Writing travelers' tales on New Literacyscapes

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Unbounding Internet culture and identity

While walking through the city, you might come upon chalk marks on the outside of a building that look something like a large version of this:)(, with letters and numbers written adjacent to them. These symbols are giving you information about how to tap into a wireless local area network (WLAN) based inside that building; someone has "warchalked" the building so that you may open up your laptop or Personal Digital Assistant (PDA) and piggyback on a high-speed network supported by a business or building resident. This literacy practice is said to have its historical precedent in the marking of buildings by beggars and the homeless during the Great Depression in the United States, who used chalk marks on the outside of buildings to indicate whether or not they were good places for handouts (http://www.warchalking.org).

I begin with the example of warchalking not because of the ethical issues that dominate discussions of it, but because I believe it illustrates several key issues that will become increasingly critical in emerging research on online literacies. First, the writing on the outside wall concerns the digital world and gives information about it, but does not formally exist inside the digital world. Rather, information about a WLAN flows onto a traditional urban sketchpad: the building. Online and offline "worlds" flow and fuse; literacy is a traveling practice (Clifford, 1992) within and between them. It is increasingly less tenable to hold onto a vision of culture, identity, and literacy practice in which the "offline" and the "online" are held radically apart in the ways that they are practiced and signified (Hine, 2000; Miller & Slater, 2000). City buses, television shows, and cereal boxes announce websites to youth audiences, friendships are mediated through physical classroom spaces followed up by daily instant messaging (IM) sessions, hit movies are first experienced through Web-based trailers, and the Internet is realized in cultural practice and is reified as a cultural artifact in the media (Hine).

Second, warchalking is essentially a practice of rewriting modernist spatial boundaries and calls for a spatial interpretation. On the one hand, the warchalk etchings indicate something of the flow of culture and connectivity in a network society (Castells, 1996), while on the other they suggest how individuals and social groups are constantly engaged in efforts to territorialize space or claim spaces (Massey, 1998). Struggles over technoliteracy spaces have often been narrowly constrained by discussions of material access to computers and networks. While material access is clearly at issue in this example, as much at stake are social, learning, and political issues—provisionally networked social spaces—that make such access desirable and possible.

Third, the practice of writing the warchalk is a practice of identification with other humans and with technology. This marking of identity is invisible to some and well known to others. The warchalk discursive practice participates as part of a freenet Discourse (Gee, 1990) about Wi-Fi (Wireless Fidelity), an anticorporate, quasi-anarchist set of ideologies and practices. Zealous Wi-Firians recruited by this Discourse share not only some type of technical know-how but also powerful practices of "technoliteracy" (Lankshear & Snyder, 2000) that function as forms of identification.

Fourth, and directly related to the discussion of identity, knowledge about information and communication technologies (ICTs) is unevenly experienced and distributed among adults and youth. It is essential to note that the website on warchalking I referred to was created and is managed by 15-year-old Aaron Swartz, a self-proclaimed "teen-age writer, programmer, and hacker" (http://www.aaronsw.com). Swartz,

who spends much of his time reading and programming and has been interviewed by the British Broadcasting Corporation and National Public Radio, writes in his website that he occasionally goes back to his old school "to say hello to everyone." While Swartz is obviously an atypical young person, the noticeable gap between his everyday literacy practices and those of adults, including those of us who teach and engage in research on literacy, may in fact be typical (Knobel & Lankshear, 2002; Tunbridge, 1995). As teachers and researchers, we are currently confronted with the need to observe and learn from our students while making critical decisions about the kinds of old and new literacies that could make schooling meaningful to their life trajectories beyond it (Gee, Hull, & Lankshear, 1996).

Early mapping of digital youth spaces

Margaret Mackey argues (later in this issue) that we need "thick description of interpretive acts, thick analysis, and thick theorizing" (p. 405), with a particular emphasis upon research that pays attention to the full range of multiple contexts in which persons engaged in semiotic activity are situated. This claim is particularly applicable to the study of online literacies. A handful of large-scale studies (such as the Pew Internet and American Life Project) has collected survey data on the online practices of youth (e.g., Lenhart, Simon, & Graziano, 2001). Some of these studies have been commissioned by corporations with a clear investment in demonstrating the importance of online practices (Roper Starch Worldwide, Inc., 1999). While some interpretive work has examined online literacy practices within diverse school settings (Lankshear & Snyder, 2000; Reinking, McKenna, Labbo, & Kieffer, 1998; Warschauer, 1999), relatively little work has closely documented the everyday online literacies in which many youths invest their time. With few exceptions (Alvermann, 2002; Evard, 1996; Lam, 2000; Leander, 2003; Lewis & Fabos, 2000; Tobin, 1998), current qualitative work has tended to focus upon the products or artifacts left behind by youths in their forays across cyberspace (Leonard, 1998; Stern, 1999; Walker, 2000). From this perspective, the current state of the field is somewhat analogous to composition studies in the early 1980s, when researchers first began to systematically observe and study writing processes in situ rather than to examine textual traces alone. Moreover, with few exceptions (Holloway & Valentine, 2001; Kupperman & Fishman, 2002; Lankshear & Knobel, 1997; Valentine, Holloway, & Bingham, 2000) very little work has considered how home and community settings interact with online practices, producing the kinds of interpretations of online literacies that have been more richly documented for other out-of-school practices and settings (Hull & Schultz, 2001). Such research across diverse settings will help make evident the need to shift our questioning from *what to do* with technology in school toward redesigning the relationships between the school, the home, and the community (Bigum, 2002). Integral to these redesigned networks is an expanded perspective of literacy practice as textual, visual, audio, and tactile design.

Current work in social and cultural geography is beginning to generate important insights for interpreting online literacies. Empirical and theoretical work that articulates technology, discourse, and geography considers how information and communication technologies (ICT) practices construct their meanings from the interactions and transformations of multiple social spaces, including the diverse spaces of the Internet (Crang, Crang, & May, 1999; Dodge & Kitchin, 2001; Hine, 2000; Saco, 2002; Wakeford, 1999). Spatial theory is only beginning to be taken up in literacy research (Hagood, 2001; Hirst, in press; Leander, 2001, 2002; Moje, 2000; Sheehy, 1999). This shift is particularly important for researching online literacies, as a limitation of previous research has been the radical isolation of online activity from material settings. Once online activity is bracketed from the social situations that shape its meaning, critically important problems of literacy practice, context, and identity become opaque (Bruce & Rubin, 1993). As an illustration, the research of Sarah Holloway, Gill Valentine, and collaborators (Holloway & Valentine, 2000, 2001; Valentine & Holloway, 2001; Valentine, Holloway, & Bingham, 2002) has reconceived the problem of ICT access to include a consideration of social identity and agency. Across home and different school settings, Holloway and Valentine (2001) have documented practices of identification with technology by youth, including how they negotiate the visibility of their technical competence. For instance, they found that technology emerged as a signifier of social inadequacy for some boys in school (e.g., marked as "geeks" or "homos"), yet skills in certain computer games, acquired at home, carried cultural capital into the school setting. And, while some girls received praise from parents for technical competency, they

strategically used technical practices sparingly at school to "win social popularity as well as the grudging respect of their peers for their technical skill" (2001, p. 36). Rather than documenting a stable set of meanings and practices "within" contexts, this research traces a complex, dynamically shifting articulation of technoliteracy practices, social spaces, and identity.

Moreover, these practices are coproduced with specific discourses or representations of space (Lefebvre, 1991; Soja, 1989) concerning ICT in state policy, school policy, and the media. Research on technology and literacy must follow not only local practices, but the ways in which these practices are mediated by discourses about the Internet, literacy, and the life trajectories of youth. For example, Valentine et al. (2002) analyze how three case study schools constructed different discourses concerning technology, including "ICT for all" (including the wider community), "ICT as a life skill," and "ICT in terms of academic achievement" (p. 312). These discourses helped to structure different types of access and surveillance of ICT practices in and out of school. Holloway and Valentine (2001) document how discourses of the "child in danger" and "the dangerous child" (Oswell, 1998) are appropriated (and sometimes resisted) by parents and schools in efforts to regulate Internet content. Relations to these discourses suggest how identities of "the child" and "the adolescent" are produced in relationship to computers and other nonhuman actors.

From remediation to semiotic self-fashioning

The relationship between computers and reading has been a research focus in the United States since the early 1970s, a research agenda that heavily emphasized remediation in its early years. The late 1980s and early 1990s were marked by a shift in research to broader considerations of the changing meanings of literacy with new technologies (Knobel, Stone, & Warschauer, 2002). To offer a more recent glimpse of a historical trajectory of research on online literacies, I turn to the *Handbook of Literacy and Technology* (Reinking et al., 1998). While the handbook was published in 1998, it is composed of papers that were originally drafted for a conference on technology and literacy held in Atlanta in October of 1996. I would like to use this restricted space to make a few observations about the handbook as a historical document, likely drafted in late 1995 and 1996, or just several years after then-Vice President Gore began to imagine and routinely invoke the "Information Superhighway" in his speeches (Wiggins, 2000).

A broad review suggests that much of the research agenda charted in the handbook remains important for ongoing research, including changing perspectives of literacy development, societal implications of reading and writing online, equity issues, processes of learning with new technologies, and understanding specific forms of literacy on the Web. However, other current trends in online literacy research depart, in degree or in kind, from the direction it charts. First, the handbook is shaped around the changing notion of text and its transformation in a post-typographic world. Even while the definition of literacy is being challenged, these challenges are typically framed in a language of transforming print texts, reading, and writing (notable exceptions include chapters by Jay Bolter and Jay Lemke). Second, while important ecological models of technology studies are discussed in two chapters (one by Bertram Bruce and Maureen Hogan and another by Jay Lemke), nearly all of the research represented in the handbook is concerned with issues of teaching and learning in school settings. Key issues include the design of new technologies for learning literacy, the development of technology-related pedagogies, and problems encountered in changing educational practices. The presence of the Internet in the lives of youth outside of school is all but absent in the book, with the exception of Tierney and Damarin's extended illustration of the relations between boogie boarding, Internet communication, and other media. A third observation is that discussions of the relationships of online literacy to identity construction are not a focus of the book (however, identity issues are considered in chapters by Myers, Hammett, and McKillop; Lemke; and Tierney and Damarin).

I note these trends in current inquiry not as a critique of the handbook, but as a reflection of current shifts in the study of online literacies. These trends and others begin to suggest how new expectations are emerging concerning what research on media and online literacies might ultimately accomplish. What agenda lies beyond a deeper understanding of the (digital) text, the classroom, and pedagogy? A partial response involves a shift in focus from a fixation upon technological tools toward mapping the ecosocial systems (Lemke, 1998) through which new identities are being performed and produced. Online and media literacy studies do not have a corner on the market for the analysis of literacies as practices of the self (Holland, Lachicotte

Jr., Skinner, & Cain, 1998) within sociocultural-material networks. Yet such research does offer a unique set of opportunities to significantly advance our theories of the relations—which have always existed in some configuration or another—between semiotic production and consumption, human networks, and material-ideological tools.

Can methodology get an mlife?

Situated accounts of literacy practices have made a durable impression on how we perceive literacy; the spatial imagination of current literacy work has been powerfully shaped, for example, by Shirley Brice Heath's (1983) place constructions of Roadville and Trackton. Literacy researchers' ways with words and interpretive lenses have been formed by long-standing ethnographic traditions of relatively bounded places, including texts, literacy events, classrooms, schools, and communities. In researching online literacies, how do we move from "roots to routes," as the formulation goes, to how we trace and map the texts and contexts articulated in a moment of space-time of literacy practice?

How do we reimagine and study the event, the text, the classroom, the school and community as a nexus—a "field of relations" (Olwig & Hastrup, 1997)—rather than as a container? In what situations, and for what social purposes, are offline and online lives held apart? When are they merged? If the Internet itself is not a single thing, but a heterogeneous assemblage of practices, texts, and cultures, then how are online territories performed through semiotic practices (Dodge & Kitchin, 2001)? Further, what form does ethnography take when it is no longer necessarily about physically displacing oneself, but about experiential displacement, a process of following connections (Hine, 2000; Miller & Slater, 2000)? Moreover, (how) are we currently constrained by assumptions about "individual" research careers and projects, when, as Jay Lemke (2000, revoicing Hillary Clinton) claimed, it "takes a village" to study a (metamediated, connected) village?

Obviously, the methodological issues of researching online literacies are legion. For the development of online ethnography, these issues include researcher and participant identities, ethics, the nature of participant observation online, credibility, researcher knowledge and immersion in online culture, privacy, and many others. While a rapidly developing set of materials is emerging for such study in the social sciences in general (Jones, 1999; Lindlof & Shatzer, 1998; Mann & Stewart, 2000), there is a vast amount of work to be done to appropriate and develop emerging methodologies for researching the online literacies of youth.

A second theoretical and methodological issue involves how to transform cultural historical activity theory (CHAT) for research in online contexts. I focus upon CHAT because this broad theoretical tradition has been widely appropriated and developed in literacy studies since the pioneering work of Scribner and Cole (1981). In many ways, the analysis of mediation, material technologies, language, culture, and the relations between individual and systemic change make CHAT appear ideal for researching online literacies. Also powerful in this work is the way in which Vygotsky's more simple formulation of mediated activity has been modeled as the complex activity system (Engeström, 1993). At the same time, activity systems are most often identified as locally situated groups organized in relations of copresence or within relatively clear boundaries shaped by negotiated objects: doctors and patients consulting in offices; children playing games in after-school clubs; scientists using diagrams in laboratories; athletes developing pole vaulting practices. Since its inception, CHAT has been primarily concerned with the analysis of human activities, "concretely present in space and time" (Engeström, 1999, p. 28). How are such formulations of learning and activity helpful for interpreting the actions of a young person involved in multiple IM sessions while simultaneously working on a homework assignment that involves Web searching and watching television? Should such a situation be considered a deviation from the norm? If individuals learn, or are transformed, in relation to activity systems, then how are activity systems laminated, folded, hybridized, or blurred (Alvarez & del Rio, 1999; Engeström, Engeström, & Vähäaho, 1999; Holland et al., 1998)?

Drawing on practice theory, a close cousin of sociocultural work, some research has begun to frame online activity in relation to communities of practice. However, in online contexts, it is often not at all clear what the boundaries of a given community are. Additionally, the sense of being engaged in legitimate peripheral participation online is less apparent than it may be, for instance, in the case of apprenticing in a Vai tailor shop, becoming a Yucatec midwife (Lave & Wenger, 1991), or learning in an insurance claims office (Wenger, 1998). While CHAT has informed theories of human-computer interaction (Nardi, 1996), an important methodological and theoretical problem for the study of online literacies involves reinterpreting CHAT theory

through a cultural and historical lens. That is, the explanatory power of CHAT is predicated on it being continually developed in relation to particular, historically developing forms of activity. If the theory itself is saturated with the activity of craft apprenticeship, laboratory experiments in the Soviet Union of the 1930s, or paperwork in modern offices, then it will be limited in delivering rich interpretive frames for interpreting online and offline lives and learning. On the other hand, if this theoretical tradition is broadened and transformed in use, then it could ultimately be a powerful and flexible means for understanding how new literacies are learned and culture is being transformed.

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Pedagogy, connectivity, multimodality, and interdisciplinarity

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Introduction

The histories of communications technologies have more similarities to the histories of millennial religion and cargo cults than might be immediately apparent. From the emergence of alphabetic writing as a portable, durable, and replicable means for the preservation of knowledge, to the development of typography and mass literacy, and to the early and mid-20th century emergence of cinema, radio, and television, shifts in dominant modes of information at once tend to generate moral, intellectual, and institutional panic and critique, as well as powerful evangelical discourses about their capacity to revolutionise thinking, everyday life, and, of course, the practices of education. At the same time, dominant educational institutions—from Socratic dialogical circles, to medieval monasteries and universities, to the industrial-era school—do not have outstanding track records engaging with new communications technologies. This is in part because curriculum and teaching tend to be defined in terms of mastery of and engagement with dominant modes of information, whether of spoken language and gesture, inscription and print, or visual image. Simply, the domination of pedagogy by mode of information may prove harder to displace than any particular political or sociocultural ideology.

Many teachers and parents are concerned about children's engagements with contemporary media culture—whether the Internet, online or