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Genre, Medium,
and Learning
to Write:
Negotiating
Identities,
Enacting School-
Based Literacies
in Adulthood*

Writing instruction in the United States now routinely takes place in networked environments. For adult learners in open admissions institutions, the literacy demands of the academic sphere and the public nature of the acts of writing in networked environments can create alienating experiences. This study examined the possibilities that the genre of student technology autobiographies offers adult learners. Eighteen adult community college students enrolled in a freshman-level reading/writing course participated in the study. Participant ages ranged between 20 and 54. Thematic analyses of their autobiographies revealed their substantial yet unacknowledged experiences with technologies. Building upon their reflections and representations of past experiences fostered their development of technological literacies.

When adult learners go back to school to learn to write, they need to develop a self-awareness of their existing social identities to understand how writing may be used to negotiate and construct other identities. Such self-awareness can help learners negotiate and construct identities into which they are called by school, workplace, and other institutions. While this process is complex

enough, it is often further complicated by the use of computers for writing instruction. In the United States at least, one consequence of the ongoing technological revolution is that college writing instruction typically occurs in computer-networked environments. The interrelationship between literacy learning and emerging technologies has prompted some scholars to designate current college-aged students as members of a generation whose relationship with computer technology shapes their assumptions about literacy (Duffelmeyer, 2002; Tuman, 1992). But from my observations, this characterization does not describe the experiences of nontraditional, returning adults in open admissions institutions. For these students, the networked environment adds further layers of complexity to issues of identity construction for the reading/writing subject. Although the study of the relationship between computers and writing has evolved as a subfield of composition studies over the last 20 years, few researchers have specifically examined the literacy-related experiences of nontraditional learners in computer-mediated learning environments. Understanding how adults negotiate learning to write in electronic environments can help us create better learning conditions for the adults who are returning to traditional schooling in increasing numbers.¹ This article presents the findings of a qualitative study conducted in a community college writing class. It argues that we need to help adult learners (re)conceptualize their experiences with technologies and literacies in ways that honor what they already control, while simultaneously fostering the development of what they desire in ways that are self-empowering.

Genre Study: The Autobiography

A traditional argument for writing instruction in higher education has been to introduce learners to various genres and discourse types, particularly those related to how writing functions in the academic sphere (Bartholomae, 2001, p. 51; Hesford, 1999, p. 29). Over the last twenty-five years or so, the work of scholars in fields as diverse as applied linguistics (Halliday, 1978; Kress, 1988; Swales, 1990), communication studies (Campbell & Jamieson, 1978), rhetoric and composition (Bawarshi, 2000; Bazerman, 1997; Coe, 1994; Devitt, 1993; C. R. Miller, 1984; Russell, 1997) and education (Christie, 1988; Cope & Kalantzis, 1993; Dias, 1994; Freedman & Medway, 1994) have pushed forward a (re)conceptualization of genre. This multidisciplinary body of work has accorded genre study more explanatory power as it has moved scholars beyond the study of *text types* (such as autobiography) and into defining and organizing the kinds of *social actions* that texts make possible rhetorically. Such social actions include "the socially sanctioned ways

of 'appropriately' recognizing and behaving" (Bawarshi, 2000, p. 341) that we internalize and then enact based on the functions that genres make available. Extending Foucault's notion of author-function, Bawarshi (2000) argued for foregrounding genre as "the rhetorical environment within which we recognize, enact, and consequently reproduce various situations, practices, relations, and identities" (p. 336). Such a position on genre democratizes the study of texts to include the kinds of discourses that are part of "everyday speech that merely comes and goes" (p. 339). This move is a critical one because it creates the theoretical space for extending the study of genre and texts to those consumed and produced by students, and thus accords such study the kind of seriousness that has heretofore applied only to canonical and quasi-canonical texts.

The autobiography genre is often perceived as conducive for introducing adult writers to public writing. For example, Bartholomae and Petrosky (1986) initiated students into public writing via reading, discussing and writing about autobiographical texts. The reading and discussion of autobiographical texts such as Margaret Mead's *Blackberry Winter*, or Maya Angelou's *I Know Why the Caged Bird Sings*, it is argued, provided learners with multiple entry points from which they can begin to tell versions of their own stories. That this strategy is a common pedagogic move in adult learning can be seen in Larson and Brady's (1999) argument about the usefulness of autobiographical writing to the development of adult learners. They assert that "every adult learner has the right to tell the story of their [sic] life—or significant parts of it" (p. 13). This idea of autobiography as a medium for owning experience and bringing it into being is particularly significant in the context of adult learning. For as Joan W. Scott (1998) notes, "Experience is at once always already an interpretation *and* is in need of interpretation" (p. 69). Writing classes create critical spaces for adult learners to engage in interpretive as well as critical reflective practices about their experiences, particularly when experience is cast as a verb (Yorks & Kasl, 2002); that is, when experience is conceptualized "phenomenologically instead of pragmatically" (p. 179).

Many adult learners, though literate, work from backgrounds that place them outside the boundaries determined by the conventional undergraduate curriculum.² These learners often lack confidence about their school-based literacy abilities. Indeed, as both Hesford (1999) and Stygall (1994) have demonstrated, entrenched notions of what counts as writing often lead to the marginalization of so-called "basic" writers and their teachers. When instruction related to helping such learners develop these school-based literacies shifts into electronic environments, the anxieties of basic writers about learning to write can be intensified.

Lytle (2001) pointed out that many adults present themselves as helpless and incompetent in their literacy abilities. Further, such learners often feel intimidated by writing because of the public and social nature of the act (Clark & Ivanic, 1997). Such writers may feel conflicted about the nature of writing in higher education that is set off by a demarcation between their "former selves" and their "becoming selves" (p.134). Yet as anyone who works with adult learners will attest, they bring into their learning a rich array of experiences, often literacy-related, that can be legitimized by the pedagogies and environments that a learning community creates.

The present study explores three dimensions of the use of autobiography to address the particular strengths and weaknesses of adult learners: (a) the use of the autobiography and the possibilities it opens, (b) the nature of the electronic learning environment in which learning to write is embedded, and (c) the processes of identity negotiation in that environment. Specifically, it asks how and what identities are constructed/composed, and what subject positions are taken up by adult learners as they work with and around technologies. It also looks at the implications of the findings for teaching adult learners in networked environments.

Method

The study adopted a qualitative, systematic, and intentional inquiry process by drawing on the long tradition of teacher research (Baumann & Duffy-Hester, 2000) in a freshman-level reading/writing course at an open admissions community college. In their synthesis of the method and methodology in teacher research, Baumann and Duffy-Hester noted that a "cornerstone of teacher research is that it is *pragmatic* and *action oriented*; that is, it involves reflecting on one's teaching and practice, inquiring about it, exploring it, and then taking action to improve or alter it" (p. 2). Inquiry and reflection are grounded in teacher theoretical and research knowledge. Out of such practices, a teacher produces new knowledge about teaching and learning. In the course for this study, students were expected to develop academic-related literacies that would enable them to function in academic and public communities. As with all writing courses at the college, this course was taught in a computer-networked environment. The course developers positioned reading and writing as social practices, recognizing that "we write not as isolated individuals but as members of communities whose beliefs, concerns, and practices both instigate and constrain, at least in part, the sorts of things we can say" (Harris, 1989, p. 12). The challenge for the teacher was to draw on what learners brought to the networked environment, while engaging those experiences as legitimate for exploration.

Participants

Eighteen adult learners enrolled at a public, midwestern community college during the fall of 2000 provide the data for the study. There were 8 men and 10 women. Three were African American; one was from the Caribbean, and six were European American. The ages of participants ranged from 20 to 54. At the college, 88% of students are European American, 7% are African American, 1.9% are Hispanic, and 2.2% are Asian/Pacific Islanders. Students come from a local area that is relatively prosperous and has a fairly solid economic base. Their age ranges are 57% between ages 20 and 29 and 22% between ages 30 and 54. Women account for 56% of the student population. Many students (60%) attend the school on a part-time basis.

Data Sources

Primary sources of data were technological literacy surveys and student-generated autobiographical texts. Supplementary data sources were teacher journal entries (these included participant observer notes), teaching logs, and conference logs.

Technological literacy survey. Students were asked to think about and respond to items related to family literacy histories, personal literacy histories and memories, and histories with technologies. Students were allowed to decide what constituted technologies in their lives. They responded to questions such as "Do you consider yourself a literate user of the technologies? How do you define literate in this context?"

Technology autobiographies. Students were asked to write essays of five to six pages about their literacy acquisition that required them to identify very self-consciously the technologies that they use. They were to be explicit about what a technology was to them and why. Students were also to consider the culturally specific ways in which such definitions function.³

In these essays they reconstructed their processes of acquiring the literate practices they controlled in whatever contexts they chose as sites for their reconstructions. In doing that reconstruction, students had to examine their interactions with various technologies as they defined them and to evaluate the effect of those technologies on their processes of acquiring or extending their literacy abilities. The assignment identified technologies in very broad terms but specifically noted the role that emerging digital technologies are playing in our understanding of literacy. The technology autobiographies, therefore, focus on the particular cultural practices with which uses of reading, writing and communication are associated in the many contexts in which the adult learners in this class function. The technology autobiographies were

public texts, in that they were bound as a class book that all students received and used for other exercises in the course.

Procedure

The course was taught in a computer-mediated environment in which students read, discussed and wrote about the medium of instruction and its related discourses and representations. Students in this study also used a course-based, teacher-moderated asynchronous discussion list on the college's online teaching program, *Topclass*. The data were collected during the fall of 2000 from materials related to the first unit of the course, which spanned four to five weeks.

Students first were asked to complete the technological literacy survey. Students shared and discussed their survey responses both in class and online and then engaged in a number of planning, invention, and drafting processes to generate technology autobiographies as their first major project for the course. These texts and other samples of writing that relate to student/technology interactions provide data for the analysis.

Data Coding and Analysis

Data coding and analysis entailed identifying patterns in the representations of self and technology use as it was encoded in students' (technology) autobiographies. Students' texts were read by the author (teacher) to identify recurring themes. The initial themes were memory construction and recovery; representations of the literacies; writers' control; and uses of the autobiographical text to negotiate, compose and construct identities and to position the learning environment. These themes were then discussed independently with two colleagues, one of whom also served as a second coder. Based on these discussions, the themes were refined to generate the three broad themes used for the analysis. The author coded the data using the revised themes. The second coder then read all texts independently and coded the samples by identifying and labeling texts that reflected the categories and themes. The percentage of agreement in our independent coding was 81.3%. In the cases where we disagreed, we discussed our rationale for category designation and came to a consensus on how the data sample should be labeled.

The final thematic categories used in the analysis are

1. How texts encode commemorative practices and allow their writers to engage in memory work.
2. How texts allow writers to compose/construct identities in terms of the ways by which writers represent themselves, and their social and academic worlds as well as how they negotiate authority.

3. How technologies are represented and how/where writers locate their literacies.

The texts used for the analysis were those that students presented as their final drafts for the unit on technology autobiography. These final drafts were submitted as part of the students' portfolios for the course. The texts used in the discussion of the analysis are represented just as students wrote them. The examples selected for discussion are characteristic of the themes identified during coding.

Analysis of the Intersections of Genre, Medium and Writer Subjectivities

This section addresses the dimensions of writing the autobiography, writing in electronic environments and the processes of identity negotiation such writing creates for adult learners. The literacy autobiography or narrative is a pedagogic strategy teachers have often deployed to understand students' orientations and experiences. R. E. Miller (1998) declares that such narratives help uncover, "students' hidden educational transcripts" (p. 15)—that is, they make explicit the webs of experiences that frame students' acquisition and understanding of literacy practices. In a similar way, technology autobiographies reveal the experiential dynamics that influence students' reactions and interactions with new technologies. They enable their writers to construct and capture a "self" not as a coherent, unified category per se, but rather as a process that comes into being at the point of text production. Autobiographies, as Hesford (1999) notes, enable us to examine "the relationship between self-representation and historical realities and the implications of this relationship for understanding 'the complexity of the momentarily situated subject'" (p. 4).

Technology autobiographies provide opportunities for students to reflect on early and more recent literacy experiences and on the inflections that emerging technologies impose on their attitudes towards learning, learning strategies, and orientations to living with these technologies. Selfe and Hilligoss (1994) note that "technology, along with the issues that surround its use in reading and writing-intensive classrooms, both physically and intellectually disrupts the ways in which we make meaning" (p.1). Computers, they pointed out, "change the ways in which we read, construct, and interpret texts. In doing so, technology forces us to rethink what it means to be human" (p. 1). Autobiographical acts, therefore, create an avenue to knowledge about a "self." Writing then cannot be separated from the writer's identity, though that identity is scripted through the "culturally available models of identity and narrative templates that structure experiential history" (Hesford, 1999, p. xxi). These

insights become clearer as we examine the first theme of analysis.

1. Commemorative practices and memory work

Like other autobiographical writing, technology autobiographies allow adult writers to make and unmake personal memory. The work of representing memory is simultaneously an effort at self-representation and a revelation of an authorial self. Sharing such texts also enables a classroom community to experience the communal effects of remembering and legitimating experiences related to the acquisition and uses of literacies and technologies. However, autobiographical writing also constitutes risk-taking for the writing subject because it makes public that which had, up until the moment of composing, been private. At the same time, it creates the potential for voyeurism and exhibitionism.

In the example below, Tina (all names are fictitious), a twenty-six-year-old White woman who left high school and later went back for her GED, engages in memory work that is also in some ways commemorative. In the process she constructs a specific representation of her self. She notes:

- As I was growing up my family moved a lot. ...A form of technology that has helped me to remember events in my life that I would have no idea about are pictures. Pictures are a wonderful way to look back at events in a person's life and see who they were then and how they may have changed. I would say that pictures are one of my favorite forms of technology I use now.

As Tina looks back at her childhood, she enacts for readers representations of her childhood and the relationships she has developed with various technologies. Photographic technologies, she notes, enable us to remember a recorded past and to capture the present by creating physical artifacts of experience. This part of her text allows her to turn her gaze on her life, to read it and to interpret it. She also situates her reading of photographic technologies in a larger cultural context by capturing what Hesford (1999), drawing on Alan Sekula's work, terms "the socially cohesive function of the photographic image and its moral economy" (p. 6). Sekula's work traces the historical functions of photographic technologies by demonstrating, among other things, how "family photographs sustained sentimental ties in a nation of immigrants" and articulated a "nineteenth-century familialism that would survive and become an essential ideological feature of American mass culture" (as quoted in Hesford, 1999, p. 6). Tina's family photographs and her relationship to those photos allow her to sustain her ties to her past and to family history and thus construct as well as represent a certain part

of her identity and her experiences. Writing as social action is fundamentally about meaning making. Representations of childhood and the inflections of photographic technologies on one's memories of childhood can help students like Tina make sense of their relationships with the technologies that are becoming part of their learning environments and to locate them in their cultural and socio-political contexts.

Timmy, a twenty-three-year-old African American man, engages in a similar memory recovery practice when he notes:

- While growing up I had my basic technology of learning to read and write. In my household school came first which meant that these abilities were very essential. I can still remember my very first book *Green Eggs and Ham* by Dr. Seuss. I loved reading this book and would often read this book two to three times a day. As I grew older my responsibilities didn't change, I just expanded my horizon with reading and writing and perfected them in the classroom.

Like Tina, Timmy is doing some remembering as he reconstructs his literacy development. Timmy sees the acquisition of literacy as his first technology, and he remembers his process of acquiring literacy as a "responsibility" that began before formal schooling but for which school became the place to make "perfect." In and out of school, he saw the processes for literacy acquisition as opportunities to expand his horizons. Though Timmy does not explicitly identify any other members of his household in this excerpt, his reconstruction makes it clear that his family had literacy expectations and that these were supported by making reading material available to him. Timmy's constructions and representations of his literate self here are positioned to acknowledge the cultural context of writing as a school subject. As members of a culture that privileges the development of the love of books in the young from an early age, we recognize that script in Timmy's text.

For Gail, a twenty-four-year-old White woman, the act of remembering literacy experiences led to a (re)assessment of the values she attaches to literacy and its place in her life.

- As a child growing up I can remember how I didn't care much about school. I never realized how important literacy is and how you can't function without it. Because being able to read and write is very important. I remember my parents telling me all through school that education is important and how without an education you will get nowhere in life.

In this part of Gail's text, she reveals the values her family has about the acquisition and control of school-based literacy practices and their sense that such access and control can change Gail's life positively. Gail's

representation here is symptomatic of a larger issue that will be familiar to teachers of adult learners. Clearly, she is suggesting a disconnection between the literacy proffered by her school and the life that she would have beyond school. She could not see the connection between the two worlds, so her parents took on the role of helping her connect the dots between the two environments.

Jake, a fifty-four-year-old White man who was a recently displaced worker returning to school, presents a reconstruction of his experience that is also couched in a remembering narrative. His narrative provides an orientation to his family life during his childhood.

- About the time I started kindergarten, television was coming into peoples' homes. They were too expensive at that time for most people. ... We still had coal furnace until I was in high school. I remember my brother and I had to fill the hopper in the morning before we left for school and when we returned home and before bed. You also had to take the clinkers out each morning and evening.

Jake's memory work encodes a trajectory of technological innovation for his peers. His recollections provide a historical reality that may not be available to other members of the classroom community.

Nadia's representation of her experiences with technologies offers a different conception and orientation to the technologies she identifies in her narrative. Nadia, a native of the Caribbean, is a woman in her late twenties. She notes:

- Unfortunately, people in industrialized societies tend to take modern technologies such as electricity, televisions, and refrigerators for granted. Often, they assume everyone has or can have these necessities. Unlike many of you, I was not raised in a home where modern technology was commonplace. However, I was introduced to some in the early nineties, when they became available to my family and me. These technologies have made my life easier, and I am against reverting to my childhood days.

This excerpt offers an oppositional text to the constructions of contemporary western culture that is represented in the narratives of Americans. While she identifies domestic technologies as necessities, she notes that at least in some parts of our world, even necessities, cannot be acquired by everyone. Like Jake, she also constructs these technologies as characteristics of progress. For this reason she says "I am against reverting to my childhood days." A juxtaposition of Jake's and Nadia's experiences, particularly in the context of contemporary culture, actually captures the changing roles of technologies in peoples' lives as well as their situated nature. They also underscore the fact that the wealthy have always had initial access to technological innovations

and that the social spread of such innovation at any historical juncture is uneven and inequitable. These two autobiographical texts map the historically specific ways in which students experience and remember their technologically infused lives and the differences in how they have lived those lives at particular historical moments.

2. *Composing/Constructing Identities*

Autobiographical writing, according to Hesford (1999), always entails rather complex processes of identity negotiation that can be theorized as multiple, contradictory and at best fragmented. For all writers the acts of recreating experience discursively always involve a process of constructing relations to others. Aspects of social class, race and gender in identity construction are not essential, but rather partial, local and contextual. These dynamics are present in the autobiographical scripts of the adult writers in the present study. Tina, for example, reconstructs another aspect of her relationship with what she defines as the technologies in her life. There is a discursive "Tina" that is a constructed representation as a result of the particular gendered discourses and practices she enters into as a writer.

- The older I got the more technology I was introduced to. The next time period in my life was important as I grew from a girl to a young woman. I was introduced to several more forms of technology such as the curling iron and blow dryer. They became things I used everyday. These seem like unimportant items to be mentioning, yet they are still something I had to learn to use for them to mean anything to me.

Here Tina identifies the period of her growth and change into adulthood as another significant stage in her experiences with technologies—domestic ones in particular. For her, therefore, womanhood and, in a sense, femininity were at that particular moment a critical part of how she saw herself and her relationship with technologies. She notes that hair dryers and curling irons may not be that important to others (a signal to her sense of audience expectations of her representation of herself) even though they were things she had to learn to use in order for them to have a meaningful presence in her life. In fact, Tina is actually making a very significant point about literacy and learning in general. Learning has to be meaningful in order to have some impact on our lives. The use of image-enhancing technologies that are also gender-associated allow Tina to represent her notions of womanhood. Gender then is a particularly critical identity marker for Tina at this point and has specific inflections on her development. Tina's construction of her discursive self here offers a teacher a way to foreground the similarities

that networked environments have to what students see and control as technologies in their lives.

Gina, another writer, reports on her family's attitudes about class when she examines schooling as a sort of technology that she and her parents feel she needs to have access to because of the social capital that accrues from it. The pressure she feels expresses itself here as a daughter who wants to please her parents. Again, we see the desire of parents to help their children acquire social capital that schooling provides and in this case, that schooling is something the parents themselves never had. Gina states

- My parents never went to college because when they were in high school they got married and my dad went off to the air force after he graduated. He had taken some college courses in the air force but it was not enough to count. That is why they pushed me so hard about college. Is because they said that they want to give my brother and I an opportunity that they never had.

The identities composed by these writers are complex and contradictory. Gina is in school but in some ways we can see that her own investment in the process is heavily influenced by how she understands her parents' desires for her. Gina constructs an identity about the soft technology of schooling that is couched within the constraints of family expectations. There is some tension as we wonder what Gina's own feelings are about school. In the excerpt below, we see a similar tension in Jim's desire for a "simple life" even as he acknowledges life's growing complexities.

- I have tried to live a very simple life with as little stress as possible. I have lived here for my whole life. As a young boy I spent my days playing baseball and an occasional video game with my brothers. The video game at that time was on the Atari. When the sixteen bit Nintendo came out we got one of them and played it all day. . . . The video game systems that are produced today are so much more advanced... With every year that passes everything around me gets more and more complicated.

Jim talks about having "lived here for my whole life." The demographic make up of the community he refers to is one that is changing rather rapidly. The community is about two hours south of Chicago and about three hours north of St. Louis. According to recent census figures, its population has grown by 20 percent since 1990. The 2000 census figures show a population of 110,000 (Ford & Arney, 2001, March 15, A2). The Hispanic, African American, and Asian populations in the community have been growing rapidly. As in many small, midwestern towns undergoing rapid change, some locals are finding these changes

challenging. Unlike some of his peers, Jim uses recreational technologies only occasionally because he prefers the outdoors instead. Here we see Jim representing himself as a person who yearns for a simple and relatively stress-free life—perhaps in the same small town environment that he has always known. There is, therefore, a tension between this life goal and the possibilities his becoming self open up in contemporary culture. Jim constructs a self that is contradictory and in some ways conflicted. I will return to this tension in Jim's life as I examine the implications of technology autobiographies for instruction in networked environments.

3. *(Re) Positioning Technologies and Locating Literacies*

In learners' autobiographical texts, computers are positioned as important cultural symbols. These writers also associate some specific literacy practices with electronic technologies. However, some writers expressed uncertainty about their use of contemporary technologies. For example, Tina, identifies the computer as the most powerful technology over which she lacks control.

- If I had the knowledge that I do now on how important they [computers] are I might have gone further in trying to learn about them... [In high school] my schoolwork or how important it would be to me in my adult life never seemed to be a priority. With all these in mind you can understand how worried I was when I found out that most of my schoolwork would need to be done on a computer.

Here we see an overlap of how a particular technology is positioned and how it simultaneously enacts a mode of identity construction for its writer. Tina registers her anxieties about computer technology, anxieties that were shared by other writers in our classroom community. Earlier in her text Tina talks about not taking her word processing class seriously in high school but wanting to do so now so she can get into a nursing program. Notice that like Gail, Tina's representation of herself here suggests a disconnection between what her high school offered and her life beyond school. As she turns her gaze on her earlier experiences with school, it becomes clear that she has made a connection between school-based learning and productive living beyond it. Yet the way she constructs technological literacy as school work is a stance that a teacher can help students like Tina reassess. Kellner (2000), for example, argued for a more sophisticated conception of computer-related literacies that involve "learning how to use computers, access information and educational materials, use e-mail and list-serves, and construct websites" (p. 254). Further, for Kellner, these processes also have to involve critical stances. Tina's representation here uncovers her

needs as learner, and these self-representations can become data that drive responsive instruction.

A number of students in the twenty- to twenty-five-year-old range said they surf the web, write e-mails, socialize in chat rooms, shop, etc.; however, they did not consider the ability to navigate, read, write and communicate in this environment as a distinct set of behaviors for a specific context. Thus, they did not name themselves as writers or name what they do as reading. Perhaps in line with their own internalized notions of literacy practices in academic contexts, these learners constructed themselves and their experiences in electronic environments as irrelevant to school-based literacy practices. While all students identified school as the site for their first encounter with computers, and while a number of them located classrooms as the places where they continue to interact with computers, it is the non-school-based uses that a number of them found critical to their development of behaviors and practices for electronic environments. Here is a typical example of what students reported. Mark, a twenty-year-old Black man, notes

- I did nothing in junior high with computers as far as literacy training is concerned, but I would eventually use computers more in high school. I did however play a lot of video and computer games. Most of the video games were computer based. I admit video games did not teach you to read or write directly, but they help with learning how to strategically solve problems.

Mark also observes that he did not like reading or writing in school; in fact he notes, "I don't consider myself a writer." This student is constructing a link between computers and learning and that learning is situated in school. Like many of his peers, he privileges school-related language practices and behaviors. Steven, another student, describes the role of computers in his life thus: "I have met different types of people in chat rooms, and talked to people by e-mail and instant messages. The Internet is a place to go when I'm bored." For this student, the Internet has been "a big part of his learning process" though that learning has been largely recreational. For both Mark and Steven, recreational uses of technologies are separated from educational uses as though these domains are mutually exclusive. Further, it is clear from these remarks that functional, rudimentary skills are not enough if active, yet critical, stances to technologies are to be fostered in classrooms. In fact the demarcation of boundaries between the educational and recreational uses of technologies by students raises questions about how instruction can reframe the relationships between the two domains.

Consumer electronics featured prominently in students' representations of their processes of developing literacy abilities around tech-

nologies. While students identify older technologies such as print, the process of writing and literacy as technologies that have shaped their development, they nonetheless tended to focus on more recent technological innovations as critical to framing their experiences and their sense of themselves as literate beings. Video games, televisions, cell phones, DVDs, CD players all appear in autobiographies, though they appear more frequently in the autobiographies of those in the 20 to 29 age range. And entertainment is one of the main functions of these technologies in the lives of these writers.

Some students, like Tina and Dan, a twenty-seven-year-old White man, describe a process of schooling that did not provide them with much exposure to the literacies related to computer technologies but which they consider important to their definition of whom they want to become. Dan sees the control of technology-related abilities as defining access to social capital and, as he notes, he does not want to "be left behind."

- It wasn't until just a few years ago that I really started learning how computers and other technologies worked and how to use them. I was never exposed to all the newfound technologies that were coming out during my life. I started seeing them everywhere and how important they were to people. I realized that, today and in the future, they are going to be a large part of people's lives, I didn't want to be left behind.

Jim, on the other hand, reconstructs a rather conflicted, ambivalent relationship with technologies. Jim has already noted his desire to live a "simple life."

- I have tried to dodge using computers as much as possible over my lifetime. The computer just seemed to be one more thing to complicate my life and I did not see how I really needed to use the computer for anything. The only time I used the computer was when I was playing games or writing a paper for school. When I used the Internet in school for projects I was not really impressed with it because it would take so long to use and when I finally would find something on the screen it was not anything that I would use for my projects. As I have been going to college, I can see how I need to know how to use the computer for projects. I fear the day that I am that far behind in technology and don't know how to use the material objects that I buy. The more technology that comes out the more it complicates my life.

If Jim's earlier excerpt provided a window into a resistant stance to computer and related technologies, this part of his text makes his position clearer, though there is still that contradictory tension. Bruce (1997) identified opposition/resistance as a specific stance to technol-

ogy use in literacy studies. In some ways, Jim is clearly such a user. Bruce identifies the opposition/resistance position with those who fear the uses of technologies for surveillance, regimentation, social stratification, and a retreat from reality, among other purposes, and who fear that "technicizing society will progressively destroy the last bit of our humanity" (p.290). In Jim's case, his attitudes had to be negotiated within an institutional environment that, at the very least, sanctioned a utilitarian stance to computers. The computer is, therefore, constructed in a typical pattern described by Bruce (1997) as "technology" here and "literacy" there—they were in two distinct realms. But this is not something that only Jim does. As Bruce (1997) pointed out, this account of technology as autonomous from literacy is arguably a derivation from what Bruno Latour (1991) termed the "technology/society divide" (p. 103). For Bruce (1997) that divide is manifested in positions that range from seeing technologies as being outside of us, to beliefs that technologies can transform us, to the position that we could be neutral about technologies or see them as just tools. Conceptualizing social reality as separate from technology is, he argues, a "linguistic convenience" (p.293) that only muddies our understanding of the relationships we construct with technologies. Clearly, the tensions and the ambivalence in Jim's reconstructions of his relationships with technologies provide an example of this.

Autobiographies point to a number of issues related to locating literacy in students' lives. The locations of literacy that are provided in student texts often also show how students may see their literacy as skills or task-related, as practices that are socially positioned, and at times as a combination. For these adult writers, alphabetic/text-based literacies are acquired and used in the context of school. Out of school, a number of writers locate various literacies around technologies that are used for recreational purposes. Recreational use has a down side, though; students often describe their recreational and leisure-time experiences with technologies—especially consumer electronic technologies—in ways that can only be described as passive and non-creative. Though many aspects of formal educational programs now occur in electronic environments, we have ignored students' recreational uses of technology. We need to engage these uses, to critique them within a theorized framework that will enable students to see possibilities for a more active and creative use of the technology, and to harness the potential for crossing the boundaries among "school," "work," and "leisure time" uses of technologies.

By recreational uses of computer technology, I am referring to the use of personal computers for leisure-time activities such as surfing the

web, playing computer games, pursuing hobbies such as genealogy or collecting recipes, and socializing in chat rooms. This domain of technology use may strike us as inconsequential or even deleterious. But it is important especially because it represents a realm of experimentation and play that can take users beyond narrow vocationally oriented tasks. As Kellner (2000) noted, Internet forums and other related technologies require "a new emphasis on the importance of clarity and precision" (p. 249), with the expectation that participants will communicate thoughts and feelings concisely. These are also examples of the rhetorical skills that writing programs seek to promote.

A few students do describe experiences with technology in terms that suggest awareness of their need for a version of technological literacy that will enable them to succeed in the emerging workplace. Jake, for example, who did not own a computer when he returned to school, was nervous about encountering a technology-infused learning environment. Interestingly for Jake, it is the new economy that has forced an examination of an "escalation in educational expectations" (Brandt, 1995, p. 667). As a recently laid-off factory worker in his mid fifties, Jake has been compelled to confront the effects of technological innovations on literacy practices in the workplace. He received technological training on a couple of occasions, only to have his skills quickly overtaken by later developments. His training to work with IBM punch cards in the 1970's did not translate into an advantage for him when personal computers entered the workplace in the eighties. Instead, he was laid off as his specific skills became obsolete.

Jake's situation underscores the problems inherent in a location of literacy as a task or skill-oriented ability and raises questions about the nature of critical lifelong learning. As Manuel Castells (1998) argues,

The concept of education must be distinguished from *skills* (italics added). Skills can be quickly made obsolete by technological and organizational change. Education (as distinct from the warehousing of children and students) is the process by which people, that is labor, acquire the capability constantly to redefine the necessary skills for a given task, and access the sources for learning these skills. ...On the other hand generic labor is assigned a given task, with no reprogramming capability, and it does not suppose the embodiment of information and knowledge beyond the ability to receive and execute signals. These "human terminals" can, of course, be replaced by machines, or by any body around the city, the country, or the world, depending on business decisions. (p. 361)

This is in fact what Jake and some of his classmates have learned. Jake discusses the number of times he has been displaced as a worker.

About his first displacement and subsequent reentry into the workforce he has this to say:

- I thought my training saved the day. Little did I realize that what was saved was just postponement. This should have awakened me to get back to school and update my technical skills. ... If I had gone to school with a purpose in mind and stuck with it I would have the background I need now instead of trying to catch up. Now I'm out looking for a job and trying to modernize my skills at Hometown.⁴

Unlike his younger peers, therefore, he associates functional or vocational uses with technological literacy. Yet it is Jake's narrow focus on the vocational/functional uses of his abilities that has led to his displacements. The challenge for teachers of students like Jake is to create conditions that allow such students to explore the social, economic and political uses and consequences of technology use while developing more fluid boundaries among the domains in which they use technologies.

Discussion and Implications

Technology autobiographies offer students the opportunity to position technologies and literacies as they understand them in their lives and to reconstruct their relationships with both. As this analysis demonstrates, autobiography can guide pedagogies that are responsive to adult learners by legitimizing their experiences while exploring their histories as bridges to "new" learning. Three broad implications emerge from this study.

First, the analysis points to the potential of the technology autobiography in the adult learning context, particularly when instruction is in cybernetic environments. In these instances, generating the autobiography provides an avenue for self-representation for writers. The genre accords writers an authoritative identity that allows them to construct and represent their self-interest and commitment to writing as social action and sense making. Student writers can construct narratives that "fit" them in a voice that embodies their own ideas and beliefs about what is "real" to their sense of themselves. The genre foregrounds an "autobiographical self" that is distinct from the self that is constructed discursively. Further, the autobiography can provide access to an authorial self that many adult learners may feel inadequate about taking on. The genre then can be a pedagogic tool for sensitizing adult writers to the multiple selves the act of writing opens up, even as they explore the medium of instruction itself.

Second, the analysis uncovers student perspectives on technology and literacy that have implications for how we think about teaching in

networked environments. Students isolated three distinct domains of technology use in their lives: (a) the recreational, (b) the educational, and (c) the functional/vocational. In the educational domain, most educators focus on the use of computers and the Internet in school. Yet, these data highlight adult use of technologies for personal recreation, learning, and functional/vocational development outside of school. As educators we can have a major role in determining the character of the educational domain. It can be a space for helping students integrate the other two domains and an opportunity for them to think of technology as a gateway to lifelong learning.

Through the complex stories that our students tell, we can interrogate the social, cultural and economic interests that have converged to construct the cultural narratives about literacy education and technologies in the new economy. Such an interrogation can help teachers articulate responsible positions on the integration of these technologies into adult learning.

We can use students' own self-representations as materials for fostering the development of meta-knowledge about access and conditions of technology and literacy use in their lives. We can also use students' reconstructions as springboards for exploring why we all need analytic abilities to navigate the technology-infused environments we inhabit. Students' self-representations can be material data for helping them develop an understanding of how systems and skills operate in relation to access and power in institutions and in society in general (Luke, 2000). While access-related issues are real, for these students at least, the issue is not entirely about access; rather it is learning how to appropriate these technologies to construct agency, to develop creative uses, to produce knowledge, to intervene on one's own behalf or on behalf of others, and to orient one's self in a world that is in flux. There is a need to help learners develop strategies for production in the environments that technologies create rather than simply consume. I suggest we begin by finding links to the technological exposures that students already have—the consumer electronics, and entertainment-oriented uses—and proceed from there. This approach calls for rethinking our practices for a time when, in Selfe's (1999) words, "literacy alone is no longer our business. Literacy and technology are. Or so they must become" (p.3). It means paying attention to the issues that the accelerated integration of emerging technologies pose to teaching returning adult writers to work comfortably and with a critical stance in cyber-environments.

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Footnotes

¹ Carney-Crompton and Tan (2002) make the case that the number of people who are described as "non-traditional," "mature," "adult," or "reentry" students has substantially increased over the last decade. Further, they point out that the majority of these learners are female. They argue that the increasingly complicated location of these learners requires rethinking approaches to teaching them.

² According to Herideen (1998), community colleges are "of special theoretical interest" because they are far more likely to enroll "academically less well-prepared students, part-time students, economically disadvantaged students, commuter students, older students and first-generation students" (p. 1; see also Quarshie Smith & Watson, 2000). There is further indication that the community college is often the only affordable option for many minority students (Phillippe, 1995; R. Smith, 1995). As Padron (1994) reports, 36% of Caucasian Americans who seek higher education choose community colleges, compared to 45% of African Americans, 56.5% of Hispanics, 54.3% of Native Americans, and 40% of Americans of Asian descent.

³ The technology autobiography assignment guide for students is available from the author by request.

⁴ Hometown is a fictitious name for the community college where the study was conducted.

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