

Collaborative Learning Across Space and Time: Ethnographic Research in Online Affinity Spaces

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Abstract: In this paper, we further articulate *connective ethnography* and consider how it may add to qualitative studies of collaborative learning in naturalistic, computer-mediated settings. Despite their physical separation, members of online affinity spaces work and learn together—they construct and review artifacts and share their work across sites. To trace these processes, we examine the complex artifacts and texts that constitute social practice in these spaces. We consider how expanding connective ethnography may meet researchers' needs in online contexts and we raise questions about how participants learn in these settings. Finally, we outline principles for an *affinity space ethnography* designed to capture the collaborative web of social interactions and audiences inherent to participation in affinity spaces.

Introduction: From New Spaces to New Methods

As young adults move many of their social interactions into online communities, researchers have called for further study of the literacies inherent in these spaces (e.g. Alvermann, 2008). The Pew Internet and American Life Project reports that youth participation in such communities is widespread: 73% use online social networks, 38% share original creative work online, and 21% remix their own or others' content (Lenhart, Purcell, Smith, & Zickuhr, 2010). However, Grimes and Fields (2012) point out that these statistics typically consider only a small part of young people's internet activity: generally, their use of large networks like Facebook. In online spaces built for and by them, youth reframe and re-imagine content by creating original and transformative works such as fan fiction, artwork, and machinima. To do so, they work collaboratively, although distance often precludes face-to-face contact (Black, 2008; Lam, 2000). Members negotiate discourse norms (Lammers, 2013), form writing partnerships (Magnifico, 2012), disseminate practices (Fields & Kafai, 2009), and review each others' creations (Black, 2008).

Some scholars have conceptualized these communities as *affinity spaces*, or sites of informal learning where "newbies and masters and everyone else" interact around shared passions (Gee, 2004, p. 85). Online affinity spaces are loosely-organized arrays of separate, affiliated "portals" (Gee, 2004) connected by topic, links, and hashtags. Portals include root content sites (e.g. Neopets.com, the *Sims* wiki), creative archives (e.g. Fanfiction.net, DeviantArt.com), and social networks (e.g. Facebook, Tumblr). Though the field continues to theorize affinity spaces (e.g. Hayes & Duncan, 2012), typical research methods do not adequately account for these online interconnected networks of participants—or the learning that members accomplish together. We offer this paper as a beginning step in recommending new methods to gain insight into this kind of computer-supported collaborative learning.

Tools for structured observation are key methods for studying learning and literacies, particularly in these evolving settings. At the same time, online field sites are not traditional ethnographic field sites, and their activity cannot be captured in the same ways because places, researchers, observations, and participants become complex in online contexts (Leander & McKim, 2003), particularly when there are multiple paths to participation. As such, we first examine *connective ethnography's* open, descriptive stance towards capturing "traveling practices" (Leander & McKim, 2003, p. 212) among blended online and offline spaces. Then, we consider what it means to extend this framework as *affinity space ethnography* (Lammers, Curwood, & Magnifico, 2012), and how this step is necessary to study literacy practices across portals. While this step is modest, we believe it will enable clearer views of learning in the collaborative webs of social interactions, digital tools, artifacts, and discourses that are integral to affinity spaces.

Theory: Toward an Ethnography of Affinity Spaces Connective Ethnography

Connective ethnography begins from an open, descriptive stance towards evolving spaces, as well as a desire to document resonance among online and offline contexts. This method is rooted in actor-network theory approaches to theorizing activity (Latour, 2005) and shows how practices travel across and among spaces and activities. The separation between online and physical spaces is deliberately blurred, unlike early research on digital learning and practice that suggested significant differences between these contexts (e.g. Markham, 1998).

Connective ethnography has been used primarily to create detailed tracings of people and their traveling practices, often using small numbers of participants (Lam, 2000; Leander & Lovvorn, 2006). A handful of larger studies of face-to-face and online communication in disciplinary communities (Hine, 2007) and practice initiation in tween gaming groups (Fields & Kafai, 2009) exist as well. Because affinity spaces have become multi-sited contexts where members collaborate *across* portals, we argue that describing the travel of members' practices and artifacts must become central. Fields and Kafai (2009) show how such documentation of tweens' virtual world usage can be accomplished by analyzing face-to-face video and back-end logfiles. In the following sections, we ask: how can we "connectively" trace participants' computer-supported collaborations through affinity spaces when these data streams are unavailable?

Tracing Texts and Artifacts

A typical assumption of ethnography is the face-to-face nature of activity and data collection. In online affinity spaces, though, communication is mediated through an array of digital tools. As connective ethnographers have articulated, researchers must understand how practices travel between online and face-to-face elements of blended practices to understand computer-supported learning (Leander & McKim, 2003). Here, we extend this thinking: Researchers must also understand how these activities travel across and through the multiple affiliated portals that support these actions. To do so, we must study how members work and learn together, often over substantial physical distance (Lam, 2000; Black, 2008), using text, computer code, and image creation. Tool-mediated communication is hardly exclusive to online sites (Latour, 2005; Prior, 2008), but texts and artifacts circulate in different ways from face-to-face customs and rituals. Unlike connective ethnographers of blended spaces, we may not have access to our participants' offline lives beyond self-reported experiences. Consequently, we cannot fully understand how their practices travel. While some may consider this a limitation, this condition mirrors participants' interactions and the ways in which they navigate online affinity spaces. Instead of speaking face-to-face, members communicate with complex mixed genres and artifacts (e.g. instant messages, tweets, Tumblr posts, artwork, videos) (Curwood, 2013). Such texts are necessarily compositional and communicative—multimodal practices of reading, response, and creation (cf. Prior, 2008)—and this complicates their analysis. Connective ethnographers may broadly map these digital traces, which travel between spaces as they are posted and linked (Hine, 2007). While this method is a useful step, online researchers must also (a) reconstruct artifacts' travel and evolution across portals, and (b) use such findings to further theorize the collaborative nature of online texts and how they support learning and participation.

Affinity Space Ethnography

With *affinity space ethnography*, we trace and map the connections among and across members' actions in diverse portals as they are represented in texts, artifacts, genres, and discourses. The findings generated by this method will be limited by partial access to participants (in similar ways as their own participation is limited by partial access to each other). We believe, however, that this work better represents adolescents' online lives and the new literacies that they nurture through their participation as fans, creators, and collaborators in affinity spaces. While Steinkuehler (2007) and others have documented "constellations" (p. 184) of multimodal literacy practices in online activities, and recent research has expanded conceptions of online participatory cultures (e.g. Ito, et al, 2010) and affinity spaces (e.g. Lammers, Curwood, & Magnifico, 2012; Hayes & Duncan, 2012), little research exists on how learning circulates among and across these online communities. Discussions of popular books and movies, for instance, may encompass diverse genres including fan fiction, role-playing games, and Twitter hashtags (Curwood, 2013). Despite physical separation, members collaboratively construct and review texts and artifacts, write guides for participation, and share their work across portals. They set boundaries for community Discourses (Gee, 1996), thereby creating norms and rules for productive participation (Lammers, 2013). Using multiple portals, genres and practices travel among sites and communities as members learn, create, collaborate, and respond to each other in diverse online venues.

Method: Enacting Affinity Space Ethnography

We argue that a new approach for studying computer-supported collaborative learning in multi-sited, technology-mediated settings is necessary. In previous work (Lammers, et al., 2012), we sought to update Gee's (2004) discussion of affinity spaces, considering how affinity spaces have evolved into groups of loosely affiliated, content-focused sites. Here, we build on connective ethnography to offer recommendations for enacting affinity space ethnography and illustrate them with the worked example of Curwood's (2013) *Hunger Games* affinity space study.

Sustained, systematic observation in an affinity space is a crucial first step for researchers to make sense of the culture and practices of a space. Such observation should focus on understanding the organization of the space, including traveling among and between the various portals to map connections and note how participants make use of each. Observations using such tools as forum archives can also help affinity space

ethnographers learn about a portal's past activities in order to develop sociohistoric understandings. Sustained observation should also aim to determine the various roles available to participants, to trace how activity is distributed amongst participants, and to answer questions about what constitutes participation and activity for different users. To this end, Curwood has spent two years systematically observing participation in numerous *Hunger Games* affinity space portals.

Equipped with a deeper understanding of the organization and culture of an online, multi-sited field, attention can turn toward *analyzing artifacts*. To acquire a sense of a space's development, it's important to track the historical information represented by artifacts over time and across different portals. This analysis can offer the affinity space ethnographer insight into how participants' foci and interests have changed over time, as well as how they vary within different portals. The worked example below offers insight into how Curwood traced and analyzed such artifacts.

Finally, the affinity space ethnographer engages in *repeated contact with participants* to fill in the gaps and learn about their own interpretations. Such contact seeks to strengthen the researcher's understandings of the culture and practices within the affinity space, and thus must include contact with informants who enact a variety of roles identified during observation. To gain such insight into the *Hunger Games* affinity space, Curwood has maintained contact with over 30 adolescent participants who reside in the United States, United Kingdom, Canada, and Australia.

Worked Example: *The Hunger Games* and Affinity Space Ethnography

Recent years have seen a marked increase in the number of novels published for young adults, as well as increasing fan conversation, collaboration, and creation in online affinity spaces devoted to these works. For instance, Suzanne Collins's trilogy, *The Hunger Games*, has inspired expansive fan activity. Curwood's (2013) ethnographic study focuses on literacy practices in various *Hunger Games* portals where participants write fan fiction, create art, produce videos, compose music, and design role-playing games. These portals can be classified into three types: (1) root websites specific to *The Hunger Games* affinity space; (2) fandom websites that include transformative works from multiple affinity spaces, such as FanFiction.net and DeviantArt.com; and (3) social media tools that promote interaction within and beyond the affinity space, including Twitter and YouTube. Each portal serves as a potential entry point into the affinity space, and participants move across and through portals as they participate in the fandom.

In order to understand the culture of *The Hunger Games* affinity space, it is essential to examine how conversations, texts, and artifacts travel within multiple portals by engaging in sustained, systemic observation. Through such observations, Curwood met Olivia, one participant whom she has observed across all three types of portals for 16 months and interviewed four times. We describe Olivia's case to discuss how casual fan participation leads to deep situated learning over time. At 10 years old, Olivia began to write fanfiction in the fandom surrounding Collins's *Underland Chronicles*. Within a week of reading *The Hunger Games*, Olivia decided that she wanted to start her own portal, "a text-based role playing game [RPG] devoted to the world of Panem." Since 2008, Olivia's RPG portal has grown to include her own root website, links to Facebook and Twitter, and game recap videos on YouTube. Now 17, she discusses her learning: "My site in particular has changed me as a person and a reader both by helping me develop my writing skills and allowing me to befriend people from all over... that share a common interest."

An analysis of Olivia's artifacts over time supports her sense of her own learning. She has participated as a designer, moderator, and player since the RPG's inception, and her learning is particularly evident in her creative writing. A textual analysis of Olivia's 12 FanFiction.net stories and 2,600 forum posts suggests that her understanding of character development and her use of descriptive language have been positively shaped through the text-based RPG. For example, in 2008, Olivia's first *Hunger Games* fan fiction story was written from the perspective of a minor *Hunger Games* character, drawing heavily on events and dialogue that appeared in the original novels. An RPG from 2013 shows that Olivia's style has changed, however. In this game, she developed an entirely new character, using figurative language, poetry verses, and anecdotes to offer a richly detailed profile of a young girl. Content analysis reveals that, over time, Olivia's writing has grown increasingly complex, creative, and improvisational. While she began by relying on existing narratives to tell her stories, she now innovates within Collins's world of Panem.

In more traditional connective ethnographies, researchers often navigate online spaces and physical locations, engage in observations and other face-to-face data collection, and examine artifacts in order to study how practices and cultures travel across settings. Conducting research exclusively in online spaces challenges such methodological approaches. To gain insight into the culture of an affinity space, a researcher may need to participate in dozens of portals, access multiple social media tools, and examine multimodal artifacts. Alternatively, the researcher could follow a participant like Olivia in order to understand how her learning and texts travel across multiple portals. In order to uncover how affinity spaces function as collaborative learning environments, Curwood is tracing how Olivia's writing develops through role playing and interacting with other

fans across time and space. Affinity space ethnography needs to trace texts and artifacts across multi-sited, ever-changing portals, without face-to-face access.

Conclusion: Moving Ethnography Forward

As educational and social venues move to online settings, researchers must develop new methods of understanding learning and interaction in these spaces. As the CSSL theme states, we must observe the activity of online worlds writ large *and* examine individual participants' artifacts to gain insight into the facets and travel of "grains of sand." Even where traditional and blended ethnographic observation is impossible, and complete accounts of participation unlikely, we can map portals, trace genres and practices, and glean information about participants' roles and activities. These are the methods and tools by which we attempt to reconstruct participants' situated and sociohistoric learning. Despite physical separation, members are apprenticed into online Discourses, and they learn how to take meaningful action in particular portals (Gee, 2004). At 10, Olivia joined a literature-based fandom; at 17, she's an avid reader, writer, and game designer. To trace and document this learning process, affinity space ethnographers must consider connections among texts and artifacts in spaces with compositional and communicative histories. As participants move through affinity space portals, so must researchers follow these traveling practices to understand how actions that may initially seem disconnected cohere into learning. We offer this discussion of affinity space ethnography as a modest step and needed expansion of connective ethnography, and as the beginning of a continuing conversation about online research sites and how researchers can gain explanatory footholds in complex, evolving spaces.

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