Virtual Ethnography: The Post Possibilities of Not Being There

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The purpose of this paper is methodological. It serves as a defense of virtual ethnography as a method, not only well suited to postpositivist research, but as a tool to further interrogate the tenuous truth that all research produces. To accomplish this, virtual ethnography is situated within the history of qualitative inquiry and then examined in terms of data collection, analysis, and the types of productive challenges virtuality presents. The paper concludes by considering the use of virtual ethnography in education, particularly in the field of educational technology.

Introduction

Virtual ethnography is a qualitative methodology for this moment in time, eventually to be lost as the newness of being in a virtual setting becomes normalized. For now, it is a necessary method, and one with promise for furthering postpositivist research by bringing to the fore ontological and epistemological questions of what constitutes "being" and how one comes to know about being. These questions are not new, but the context has changed and continues to change. This change can push researchers to challenge the idea that a certain set of data or analysis of that data can guarantee access to the truth.

In this paper, I begin by situating virtual ethnography within qualitative inquiry. A theoretical framework is grounded in the history of qualitative inquiry in order to understand the ways virtual ethnography emerged in a time when the foundations of what constitutes research had been and continues to be under debate. Virtual ethnography is then fully interrogated in terms of data collection, analysis, and the challenges brought about by the essence of the method. I conclude by considering the use of virtual ethnography in the field of educational technology. Educational technology is a field for which virtual ethnography is well suited to answer important questions not asked.

Theoretical Framework

Qualitative research for me, entering the field at this particular moment in time, should always be poststructural, contested, and decentered. It is difficult for me to imagine how qualitative research was ever considered humanist, objective, and universal. I read ethnographies through the lens of a rhizomatic power/knowledge framework (Deleuze & Guattari, 1987; Foucault, 1971, 1980), a framework in which binaries are opposed and "beginnings" and "endings" are nearly impossible to find. The rhizome is used as a tool to think about knowledge in a less linear fashion, in order to disrupt overly simplified understandings of complex phenomena. Therefore, ethnographies of the modern persuasion evoke in me an uneasiness in their easiness, an incredulity in their certainty, and even hilarity in their methods and conclusions so tidy. This stance toward knowledge creation was both, I think, the goal of my educational experience, but

at the same time a new sedimentation, a way of thinking that I have trouble unthinking, a way that I see as the best way to do research. I am bound to it now, bound to the messiness, bound to the deconstruction of these post-truth games, bound to the idea that all research is, in some way, fiction.

A Brief History of Qualitative Inquiry

Having situated myself in a postpositivist environment, I am not unaware of the history of ethnography and qualitative research, especially in educational research. Like Glesne (2006), "I use *ethnographic* somewhat interchangeably with *qualitative* to refer to practices that seek to interpret people's constructions of reality and identify patterns in their perspectives and behaviors" (p. 9). Qualitative research and ethnography grew out of the field of cultural anthropology and the works of ethnographers like Mead (1928) and Malinowski (1922). These traditions, while breaking ground in research methods and ways of knowing, also purported to understand an "exotic" culture objectively through observation and participation in that culture. The shame of the colonial influence of the early traditional ethnographies caused anthropologists to begin to study their own cultures around the time of World War II (though this often continued colonialism as many studied the "exotic" or marginalized of their own cultures). It was at this point that many ethnographers began to include a more participatory approach towards their subjects (Glesne, 2006, p. 10), in order to do less harm by creating knowledge *with* rather than *for* the subjects of the research.

Qualitative research expanded to include various modes of research including case study, discourse analysis, grounded theory, life history, phenomenology, and others (Glesne, 2006, pp. 11–13). In the 1960s, 1970s, and 1980s, because of an increased sensitivity to power and authority's impact, there was a rethinking of research design that might include the participants (rather than the "subjects") as co-researchers and partners in the analysis of data alongside openly ideological design that "empowered" them to resist oppression in some way. This was also a time when a more distinct delineation between qualitative and quantitative research developed, as qualitative research was seen as subjective and thus inferior by those who clung to a "rational" and "objective" definition of science (Denzin & Lincoln, 2005). This was particularly true in educational qualitative research which evoked a double bind of illegitimacy (Lagemann, 2000), having to bear the weight of both the feminized profession of education and the skepticism of scientific knowledge available through qualitative work. Research in this vein included participant-oriented research, critical ethnography, feminist ethnography, and action research (Glesne, 2006, pp. 13–17). Denzin and Lincoln (2005) would describe the periods mentioned so far as *traditional* (cultural anthropology), *modernist* (participatory approach), and *blurred genres* (p. 3).

At the end of this last period (the late 1980s), the further critique of method resulted in a crisis of representation in qualitative research (Norman Denzin & Lincoln, 2005; Marcus & Fischer, 1999). This laid the groundwork for the postmodern turn and resulted in a plethora of contested inquiry that challenged the boundaries of terms like ethnography or qualitative research. In Lather and Smithies' (1997) *Troubling the Angels: Women Living with HIV/AIDS*, for example, the researchers are both observers *and* participants in group therapy sessions and organize a multilayered text of participant voices juxtaposed with theoretical discussions and reflections.

The crisis of representation was a time when "[q]ualitative researchers sought new models of truth, method, and representation . . . Issues such as validity, reliability, and objectivity, previously believed to be settled, were once more problematic" (Denzin & Lincoln, 2005, p. 18). New forms of textuality via digital technologies also began to appear during this time period, offering further opportunities for qualitative researchers.

Virtual Ethnography

Virtual ethnography begun to appear alongside the increased adoption of the internet, in the late 90s, in a time when postmodernism and poststructuralism were already a part of qualitative research. Indeed, postmodern/poststructural theories that fragment the notion of identity, truth, and reality have a history with technology and the virtual as a useful metaphor/tool to think anew about those concepts (Baudrillard, 1983; Benjamin, 1932; Haraway, 1991a; Massumi, 2002). The notion of a "virtual ethnography," however, does not imply a certain research paradigm, nor does it claim to be something other than ethnography. I espouse the term as described by Hine (2000) as an ethnography *of* the internet:

> There is a place for a study of the everyday practices around the Internet, as a means to question the assumptions inherent in the prediction of radically different futures. Ethnography is an ideal methodological starting point for such a study. It can be used to explore the complex links between the claims which are made for the new technologies in different arenas: the home, the workplace, the mass media and the academic journal and monograph. An ethnography of the Internet can look in detail at the ways in which the technology is experienced in use (p. 5).

This approach has the potential to be disruptive to traditional ways of knowing by seeking to more fully understand new experiences of place and time by becoming immersed in them and interacting within them. Hine also sees the internet as both a space of culture and a cultural artifact (p. 9). Each, according to her, will evoke differing questions and require differing methodologies.

In using Hine's (2000) understanding of virtual ethnography, it seems appropriate that I create a distinction between the language and methods of other qualitative researchers who study and use virtual tools. When I use the term virtual ethnography—sometimes also called online ethnography or cyberanthropology in social science (Beaulieu, 2004, p. 142)--I am referring to an ethnography of virtual space rather than ethnography that makes use of digital technologies as tools of research or what Murthy (2008) calls "digital ethnography." Though digital tools are often used to aid research, and this deserves attention, the tools for data collection and analysis, though impacting the materiality of the research process (Voithofer, 2005), are not the objects of a virtual ethnography. The term "webnography" has also been used by market researchers in business settings as a method to get "useful" data from the information made available by interactions on the internet (Puri, 2007). Given this connection, I prefer to use the term virtual ethnography over the term webnography.

The term "visual ethnography" is another term related to virtual ethnography. It is distinct, however, in that the focus is on the visual nature of technologies ranging from photographs to

videos to electronic texts (Pink, 2006; Rose, 2007). As such, this sort of ethnography is focused on what imagery and placement of text can tell us about the culture of the internet or a particular culture on the internet and is related to, but not the focus of, virtual ethnography.

I situate virtual ethnography in the greater field of qualitative research, keeping in mind the historicity of this method and paying particular attention to a paradigm that takes the crisis of representation into account. I use virtual ethnography in a sense that the virtual space of the internet has its own cultures and sub-cultures, cultures that can be studied using an ethnographic approach. And, though these sorts of studies use the culture of the internet as their object of research, I do not ignore the fact that new issues arise with new forms of mediation, materiality, and ways of being available in the space of the internet. I see the newness of these forms as a threat to traditional, humanist understandings of the subject, the body, and being. Indeed I hope those issues are used as a way to think our way into a more poststructural form of ethnography, one which St. Pierre (2011) would describe as "provocative, risky, stunning, astounding. It should take our breath away with its daring. It should challenge our foundational assumptions and transform the world" (p. 40).

Doing Virtual Ethnography: Exemplars to Think With

It is important to consider the *doing* of virtual ethnography, the types of data collected, and the ways in which those data are collected and analyzed in some of the first examples of virtual ethnographies. As such, I present here an archive of exemplars to explore the current practices of the method. All of these practices differ to some degree from the practices of a "traditional" or "in-person" ethnography, but their purposes are not completely different, nor do they necessarily function in entirely new ways.

Data Collection

Data in a virtual ethnography can be collected in a variety of ways, the first being in-person. Often, however, interviews take place via chat or email. Observations can occur offline, while participants use the internet or talk about its use, or online as the ethnographer observes the web interface, visuals, text, threaded discussions, changes to the environment, and participant interaction. Documents can also be gathered that relate to the culture of study; for example, an online community's rules and regulations, an "About" page, or news articles related to the community. Schoneboom (2007), in her ethnography of workbloggers ("employees who write online about their work," p. 404), uses all of the data listed above. She also participates in the culture of blogging by actively commenting on the blogs she studies. Her interviews of workbloggers were in person. She describes the use of face-to-face interviews as a testimony to validity, important to her since she struggles with the fact that most of the bloggers are writing fictionalized accounts of "real" events. She assures her audience that, "[t]hrough interviews and face-to-face meetings, I have tried, as far as possible, to build a level of trust that allows me to assume that the bloggers involved in the study are being broadly honest about their occupation and are drawing their artistic inspiration from real events" (p. 410). Schoneboom is addressing a concern she has for the validity of her data as it is mediated by the greater affordance for anonymity available on the web.

In an early virtual ethnography of an electronic bar, Correll (1995) also used data similar to Schoneboom's: observation of discussions that took place on a computer bulletin board system and interviews of participants (hers were mostly via email with some follow-up in person). She also participated in the online community by posing questions to the group. She did not study offline documents related to this community. Darwin (2017), in a more recent virtual ethnography of a genderqueer subreddit (a smaller group within the website Reddit), did not conduct interviews at all, instead using only anonymous user posts as her data corpus.

Four larger virtual ethnographies, Miller and Slater's (2000) study of the internet in Trinidad, Boellstorff's (2008) study of Second Life, Markham's (1998) study of life online, and Hine's (2000) study of websites dedicated to the Louise Woodward murder case, all collected similar types of data though in different ways for their differing purposes.

Miller and Slater (2000), for example, studied how internet technologies were being taken up in a physical geographical location (the country of Trinidad), and so collected documents related to the infrastructure and economy of the internet. They also conducted face-to-face interviews with people about the internet, sometimes as their respondents were using the internet in cybercafes. In addition, they had students solicit the completion of questionnaires by going door-to-door. The only "virtual" exchange they had with participants was as the researchers participating in occasional online chats. This study, framed in the most traditional sense, also collected the most traditional types of data, and is reminiscent of Turkle's (1995) early study of Multi-User Domains, video game users, and other online interactions.

Boellstorff (2008), on the other hand, conducted his entire research *within* Second Life, observing behavior as an in-world avatar, conducting interviews and focus groups at his "home" in Second Life, and looking at documents and programs created within Second Life. Markham's (1998) approach was similar; all interviews and fieldwork took place online as she examined several computer-mediated contexts.

Hine's (2000) data collection approach was somewhat diverse as compared to the three previous studies. Hine observed websites related to the Louise Woodward case by tracking changes across websites, following links between them, and reading news stories and newsgroup discussions online regarding the case. Email interviews were conducted with the developers of some of the websites and with the newsgroup community via their discussion boards. She also collected data offline, including newspaper articles, videos of news commentary, and field notes of thoughts and observations.

As I reflect on the types of data that can be collected and the ways these data can be collected in a virtual ethnography, I am reminded of a particularly passionate paper delivered at the International Congress of Qualitative Inquiry in 2010. Dillard (2010) shared a story about her work in Ghana, describing the smells and the sounds of the local market in great detail. She provided bright visual imagery of what the people were wearing and how sweat dripped from her face in the heat of the day. It occurred to me that this sort of sensual detail can scarcely be had in the screen-mediated text and two-dimensional image-based environment of a virtual ethnography. Though I contend that virtual ethnographers are just as much "there" in their work as Cynthia Dillard was, they cannot describe for their audience, in all of that sensual detail, what

it is like to be in a virtual space. Indeed, much of the sensual is absent. Perhaps because of this, Wittel (2000) suggests that a virtual ethnography conducted entirely in virtual spaces is not an ethnography at all, but a simple document or content analysis. I disagree.

However little sensual detail is involved, I contend that even when virtual ethnography is "purely virtual" (if there is such a thing), it is still ethnography for two reasons: 1) Ethnography does not demand physical being in the traditional sense; privileging the physical world and the body is privileging a humanist, "scientific" notion that we can only know by seeing, touching, or measuring; and 2) Spaces available on the internet are artifacts in some sense composed mostly of text, but are also cultures and sub-cultures in their own right. They are not static documents waiting to be analyzed; they are part of a dynamic culture, one that can be studied ethnographically, with or without physical presence.

St. Pierre (2008), a poststructural feminist researcher who decenters voice and presence in qualitative research, argues that, "For poststructuralists, however, presence and other related concepts of qualitative inquiry—e.g., voice, interview, narrative, experience—cannot secure validity, the truth" (p. 321). In other words, "being there" is no longer a guarantor of validity, as "being there" does not guarantee access to the truth. "Being there" does give access to a certain kind of truth, and being in a virtual ethnography gives access to a different kind of truth, both equally fictitious.

That, as ethnographers, is really all we can hope for and acknowledge… partial truths. But Talburt would say that this partial truth does not mark the end of the practicality of ethnography, because ethnography must not be concerned with finding the "real," but rather reflect a "dialogic rather than a monologic research that seek[s] less to persuade than to invite readers to form relations with the text by offering 'a balance between engagements with others and self-reflective considerations with those engagements'" (Goodall, 2000, as cited in Talburt, 2004, p. 95). Virtual ethnography is a working example of how ethnographers can resist the desire to study the "real," and how they can rethink what in fact *is* "real."

Data Challenges

Though Wittel (2000) remarks on the possibility that material presented online can be removed at any time, it is equally likely that data collected online is persistent and replicable (boyd, 2008) posing a different set of problematizations. As Hine (2000) notes, "While spoken interaction is ephemeral and local, texts are mobile, and so available outside the immediate circumstances in which they are produced" (p. 50). Indeed, texts on the internet are often archived over several years, making them available to searching and researching. What this means is that texts in a virtual environment can travel greater distances, can be copied and changed, and can resist and transgress a traditional notion of place and time. Archiving can be an advantage to an ethnographer as data is more readily available and easier to save and record, but it can also be a problem as it can be difficult to locate original context and to understand if and how the text has changed forms over time. Replication and modification can produce an overwhelming amount of data and poses a greater threat to participant anonymity, as usernames may be copied and shared outside of the context of the study unbeknownst to the participant or the researcher. Here again, though, is the poststructural possibility inherent in a virtual ethnography, the chance to rethink

place as bounded or unbounded in different ways with differing effects of time and space (Hine, 2000, p. 58).

Data collection on the internet involves gathering existing textual material and almost entirely dismisses the need for transcription, a well-entrenched process of social science research. This causes some angst in the social science community. "If the ethnographer is expected to go somewhere, and bring back a story, then what happens when it seems that the story is already written, and what is more, authored by more legitimate writers?" (Beaulieu, 2004, p. 155). The textuality of the internet does allow for many "pre-transcribed" sorts of data collection, but it does not entirely undermine the need for field notes regarding the researcher's thoughts and interactions with the participants or member checking for clarity on pre-transcribed data. This may be another issue, however, that can help ethnographers consider how to understand ways of being as a result of the restrictions/affordances of research on the internet.

Orgad (2009) makes the decision to include offline data in internet inquiry. Indeed, Markham and Baym (2009) and Hine (2000) also begin discussions regarding the boundaries of this sort of research. Should online data collection be combined with offline data collection? Do they need each other? Can they be considered comparable? Markham and Baym (2009) submit that the answers depend on the type of question you are asking with your research (p. 38). For some sorts of virtual ethnography, offline data will be a natural part of the phenomenon being studied; for others it will be less so. For example, understanding the culture of an online school may require in-person observations of students at work. Markham and Baym further warn that researchers should not imply that online data is somehow not as authentic as offline data, but exists as another way to contextualize and understand your subject (p. 39). In addition, the decision to include multiple sources of data may also have to do with ontological understandings of identity. If identity is understood as always *becoming* (Butler, 1990), then only a partial understanding of identity is possible, whether interrogated online or in person.

Data Analysis

A variety of data analysis techniques are employed with regard to virtual ethnographies. Textual analysis is common. For example, Denzin (1999) uses discourse analysis alongside a "method of instances" (p. 113). Psathas (1995) argues "The goal is to achieve a strong reading and an adequate analysis of a particular instance or sequence of experience" (p. 50). Mitra and Cohen (1999) espouse a critical textual analysis as a way to "focus on the central aspect of the WWW [World Wide Web]—its textuality—and begin to answer questions about the WWW by considering the unique characteristics of the text" (p. 181), including its intertextuality, nonlinearity, interactivity, multimodality, and connectivity. Textual approaches seem well suited to a virtual ethnography. While it is outside the scope of this paper, it is worth noting that narrative approaches to inquiry (Connelly & Clandinin, 1990) can also be an appropriate methodology for virtual research.

Content/textual/discourse analysis techniques are advocated by virtual ethnographers, but are also used in conjunction with other analytic methods. A sort of general grounded and a priori theorizing is another technique used often by virtual ethnographers and has become popular for ethnographers in general (Boellstorff, 2008; Correll, 1995; Darwin, 2017; Hine, 2000; Markham,

1998; Miller & Slater, 2000; Schoneboom, 2007). With these studies, the specific method of data analysis not explicitly stated; rather they tended to mentioned that analysis was ongoing alongside data collection and that themes were generated.

Also important to data analysis in virtual ethnography is the consideration of the unit of analysis. Early studies in computer-mediated communication, a socio-psychology-centered field that works to understand how human beings relate via computer technology, focused on the individual. Work such as Turkle's *The Second Self* (1984) and *Life on the Screen* (1995) looked at the experiences of individuals using the computer interface and communicating with others through the interface. Turkle observed and interviewed her participants in "real" life as individuals having an online experience. Others such as Garton, Haythornwaite, and Wellman (1999) call for a network approach, in which the individual is part of a virtual community and must be explored as such.

Types of data, data collection, and data analysis, though similar in form and function to a traditional ethnography, are mediated differently in the context of the new materiality of a virtual environment. The issues surrounding how to conduct a virtual ethnography are not, I argue, in tension with what counts as ethnography, but instead are a chance to rethink the underlying assumptions, ontology, and epistemology that traditional ethnography has been afforded in the past.

Challenges of Virtual Ethnography

For researchers considering a virtual ethnography to answer their research questions, there are a number of challenges to consider due to the virtuality of this method. I argue that these are productive challenges that will continue to shift as online communities and modes of communication shift as well. These challenges provide space for a more careful and complex look at research in order to resist the sort of neat and tidy conclusions that are too often normalized in educational research.

The Research Question

A virtual ethnography may, in some sense, constrain the type of research question that can be asked. Since the interactions found online are less "traditional" types of interactions, being mediated by technology, the question asked would be different than a question about interactions in physical environments. Though no interaction is "truer" than another, those taking place over the internet are materially different and therefore mediated in a different way than in-person behavior. Wysocki (1998), in her study of visual communication, encourages the analysis of seemingly invisible design structures (including web pages) as influencing the meaning of a text. Wittel (2000) laments the lost material "complexity" (p. 9) that cannot be found in virtual environments. And while Orgad (2009) would say that these differences just require different kinds of question, Talburt (2004) would instead resist the search for the "real" in qualitative research. Talburt claims "[b]ecause it is relational and social, ethnography offers contingent knowledges that are never self-evident but whose meanings and implications must be constantly reinterpreted" (p. 98). Whether virtual or in-person, ethnography can only produce a "situated knowledge" (Haraway, 1991b).

Anonymity

Another challenge for virtual ethnography is that, due to the mediated nature of the internet, it may not be possible to know if the person participating is representing themselves accurately. This means that a researcher cannot assume, as he/she formulates a research question, that the participants are who they say they are. This is similar to the problematization of identity that can also occur when considering the collection of offline data. In real life, people misrepresent themselves in many ways, but there is an increased layer of anonymity online without the physical presence of the body. Along with St. Pierre (2008), Haraway (1991a), and Butler (1990), I would not privilege the physical world. Having said that, Wittel (2000) and Murthy (2008) worry about the accuracy of information and the validity of the research if participants are indeed *not* who they say they are. Boellstorff (2008), however, in his study of Second Life, purported to study this virtual world "on its own terms," conducting the entire ethnography within Second Life:

> I took their [participants] activities and words as legitimate data about culture in a virtual world. For instance, if during my research I was talking to a woman, I was not concerned to determine if she was "really" a man in the actual world, or even if two different people were taking turns controlling "her" (p. 61).

The issues of an authentic representation and humanist validity are the sorts of issues that might underlie challenges to the claims made in a virtual ethnography. If a person is not who he/she says he/she is online, then what can you claim to really know, as a researcher? Perhaps you can claim to know the workings of a particular phenomenon, but you could not claim to know a larger, more universal truth. This point is well aligned with poststructural thought and a cultural studies approach. Stern (1999) argues "Given the existing work, the challenge facing cultural studies Internet scholarship is to retain its critique of realism while at the same time speaking to the real" (p. 255). In addition, what claims can a virtual ethnographer make about more universal understandings, if his/her research is situated in an online environment? Orgad (2009), again, wonders if the online world and the offline world are truly comparable and suggests that the research question drives the types of data being collected—and therefore the types of claims that can be made. Anonymity online is a challenge, but it's a productive challenge that can be useful in expanding ideas about identity and truth claims.

Validity

Validity in a virtual ethnography is clearly an issue that varies by epistemology and ontology of the researcher. How can a virtual ethnography be valid if it is not certain who the participants are, if time is not spent "being there" physically with the participants, and if the researcher potentially never leaves the comfort of her office chair? Perhaps, "being there" is not null, but simply different, spatially and productively. Validity, in poststructuralism, is a contested term with implications for qualitative research. Britzman (1995) in her piece on poststructural ethnography, declares that it is necessary to:

> revision the project of ethnography beyond the structuring regulations of the true and the false, the objective and subjective, and the valid and the invalid … disturb the impulse to

> settle meaning . . . to think the unthought in more complex ways, to trouble confidence in being able to "observe" behavior, "apply the correct technique," and "correct" what is taken as a mistake (p. 236).

Thus, virtual ethnography seems to offer a great opportunity to be truer to the difficult task of reading beyond a stable validity in poststructural inquiry.

Alternatives to traditional validity and methods of validity have been proposed by different authors. Lather (1986) in her early work, calls for a "catalytic validity" or one that provides the research participants an opportunity to "grow" during the research. Her later work, though, rethinks validity further, calling for a poststructural transgressive validity, one with incorporates ironic, paralogical, rhizomatic, and voluptuous validities (Lather, 2007, pp. 128–129).

With regard to triangulation as a method to improve validity, Richardson (1997) proposes crystallization as an alternative. "I propose that the central imaginary for 'validity' for postmodernist texts is not the triangle – a rigid, fixed, two dimensional object. Rather, the central imaginary is the crystal, which combines symmetry and substance with an infinite variety of shapes, substances, transmutations, multidimensionalities, and angles of approach" (p. 92). The crystal metaphor is also more in line with a rhizomatic ontology in which understandings are complex and nonlinear; just when a solid understanding is thought to be discovered, a new angle might reveal further complications. Validity and the means of evoking validity in virtual ethnography are problematized in much the same way as they are problematized by poststructural theorists.

Rigor and Quality

Much has been made of rigor and quality in qualitative research, oftentimes in response to the "science envy" of early methodologies that continues today, particularly in educational research after No Child Left Behind called for "data-driven" decision-making to increase test scores. The National Science Foundation's guidance for developing qualitative research projects (Ragin, Nagel, & White, 2004) and the National Research Council's (2002) report on scientific research in education are examples of this. Bloch (2004), in response to the NRC report, worries that the sorts of quality guidelines outlined "creates a group of scholars who are always identified as less legitimate, and/or oppositional, and not as fully accepting of the norms of good science as the others who, in fact, become established as abnormal in the real science of research in education" (p. 102). As such, it is important for definitions of research to be broad enough to include qualitative research and for qualitative researchers to be a part of the conversation.

Lincoln (1995) and others have tried to take a more flexible look at quality in qualitative research, bringing the methods and goals of this type of research to the fore. Lincoln distinguishes this "new" paradigm from a more "purely scientific" one, not as second-rate, but as having different commitments: 1) to relations with respondents, 2) toward the use of inquiry to foster action and 3) to research that promotes social justice (p. 277). While noting that different methods call for different sorts of quality criteria, and while also noting the dangers of criteria in general, she points to several emerging criteria for quality in qualitative research: positionality

(all texts are situated), community (as arbiter of quality), voice, critical subjectivity, reciprocity, and sharing privilege (Lincoln, 1995, p. 278-285).

Virtual ethnographers have also considered quality and rigor in their methodological work. Hine (2000) formulated "principles of virtual ethnography" (p. 63-65) in her text dedicated to the method. These principles were created as she "develop[ed] an approach to the Internet which embraces complexity offered by this form of mediated interaction" (p. 63). These principles include: 1) sustained presence and participation of the ethnographer in the field setting, 2) attention to context, 3) investigating the remaking of space through mediated interactions, 4) a focus on flow and connectivity rather than place, 5) exploring boundaries throughout study, 6) attention to temporal dislocation for intermittent immersion (at best), 7) necessary partiality (strategic relevance over faithful representation), 8) the belief that intensive engagement with mediated interaction requires reflexivity, 9) the notion that all forms of interaction, just not face to face, are ethnographically valid, and 10) virtuality that is taken as 'not quite' real, but "adequate for exploring relations of mediated interaction . . . It is adaptive ethnography which sets out to suit itself to the conditions in which it finds itself" (p. 65). Though these principles are not necessarily explicit guidelines for rigor or quality, they address some of the "stuck places" (Lather, 1998) of virtual ethnography and ways to think through these "stuck places" in an effort to model rigor and quality in this messy method.

Markham and Baym (2009), also discuss quality and rigor, not specifically in virtual ethnography, but in internet inquiry more generally. Indeed, they acknowledge that one of their goals in publishing their text on internet inquiry was that qualitative internet research could "use a healthy dose of rigor" (p. 177). They also call attention to the difficulty in establishing standards, but recognize that there should be some sort of pragmatic criteria for quality. After reviewing exemplary internet studies, they list quality as: "1) grounded in theory and data, 2) demonstrating rigor in data collection and analysis, 3) using multiple strategies to obtain data, 4) taking into account the perspective of participants, 5) demonstrating awareness of and self-reflexivity regarding the research process, and 6) taking into considerations interconnections between the internet and the life-world within which it is situated" (p. 179).

Markham and Baym's (2009) indicators of quality seem to be applicable to all qualitative research, virtual or not, and Hine's (2000) principles, though abstract, are more relevant to the difficulty of the virtuality of the research. Taken together, however, they can be useful in providing guidance to virtual ethnographers in their focus on both researcher reflexivity and on the interconnections possible in the context of virtual environments. Virtual ethnographers must engage carefully and reflexively in environments with shifting boundaries of time and space, understanding new flows and connections in these contexts.

Ethical Issues

While validity, rigor, and quality continue to be fleshed out, ethical issues involved in virtual ethnography resulted in ethical guidelines created by the Association of Internet Researchers (AoIR) in 2002 and revised in 2010 (Markham and Buchanan, 2010); these allowed for consideration of a variety of projects. Several issues spurred these guidelines, including

protection of participants, anonymity of participants, and the conflation of public and private in this new space.

Protection. Regarding the protection of participants, Murthy (2008) and Wittel (2000) both discuss the age of participants as a potential problem. Due to the mediated nature of communication via the internet, it is difficult to know if the person you are interacting with is really who they say they are. This may be less important when understanding the culture of that space, but it becomes more important when one considers the ethics of the situation. If this person is under 18, or even a member of some other vulnerable group, (such as a person with a disability), they should be afforded more privacy and protection. If the researcher cannot know if misrepresentation is a factor, protection becomes more difficult to achieve.

Consent. In the same vein, consent becomes a thornier issue on the internet. How can a researcher achieve comprehensive consent to study a message board with thousands of participants? The AoIR's (Markham & Buchanan, 2010) guidelines suggest whether consent is necessary, and if so, obtaining consent from facilitators or administrators of the site. If individual consent is necessary, then the researcher should consider how to obtain it – through print or digital signatures, virtual consent tokens, or clickboxes (p. 11).

Anonymity. Consent brings to light another ethical concern, that of the anonymity of the participants. Especially in the age of "big data" we should consider that accessible does not necessarily mitigate ethical concerns (boyd & Crawford, 2012). If the participant uses a pseudonym and wants to participate, emailing or mailing a consent form may reduce the level of anonymity. In addition and in opposition to the problem of *increased* anonymity offered by a mediated environment, the searchability and replicability of the internet, as noted by Beaulieu (2004) and boyd (2008), contributes to a *reduced* anonymity. Even if researchers use pseudonyms of pseudonyms, if they put direct quotes from a message board in their published work, a reader could easily use a search engine to find a direct quote and the participant. The AoIR (Markham & Buchanan, 2010) guidelines suggest that a researcher gain consent from the moderator of a group rather than individual members to protect anonymity as well as considering paraphrasing text (p. 10-11).

"Lurking." A few further ethical issues considered by other authors were lurking, access, and power. "Lurking" is tangentially considered by the AoIR, but is specifically mentioned by Beaulieu (2004), Hine (2000), and boyd (2008). Lurking is visiting a site but not participating or letting the members of the site know that you are watching and/or studying them. Lurking is problematic in that it permits the appearance of a certain "objective distance," while not allowing for the intimacy and participation called for by virtual ethnographers such as Boellstorff (2008), Correll (1995), Schoneboom (2007), Hine (2000), and Kendall (1999). Lurking also violates the assumed privacy of many online participants, who intend to participate in public conversations, but not spied on or studied unknowingly. It might be helpful, according to AoIR (Markham & Buchanan, 2010), to ask: Is the site like a blog where the author is purporting to broadcast to an audience or is it a discussion site where participants have more of a sense of privacy (p. 10)?

Access and power. Access and power are two other important ethical considerations in a virtual ethnography. The digital divide (Voithofer & Foley, 2007) is a neglected factor in many areas of

education and educational research and should be considered with care, particularly in qualitative research in virtual settings. How does studying communities and interactions online limit the types of participants who can be studied? This is as much a question of access as of power. The question is not only who has access, but who has the ability to use that access in ways that researchers might find "analytically interesting." How has this use been shaped by gender, sexuality, and race? How are certain groups kept from certain communities by, for example, sexual innuendo (Kendall, 2009) or racial indifference or bigotry? And further, how will research on small groups of rather elite standing contribute to the exclusion of certain groups from new technologies? These ethical issues should be a concern to researchers as well, particularly if we follow the guidelines presented by Lincoln (1995) for quality in qualitative research as an activity for social justice.

The IRB

The institutional review board (IRB) is the governing body for research conducted at academic institutions. Since IRBs were created with mostly quantitative medical research in mind, social science has been struggling to explain the ways that concepts like "harm" is different for qualitative research. Adding virtuality to qualitative research presents further problems for IRB approval; namely consent, anonymity, identity, and privacy, as discussed above. In some ways IRBs might be too cautious in their reviews of internet inquiry, but in other ways, they might be naïve in their understandings of the ways in which technology works. For example, IRB regulations do not take into consideration that "existing" material on the internet can mingle with new material, making it nearly impossible for a researcher to declare that she will only be accessing existing material (though this is still an option for an exempt research request).In addition, internet research can easily (and even accidentally) cross international borders wherein international laws of privacy may need to be considered by the IRB. IRBs also may not take into consideration conceptions of privacy by participants in "public" forums on the internet. Though many of these forums may be public record, participants should know that they are being studied. The researcher, then, must be ethical in a way that the IRB has perhaps not considered due to a limited and perhaps undeveloped understanding of networked publics and technologies.

Virtual ethnography is a challenging methodology that requires researchers (re)consider the questions they ask, the claims they make, the validity, rigor, and quality that is possible, and the possible ethical dilemmas that could emerge. In a traditional ethnography, a researcher might not have to step into the field and wonder about the nature of the environment, how she exists in relation to participants, what counts as existence, and what is real. Virtual ethnography thrusts these questions upon the researcher in a productively burdensome and delightfully poststructural way.

Possibilities in Educational Technology

What is possible if virtual ethnography is used in the field of education? I argue that the field of educational technology, already situated in the virtual, is ripe for making use of this type of inquiry. The field, like the field of education more generally, has largely taken a pedagogical/instructional design approach rather than a cultural approach to research. This approach has as its focus the design of educational environments that incorporate technology in an effort to build content skills and knowledge, rather than investigating the cultural issues

wrapped up in the uses of technology in education. This is evidenced by researchers such as Squire (2008a, 2008b), Squire and Jan (2007), and Squire, DeVante, and Durga (2008), who research how video games can be used for learning in the classroom, but not the ways that participation with new technologies is changing power dynamics, subjectivity, and agency that unfolds in various and complex ways in a multitude of educational settings. The design of e-learning and strategies of technology integration have also served as a major focus in this area.

One of the main journals in this field, *Computers & Education*, focuses on the use of technology in the classroom setting to reach state-defined educational goals. The hegemony of this type of approach is evidenced by this journal's impact factor (4.538) on the Institute for Scientific Information (ISI)Web of Knowledge database. On the other hand, several journals such as *Computers and Composition* and the *International Journal of Qualitative Studies in Education* have begun to take a more cultural foundations approach to technology in education. They have featured studies not only on how learning is changing, but how identity, subjectivity, communication, and gender performances are affected by the use of technology, as well as the effects of these changes on society. These journals are not (yet) listed in the ISI Web of Knowledge database. Knowledge around new media and education tends to be produced in particular ways, in which a "practical" school-based approach continues to dominate. This is a focus I would like to disrupt.

The field of educational technology, though, has also borrowed from the field of media studies, which has looked more closely at online culture in varied ways. Jenkins (2006; Jenkins & Cassell, 2008) is an example of a thinker in this field who studied what he called *convergence culture*, or the cultural changes that occur as new media are introduced and mingle with "old" systems. Gee (2003), who studied the ways in which video games could help the field of education rethink learning, teaching, and identity, is another example. A continued engagement with the field of media studies could support educational researchers' shift toward a deeper and more culturally-focused look at technology in use.

Technology studies and science studies could also have a greater impact in the field of educational technology, as the study of the ways in which science and technology have been culturally constructed can inform the ways in which both science and technology have been constructed in relation to ethnography and qualitative research. Thinkers such as Benjamin (1932), Baudrillard (1983), Haraway (1991a), Barad (2003), and Massumi (2002), have discussed the implications and new ways of being that have resulted from a closer look at technology in culture. These implications include how art has been impacted by mechanical reproduction, the difficult work of simulating "reality," and the useful metaphor of a cyborg to transcend binary conceptions of gender. Wajcman (1991) and Spender (1995) have rethought the history of technology and its traditional identification as masculine. Turkle (1984, 1995, 2015) and boyd (2007, 2008) have conducted ethnographies of the current uses of technology and how they are changing the ways in which identity and communication are engaged. More studies of this type would enhance our understanding of what technology means for (or what effects it is having on) learning and education, more broadly defined.

A poststructural approach to these ethnographies can help us as educational researchers avoid spending so much time finding the "right instructional approach," a focus which is always dense

with power. And a virtual ethnographic approach may help push us even further as types of data, data collection, and data analysis, though similar in form and function to a traditional ethnography, are mediated differently in the context of the new materiality of a virtual environment. The issues around how to conduct a virtual ethnography are not in tension with what counts as ethnography, but instead are a chance to rethink the underlying ontological and epistemological assumptions that traditional ethnography has been afforded in the past. Technology in education as a field has an opportunity to create a persistent dialogue that encourages the thinking *of* practice, or practice as curriculum, over a search for the ever-futile "best practice." A critical, poststructural stance could facilitate the thinking through of various themes and issues that become problematized as new technologies emerge.

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