

Researching Literacy as Tool, Place, and Way of Being

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Poised as we are at the edge of an expanding wave of digital technologies, researchers are faced with the task of finding firm footing within a rapidly changing landscape of computer-mediated communication and digital literacies. Yet, this task is complicated (if not hindered) by a political climate that places a high premium on randomized experimental trials based on the presumed-relevant medical model of research (cf. Reyna, 2002) and an education administration that has now tied research funding to ‘scientifically-based’ studies narrowly defined as such (Coalition for Evidence-Based Policy, 2002). The resulting situation is one in which *the phenomena of study are ever widening while the range of methods considered legitimate for their investigation is increasingly narrowed.*

While ‘clinical trial’ quantitative methodologies may have valuable contributions to make to our knowledge of new technologies (for example, in establishing the effects of various patterns of use), their immediate application may very well be putting the horse before the cart. In the context of new digital technologies, assuming the nature and meaning of (countable) variables and categories a priori, for example, runs the risk of obscuring rather than illuminating the nuances of meaning-making practices within their indigenous contexts of use. In the growing global digital economy, ‘item producers’ are transforming themselves into ‘service providers,’ allowing ‘consumers’ to produce their own original work, be it narrative (in the case of fan fiction), social/material virtual worlds (in the case of massively multiplayer online games), or experience itself (in the case of single player videogames). In so doing, they offer new contexts and resources for forms of semiotic work / play that challenge antiquated models where production and consumption are held as separate ends of the meaning-making process (de

Saussure, 1986; cf. de Certeau, 1984). Researchers interested in such spaces must begin by elucidating the sense participants make of the semiotic resources available or run the risk of counting their proverbial eggs before they semiotically hatch.

Appropriating Methodologies

If we want to generate robust understandings of the complexities of meaning-making practices with/in digital spaces and technologies, then we need to set aside disciplinary differences (oftentimes maintained, despite our good intentions, under the rubric of much grander notions such as ontological or epistemological incompatibility) and resourcefully adapt empirical methods best suited for just such work. In our own work, we borrow methods from disparate fields that emphasize different units of analysis and therefore different timescales. Working within/across multiple timescales is crucial to literacy research as a whole: As Lemke (2001) aptly points out, “sign interpretation is itself a material dynamical process that always involves relations across multiple scales of organization.” (p. 18). Thus, genesis on the micro level (experience) is indelibly tied to socio-historical change on the macro level (community) and vice versa (cf. New London Group, 1996) through varying levels of intermediate organization that shape and constrain in both directions. What methodologies can be leveraged toward understanding digital literacies in ways that might foreground one unit of analysis / timescale but resist ignoring others? In our own work, we borrow from three outside domains.

Activity Theory. Philosophically rooted in the early twentieth century cultural-historical school of Russian psychology, the work of Vygotsky, Leont’ev, and Luria initiated a trajectory of inquiry that has grown into contemporary conceptions of *activity theory* (Engeström & Miettinen, 1999). As a broad methodological approach, activity theory provides a conceptual framework for mapping the transformation of complex systems of goal-oriented activities over

an extensive scale of time (Nardi, 1996). From this perspective, qualitative analyses of short-term individual and collective activities must take into account the ways in which these activities are embedded in and linked to wide-ranging historical, cultural, and institutional systems of activity. As such, activity theory provides a means for situating the local in the broader context of the global.

Central to this approach is an understanding of how the tools and artifacts that mediate activity are historically formed and both shape and constrain the actions of individuals within a system. As people make use of existing artifacts, tensions develop between the constraints of existing tools and individual goals. It is these tensions and contradictions that drive change within and across systems, as individuals adapt and adopt new artifacts and tools (e.g. media, genres, technology) to make meaning at the local level (Engeström & Miettinen, 1999). Thus, activity theory takes a broader developmental perspective; yet, in the context of new digital spaces, such an approach becomes increasingly complex. The digital technologies in which a given system of activity is embedded serve as both *tool for* (e.g. archiving digital documents, accessing participant information) and *object of* (e.g., fanfiction, virtual social interaction) inquiry. As these technologies (and the researcher's facility with them) evolve over time, the act of theorizing the literacy activities of interest becomes a developmental process for both the researcher and the researched. (Hine, 2000; Reinking, McKenna, Labbo, & Kieffer, 1998). In other words, your own technical literacy in the digital space of interest tightly constrains what you can observe and therefore are in the position to theorize.

Distributed Cognition. If we scale down to 'slices' of time to attend to the more local activities that constitute (and are constituted by) the broader systems of interest to activity theory, we find that methods from studies of *socially/materially distributed cognition* aid us in

unpacking the situated interactions of individuals with their environment, tools, artifacts, representations, and other actors. Research at this intermediate level of analysis between system (activity theory) and instant (phenomenology) can reveal important characteristics of learning at the level of both the *group* (changes in shared practice, knowledge, tool/artifact use) and the *individual* (a person's "process of coming to be, of forging identities in activity," Lave, 1988).

For example, methods such as *think-aloud protocols* (Erikson & Simon, 1980) can be put to new use when applied to routine and/or exceptional community events, providing members' in-tandem verbal interpretations of activities that then become the basis for theorizing the interpretive practices that constitute varying types of group membership. Semi-structured interview techniques such as *repertory grid interviews* (Fransella & Bannister, 1977) can be repurposed and employed without their original presumption of stable factors inside the 'individual head' in order to elicit community-member identified categories and their dimensions of similarity/difference. *Directed graphs* can be used to capture the temporal and spatial 'rhythm' of complex (virtual) social / material coordinations (e.g. collaborative problem solving) and then compared, qualitatively and/or quantitatively (cf. Strom, Kemeny, Lehrer, & Forman, 2001), across different points in time (e.g., novice versus expert). Finally, known *discourse analysis methods* (e.g., Gee, 1999, Fairclough, 1995) can be used in less overtly critical/political ways to provide a rigorous, data-driven basis for content analyses (cf. Tobin, this issue) of text and interaction. Though the goal of developing a viable account of the situated meanings people construct and the definitive role of communities in that meaning-making process remains the same, the goal of *generalizing* out toward broader, shared patterns in such meaning-making processes becomes an added objective.

Phenomenological Approach. At the ‘atomic’ unit of analysis taken by a phenomenological approach, the timescale is abbreviated down to focus on literacy as experience, an activity made possible by meanings situated in the sensory life of the “body-in-world” (Merleau-Ponty, 1979). A literacy experience is the outcome of a dynamic interaction between a subject (person using literacy) and an object (the literacy technology being used). These coordinations between the person and the literacy-technology are inscribed in the subject-body as sense-movement configurations, which provide a material base upon which consensual meanings can rely. We can add an analytical focus on ‘literacy as experience’ by describing literacy in terms of a new metaphor. Drawing on Internet researcher Markham’s (2003) insight that a “way of being” metaphor offers a means for explaining the ways technologies become interwoven with our experiences, a ‘literacies as ways of being’ metaphor creates a framework for explaining how the “tempos, timings, and properties” (Latour, 1996: 268) of technologies impact the rhythms, textures and contours of our experiences. More specifically, this metaphoric framing enables us to account for how new technologies introduce changes in literacy.

To define literacies as “ways of being” makes salient how using literacy requires gaining a familiarity with experiencing it. In a sense, we could say, that learning literacy is a process of ‘learning to be affected’ (Latour, 2002) by literacy in the ways an insider to a system of meaning (Discourse, community of practice, affinity group, etc.) would be affected. Such descriptors as ‘blurred genres,’ ‘multi-layered lifeworlds,’ ‘hybrid identities,’ and ‘quasi-objects’ are just a few examples of the new kinds of states emerging as people experience digital media. These new forms of experience – due to how they are new ways of reading and writing – are new forms of literacy (Abrahamson, personal communication, May 15, 2004). Informed by the phenomenological perspective, the method of *philosophical reflection* (see Sudnow, 1983;

Abram, 1996) offers a way to document the new sense-movement blends emerging as people experience digital technologies. As the theories, equations, and stories that organize our sense of ‘reality’ (i.e., the ‘world on paper,’ Olson, 1994) become increasingly mediated by digital technologies, *fluency* enacting the sense-movement blends anchoring their meaningfulness become the new embodiments of ‘being literate’ in contemporary culture.

New Metaphors for Literacy

Participatory observation across the contemporary digital spaces we study – online fanfiction, massively multiplayer online games (MMOGs), and single player videogames – suggests new definitions of what literacy is or *could be*. The varying nature of our individual research sites has pushed us in different directions in terms of the kinds of metaphors we feel best capture (even if only partially) the semiotic work/play people do within them. Next, we summarize these individual lines of research using Markham’s (2003) metaphoric framework of ‘tool, place, and way of being’ as a way to describe how literacy plays out within each context.

Literacy as Tool: Online Fanfiction. Moving toward a method of analysis that conceptualizes literacy as *tool*, Black’s (2004) research focuses on generating a typology of information exchange and social interaction in an online fan fiction website as a means of understanding the array of literacy activities that participants in this space engage in (Burnett & Buerkle, 2004). This research seeks to contribute to our understandings of the ways in which adolescents and/or English Language Learners (ELLs) use technological tools to enhance and extend their literacy-practices as they enact their fandom in digital spaces in and out of school contexts (Alvermann, 2002, Alvermann & Hagood, 2000; Chandler-Olcott & Mahar, 2003; Jenkins, 2004; Lam, 2000). While fan fictions are derivative in the sense that they draw from media and popular culture such as books, television, movies, music, and video games, these

adolescent fans are far from being mindless consumers and reproducers of dominant media, as they actively engage with, rework, and transform the original genres (Jenkins, 1992).

Activity theory provides a framework for conceptualizing the ways in which fans adopt and adapt tools such as genres, forms of media, and digitally mediated modes of representation to create texts that are culturally, linguistically, and multimodally hybrid (New London Group, 1996). A typology of information exchange and social interaction based on such analysis has the potential to provide a great deal of insight into the relationships among literacy, identity, and learning in this virtual fandom by providing—a means for mapping how individual ELLs as subjects encounter the tensions of using historically-rooted tools and artifacts such as print-based genres, English language conventions, and popular forms of media that conflict with their personal goals at the local level. As such, the developmental scope of activity theory offers insight into how ELLs respond to these tensions by drawing on cultural, linguistic, and personal resources to create an array of hybrid fan fiction texts or objects, and how these hybrid forms, over time, come to shape the social context of the site at the global level, including its norms, conventions, and division of labor as other participants take up and begin to use these hybrid forms (Barab et al., 2002). Clearly, tracing the dialectical and mutually constitutive components of a hyperlinked and highly networked online community presents a wealth of practical methodological challenges; however, many of these issues can be resolved through an activity theoretical approach in that it involves a research time scale that is sufficient for observing and understanding changes in tools, objects, and context, allows for varied means of compiling and triangulating data, and highlights the importance of situated-understandings of participants' meaning making practices within this space (Nardi, 1996).

Literacy as Place: MMOGs. Despite recent public indictments (e.g., Anderson, 2003, Provenzo, 1992) and their dismissal as barren play, massively multiplayer online games (MMOGs) constitute a complex and nuanced set of social, material, and discursive practices, tied to particular communities and consequential for membership and identity (Steinkuehler, 2003). As such, MMOGaming is participation in a multimodal and digital textual *place*, one with fuzzy boundaries that expand with continued play: What is at first confined to the game alone (e.g., in-game talk, letter-writing) soon spills over into the virtual world beyond it (e.g., websites, chatrooms) and even life off-screen (e.g., telephone calls, face-to-face meetings). Building on this conceptualization, Steinkuehler (2003, 2004a, 2004b) is conducting a broad virtual cognitive ethnography (Hutchins, 1995) of MMOGameplay: a “thick description” (Geertz, 1973) of the socially and materially distributed semiotic practices that constitute the game. Traditional ethnographic methods including participatory observation (to date, for a period of over 24 months), un-/semi-structured interviews with informants, and the collection of community documents (e.g. player-authored user manuals, fan sites, fan fiction) and transcripts from game-related discussion boards / chatrooms are used in order to capture gameplay not only within the virtual game space itself (between login and logoff) but also beyond.

Methodological tools culled from distributed cognition studies can be applied to data so gathered to provide robust, empirical accounts of the forms of participation and meaning making that emerge in MMOGameplay; yet, making sense of such virtual worlds can be daunting. From data collection through analysis, old issues arise in new forms and new issues arise when least expected. Simply participating in these spaces, for example, is no small task. The game changes with time spent in-play and mere access to various subpopulations of the community (e.g., ‘hardcore’ gamers) can require months of online participation. Establishing and maintaining your

own consistent and forthright online presence can put your personal and professional privacy at risk in ways that can be unnerving. Insuring anonymity in an online world of quasi-enduring digital archives of all things ‘google-able’ is difficult if not impossible. Involving the parents of minors, triangulating sources in order to verify your data without invading the privacy of confidants, and even extricating yourself from the space when your work is complete all present challenges that require constant negotiation and engineering. Clearly, however, such efforts will remain necessary if we are to understand cognition/culture in a world that, increasingly, logs in.

Literacy as Way of Being: Single Player Videogames. Clinton’s (2004) research aims to contribute to the development of an analytic framework for explaining the new forms of reading and writing emerging as people experience such semiotic resources as three-dimensional spaces, stereo sound, virtual objects, interface icons, representational bars, symbols, and (most crucially perhaps) avatars. As videogames are cutting-edge examples of digital technologies, they represent a rich site for anticipating the new kinds of literacies emerging. Research on experience in digital contexts, however, faces a real methodological challenge: It must develop methods which enable researchers to identify how literacy use in digital contexts may take on radically different forms due to the unique characteristics and properties of digital media.

Semiotics provides a method for studying how digital literacies make possible new ways of interacting with written signs. This form of meaning making pivots on the player’s ability to ‘be a representation’ by projecting herself sensorially into a game character, setting a new kind of stage for meaning making. While reading and writing mediated by such technologies as cave painting, books, and billboards require a person to orient to the sign as a *signifier*, digital technologies have the unique affordance of enabling a person to orient to the sign as *both signifier and signified*: Within videogames, for example, the reader becomes/inhabits a symbol,

enabling them to interact with signs ‘as if’ they are the very things they represent. A likely result of this new capacity of written communication is that new forms of literacy will share much in common with the dynamics of meaning making in face-to-face communication. In the same way that interpreting language, gestures, body language, and facial expressions rely on such sensory cues as body-sense, sound, vision, and movement, it is likely that newly emerging literacies will become increasingly defined by digitally rendered corporeal cues.

Concluding Comments

Despite all of our professional rhetoric about *first* choosing a theoretical paradigm and its concomitant methods and only *then* making observations of the world (that, should all go well, bear back on the theory first espoused), actual practice, in our experience, sometimes marches to the beat of a very different drum. The methods we have outlined, culled from distinct (though perhaps compatible) theoretical paradigms, were chosen *after* the phenomena of interest, not before. For, in a massively networked society like ours with such ferocious capacity for enabling both the *global to be localized* (e.g. the rewriting of the anime series *Card Captor Sakura* from Japan into local terms of teen pregnancy by a fourteen year old girl coming of age in Utah) and the *local to be globalized* (e.g. the editing, rescoring, and widespread distribution of the illicitly web-posted *Star Wars Kid* video, originally a recording that an adolescent boy clandestinely made of himself while horsing around at school with an 8mm camera, a Jedi fantasy, and a golf club), it becomes less and less viable to presume *meaning* as a stable, countable construct that can be categorized, catalogued, and quantified. Here, participation is a creative act where signs are not merely consumed but rather reworked, recontextualized, and then redistributed. In such contexts, qualitative methods may very well be our only means for seriously understanding what it means to participate: For, in digital worlds, the very act of participation is a hermeneutic one.

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