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Tracing the Everyday 'Sitings' of Adolescents on the Internet: a strategic adaptation of ethnography across online and offline spaces

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ABSTRACT *This article argues for the need to move beyond place-based ethnography and develop ethnographic methodologies that follow the moving, traveling practices of adolescents online and offline. In the first part of the article, challenges to traditional ethnographic constructs such as place, identity, and participant obervation, and the ways in which these constructs are further destabilized in research online are reviewed. Secondly, at the center of the discussion, a common misconception of the Internet as somehow radically separate from everyday life is critiqued. Thirdly, possible interpretive methodologies are discussed for following connections and circulations in research that travels, with adolescents, across online and offline spaces. These methodologies include tracing the flows of objects, texts, and bodies, analyzing the construction of boundaries within and around texts, and focusing upon the remarkable ways in which texts represent and embed multiple contexts.*

In this article we move toward the design of ethnographic methodologies for researching the online literacy practices of adolescents. In our efforts to understand online literacies as social practices, we find ourselves limited by current forms of ethnography. While there is a small but developing body of Internet-related ethnography (Turkle, 1995; Markham, 1998; Wakeford, 1999; Hine, 2000; Miller & Slater, 2000), and while general purpose texts concerning the transformation of qualitative methodologies for researching online practices are beginning to emerge (e.g. Jones, 1999; Mann &

Stewart, 2000), we are not aware of any current discussions focused on interpretative methodologies for studying the everyday online literacy practices of adolescents. 'Moving toward' such a methodology involves at least two caveats. First, we maintain that ethnography cannot be somehow completely formulated prior to the moment-by-moment application of theory to research practices. Secondly, we recognize that our particular construction of ethnography, like others, is in its infancy and is in some senses a patchwork of disparate disciplinary traditions and practices. Thus, we do not claim to be introducing a radically new version of ethnography, but somewhat more modestly, to be reworking ethnography for the complex ends of studying new literacy practices. In sum, as ethnographers, we imagine our own work as a 'traveling practice' (Clifford, 1992), assuming at the outset that our methodological assumptions will continually recede before us.

In formulating the expansion of current ethnographic methodology we have borrowed the term 'connective ethnography' from Christine Hine (2000). Like Hine, we consider how a geographical or spatial perspective might expand research methodologies for online interaction. How might we develop research practices and frameworks that allow and even propel us as researchers to travel with adolescents as they create and dwell in online and offline sites? Drawing upon the work of critical and social geographers such as Henri Lefebvre (1991) and Edward Soja (1989, 1996), we begin with the assumption that space-time (or social space) is not simply a static background 'upon' which human activity is played out. Rather, the ongoing production of space-time is a rich process that draws upon multiple material and discursive resources, is imbued with relations of power, and is malleable through individual agency and imagination.

Our first move in the article is to consider some of the problems and dilemmas for expanding place-based ethnography for researching online, traveling practices. Keeping a spatial perspective at the foreground, we briefly discuss how place, researcher and participant identity, and participant observation become troubled constructs in online research. Secondly, we bring a spatial perspective to the Internet, critiquing how the Internet has been constructed in research as a 'world apart.' Part of this limitation comes from our current uses of language to describe practices and social settings mediated by the Internet. In this article, for example, we use the term 'online' to describe Internet mediated practices and settings, in contrast to 'offline' practices and settings that are not mediated by the Internet. At the same time, we recognize that this terminology and its inherent contrast sets up a false dichotomy, akin to the dichotomies set up by 'real'/'virtual,' 'digital space'/'meat space,' etc. While limited by current terminology, we offer an analysis of some of the ways in which online and offline practices are co-articulated. At the same time, we recover from the online/offline binary questions to pose questions about why and how the Internet is made out to be a separate social space.

In the third section of the article we discuss the design of possible methodologies for researching literacy practices in online and offline settings. Through these design possibilities, our concern is not to simply enumerate more research sites that should be considered in ethnography that traverses online and offline settings. Rather, we are concerned with describing practices that could be followed in understanding how participants create, bound, and articulate social spaces. Our shift, therefore, is from identifying sites (as things) to identifying 'siting,' as a productive process. We work in this discussion of research design to create productive tensions among flow and place-making practices, space-time paths and stories of travel, and the ways in which writing, speaking, and reading are constructions of social space.

Adapting Ethnography to Online Settings

Ethnography has always been, in some sense, a geographic project, traditionally involving practices of dwelling in physical locations, mapping and understanding the practices within these locations, and retreating to other spaces to write research reports (Clifford, 1992). When the research site or location for ethnographic study moves into the virtual worlds of the Internet, what happens to the meanings and uses of spatial constructs of ethnographic research, such as 'place,' knowledge about local identities, and participant observation?

Place

In carrying out an ethnographic study, where is it that the ethnographer goes? Where does the collection of data take place? According to Spradley (1980), 'place' is one of three aspects of a 'social situation.' The other two aspects are 'actors' and 'activities' (or 'action'). In Spradley's view, any physical place can be the basis for a social situation as long as the other two elements are also present. An example Spradley gives is of an ocean pier where people loiter and fish (p. 40). A researcher then, as a participant observer, would hang out in this particular place—the pier—watch and interview the actors, and perhaps even fish. Inherent in this social situation we can further acknowledge a particular culture, or 'the acquired knowledge people use to interpret experience and generate behavior' (p. 40), as formed by the particular actors and activities that reside there.

Imagining where the ethnographer would go in terms of Internet research suggests an expansion or revision of social situation to include locations that are not physical settings as we have typically thought them to be. One definition that allows this broader concept of place or setting has been offered by Hammersley and Atkinson (1995), who have described the place as 'constituted and maintained through cultural definition and social strategies' (p. 41) with boundaries that are 'not fixed but shift across

occasions, to one degree or another, through processes of redefinition and negotiation' (p. 41). Olwig and Hastrup (1997) suggest that:

… a new sensitivity to the ways in which place is performed and practiced is required. This might involve viewing the field [place], rather than as a site, as being a 'field of relations.' In this sense, rather than focusing on specific research locations as they are defined physically, focus would shift to the connections between multiple locations where the actors engage in activity. In this view, ethnographers might still start from a particular place, but would be encouraged to follow connections which were made meaningful from that setting. Ethnography in this strategy becomes as much a process of following connections as it is a period of inhabitance. (p. 8)

Moving from traditional research sites to online spaces compels a shift to fields of relations rather than bounded physical sites. At the same time, the Internet has sometimes been constructed by researchers as a disembodied site for research, where physical boundaries and locations of participants are irrelevant. As discussed in the next section of the article, this 'unbounding' of research sites from physical locations does not suggest that physical locations do not matter, but, rather, relationally speaking, that they do not serve as self-evident boundaries of research sites.

Identity

Much of our communication offline depends on non-verbal cues. How does online communication exist effectively without these embodied cues? The importance placed on written text in online communications is emphasized by Yates (1996):

The text which appears on computer screens must provide all available information about the communication as well as being the communication. It has been both location and social context. It must carry the social situation, it must also carry the participants' relationship to the situation, their perception of relationships between the knowledge and objects under discussion. (p. 46)

This ability of texts to create social spaces is not unique to online practices. Yet, the degree to which the creation of space-time contexts is dependent upon textual practices clearly shifts in online research; using literacy, the researcher textually constructs not only her participants but also herself and her social world. The degree to which such constructions are entirely dependent upon text on the screen is an empirical and methodological question that depends, among other things, on the extent and nature of the different social networks shared by the participants and researchers.

Many researchers have also addressed 'identity play' in online interactions which, as Katz and Aspden (1997) have pointed out, is also frequent

in offline interactions. A major source of this concern is the fact that online spaces themselves appear to provide varying levels of anonymity protection. This philosophy regarding identity authenticity prompts Paccagnella (1997) to only treat as authentic those interactions that he can verify through processes of engagement and immersion. In contrast, Hine (2000) believes that going through the process of documenting interactions with informants and analyzing the threads of evidence they provide about their offline lives provides her with sufficient information to determine that the identity presented was plausible for the purposes of her research (p. 76).

Researchers have had contrasting perspectives on the meaning and degree of identity play involved in Internet use. New technological advancements appear to go through times of question, apprehension, and suspicion as societies test the boundaries of what the new technology can actually accomplish, and Internet use is no different. Harrington and Bielby (1995) have suggested that use of the medium serves to disconnect us from ways we build trust in our information exchanges, and in a similar vein, Danet, Ruedenberg-Wright & Rosenbaum-Tamari (1997) have suggested that 'the absence of non-verbal and other social or material cues to identity frees participants to be other than "themselves", or more of themselves than they normally express' (p. 131). Not all researchers have come to the same conclusions about identity play and Internet use. In a study done by Baym (1998), the members of a soap opera discussion group have built up identities she believes to be consistent with those they sustain offline. Correll (1995) also came to a similar conclusion about the online and offline identities of her research subjects. Hine (2000, p. 121) suggests that the current postmodern preoccupation with identity play on the Internet reflects more about the academics conducting research than it does about the majority of Internet users.

Participant Observation

What is meant by participant observation in offline or more traditional settings? Spradley (1980) lists the two purposes for participant observation: to engage in activities appropriate to the situation; and to observe the activities, people, and physical aspects of the situation (p. 54). Beyond everyday observations that all people take part in, the researcher as participant observer participates in such a way as to experience first-hand the society that he or she is observing. Olwig and Hastrup (1997) add action through the concept of 'interplay' to the picture of participant observation. In their words, 'The field work method of participant observation has involved a constant interplay between being part of life and stepping out of it, observing it and reflecting upon it' (p. 35).

How do online settings challenge the researcher in the role of participant observer? What do the characteristics of online settings imply

for the researcher attempting to conduct participant observation, when researchers are told to 'do what others do, but also watch her own actions, the behavior of others, and everything she could see in this social situation' and 'maintain explicit awareness of everything that is going on' (Spradley, 1980, p. 54)? We will focus on two aspects of online settings that are key to this question: how might the existence of 'lurkers' (see Knobel, this issue) affect the observation; and how do online settings affect the researcher's knowledge of those sites?

In an online setting, a lurker (someone who reads but does not post) or a large number of lurkers could be present. If the job of the ethnographer is to maintain explicit awareness of everything that is going on at that site, what implications does the presence of invisible lurkers have for rich reporting of events? Hine (2000) highlights four points to consider about the existence of lurkers as they pertain to the activity of the researcher as participant observer that can help researchers define their position in this regard: 'From a discursive point of view, the silent are difficult to incorporate into the analysis … they leave no observable traces' (p. 25). Essentially, Hine argues that it is only through visible activity and acknowledgement of other group members that the lurkers become important to the group. In this manner, the ethnographer mirrors the activity and awareness of other active newsgroup members; while lurkers may be present online, their identities are not present in any meaningful way.

A second question regarding participant observation involves the researcher's own participation. How does this participation affect the researcher's knowledge of these sites? In contrast to offline settings, the researcher is able to go to some online venues and not have his or her existence known. The researcher then participates as lurker. As Baym (1998) and Correll (1995) both stress, this type of participant observation would threaten the authority that comes from exposing the emerging ethnographic analysis to the challenge of interaction. Part of the authority of the ethnographic representation is directly related to the interaction between informants and researcher as participant. On the other hand, if the researcher does not lurk, but instead joins online venues as an active participant, interaction is no longer a problem, but the question becomes one of authenticity of the participants. One possible solution could be using face-to-face encounters to triangulate the authenticity of participant identity, yet such a practice would require in many cases a type of encounter that would not typically be carried out between participants in most online venues. Perhaps what is needed, suggests Hine (2000), is a way of looking at authenticity of identity as negotiated and sustained by the situation rather than as a fixed identity attached to a fixed body. In this way, the task of the researcher is to analyze authenticity as part of the ethnographic analysis, rather than as a problem for all online activity (p. 49).

Re-spatializing the Internet's Relation to the 'Real World'

Cyberspace has often been conceived of as a separate world in media representations, everyday practice, and in academic research. In the case of academic research, there are likely practical reasons for the separation of the Internet from the 'real world,' such as the difficulty of addressing multiple sites and the relative ease of gathering information online from university office spaces. Historically speaking, cyberspace has also been constructed as a 'world apart' through technocentric visions, whether utopic or dystopic, that have imagined the Internet as independent, active, and determining, and culture as passive and dependent (Dodge & Kitchin, 2001). Transformative visions of cyberspace have been shaped by Rheingold (1993), Turkle (1995), and others. From different communities, some of whom were inspired by science fiction, inequalities associated with particular identity categories (e.g. women, ethnic and racial minorities, gays) were treated as if they might disappear once the significance of the real body disappeared (Wakeford, 1999, p. 179). Following the visions of life as radically transformed by the Internet, a cottage industry recording the disappointing realities of Internet life began to arise, rendering reports that Internet sociality was just as sexist, classist, homophobic, etc. as life in bars and grocery stores (critiques that also often suffered from latent technocentrism).

Besides technocentrism, and perhaps informing it, the Internet has likely been constructed as a world apart due to static, folk theories of social space. Static, essentialist conceptions of space treat space as an absolute, akin to a container filled with objects. In this view, the Internet would be seen as a network of linked computers containing information that are relatively separate from cultural practices. Newtonian static conceptions, in which space is grid-like, have been adopted in traditional geography and underpin the search for spatial laws and logical patterns (Dodge & Kitchin, 2001, p. 28). Relational conceptions of space (e.g. Lefebvre, 1991; Harvey, 1996; Soja, 1996) assert that space does not exist outside of social processes, and that there is no single space or space-time being constructed in any social process.

> *Space and time are neither absolute nor external to processes but are contingent and contained within them. There are multiple spaces and times (and space-times) implicated in different physical, biological, and social processes … Processes do not operate in* but *actively construct* space and time and in so doing define distinctive scales for their development. (Harvey, 1996, p. 53)

In order to capture something of social space as a dynamic, ongoing construction, we sometimes speak of spatial processes as 'spatiality,' following Soja (1989). Relational conceptions of space typically insist upon the co-constitution of space and time (Thrift, 1996), such that even when

temporal processes are not named, geographers take space and time to be intertwined. Most importantly for research on identity and literacy, space is considered to be a product of social, cultural, political, and economic relations (Dodge & Kitchin, 2001, p. 29).

Relational theories of space would not assume the space-times of modern life would be held apart from new spatial relations developing through the practices and technologies of the Internet. Neither would such perspectives assume a simple replacement logic—that a new dominant space could substitute for an old dominant space. Rather, relational theories would be more supportive of a view that we believe is emerging from current ethnographies of Internet practices: that the emerging social spaces of Internet practices are complexly interpenetrated with social spaces considered to be 'before' and 'outside of' the Internet. From the relatively small but developing area of empirical studies of Internet activity, and with a particular focus upon ethnographic approaches, we are able to currently glean a number of illustrations of how offline and online activity and social spaces interpenetrate. In the following, we conceptualize and summarize some illustrations that we have found to be particularly important for reconceiving Internet research as connective ethnography.

a. Experiences in cyberspace are often not seen as exceptional by partici- pants. Even when researchers begin with the premise that Internet activity and social space is decidedly an 'other' to offline identity and social space, they often appear to find that those more 'native' to online environments do not see their experiences online as remarkable or separated from their day-to-day lives. For example, in their study of the use of the Internet by Trinidadians, Miller and Slater (2000) found that there were very few places where commerce or e-commerce, chat on playgrounds or in instant messaging, or religious instruction as carried out face to face or by e-mail were treated in terms of clear distinctions between the 'real' and the 'virtual.' On the contrary, 'far more evident [was] the attempt to assimilate yet another medium into various practices' (2000, p. 6). The researchers make clear that this does not mean that Trinidadians do not invest heavily into online activity, relationships, commerce, etc., or that they do not carry out forms of activity and relationships that only exist online. The key issue is that participants weave these social spaces and relations into their lives in such a way that the online is experienced as real and as 'commonplace,' and that transitions between online and offline social spaces and identities may be less marked than researchers initially assume.

b. Participants make meaning of their experiences across online and offline spaces. Sherry Turkle, whose early empirical research (1995) of Internet practices broke important ground, contrasted the real and virtual lives of people who regularly use MUD's (Multi-User Domains, or virtual worlds that permit participants to interact with text-based objects and

spaces). In contrast to most Internet research of her early work to the present, Turkle's methodology was based upon an insistence of observing her key informants face to face. Turkle found that while some people use MUDs for play, others use them for emotional support. MUD enthusiasts seeking emotional support either act out problems from their offline lives—using the MUD as a place of self-reflection—or seek to escape from their offline lives. Ironically, for those who seek to emotionally escape, Turkle found that the MUD often deepens offline anxiety. Along with contrasting and integrating online and offline social spaces to make meaning of their experiences, Dodge & Kitchin (2001) argue that people produce identities across these spaces without an exaggerated separation that is sometimes assumed. In particular, the researchers posit that most people do not want to be anonymous in most of their interactions online, but actually work to make themselves known, and routinely engage in a good deal of work to provide links to their offline, embodied identities (Dodge & Kitchin, 2001, p. 54). Whether or not this claim would be verified empirically, it does prompt us to consider not just identity expansion and identity play online, but the mundane practices of marking and stabilizing identity in the production of online and offline spaces.

c. Internet-based social practices shape offline practices of identification. Miller and Slater (2000) offer an intriguing example of the way in which Internet practices and structures of identification flow into offline practices and structures. Among some teens in Trinidad, it appears that a certain kind of stage model has developed in which they recognize and speak of others as moving through a pre-personal website phase or pre-ICQ phase, a next phase of heavy involvement in cybersex and Internet porn, and then a later phase in which Internet sex and pornographic activity is considered to be uncool. Along with these phases of activity come naming practices: while earlier and less-experienced adolescents might call one another by their ICQ nicknames, this practice is considered uncool by older adolescents (Miller & Slater, 2000, p. 76). The researcher's stage analysis is suggestively important for Internet studies, as it begins to suggest how Internet activity does not simply associate settled identity categories (e.g. adolescence) with certain forms or stages of online practice, but, rather, that these categories themselves—adolescence, man, woman, lesbian, poor, academic—become stitched together with particular Internet practices.

d. Online technologies extend rather than replace offline relationships. One of the invisible aspects of newsgroup participation, especially for peripheral or novice members of such groups, is the extent to which participants interact in private side-sequences and also in offline contexts. For example, from the view of the screen alone, academic newsgroups often appear to be constructive of new forms of community life solely based upon online interaction, while in fact they are structured as extensions of networking

that occurs through communal research and writing projects, through common attendance at professional conferences, and through shared histories in embodied universities and departments. While as a cultural artifact the Internet is often constructed as creating new relationships, including new forms of identity, cultural border crossing not otherwise possible, illicit romances that break up families, etc., in practice it is likely that the Internet is more often one tool and social space among many that people use to extend themselves and their relationships:

> *[The Internet] extends and maintains relationships more than it creates them. Indeed, it's not the web, but it's part of a web of relationships that includes meetings, phone calls, purchase orders, voice mails, third-party gossip—all the ways people communicate with one another. (Dyson 1999, as cited in Dodge & Kitchin, 2001, p. 132)*

Miller and Slater (2000) maintain that, contrary to the expectations of theorists such as Castells (1996), the Internet is not opposed to traditional forms of relationship, and especially to kinship (2000, p. 82). E-mail, for example, has proven to be a highly significant way for Trinidadian diasporic families to communicate, including exchanging photographs of Trinidadian family life as it extends across the globe. Miller and Slater (2000) argue that the analysis of potential or actual changes in social relations must be situated: while e-mail and other technologies were strongly contiguous for the extension of Trinidadian relationships developed first in kinship, the 'elective affinity' of particular Internet technologies for other cultures and forms of relationship is highly contextualized (2000, p. 83). In other terms, the production of any social space through practices and technologies is always caught up in a mangle of tensions, relations, and contradictions with other space-times.

e. Offline places are embedded within and reproduced in cyberspace. It is perhaps too much of a truism to note that in creating anything 'new' we are always bricoleurs, using scraps of old materials, familiar structures, and well-worn stories. The kind of bricolage that has become the Internet embeds within it offline spatial formations, as well as more generally being shaped by geographic metaphors from offline life (e.g. chat *rooms*, *home* pages, online *communities*, virtual *landscapes* and *worlds*, MUD *lobbies*, online *cafes*, etc.), which are arguably used to create an online 'sense of place' that resonates with life offline (Dodge & Kitchin, 2001, p. 56). The failure to borrow upon offline socio-spatial relations and create such a 'sense of place' has been credited for the failure of a certain online community (Public Electronic Network, or PEN) to survive (Foster, 1997, as cited in Dodge & Kitchin, 2001, p. 58).

AlphaWorld, a virtual world run as a commercial venture, offers a fascinating illustration of the embedding and reproduction of offline places in cyberspace. In AlphaWorld, participants claim territory and build their

own structures. Despite the possibility of a high degree of innovation, including, for instance, the ability to build a structure that would float in mid-air, such innovations are rare. Rather, structures tend to imitate conventional forms, including those from US suburbia (Dodge & Kitchin, 2001, p. 160). Dodge and Kitchin surmise that the conventionality of the world might be guided by a number of purposes and practices, including the range of common building materials supplied, the desires of inhabitants to create a familiar sense of place through 'homesteads,' and the desires of inhabitants to facilitate easy movements through their structures and therefore network their structures with the rest of the community. The structuring of AlphaWorld, through practice, also indexes a somewhat ironic reproduction of offline geographies and practices. Dodge and Kitchin (2001, p. 162) report that a small number of participants began to vandalize others' properties, including creating offensive objects and even billboards with pornographic pictures and posting them close to the entrances of others' homesteads. Such vandalism led to the first forms of community action in 1995, eventually leading to the formation of the AlphaWorld police department.

f. National identities are practiced in cyberspace. As illustrated again by the ethnography of Miller and Slater (2000), the Internet can function as an important venue for performing national identity. Trinidadians, the researchers argue, enter and practice the network 'as a people who [feel] themselves encountering it from a place' (Miller & Slater, 2000, p. 105). Despite the broad dispersal of the Trinidadian diaspora, and despite the global commodification of culture, Trinidadians continually practice their national identities online and consume the Internet as a source of nationalism. For example, the home pages of Trinidadians are often replete with core nationalistic symbols, such as flags, crests, maps, and national statistics. Web pages, online chat, and newsgroups are also used to practice cultural identities through language play ('lyming'), Trini-style jokes, and even explanations for outsiders to help them learn about Trinidadian culture. Miller and Slater interpret this nationalism and practice of cultural identity as related to a historical ethos of resistance to forces such as slavery and colonialism, but at the same time as indexing the fragile state of Trinidad as a nation state (2000, p. 115). Most significantly, they see the global reach of the Internet as supportive of the construction of Trinidad as a national 'place'; because the Internet is global, it can 'give people back their sense of themselves as special and particular' (Miller & Slater, 2000, p. 115). National identity was also a key topic of online discussion concerning the Louise Woodward case, in which a 19 year-old British au pair was charged with murdering an eight month-old Massachusetts baby in her care (Hine, 2000). In newsgroups more than in web pages, the case was constructed by participants as a confrontation between Britain and America:

What was seen in some of the newsgroups discussing the Louise Woodward case appeared to be not so much a case of cultural homogenization as a polarization or playing out of difference … national identities appeared to be solidified rather than dissolved by the contact. (2000, p. 114)

These instances of national identification practices as documented in ethnography run counter to the rhetoric of replacement or substitution (e.g. Castells, 1996), where global processes of identification somehow overtake forms of identification associated with places. Rather, they illustrate that the relations between a space of flows and a space of places (Castells, 1996) is a fecund site for the study of spatial–identity–literacy practices.

g. Online and offline spaces are dynamically co-constructed and interpolated. From her ethnography of 'NetCafé,' the first cybercafe in London, Nina Wakeford proposed that situated, material-technical networks be considered as the intersection of three 'landscapes' of computing. While 'online landscapes' concern the visual and textual practices on the machines, 'expert landscapes of the machine' are practiced by technicians who set up networks, keep hardware and software running, etc. 'Translation landscapes' are those most directly linked to staff, such as 'cyberhosts' who produce and interpret the Internet for customers, translating Internet knowledge, practices, and culture (Wakeford, 1999, p. 189). Wakeford is primarily interested in the work of translation, conducting the ethnography, in part, by working as a cyberhost herself. In particular, Wakeford documents how the main cafe floor is performed as a site of the Internet with a strong sense of physical and symbolic Internet presence, through the maintenance of a stylized 'cyber' interior, by the situated reworking of London subcultures (e.g. nightclub music and fashion), and by the roles of the cyberhosts—serving up coffee, snacks, and online time.

Wakeford analyzes how a particular imagination of the Internet guided the ongoing construction of NetCafe by its managers and cyberhosts, a story where Internet access was not influenced by gender and where women were encouraged to identify with Internet practices. Yet, this imagination, as captured in NetCafé brochures and main floor practices, conflicted with other imagined and practiced spaces. The front stage performance of the Internet on and with the main cafe floor hid backstage practices and spatial divisions. For example, while the second floor of the NetCafé provided office space for management, including the two women who pioneered the business, the top floor housed mostly men in a technical support area, which was avoided by the women cyberhosts as 'stinky,' littered, and distasteful. Wakeford records that the stairwell was an important physical space of negotiation among various staff members—a space where the translation landscape of computing was worked out and hidden from public view (1999, p. 191). On the cafe floor,

the Internet was also often gendered by customers, who tended to ask the women cyberhosts to serve coffee and the men for help with machine problems (1999, p. 193).

Wakeford's work opens up new interpretations of the Internet as a collection of traveling practices, as negotiated and performed ensembles of material-symbolic-imagined resources. She also creatively problematizes the view of the Internet as any single object or practice—not simply because the Internet is composed of a myriad of technical tools, but because it is culturally distributed across practices, including serving and drinking coffee, negotiating and bounding physical spaces, and consuming particular types of clothing and music.

Summary: researching the Internet as a 'world apart'

In this section of the article we have provided some illustrations of how online and offline social spaces are dynamically co-constructed. Emergent ethnographic work has begun to document how online and offline practices and spaces are co-constituted, hybridized, and embedded within one another. Based upon relatively recent work in the anthropology of modern cultural flows (Appadurai, 1996; Castells, 1996) and work in spatial theory, it is not at all surprising that online and offline practices are closely intertwined. In fact, the distinction 'online' and 'offline' is perhaps best seen as an analytic heuristic, a holding place until a more grounded means of understanding and discussing technologically mediated human experiences is formulated. The online/offline, virtual world/real world, cyberspace/physical space binaries need to be disrupted not simply because they are imperfect, fuzzy distinctions, but because they provide a priori answers to some of the most intriguing questions about Internet practices. What seems most surprising and interesting is not the lack of a clear boundary between the Internet and everyday life, but the ways in which participants and researchers alike construct the Internet as a separate social space. These practices of holding the Internet apart raise a number of questions. For instance, in what space-time situations, and for what purposes, is the Internet separated from other social spaces? How do these symbolic-material practices of separating the Internet from face-to-face interactions shape online and offline practices and identities? Further, how do we come to attribute entirely to technologies certain effects that are achieved through social practices (Hine, 2000, p. 116)? Moreover, what consequences for literacy and identity are achieved by telling and following 'world apart' stories? These questions are only suggestive of a broader series of problems that emerge once separation strategies become the subjects of practice-based inquiry, rather than foregone conclusions:

To the extent that some people may actually treat various Internet relations as a 'world apart' from the rest of their lives, this is

*something that needs to be socially explained as a practical accom-
plishment rather than as the assumed point of departure for investiga-
tion. (Miller & Slater, 2000, p. 5)*

Designing Connective Ethnography

In the following section we shift from a discussion of theory to a discussion
of methodology. We do not describe a single, coherent methodology, or a
design for a specific research agenda, but, rather, we imaginatively consider
several ways in which methodology might move beyond its current
place-based limitations and interpret online activity as involved in the
production of space. In this discussion, we adapt constructs from spatial
theory, ethnography, and literacy studies. We attempt to continually inter-
pret ethnography, spatiality, and literacy as dynamic and as conceived
relationally, rather than considering any one of them as primary and
independent.

    In moving toward the design of connective ethnography we seek to
make several disruptions. First, we wish to disrupt the binary between
'offline' and 'online' practices. As argued from the above illustrations, we
begin with the premise that the boundedness of 'offline' and 'online' is a
social achievement rather than a starting point of research. In the discussion
of research processes, we have striven instead for theoretically rich
methodologies that can travel across settings. For example, while ethnogra-
phy is adapted for research online, we believe that over time the opposite
trajectory will also prove productive: new methods designed for research-
ing online interaction will be found valuable for researching offline
interaction. As a related notion, we disrupt the binary of virtual and 'real'
worlds. We believe that the separation of the virtual from the real ought to
be a focus of an ongoing inquiry of practice rather than an a priori structure
for sorting practices. For Internet users, the blurring of the virtual and the
real involves a shifting sense of what it means to experience, an evolving
sense of the 'authentic' in social interaction. For researchers, such blurring
serves as a critique of the ways in which we separate imaginative images,
metaphors, and storytelling from architecture, cityscapes, identities, and
other spatial formations.

    Further, we seek to disrupt conceptions of social practice that consider
only one context or space-time to be operative at any given moment.
Rather, we strive to account for the ways in which multiple space-times are
invoked, produced, folded into one another, and coordinated in activity.
While we might commonly consider simultaneity as parallel activity
'within' a given temporal-spatial frame, shifting to a relational perspective
on space-times as constructed within activity redirects our attention to the
accomplishment of multiple spatio-temporal achievements. Understanding
how these multiple space-times are hybridized (Bakhtin, 1981; Leander,
2001), held apart (Lemke, 2000), laminated (Goffman, 1981), and made to

be intercontextual in practice will allow us to begin to consider not just space-time practices, but also the relations among these practices. Such a transition requires that we also disrupt the notion of literacy practices as primarily involving linguistic texts and school settings. Drawing upon a range of work in the New Literacy Studies (e.g. New London Group, 1996; Alvermann *et al.*, 1998; Barton *et al.*, 2000), we seek to interpret how broad forms of semiotic mediation are made to 'count' as literacy (Gallego & Hollingsworth, 2000). We also propose to contribute to an understanding of the 'situatedness' of literacy in New Literacy Studies, which has been commonly developed as a set of claims about how the meanings and effects of particular literacies are best understood as related to particular situations.

In the following discussion of methodology we construct not a list of specific research 'sites' in the traditional sense, but, rather, turn to a consideration of how to follow and interpret space-constituting practices. These practices are not intended to be mutually exclusive. On the contrary, while they are separated as a heuristic strategy, we imagine the relations among these practices (and their dimensions) to be of more interest than their analytic separation. Following Lefebvre (1991), who theorizes 'trilectical' relations among perceived space (physical space, daily routines, performed paths), conceived space (represented space, mental space, imposed space of design and writing) and space as 'directly lived through its associated images and symbols' (p. 39), we illustrate and advocate for such tensions in research. In the first part of the discussion, for example, we consider the mapping of flow, such as the flow of texts and bodies. In a simplistic grammar of activity, we identify flow with verbs and prepositions, describing movement and relationship. In tension with processes of flow are processes active in the bounding of place. These processes make space thing-like or noun-like. We consider the flow/place, global/local tension as a necessary dimension of connective ethnography, rejecting a position whereby places (and place-making practices) are replaced by flows (e.g. Castells, 1996).

In the second part of the discussion, we reinterpret flow with respect to a different tension. Rather than posing bounding or place-making in contrast to flow, we discuss how the traces of flow must be interpreted discursively. Flows or circulations appear to leave readily visible material paths of literacy practice, paths made by participants as they organize time and space through the routines of their lives. However, along with interpreting the seemingly self-evident paths of activity, we pose a reading of the metonyms and metaphors that one encounters and appropriates during the process of 'Net-walking.' By 'metonym' we intend to indicate how a fragment of language or other form of semiotic mediation calls up and points to a different world or alternate space-time. A metonym is a part of

a whole that brings to mind that entity. We are concerned with this part–whole relationship, and also how memory of distant space-times functions through metonym. By 'metaphor' we intend to indicate how a social world may become compressed and organized into a brief narrative form. For example, calling up 'trailer park kids' or 'a romantic evening' invokes an imagined geography or a figured world (Holland *et al.*, 1998) that may be resituated, through discourse, into the space-time of co-present activity.

In the third part of our discussion we focus more directly upon the textual and discursive construction of social space and identity, focusing upon textual geographies, the ways in which narratives are structured with specific 'chronotopes' (literally, time-spaces), and discursive constructions of situated selves.

Flow and Place-making: verbs, prepositions, and nouns

Flow. Flow describes not merely a networked structure, but, rather, the performance of individuals of and through that structure. Bruno Latour has commented regretfully on the static meaning that 'network' has come to have, in sharp contrast to its dynamic meaning in actor network theory, which he has been instrumental in developing. The popularization of network as a term:

> *now means transport without deformation, and instantaneous, unmediated access to every piece of information. This is exactly the opposite of what we meant. (Latour, 1999, as cited in Bingham & Thrift, 2000, p. 299)*

Latour's actor network theory affords us a number of productive ways to theorize flow in the ethnography of literacy practices. First, as with a range of other spatial theorists, Latour does not interpret time and space as independent, a frame in which things move, but as the result of the interaction among things (Latour, 1987). In Latour's work, space and time are less important than are 'spacing' and 'timing' (Bingham & Thrift, 2000, p. 290). More uniquely Latourian is the way in which objects of all sorts—actants—are brought into circulation, including people but also (in his analysis of Einstein's work) trains, clouds, men with rigid rods, lifts, marble tables, molluscs, clocks, and rulers (Latour, 1988a). Central to Latour's insight are not simply the circulations among human and non-human actants, but analyzing the transformations, traductions, and translations among actants. Thus, Latour historically has a keen interest in the function of texts in scientific work, and the manner in which texts are immutable (fix particular facts and forms of knowledge), are combinable, and are mobile (Latour, 1988b). Latour's actor network theory may be considered a 'prepositional' approach, as it seeks to specify how the relations between actants (e.g. orientation, directionality, proximity) are worked out in circulation (Bingham & Thrift, 2000, p. 290).

Inspired by a Latourian perspective on flow, the study of literacy practices could pull back from a fixation on isolated texts, authors, and isolated textual practices to consider how such texts are related to actual readers, desks and workspaces, writing technologies, classroom rules, clothing, school lunches, calendars, and a whole host of material, symbolic, and human actants that are active in the construction of social space. In this sense, 'flow' describes a process that is not unique to particular technologies, although certain forms of circulation are afforded by some technologies and practices more than others. An analysis of flow across online and offline practices could productively contrast the relations of flow among, for example, school-based literacies and the online literacies that adolescents engage in for pleasure. What kinds of selves do these flows construct, what forms of translation are active between circulating participants, and how do literacy practices appear when the world is flattened out and idealist abstractions (e.g. 'the institution,' 'standardization,' 'writing ability') are analyzed as forms of material circulation?

As an example of the practice of flow in ethnographic work, Hine (2000) has traced how information and advocacy websites in the Louise Woodward trial became arranged as more or less central or marginal. (Hine's work resonates with Latour's approach, although the author does not explicitly draw upon Latour.) While the number of websites associated with the case grew very rapidly (from 165 to over 700 in a week's time), and some of these sites deemed themselves as 'official' and authoritative, Hine analyzes how the Official Louise Campaign for Justice site became the key site. The centrality of this site—its flow across the entire network— is analyzed by considering not only the number of hits to the site, but also how the more peripheral and amateur sites repeatedly featured prominent links to it. Hine also argues that the offline physical location of the site was critical in constructing its centrality amidst the flow of interactions:

> *The official site was considered authoritative and up-to-date due to its proximity to the campaigners in Elton, and through them to Louise herself. The counter on the official campaign site told of the many visitors who found their way to the centre … The connection between the offline location of the village and the online location of the website was strongly rendered. It is clear that while space might be expressed as connectivity rather than distance on the WWW, this space is far from homogeneous, and it is not independent of physical, distance-based space. (p. 107)*

Thus, while 'flow' may be at first glance more cleanly associated with online than offline practices, Hine's (2000) research suggests that we need to carefully consider how flow is an achievement of relative spatiality with disparate resources across socio-material networks, connecting the global and the local, material and symbolic centers and margins. Other flow-related practices include a broad range of ways of constructing extensibility

and attention-getting through media, including the presence of incoming and ongoing links in a website, the practices of registering websites with search engines, including the payment for some registration services, posting personal website addresses within e-mail signature files, and even handing out business cards with website addresses (Hine, 2000, p. 106).

Place-making. How do online and offline literacy practices perform places? One dimension of the performance of place is the construction of boundaries. In other work, one of us (Leander, 2002) has considered how students coordinate bodies and talk in the performance of identity, including how they close off groups from one another, position others as outside observers of group activity, assign contrasting meanings to bounded groups, and overlap one social space with another so as to transform it. The production of and relations among boundaries as performed through bodies and talk in this work is interpreted as a performance of identity and power. In online practices we would fully expect to find different place-making practices, with important changes in the scale of such boundaries, the relative openness of non-embodied spaces to chance meetings and happenings, and the lamination and intercontextuality of bounded places. For instance, Hine's (2000) research indicates how, even while the Internet is hypertextually structured and potentially an entirely connected space, web developers have an intense awareness of the territoriality of their own websites, or the 'spatiality which stems from the differential connectedness of sites' (p. 105).

This territory-construction by linking is, of course, also connected to the digital-material realities of web server space allocated. Other forms of place-making of central interest include the relative boundedness of newsgroups, as performed through in-group social norms and policing, the dynamic boundedness of Instant Messaging sessions, and the use of chat spaces as bounding particular social relations. Instant Messaging and chat practices index complex boundary performances, in that there is anecdotal evidence to suggest that adolescents continue offline relationships in a rather fluid manner into online spaces. In other terms, the social networks of an adolescent's school day, as evident through space-time paths, may be reproduced in online practices. At the same time, the ability to have multiple, temporarily bounded chat and Instant Messaging sessions running simultaneously performs boundaries in ways that are not contiguous with offline social practices. How time-space paths, flow, and place-making practices relate to one another is of central import in the emerging design of research methodologies.

Just as we expect important transformations in the construction of social boundaries, we also expect that some senses of place and space-time practices will be reproduced in what may be initially thought of as vastly different settings. A noteworthy example of such reproduction is evident in the communication practices of participants in the virtual reality space of

AlphaWorld. When participants-as-avatars interact in AlphaWorld, they commonly arrange themselves in a loose circle, all facing one another. Turning away from an avatar signals the end of an encounter. Such practices mirror face-formation (F-formation) practices studied in face-to-face communication by researchers such as Kendon (1990). Avatars also maintain a sense of personal space to one another that mirrors that of offline practice. While it would be technically possible to walk an avatar through another one, avatars walk around one another, and violations of such practices are termed 'avabuse' (Dodge & Kitchin, 2001, p. 161).

We might imagine the boundary-construction and flow aspects of spatiality as complementary practices in some instances and as conflicting practices in others. A number of social geographers, including feminist geographers (e.g. McDowell, 1997), have argued for the recovery of 'place' amidst discourses on its disappearance through processes of globalization. Geographers, communication theorists, and post-colonial literary theorists have posited terms such as 'glocalization' (Robertson, 1995; Kraidy, 1999) to index the ways global flows and local places are everywhere hybridized. Yet, while hybridity is pervasive, Kraidy (1999) also argues that it is evasive; understanding how the complex local processes and micro-politics of hybridization are practiced is of primary importance. The everyday, yet often subtle blending of local and global geographies and histories has important consequences for identity and power relations that we are only beginning to understand. Such work suggests that an apolitical, neutralization perspective on global/local relations may be as limited as a rigid, bounded or structural position, where global and local space-times and identities are imagined as entirely separate. Rather, we must understand the processes by which social spaces are held apart and blended, and how boundaries and blends are recognized in everyday practice.

Net-walking: paths, metonyms, and metaphors

Paths. The most recognized work on the space-time pathways of individuals is that of Hagerstrand, (e.g. 1975), in which he creates tracings that represent the movement of bodies through space over the course of a period of time (e.g. a typical day). Other geographers have also been interested in researching and theorizing path analysis:

> *The body is in constant motion. Even at rest, the body is never still. As bodies move they trace out a path from one location to another. These paths constantly intersect those with others in a complex web of biographies. These others are not just human bodies but all other objects that can be described as trajectories in time-space: animals, machines, trees, dwellings, and so on. (Thrift, 1996, p. 8)*

A line of research on the space-time paths of individuals using new communication and transportation technologies has been led by Paul

Adams, a geographer at Texas A&M (Adams, 1995; Dodge & Kitchin, 2001, pp. 105–106). Using CAD software to represent the practices of a small group of people, Adams documents, for example, the form of communication used (face-to-face talk, telephone, e-mail), the length of time of the communication, the distance between the individuals and those with whom they are communicating, and the instances of intra- and extra-group communication. Adams's purposes are to shed light on how individuals are extended across space (human extensibility) and the individual and social impact of space-time convergence, or how space is compressed by time. Adams suggests that the research and modeling reveals a 'kind of commuting' between physical and virtual places (Adams, 1999, as cited in Dodge & Kitchin, 2001, p. 105).

We consider such research and new means of representing space-time paths as significant for methodology as we expand current perspectives of the social situatedness of literacy and examine how adolescents travel among and connect diverse situations as literate practice. Further, an analysis of space-time paths is critical for considering how diverse adolescent identities are shaped in relation to the use of information and communications technologies across time. Are more extensible adolescents—with more flow-related practices—also those with more economic and social capital (Bourdieu, 1991)? How is school space-time practiced in relation to other space-times over the course of a day or week? Further, how are the space-times of online and offline social practices co-constituted? A simple example of this that relates to us as academics is the way in which an e-mail inbox serves as a 'to do' list of everyday activity. E-mail does not simply extend our activity across space, it also occupies and organizes space-time. In a Latourian (Latour, 1996) sense, e-mail is an actant in our socio-technical networks that translates between our online and offline practices. The ways in which websites demand constant updating provides a second example. Hine (2000) documented how, in the Louise Woodward case, individuals who had developed informational and advocacy websites about the case would apologize or offer justifications if their sites were not updated promptly. Organizing one's time around the site was therefore seen as a moral imperative, yet developers 'experienced this imperative in ways which were dependent on the demands of their own lifestyles and their exposure to other media through which they learnt about the case' (p. 101).

Hine (2000) argues that Castell's notion of the 'temporal collage'—the incoherent jumble of temporalities as represented on the Internet—must be tempered with an ethnographic perspective on participant website development practices (offline) and their space-time interactions with other media. While Hine argues convincingly for an ethnographic understanding of how participants make sense of space-times that would otherwise seem incoherent, this focus upon coherence-making rather than tracing the subtle shifts in space-time practices may be one effect of her work being primarily

located online. A cross-path analysis of online and offline space-time practices may afford a richer interpretation of how developing forms of space-time are experienced and constructed by adolescents.

Metonym. While suggesting the value of tracing the space-time paths of people (and texts) in the study of literacy practices, we would also like to disrupt the notion that such maps provide self-evident representations of flow and location. A first means of disrupting path analysis is to consider the ways in which walking a path involves 'metonymic tricks'—the way in which traversing one place brings to mind another. In Michel de Certeau's work, places are not simply occupied or crossed; rather, the relations between multiple spaces are shaped through memory.

> *Time introduces alterity to space through the sudden deployment of memories … The alterity is that these memories do not just contain events, but still carry the remains of different conceptual systems from which they came. These then are the ghosts in the machine. They bring the immediate and the millenary, the novel and the permanent into contact. (Crang, 2000)*

Through memory, space-times are folded into other space-times, introducing difference into the seemingly 'same' point of traversal. De Certeau's critique of considering spaces as empirically self-evident (de Certeau, 1984) corresponds to a similar critique of LeFebvre (1991), who terms this focus upon the visual and material aspects of space an 'illusion of opaqueness,' involving a fixation on the surface features of space alone. De Certeau's use of the walking metaphor and its relation to reading is productive as a corrective to simple materialist view of space-time paths in literacy research. We may ask, for instance, how particular literacy practices move along routine paths or are fixed in particular locations, but also how brief textual surprises and intervals sparking new narratives create opportunities to interrupt the controls and organizations of proper knowledge and proper texts. These sudden connections and shifts, as mediated by memories and texts, suggest one means of reading social spaces as laminated (Goffman, 1981) or inter-contextual (Floriani, 1994).

Metaphor. Another means of disrupting the notion of path is to turn to work in imagined geographies (Gregory, 1994) and figured worlds (Holland *et al.*, 1998). This work offers a perspective on how paths are not simply inscribed in readily evident relations, but are pre-scribed and shaped through a broad range of cultural texts. In other terms, we walk through spaces with the assistance of compressed stories and worlds—metaphors that tell us what spaces are like and how to move through them. Cyberspace is not merely a space in which activity happens, but is also an imagined space, constructed in historical documents, films, military manuals, research reports, novels, and the mass media. Hine (2000)

lists a provocatively broad range of sites in which the Internet is enacted and interpreted, including web pages and instructions on how to make them, but also media reports on Internet events, fictionalized accounts of Internet-like technologies, newsgroups, stock markets, and homes and workplaces where the Internet is used (pp. 62–63). In the practice of 'virtual' or 'connective' ethnography, Hine argues that we must concern ourselves not merely with how the Internet is practiced, but with how it is made to be an artifact—how it is achieved as a set of meanings that are broadly constructed and distributed in the world both within and well beyond practices situated on the Internet itself. For instance, media representations of the Louise Woodward case criticized the Internet for not living up to the expectations of giving instantaneous results from the trial, as was promised by the judge (Hine, 2000). In this case the Internet was constructed as somewhat substandard, slow, and unreliable for critical information work, a critique that constructed the news media in a more powerful position vis-à-vis the Internet.

In tracing the spatial-identity-literacy practices of adolescents we believe it is critical to interpret the compressed stories (metaphors) and other narratives of the Internet. Drawing upon the theory of Dorothy Holland and colleagues (Holland *et al*., 1998) the Internet is a 'figured world,' a world about which certain stories are told again and again, stories which are peopled by recognizable characters with identifiable actions, motives, perspectives, relations, and results. As an example of analyzing the Internet as an imagined space or figured world in the lives of adolescents, in a separate study, we (Leander, Reese and Denny, 2001) have analyzed the construction of the Internet in young adult fiction. In this work, we focused on the figured worlds of Internet activity, on the ways in which online and offline relations are represented, and on the particular ways in which cyberspace is imagined. An absence or token presence of adults characterizes this literature and contexts of Internet activity within it. An exception to this general principle is that *parent finding and helping* is sometimes a key storyline for the adolescent protagonists. For example, in *Cybermama* (Jardin, 1996), Chris, Lily, and Felix are in search of their mother, who has died from a ballooning accident and now only exists in cyberspace. While images and video clips of the mother previously existed in digital form on the children's home computer, these files were zapped from their home location and transferred out into cyberspace during a thunderstorm. The mother, then, appears to be doubly absent—both from real life and from virtual existence and it is up to the children to retrieve her, which they set out to do via the virtual-transporter machines of their wacky scientist neighbor, Mr Zeig. The children are not merely rescuing the images of their mother; rather, here the parent-finding narrative includes a complex intersection with a mild version of another common narrative in young adult fiction: the cyberstalker. The children must rescue the files of their mother from an admiring cyberstalker, who has been living

entirely in cyberspace. With the help of Mr Zeig (working back in his laboratory), the cyberstalker is disconnected from virtuality, while the mother reawakens to her virtual life at the sound of the children's voices. The reaction of the children blurs online/offline distinctions of emotion, experience, and family life:

> *Certain instants in cyberspace resemble real life, and this one was more like it than any other. Their joy was certainly not virtual—they had found their mom again! (*Jardin, 1996, p. 58)

Textual Constructions of Social Space and Self

Textual geometries. Dodge & Kitchin (2001) argue that the spatial geometries of cyberspace are made up of a complex collection of domains, some which are more explicitly spatial with direct face-to-face referents (e.g. a virtual reality model of a geographic location), and some with no geographic referent and no spatial form or attributes (e.g. computer file allocation tables), and others in between these extremes. As an example of an online spatial geometry with an explicit offline referent, Dodge & Kitchin (2001) discuss Correll's (1995) research of a lesbian cafe, which was organized around an elaborate material-textual setting that allowed patrons to 'buy drinks' and to hang out around a 'juke box.'

Correll (1995) suggested that the construction of the shared setting, through texts, created a communal sense of reality that grounded communication. Our interest in textual geometries is directly related to the discussion of boundary-making and place-making above, focusing upon how identity-space-literacy relations are worked out in the design of web pages, classroom essays, charts and e-mail mailboxes. As we move toward an understanding of new literacies through the lens of 'design' (New London Group, 1996; Bigum, 2002), we believe that for understanding literacy we must also trace the textual formatting practices that adolescents use and through which they design their identities. We term these layout and formatting practices 'textual geometries' as we seek to understand how the process of text production produces and relates social spaces on-the-page and across pages of text. For example, within school-based practices, a common textual geometry across the pages of text that adolescents practice is the separation of more personal pages (for example, in assigned writing journals) from formal, impersonal essays. Thus, literacy practices, and identities are materially bounded in separate text-spaces. Yet, practices are also often bounded on the single page itself, for example, when the conclusion to an essay might require students to invoke their personal and social worlds while the remainder of the essay requires argument from other texts and authorities. Texts involving an entire school, such as the school yearbook, are significantly used by adolescents in the production of identities (Finders, 1997) and could also be mapped for the ways in which their surfaces produce textual-social networks. In connective

ethnography, we might compare such practices of textual geometry with those online, for instance, through the hypertextual ways in which adolescents' lives are connected (and segmented) on web pages, through the multimodal use of pictures, animations, movie files and texts boxes in web design, and through the ways in which social groups are organized and reorganized in e-mail mailboxes and Instant Messaging buddy lists.

Discursive chronotopes. Another 'cut' at interpreting how space-time is constructed in online and offline literacy practices is to consider the ways in which language (and other semiotic means) is used to produce the space-time 'background' of narratives or other structures of genre. For Bakhtin, the chronotope is an artist's creation of the 'ground essential' (1981, p. 250) for representing events within a literary work:

> *Actions are not necessarily performed in a specific context: chronotopes differ by the ways in which they understand context and the relations of actions and events to it. (Morson & Emerson, 1990, p. 367)*

These constructions of space-time in our discourse serve as an important and yet sometimes subtle background to the foreground of social action. Of interest to Bakhtin are the ways in which different forms of activity, agency, and ideology are possible given the construction of different forms of space-time within texts. Bakhtin (1981) does not offer a simple scheme for analyzing the chronotopes of different texts, but his work (and the interpretation of it by Morson and Emerson (1990)) suggests key questions to ask of texts (Leander, 2001). For example, how embedded is the characters' activity within a given space-time setting? Are similar actions possible elsewhere, or in another time? While some stories appear to use settings as mere backdrops to social action—backdrops that could be easily replaced—other stories represent character action as clearly dependent upon particular space-time situations. We might also ask if the space-time setting of a story is dynamically shaped by the characters' actions. Bakhtin (1981) is concerned with the degree of agency that characters or actors are given in the text. Are actors merely carried along by space-time contexts, or do they actively transform them? Further, how do characters change, or how are they projected to change, in relation to movements through time and across space? How are past–present–future temporal relations signified? Importantly for the research of online interaction, Bakhtin is not only concerned with the construction of space-time within texts, but also with the complex relations between the space-time of the author and the space-time of the reader:

> *The word and the world represented in it enter into the real world and enrich it, and the real world enters into the work and its world as part of a continual process of its creation. (Bakhtin, 1981, p. 253)*

As research of online discourse practices has tended to focus on its separation from embodied practices, either in a 'reduced cues' model of discourse, or in utopian visions of disembodied identity and interaction, it has not given nearly enough purchase to the ability of participants to narrativize and create space-times through discourse. Representations of space-time, following Lefebvre (1991), are a significant means by which space is practiced and transformed. The representational resources used and consequences of narrating space-times within a chat room need to be understood in relation to such practices in a classroom. To what extent do discursive constructions of space-time, as literate practices, shape the identities that act 'into' them? Hine (2000) has commented briefly upon the conflicting time frames in websites involving the Louise Woodward case, considering how one web page said Louise was 'now' awaiting the appeal of her case, while the latest posting on the web page indicated that this 'now' was some three months in the past. Hine's concern appears to be principally the 'repair' work needed by readers to make such representational work coherent (2000, p. 97). Our concern in the present design is not coherence per se, but, rather, the strategic construction of time-space through language on the Louise Woodward website (and elsewhere) through language such as 'now,' 'just recently,' and 'in Canada.'

Discursive constructions of situated selves. In taking a relational perspective on identity we believe it is important to consider how identity-related artifacts are constructed (Holland *et al.*, 1998), or, in other terms, how identity is reified (Wenger, 1998) through textual practices. Here, we turn our focus to the creation of identity-related texts and to the positioning of these identity-texts in networked relations. Discursive constructions of identity in online and offline practices include biographies and self-descriptions of various sorts, photographs and sketches of the self, images of self-related artifacts (homes, automobiles, family members), unique graphics, national flags and family shields on personal web pages, house fronts, and business cards, and 'quotable quotes' indexing ethos and identity that are attached to office doors and e-mail signature files. We are particularly interested in how newly developing forms of identity construction in online practices are related to the possibilities of identity construction afforded through social practices with other means. As a simple but noteworthy example, for instance, consider how building a personal profile as a participant in AOL Instant Messenger functions. Most broadly, this practice of identification involves a range of participants in addition to the profile writer, such as America Online as a Corporation, as well as an imagined audience of profile readers. At a more micro level, constructing a profile involves selecting a range of interests from a given menu, as well as a 'freeform' section in which one is encouraged to write 'quotes, interests, links to your e-mail address and web page, etc.' Such interest menus are ripe for the study of categories of identification. In early April 2002, in one

version of AOL Instant Messenger, there were 20 main categories of interest options, some of which had pull-down menus indicating subcategories of interests. One could select up to five interest options to list in a personal profile. These interests serve an important function, because unlike the text written in the 'freeform' section, they serve as key words for participants within the AOL Instant Messenger community to locate others with similar interests. That is, the interest categories are central to the creation of interest-networks or affinity groups—new practices of identity and community—and as such are introduced with the optional check-box: 'I am available for chat with these interests.' The 20 main categories, including 'books and writing, computers and technology, investing, and television and radio' are a fascinating construction of social identity. Quick observations begin to suggest the particular version of the world that emerges. For example, for those interested in communities as a main category of chat, only six such communities are available (African Americans, college students, Hispanics, seniors, teens, and women). On the other hand, those interested in chatting about sports have a much broader palette of 17 options. A number of hobbies seem to be represented, yet many of these hobbies seem to index the interests of retirees rather than those of adolescents (genealogy, sewing and needlecraft, stamps). Three purposes— two of them related—function as subcategories to the broad interest category of 'meeting people': chat, marriage, and romance. Finally, and perhaps especially important in its relation to the construction of identity for adolescents, only five kinds of music are listed: alternative, classical, jazz, rhythm and blues, and rock. (Apparently, rap, heavy metal, reggae, and country enthusiasts were not encouraged to build affinity networks on this version of AOL Instant Messenger.)

As information and communications technologies evolve, new forms of self-representation will emerge, along with new social practices of discursive identity construction. One area of particular interest to researchers involves those forms of identification that textually represent embodied presence. A fascinating example of developing work is the Chat Circles project, developed by a research group led by Fernandas Viegas and Judith Donath at MIT (Dodge & Kitchin, 2001, p. 145). In Chat Circles, participants are represented as separate, color-identified bubbles (circle diagrams), which are constantly present on the screen, regardless of how much they speak. In Chat Circles, one's 'bubble' expands in size to fit the chat within it, visualizing how much any interactant is participating at any given moment while also visualizing co-present others. This self and other representation contrasts with conventional chat, in which one has to speak to maintain much of a self-presence in the rapidly scrolling dialogue. Additionally, within a particular Chat Circle, interactants see (without 'hearing') other circles that one may move to and join—much like a cocktail party in which one might see the whole range of possible social circles and move among them. We mention the Chat Circles project in this context because it is both a newly developing technology of self-represen-

tation, and even more so because the selves constructed within it are dynamic and relational: social networks and identities are made to be co-visible.

Conclusions

In this article we have discussed new methodological approaches to the analysis of the online literacy practices of adolescents. Our general method is to consider literacy, social space, and identity as social practices. In the first part of our article, we traversed a few of the methodological dilemmas in translating ethnography for online contexts, with a special focus upon the challenges of moving ethnography from a place-bound practice to moving, traveling practice. We have raised many more questions than we have addressed, using these questions to foreground the importance of developing ethnographic methods that substantially engage the geographies as well as the histories of social practices. The second part of our article critiques a common misconception of the Internet as somehow radically separate from everyday life. By disrupting the binaries between online and offline practices, our hope is not to ignore or remove anything that makes the Internet unique, important, and even transformative. On the contrary, we believe that removing such binaries as a beginning point of methodology assists in understanding how the significance of the Internet and online practices come to be constructed by participants. In the last section of the article we have discussed a set of possible research practices for the development of connective ethnography. This discussion is not meant to index any complete methodology, nor is it intended as a description of our own research design for a single project. Rather, we hope that it will incite further discussion of methodology in the nascent study of adolescent literacy practices across its multiple terrains.

In our discussion of designing connective ethnography we have likely sacrificed analytical precision in our efforts to imaginatively expand current methodologies. In our own ongoing research, we are presently studying how the literacy practices of a group of adolescents may be interpreted in relation to the production of social space and identity. This project, termed **Syn**chrony (Studying Youth Networks across timespace, http://www.vanderbilt.edu/litspace/Synchrony/index.html) is developing a set of case studies examining adolescent literacy practices, including Internet use, in school settings and home settings. We are particularly interested in how common information and communications technology (ICT) practices, including gaming, Instant Messaging, e-mailing and updating music fan websites create social networks that are related to and quite different from those produced through the circulations of bodies and texts in schools. While we are working to develop methodology as this project emerges, the impulses that we continually draw function as a summary of the main arguments of this article. First, we begin with the idea that space-time

contexts are not self-evident in the material realities of social life. The online and the offline are not separate 'worlds' unless they are made to be so in practice. Second, we work to interpret space-time as dynamically constructed, and assert that literacy practices are critically important for this construction. We are collecting data in our work on how literacy practices, including online communication practices that block and invite particular participants, classroom storytelling practices that imaginatively invoke the possible futures of their writers, and, at a more macro-level, the literacy-discursive practices of the school, construct the Internet as a particular kind of social space. Third, as the name Synchrony makes evident, we recognize in this work that the notion of a singular research 'context' is much too static and purified. Rather, multiple, simultaneous space-time contexts are coordinated and produced through activity. We work to understand these coordinations—the ways in which we are 'in' and travel across more than one space at one time—as opening up new possibilities for participants and researchers alike.

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