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FROM VIRTUAL ETHNOGRAPHY TO THE EMBEDDED, EMBODIED, EVERYDAY INTERNET

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Introduction

My first online ethnographic experience happened over twenty years ago in a real-time text-based virtual reality setting called a MUD (Multi-User Dungeon). At the time I was working on a conventional ethnographic study of two fieldsites that were involved in the production and use of software systems for biologists. One of my key informants at the software production site invited me to try out this new (to me at least) form of interaction that he thought I might find interesting, arranging to meet in the MUD on one of the days when I was not physically present in the fieldsite. The technology was clunky and the experience bewildering, and my informant delighted in confusing me by playing tricks with multiple logins. I could not even work out how many people I had met, never mind fathom how I might make enough sense out of what had gone on to produce anything coherent in the way of fieldnotes. As I continued to reflect on what had gone on, however, I came to see that this initial puzzling experience offered a glimpse of the possibility of ethnographic immersion in a space of interaction that did not have a physical grounding.

The key starting point for developing an ethnographic perspective on this kind of space was to dispense with any notion that we might need to judge *a priori* whether or not this form of interaction was sufficiently rich or meaningful to form a basis for ethnographic enquiry. It would be important to take the setting on its own terms, just as any ethnographer within an unfamiliar culture would do. If this were the form that presence took in this kind of setting then the ethnographer could aim to be present in that way too, and the ethnography could focus on how people got on with things in the conditions that were created there. Being immersed in the setting meant being able to experience those conditions and to learn how to live among those who did so alongside them, and thus provided a fairly recognizable mirroring of a standard ethnographic stance.

In the intervening years I have engaged in many different kinds of online interaction and have stuck with this basic ethnographic intuition that our task is to understand ways of life as they are lived, and not to worry too much about whether any specific kind of interaction is "good enough" for ethnographic immersion. If people do it, then that is enough to make it a legitimate focus for ethnography. The task, as I understand it, is to explore the way that life is lived and relationships enacted, through whatever medium is used by the people concerned. Along the way, however, some additional complexities have come to the fore. While glibly I might have set out to study life as lived within the setting, quite patently people do not live out their lives in an online setting alone. In many cases then, to understand that "life as lived" it becomes necessary to extend studies to other spaces, and other media. A multi-modal, multi-sited study brings fresh practical and analytic challenges, as we must decide how and when to follow informants between settings and which of the many possible connections between those settings to pursue.

My more recent ethnographic studies have encompassed online and offline, following practices of meaning-making as people draw on their online experiences within offline contexts (and vice versa). I have found myself looking in depth at online experiences themselves and also within the institutional, domestic, and policy contexts where these experiences have to make sense in order to be sustained. The Internet has changed, as new platforms and new devices have been developed and as the cultural significance of the Internet has evolved. Without necessarily buying into a clear epochal rift between web 1.0 and web 2.0 it is apparent that a cultural shift has happened in the extent to which online activities are expected to be embedded within other aspects of users' lives. Ethnographers engaged with the Internet are increasingly moved to respond to the considerable spatial and temporal complexity occasioned through embedding of online activities within other contexts, with research designs not confined *a priori* to online settings. It has also been necessary for ethnographers to adapt their notions of presence to suit the conditions offered up by various forms of mediated interaction and the contingent connections forged between them.

My personal ethnographic journey has therefore taken me from conventional place-based studies into online-only fieldwork, and from there into a more complex interconnected web of online and offline fieldwork, always focused around making sense of what people think they are up to when they use the Internet. The organizing principles of these studies have, along the way, relied upon enduring principles of ethnography as an immersive form of research focused on knowing through close and sustained proximity and interaction. The form of the studies has, however, been diverse, as different research questions and the very different ways of living and working with Internet technologies that different groups have adopted have prompted different kinds of fieldwork in these uniquely constituted settings.

In the remainder of this chapter I will outline three key sets of ideas that have underpinned my ethnographic practice as it has developed across twenty years of engagement with online ethnography. First, I outline the work in Science and Technology Studies (STS) that shapes expectations of the Internet *as a technology* and suggests some fruitful directions for ethnographic engagement. Second, I discuss the notion of the fieldsite, and explore some different ways of conceptualizing the field that have emerged as we have moved away from wholly online single-sited notions of the online field. In this section I highlight some of the scholars whose ethnographic work in online spaces has inspired and informed my own. Third, I discuss the contribution made by reflexivity to ethnographic studies of wholly and partially online spaces. Finally, the concluding section reflects on the prospects for continued evolution in ethnographic approaches to the Internet.

Science and Technology Studies (STS)

Beyond an adherence to broad principles of ethnography as a means to develop a rich understanding of activities on their own terms, the specific theoretical and methodological resources offered by STS have defined my approach to online ethnography. A key conceptual idea underpinning my approach to the technologies of the Internet is "social shaping" (MacKenzie and Wajcman 1985): the idea that technologies are not the inevitable product of social trajectories of innovation, but are instead thoroughly social in both their development and their use. Applied to the Internet, this perspective suggests that we can usefully attend to the conditions within which the Internet and the many platforms that depend upon it and devices which populate it come to be, because these conditions will be constitutive in some way of the technologies that result. Thus, the ethnographer's role need not be confined to studying impact, but can also be usefully focused upstream, upon the conditions under which technologies come to be as they are.

The interest in how technologies come to be is not only confined to the study of backroom research and development environments. STS also has provocative things to say about the role of users in the innovation process (Oudshoorn and Pinch 2005) and the extent to which users have agency in technological outcomes via the meanings they attribute to technologies, through processes of interpretive flexibility and stabilization (Bijker et al. 1987). This perspective on technologies as products of social construction underpins an ethnographic approach to the Internet that understands things could have been otherwise: this particular set of technologies need not have developed, and they need not have been used in these precise ways.

Rather than studying how the affordances of a particular technology shape what people can do, we are also, to a large extent, studying how people, through their social practices, shape what the technology can do. An STS-influenced approach encourages the treatment of media technologies as socio-material complexes (Gillespie et al. 2014). It also highlights the extent to which a singular, closed notion of the meaning and purpose of a particular technology is always to some extent in doubt. Recent work in STS has explored the notion of ontological multiplicity, suggesting that a given object may be intrinsically multiple, existing in different incarnations in different places (Mol 2002). Viewed from this perspective, we may expect the Internet and its various constituent platforms to take on quite different identities in different contexts, constituted in each place through the specific sets of practices through which they acquire meaning. This focus on the agency of users and the significance of practices in constituting—in a thorough-going way—what a technology is, offers a rationale for conducting ethnographic studies as a means to find out exactly what that technology becomes in each specific context of use. Rather than reading off the likely social consequences in advance from the technology in itself, a detailed study of actual circumstances of use is required.

A further set of inspirations for an ethnographic study of the Internet comes from work in STS on the sociology of infrastructure (Star and Ruhleder 1996). Infrastructural technologies are, by their nature, often overlooked. These technologies provide a basis or framework for other, more immediately noticeable technologies to work upon. An infrastructure (for example a utility, such as electricity, water supply, or Wi-Fi) relies upon agreed standards or conventions that must be shared in order to make use of it. Infrastructures often require considerable "invisible work," both to keep them running and in order to make the messy everyday world fit in with the assumptions built into the infrastructure. Because infrastructures are so taken-for-granted they can risk being overlooked both by participants in the setting and by ethnographers. Bowker and Star (2000) proposed that we should aim to operate

an "infrastructural inversion" whereby the background infrastructure would be brought into the foreground of our study with the goal of bringing into view the otherwise overlooked consequences of the infrastructure and the work that sustains it. This provides a provocation for ethnography of the Internet, to focus not only on those aspects that are in some way "spectacular" and commented upon by participants but also those features that go unremarked and become an unspoken part of routine usage (Star 1999; Star and Bowker 2006).

A final concept from STS useful for ethnographies of the Internet is the sociological study of claims-making about the future. The development and uptake of technologies in the present is often informed by and shaped by claims being made about what the future will be like (Brown and Michael 2003). This "anticipatory knowledge" (Nelson et al. 2008; Selin 2008) is a situated phenomenon and it is therefore important to study closely what claims are being made by whom and to what effect. The Internet, the various devices that enable it, and platforms that are supported by it have been rich sites for claims-making about the future. As an ethnographer focused on understanding the meanings surrounding any use of these technologies in the present, it is important to be alert to the claims that are being made regarding the future and to explore how they shape the present. These sets of expectations might be highly significant in shaping the Internet as a cultural artifact (Hine 2000) for those adopting—or indeed rejecting—it in the present.

None of these concepts tell us how to do an ethnography, or what we should expect to find, but I have found them useful as sensitizing concepts, providing foreshadowed problems that give clues about what may be interesting places to look or useful assumptions to subject to a critical gaze. My set of organizing principles for ethnography of the Internet derived from STS sensibilities would include:

1   Take all experiences seriously on their own terms and do not aim to judge whether what people say and do is correct by any external criteria.
2   Explore technologies as cultural artifacts, expecting them to acquire meanings in use, specific to particular contexts.
3   Aim to examine taken-for-granted assumptions and to highlight invisible work that might be unremarked by participants but is essential to keep technologies running smoothly.
4   Critically examine claims-making as an intrinsic part of technological development and uptake.

Fieldsites in Various Forms

The core principles of ethnographic study have remained recognizably the same throughout my twenty years of involvement in ethnography of the Internet. Nonetheless, there have been changes in the way that these studies have been organized and among the most striking developments have been the changes in constitution of the fieldsite. Some of the early studies that were inspirational for me in establishing that an online space could be deemed an appropriate place to do ethnography focused on a defined online group, such as Baym's (1995, 2000) ethnography of a soap opera discussion group and Kendall's (2002) exploration of gender within a MUD. Subsequent notable online ethnographies include Boellstorff's (2008) anthropological exploration of Second Life. The ethnographic focus in these examples was on understanding in detail and in depth how these sites developed their own distinctive cultures.

In subsequent years the notions of online spaces, and online fieldsites in particular, have remained important organizing principles for ethnographers interested in finding out exactly how people make sense of life lived in this medium. Boellstorff (2010) has argued

convincingly for the acceptance of online space as a legitimate focus for ethnography, if the goal is to understand that space. However, some key cultural and technological developments have meant that the Internet increasingly seems embedded into diverse aspects of everyday life. Mobile devices mean that the Internet can be used in more locations and on-the-move, and social networking sites have been adopted as technologies that allow us to keep in touch with our existing networks of social contacts, blending our online and offline lives into an inseparable mesh of connections. For an ethnographer interested in exploring how online activities make sense it is, therefore, often hard to treat the fieldsite as confined to a single online space. Increasingly fieldsites are not easily located either online or offline (Garcia et al. 2009) but involve tracing networks of connection through online and offline space (Leander and McKim 2003).

As ethnographers have looked outside the confines of online space for practices that make sense of online activities, a variety of organizing concepts for defining the fieldsite have emerged. Marcus' (1995) multi-sited ethnography provides a model for studies that pursue a topic or theme across more than one connected site, such as Larsen's (2008) study of digital photographic practices. Burrell (2009) construes the field as a network of interconnected sites. Postill and Pink (2012) outline a form of ethnography that explores messy webs of interconnection across online and offline space. The connections explored by the ethnographer might take very different forms in different settings: Geiger and Ribes (2011) outline a trace ethnography that takes seriously the role of computer logs of activity in coordinating action between sites. Within these fields participant observation still plays a role but participation in human activity is supplemented with attention to the traces of activity maintained by machines. Similarly, Beaulieu (2005) highlights that following hyperlinks and interrogating the circumstances of their production may also count as ethnographic fieldwork. Even apparently "machine generated" aspects of the setting are significant for an ethnographer.

The field, then, can take many forms, and it is not always helpful to bound a study in advance through a focus on either online or offline. As Atkinson (2015) highlights, fieldwork is an active process, and rather than the field pre-existing before the work, that work brings the field into being. It is our preoccupations, our theoretical curiosity, and the trails we choose to follow in the field that bring the fieldsite for a particular study into being. Sometimes we may pre-define the field according to a bounded location, whether online or offline, or through our desire to follow a particular group of people, wherever their activities take place. These are, however, choices that the ethnographer has made.

In my own recent work I have explored some quite different forms of fieldsite since my original foray into an online-only field. *Virtual Ethnography* (Hine 2000) made a point of exploring the mass media representations that constituted the Internet as a cultural artifact and informed the development of online discussions and websites. My study of the practices of contemporary systematists (biologists concerned with the classification and naming of organisms) occasioned fieldwork that spanned historical work on the forging of the discipline and its expectations of new technologies, face-to-face ethnographic observation in institutions, close attention to policy documents and the claims about present and future that they portrayed, and online ethnography in diverse contingently connected settings (Hine 2008). My study of the online gift-giving network Freecycle began with ethnographic observations in a single online space, but moved into observation of other online spaces in which participants discussed their activities, and into interviews online and face-to-face and into auto-ethnographic reflection on participation (Hine 2015). In each case, the initial sets of online activities that formed the spark for the study were embedded in multiple other contexts and developing a sufficient understanding for my purposes involved pursuing multiple frames of meaning-making.

Immersion and Reflexivity

Immersion for sustained periods of time has been an important benchmark for the ethnographic methodology. Through being in the setting, however it may be constituted, the ethnographer is able to learn about life from the perspective of participants, and through being there over a period of time is able to conduct research that goes beyond isolated impressions, fleeting encounters, and retrospective reporting. Ethnographic insights are developed over time and tested out in ongoing encounters within the field. Immersion within the setting offers the prospect of developing an embodied knowledge of the setting that goes beyond formal knowledge and verbal accounts of the setting to provide insights into how it feels to live this way of life.

Venkatesh explains that there are many different ways in which a first-person perspective contributes to ethnography, including "to draw on direct experiences in the field in order to access knowledge of the subject's world that might otherwise be unavailable or extremely difficult to access" (2013, 5). Immersion in the field, therefore, offers one way of dealing with the "'silence' of the social" (Hirschauer 2006, 414), a term capturing the concern that many aspects of the field of most interest to us are beyond the ability of participants to describe. This should not be taken to imply that the ethnographer's insight is to be taken as a uniquely privileged or objective insight, but rather that through focused reflection on experience the ethnographer is able to put into words some aspect of the field otherwise left unspoken. The ethnographic self becomes a resource in the research (Collins and Gallinat 2013) through insights derived from being in the field, through recognition of moments of experience shared with participants, and even through acknowledgment of struggles to understand.

Across each of the studies I have conducted within and around online fieldsites it has been important to incorporate a strong reflexive dimension to the fieldwork and the subsequent ethnographic writing. Markham (1998) made an important early intervention by highlighting that reflexivity was a powerful part of the online ethnographer's toolkit, as a corrective to the tendency to assume that we could know in advance what being online was like. This kind of reflection on how a particular form of mediated interaction feels and how it feels to navigate between various forms and sites of interaction has been an important component of developing a deeper understanding of the Internet, predicated on the idea that ethnographic insight is about studying a form of life in its own terms.

Where the field is constituted through some combination of online and offline spaces, the reflexive element allows for the ethnographer to consider what the experience of navigating this contingently connected space is like. Where the ethnographer experiences uncertainty about where to go, or who people really are, it is important to reflect on whether this experience is shared by the participants whose way of life we are hoping to understand. The field, in this kind of study, is constituted through the ethnographer's agency in making choices about which connections to follow rather than through tracing out a pre-existing location or bounded set of connections. Reflexivity involves examining choices and assumptions and reflecting on modes of experience and movements within the field.

Conclusion

Across twenty years of ethnographic study of the Internet, there has been considerable continuity in my reference to theories from STS, my consciousness of the field as a construct, and my reliance on reflexivity as an intrinsic part of the ethnographic endeavor. There have, however, been shifts of emphasis, as scholarship in each of these areas has advanced, and as the Internet itself has changed. Three aspects of the contemporary Internet have proved particularly significant in shaping the ethnographic strategies that I have adopted in recent years:

the embedded Internet makes sense as it participates in multiple frames of meaning-making, few of which are confined to particular bounded online spaces; the embodied Internet has become a part of our way of living our lives, experienced not just as a tool for communicating but as a way of being ourselves and becoming present to one another; and the everyday Internet has become part of the infrastructure of our social existence, often taken-for-granted and only occasionally noticed as an topic of discussion or an influence to be questioned (Hine 2015).

These aspects of the Internet have occasioned studies that move between online and offline as necessary to make sense of the particular ethnographic questions being asked, and which focus on the ethnographer's embodied insights as one experiencing the setting and navigating contingent connections between different forms of activity. The everyday Internet occasions research strategies that seek both to uncover the assumptions inherent in the taken-for-granted infrastructure and to explore the situated nature of claims-making about the past, present, and future of the Internet. This is an ethnography that is rarely now confined within the Internet, but remains oriented towards understanding the Internet as a significant element in the constitution of what contemporary society is and can be.

It would be inappropriate to make too certain a prediction about where the Internet and its ethnography are headed next, given the inherently social nature of claims-making about the future. Nonetheless, it is probably wise to attend to developments that are on the horizon and to make some tentative preparations. One development that provokes and challenges ethnographic attention is the Internet of Things. This promise of an ever-more embedded Internet requires a close examination, inspired by the sociology of infrastructure, of the assumptions becoming embedded in new infrastructures and the power relations that emerge when the objects around us become ever smarter on our behalf. Another set of developments for ethnographers to be attentive to is the increasing retreat of online activities into closed worlds (Lievrouw 2012) of commercially owned, password-protected spaces and the proliferating domain of ephemeral app-based interactions that elude archives and search engines. It will be a challenge to develop ways to be ethnographic about increasingly embedded, ephemeral, and personalized forms of online communication. Fieldsites promise to fragment more than ever before and reflexivity will remain a key resource in articulating how it feels to navigate this complex world.

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