.
- Class audio recording. 18 Feb. 2009.
- Conference on College Composition and Communication. “Students’ Right to Their Own Language.” *College Composition and Communication* 25 (1974): Print.
- Connors, Robert, J. “The Erasure of the Sentence.” *College Composition and Communication* 52.1 (2000): 96-128. Print.
- Dewey, John. *Experience and Education*. New York: Collier Books, 1938. Print.
- . “Theory of Valuation.” *International Encyclopedia of Unified Science*. Vol. 2.4. University of Chicago, 1939. Web. 12 Feb. 2012.
- Eagleton, Terry. *Ideology: An Introduction*. New York: Verso, 1991. Print.
- Ede, Lisa and Andrea Lunsford. *Singular Texts/Plural Authors: Perspectives on Collaborative Writing*. Southern Illinois University Press, 1992. Print.
- Elbow, Peter. *Writing without Teachers*. 2<sup>nd</sup> ed. New York: Oxford University Press, 1998. Print.
- Emerson, Robert, M., Rachel I. Fretz, and Linda L. Shaw. *Writing Ethnographic Fieldnotes*. Chicago: University of Chicago Press, 1995. Print.
- Faigley, Lester. *Fragments of Rationality: Postmodernity and the Subject of Composition*. Pittsburgh: University of Pittsburgh Press, 1992. Print.
- . “Generative Rhetoric as a Way of Increasing Syntactic Fluency.” *College Composition and Communication* 30 (1979): 176-81. Print.
- Fish, Stanley E. “Interpreting the Variorum.” *Critical Inquiry* (1976): 465-85. Web. 26 Feb. 2012.
- . *Is There A Text in This Class*. Cambridge: Harvard U. Press, 1980. Print.
- Fisher, Walter E. *Human Communication as Narration: Toward a Philosophy of Reason*,

- Value, and Action*. Columbia: University of South Carolina Press, 1987. Print.
- Freud, Sigmund. *Interpretation of Dreams*. 3<sup>rd</sup> ed. Trans. A.A. Brill. Mobi Classics, 1911. Web. 14 Sept. 2011.
- Gabriel, Trip. "Learning in Dorm, Because Class Is on the Web." *New York Times* 4 Nov. 2010. Print.
- Garfinkel, Harold. *Studies in Ethnomethodology*. Englewood Cliffs, NJ: Prentice-Hall, 1967. Print.
- Gee, James. "Semiotic Social Spaces and Affinity Spaces." *Beyond Communities of Practice*. Eds. David Barton and Karin Tusting. Cambridge: Harvard University Press, 2005: 214-32. Print.
- Geisler, Cheryl, et al. "IText: Further Directions for Research on the Relationship between Information Technology and Writing." *Journal of Business and Technical Communication* 15.3 (2001): 269-308. Print.
- Gell, Alfred. *Art and Agency: An Anthropological Theory*. Clarendon, 1998. Print.
- . "Technology and Magic." *Anthropology Today* 4.2 (1988): 6-9. Print.
- . "The Technology of Enchantment and the Enchantment of Technology." *Anthropology, Art and Aesthetics*. Eds. J. Coote and A. Shelton. New York: Oxford University Press, 1992: 40-66. Print.
- Gere, Anne Ruggles. Introduction. *Into the Field: Sites of Composition Studies*. Ed. Anne Ruggles Gere. New York: The Modern Language Association of America, 1993. Print.
- . *Writing Groups: History, Theory, and Implications*. Carbondale: Southern Illinois University Press, 1987. Print.
- Gibson, J.J. *The Ecological Approach to Visual Perception*. Boston: Houghton Mifflin, 1979. Print.
- Goffman, Irving. *Frame Analysis: An Essay on the Organization of Experience*. London: Harper and Row, 1974. Print.
- Goodnow, Jacqueline J. "The Socialization of Cognition: What's Involved." *Cultural Psychology: Essays on Comparative Human Development*. New York: Cambridge University Press, 1990. 259-86. Print.
- Green and Dixon. "Introduction to Talking Knowledge into Being: Discursive and Social



- Practices in Classrooms.” *Linguistics and Education* 5 (1993): 231-40. Print.
- Gumperz, John. (1982). *Discourse Strategies*. New York: Cambridge University Press, 1982. Print.
- Halbritter, Bump. “Aural Tools: Who's Listening?” *Digital Tools in Composition Studies*. Eds. Joyce Walker, Byron Hawk, and Ollie Oviedo. Hampton Press, 2010. Print.
- Haraway, Donna. "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century." *Simians, Cyborgs and Women: The Reinvention of Nature*. New York: Routledge, 1991. 149-81. Print.
- Hayles, Katherine N. “Hyper and Deep Attention: The Generational Divide in Cognitive Modes.” *Profession* (2007): 187-99. Print.
- Heath, Shirley Brice. *Ways With Words: Language, Life, and Work in Communities and Classrooms*. Cambridge: Harvard University Press, 1986. Print.
- Heather. Personal interview. 5 Jan. 2008.
- Heather’s blog. Web. 1 Dec. 2008.
- The Henry J. Kaiser Family Foundation. *Generation M: Media in the Lives of 8-18-Year-Olds*. Web. 15 Aug. 2011.  
<<http://www.kff.org/entmedia/entmedia030905pkg.cfm>>.
- . Media Multitasking Among Youth: Prevalence, Predictors and Pairings (# 7592), 2006. Print.
- Heverly, Robert A. “Growing Up Digital: Control and the Pieces of a Digital Life.” *Digital Youth, Innovation, and the Unexpected*. Ed. Tara McPherson. Cambridge, MA: The MIT Press, 2008, 199-218. Print.
- Holland, Dorthy, William Lachicotte Jr., Debra Skinner, Carole Cain. *Identity and Agency in Cultural Worlds*. Cambridge: Harvard University Press, 2001. Print.
- Hyland, Ken. *Genre and Second Language Writing*. Ann Arbor: University of Michigan Press, 2004. Print.
- Hymes, Dell. *Foundations in Sociolinguistics: An Ethnographic Approach*. Philadelphia: University of Pennsylvania Press, 1974. Print.
- . Introduction. *Functions of Language in the Classroom*. Eds. Courtney B. Cazden,

- Vera P. John, and Dell Hymes. Prospect Heights, IL: Waveland Press, 1972. Print.
- Iser, Wolfgang. *The Act of Reading*. Baltimore: Johns Hopkins University Press, 1980. Print.
- Jamie. Personal interview. 31 Oct. 2008.
- Jenkins, H. "Why Heather Can Write: Digital Renaissance." *Technology Review*, (2004): 6. Print.
- Jill. Personal interview. 17 Oct. 2008.
- Julie. Personal interview. 31 Oct. 2008.
- . Personal interview. 21 Nov. 2008.
- Kyle. Personal interview. 5 Nov. 2008.
- Lanham, Richard. *The Economics of Attention: Style and Substance in the Age of Information*. Chicago: University of Chicago Press, 2006. Print.
- Lave, Jean and Etienne Wenger. *Situated Learning: Legitimate Peripheral Participation*. Cambridge: Harvard University Press, 1991. Print.
- Law, John. *Aircraft Stories: Decentering the Object in Technoscience*. Duke UP, 2002. Print.
- Leah. Personal interview. 11 Dec 2008.
- Lemann, Nicolas. "The Reading Wars." *The Atlantic* Nov. 1997: 128-134. Print.
- Lisa. Personal interview. 9 Oct. 2008.
- Lori. Personal interview. 29 Oct. 2008.
- Mandy. Personal interview. 5 Nov. 2008.
- Martin, L.H. et al. *Technologies of the Self: A Seminar with Michel Foucault*. London: Tavistock, 1988. 16-49. Print.
- Marx, Karl. *The Communist Manifesto*. Ed. Frederic L. Bender. New York, 1988. Print.
- The Matrix*. Dir. Larry and Andy Wachowski. Warner Bros. and Australian Village Roadshow Pictures, 1999. DVD.
- McCarthy, John C., Wright, Peter C., Wallace, Jayne and Dearden, Andy. "The Experience of Enchantment in Human-Computer Interaction." *Personal and Ubiquitous Computing* 10.6 (2006): 369-78. Print.

- McCluhan, Marshall. *Understanding Media: The Extensions of Man*. 1964. Berkeley, CA: Gingko Press, 2003. Print.
- Melinda. Personal interview. 15 Oct. 2008.
- Mellon, John C. *Transformational Sentence-Combining: A Method for Enhancing the Development of Syntactic Fluency in English Composition*. National Council of Teachers of English, 1969. Print.
- Miller, Carolyn R. "Expertise and Agency: Transformations of Ethos in Human-Computer Interaction." *The Ethos of Rhetoric*. Ed. Michael Hyde. University of South Carolina Press, 2004. 197–218. Print.
- . "What Can Automation Tell Us about Agency?" *Rhetoric Society Quarterly* 37.2 (2007): 137-57. Print.
- Miller, Daniel. *The Comfort of Things*. Cambridge, UK: Polity Press, 2008. Print.
- Miller, Richard E. "Reading in Slow Motion." Web. 28 Oct. 2011.
- Mindy. Personal interview. 5 Nov. 2008.
- Moffett, James. *Teaching the Universe of Discourse*. Boston: Houghton Mifflin Company, 1968. Print.
- Murray, Donald. *Write to Learn*. 2<sup>nd</sup> ed. New York: CBS College Publishing, 1987. Print.
- National Endowment for the Arts. *To Read or Not to Read: A Question of National Consequence, Research Report #47*. Washington, DC: National Endowment for the Arts, 2007. Print.
- Nellie. Personal interview. 2 Oct. 2008.
- New London Group. *A Pedagogy of Multiliteracies: Designing Social Futures*. Harvard Educational Review. 66.1 (1996). Web. 18 June 2011.  
<[http://wwwstatic.kern.org/file/blogWrite44ManilaWebsite/paul/articles/A\\_Pedagogy\\_of\\_Multiliteracies\\_Designing\\_Social\\_Futures.htm](http://wwwstatic.kern.org/file/blogWrite44ManilaWebsite/paul/articles/A_Pedagogy_of_Multiliteracies_Designing_Social_Futures.htm)>.
- Norman, Donald. *The Design of Everyday Things*. New York: Doubleday, 1990. Print.
- Nystrand, Greene, and Weimelt's, "Where Did Composition Studies Come from?" *Written Communication*. 10.3 (1993): 267-333. Print.
- Ong, Walter J. *Orality and Literacy: The Technologizing of the Word*. New York: Routledge, 1988. Print.
- . "Writing is a Technology that Restructures Thought." *The Written Word Literacy in*

- Transition: Wolson College Lectures*. Ed. Gerd Baumann. Oxford: Clarendon Press, 1986. 23-50. Print.
- Oxford English Dictionary. OED Online*. Oxford University Press.  
Web. 21 Sept. 2010. <[www.oed.com](http://www.oed.com)>.
- Patton M.Q. *Qualitative Research and Evaluation Methods*. 3<sup>rd</sup> ed. Thousand Oaks, CA: Sage, 2001. Print.
- Phelps, Louise Wetherbee. *Composition as a Human Science*. New York: Oxford University Press, 1988. Print.
- Plato. *Phaedrus*. Trans. Robin Waterfield. Oxford: Oxford University Press, 2002. Print.
- Prince, Michael B. "A Rescue Plan for College Composition and High-School English." *The Chronicle of Higher Education*. 27 Jul. 2009. Web. 11 March 2010.
- Reagan. Personal interview. 21 Nov. 2008.
- Rex, Lesley. *Discourse of Opportunity: How Talk in Learning Situations Creates and Constrains Interactional Ethnographic Studies in Teaching and Learning*. New Jersey: Hampton Press, 2006. Print.
- . "Exploring Orientation in Remaking High School Readers' Literacies and Identities." *Linguistics and Education*. 13.3 (2002): 271-302. Print.
- Reynolds, Nedra. "Ethos as Location: New Sites for Understanding Discursive Authority." *Rhetoric Review*. 11.2 (1993): 325-38. Print.
- Richard. Classroom discussion. 28 Oct. 2008.
- . Personal interview. 17 Oct. 2008.
- Richards, I.A. *Practical Criticism: A Study of Literary Judgment*. San Diego: Harcourt Brace, 1956. Print.
- Rosenblatt, Louise. *Literature as Exploration*. Modern Language Association, 1995. Print.
- Schleppegrell, Mary J. *The Language of Schooling: A Functional Linguistics Perspective*. Mahwah, NJ: Erlbaum, 2004. Print.
- Scribner, Sylvia & Michael Cole. *The Psychology of Literacy*. Cambridge: Harvard University Press, 1981. Print.
- Seiter, Ellen. "Practicing at Home: Computers, Piano, and Cultural Capital." *Digital Youth, Innovation, and the Unexpected*. Ed. Tara McPherson. Cambridge, MA:

- The MIT Press, 2008, 27-52. Print.
- Selber, Stuart. *Multiliteracies for a Digital Age*. Carbondale: Southern Illinois University Press, 2004. Print.
- Selfe, Cynthia L. "Technology and Literacy: A Story about the Perils of Not Paying Attention." *College Composition and Communication* 50.3 (1999): 411-36. Print.
- Shields, Patricia, M. and Tajalli, Hassan. "Intermediate Theory: The Missing Link in Successful Student Scholarship." *Journal of Public Affairs Education*. 12.3. (2006): 313-34. Print.
- Shirky, Clay. *Cognitive Surplus: Creativity and Generosity in a Connected Age*. London: Penguin Group, 2010. Print.
- Smith, Barbara Herrnstein. "Contingencies of Value." *Critical Inquiry*. 10.1. (1983): 1-35. Print.
- Spinuzzi, Clay. "Compound Mediation in Software Development: Using Genre Ecologies to Study Textual Artifacts." *Writing Selves/Writing Society*. Eds. Charles Bazerman and D. R. Russell. Fort Collins, CO: The WAC Clearinghouse and Mind, Culture and Activity, 2002. Print.
- State University administrator. Casual conversation. 21 Oct. 2008.
- Steinkuehler, Constance A. *Massively Multiplayer Online Video Games as a Constellation of Literacy Practices*. Paper presented at the 2003 International Conference on Literacy, Ghent, Belgium. Print.
- Steinkuehler, Constance A. and Caroline Williams. "Math as Narrative in *World of Warcraft* Forum Discussions." *The International Journal of Learning and Media* 1.3. (2009). Print.
- Strauss, A. & Corbin, J. *Basics of Qualitative Research: Procedures and Techniques for Developing Grounded Theory*, 2<sup>nd</sup> ed. Thousand Oaks, CA: Sage, 1998. Print.
- Street, Brian. *Literacy in Theory and Practice*. Cambridge: Cambridge University Press, 1984. Print.
- Students' Right to Their Own Language, *College Composition and Communication* (1974). Web. 10 July 2010.  
<<http://www.ncte.org/library/NCTEFiles/Groups/CCCC/NewSRTOL.pdf>>.

- Swales, John, M. *Other Floors, Other Voices: A Textography of a Small University Building*. Mahwah, NJ: Lawrence Earlbaum. 1998. Print.
- Tannen, Deborah. *Framing in Discourse*. New York: Oxford University Press, 1993. Print.
- . "What's in a Frame? Surface Evidence for Underlying Expectations." *Advances in Discourse Processing (Vol. 2)*. Ed. R. Freedle. Norwood, NJ: Ablex, 1979. 137-81. Print.
- Toby. Class comments. 21 Nov. 2008.
- Todd. Personal interview. 1 Nov. 2008.
- Todd. Personal interview. 19 Nov. 2008.
- Trimbur, John. "Multiliteracies, Social Futures, and Writing Centers." *The Writing Center Journal* 20.2 (2000): 29-32. Print.
- Vygotsky, Lev. *Thought and Language*. Trans. Alex Kozulin. Cambridge: MIT Press, 1986. Print.
- Warnick, Barbara. (2004). "Online Ethos: Source Credibility in an 'Authorless Environment.'" *American Behavioral Scientist* 48.2 (2004): 256-65. Print.
- Watt, William W. *An American Rhetoric*. 5<sup>th</sup> ed. New York: Holt, Rinehart, and Winston, 1980. Print.
- Wysocki, Anne Frances, Johndan Johnson-Eilola, Cynthia Selfe, and Geoffrey Sirc. *Writing New Media: Theory and Applications for Expanding the Teaching of Composition*. Logan, UT: Utah State University Press, 2004. Print.
- Yancey, Kathleen Blake. "Made Not Only in Words: Composition in a New Key." *College Composition and Communication* 56.2 (2004): 297-328. Print.
- Yergau, Melanie, Kathryn Wozniak, and Peter Vandenberg. Expanding the Space of f2f: Writing Centers and Audio-Visual-Textual Conferencing. With Kathryn Wozniak and Peter Vandenberg. *Kairos: A Journal of Rhetoric, Technology, and Pedagogy* 13.1. Fall 2008. Print.