and meaningful human life. At the same time ethnographers have endeavored to show how these differences are not unbridgeable. These different pathways of life move across a shared terrain of the human. One of the many contributions of virtual world ethnography is to broaden this conversation by showing how forms of technologically mediated sociality shape and are shaped by the contemporary context.

CHAPTER TWO

THREE BRIEF HISTORIES

In this chapter we offer some background on the central topics of this handbook, ethnography and virtual worlds. We provide a history of ethnographic methods, a history of virtual worlds, and a history of ethnographic methods as used in virtual worlds. Each history is brief but points to key ideas shaping what we know about the development of ethnography as a scholarly practice and virtual worlds as important sites of human activity.

Why bother to elucidate these histories? In the hype-filled culture of technology research, it is easy to mislead oneself into thinking that everything is new: "too often internet researchers take the stance that, since the internet is new, old theory and methods . . . have nothing to offer in its exploration" (Baym 2009:180). More often than we would care to report, we have encountered scholarship weakened by authors overlooking previous work or making spurious claims of novelty. One of the most basic principles of scholarship is "standing on the shoulders of giants," building on the work of others. We thus feel it is critical to begin ethnographic inquiry with a sound understanding of how ethnography emerged and has been successfully used in the past, as well as how virtual worlds developed and have been studied ethnographically from their beginnings. Ethnographers of virtual worlds must "share a commitment to making sense of the new by understanding their research processes' and objects' continuity with the past" (Baym and Markham 2009:xv).

2.1 A BRIEF HISTORY OF ETHNOGRAPHIC METHODS

As far back as records go, it seems that humans have used the world-changing technology of writing to reflect on their cultures and the cultures of others. In the Western tradition, Greek classics such as Homer's *Odyssey* and Herodotus's *Histories* helped inaugurate genres of writing concerned with difference, displacement, and the social. Through myriad transformations and reconceptualizations, these forms of writing continue to the present day. But despite its Greek roots (*ethnos* "people,"

graphein "writing"), one would search in vain for "ethnography" in Homer or Herodotus. The term appears to have been coined only in 1767 by Johann Friedrich Schöpperlin, in the context of German Romanticism (Vermeulen 2008:276).

The notion of ethnography grew out of disillusionment with Enlightenment ideals of standardization, ideals famously exemplified in attempts during that period to create "encyclopedias" of all human knowledge. Indeed, the late eighteenth-century and early nineteenth-century studies by the geographer Wilhelm von Humboldt, working in a German tradition of *Geschichtswissenschaften* (historical sciences) that was shaped by thinkers like Herder and Goethe, played an important role in developing notions of culture, linked to the German Romantic notion of the *volk* or "people" (Bunzl 1996).

The distinction between "encyclopedia" and "ethnography" is instructive, revealing two distinct claims for the scientific conceptualization and presentation of knowledge. Authors of encyclopedias typically seek to produce comprehensive and comparative compendia. They subscribe to the theoretical standpoint known as "positivism" that originated with Auguste Comte (1798–1857), in the same nineteenth-century French environment in which the modern encyclopedia originated. Positivism, to oversimplify for brevity, is the view that the world (including human society) can be described in terms of generalizable laws. In contrast, authors of ethnographies typically seek to produce detailed and situated accounts of specific cultures in a manner that reflects the perspective of those whose culture is under discussion.

By the dawn of the twentieth century, there existed a range of writings that could be considered ethnographic in some sense. For the most part, these were produced by travelers without academic positions and with varied relationships to colonial and missionary projects. Frank Hamilton Cushing's work with Zuni communities in the 1880s and Baldwin Spencer and Francis Gillen's work in Australia in the 1890s are widely recognized examples of early ethnographic work (Cushing 1979; Spencer and Gillen 1899; for examples of contemporary discussions of this work, see Hinsley 1983; Povinelli 2002). These kinds of ethnographic reports, along with the writings of traders, explorers, and missionaries, became grist for ethnographic theorizing carried out by scholars who did not themselves work "in the field," in line with the broader mid-Victorian belief that "empirical data collected by gentleman amateurs abroad could provide the basis for the more systematic inquiries of metropolitan scholar-scientists" (Stocking 1992:18). During this period fieldwork

was not prestigious, and "armchair scholars were accustomed to claiming the intellectual high ground" (Kuklick 2011:3). For instance, E. B. Tylor, who in 1896 became the first person to hold the position of professor of anthropology and was author of the influential *Primitive Culture* (1871), never conducted formal fieldwork (see Stocking 1995). Nor did James Frazer, whose book *The Golden Bough* (1915) was central to early twentieth-century anthropological thought.

In the history of ethnography, the single most pivotal figure is most likely Bronisław Malinowski (1884–1942), who taught at the London School of Economics from 1922 to 1938, training a whole generation of influential ethnographers (Kuper 1996). While Malinowski was not solely responsible for this new vision of ethnography, he may accurately be accorded a central role in its formulation and dissemination. The field research upon which Malinowski's best-known works were based was carried out primarily between 1914 and 1918 in the Trobriand Islands, near Papua New Guinea. After Malinowski, the norm in anthropology (and later in sociology and beyond) was that the hitherto largely segregated roles of "fieldworker" and "theorist/writer" were unified in the singular figure of the "ethnographer." This bringing together of method and theory is key to our understanding of ethnography. One reason for this is that "ethnography" is not a method narrowly defined; it is not part of the same categorical set as "interview," "survey," and so on. Rather, as its etymology suggests, ethnography is the written product of a palette of methods, but also a methodological approach in which participant observation is a critical element, and in which research is guided by experience unfolding in the field.

Some of Malinowski's ideas have not withstood the test of time, such as his linking of knowledge production to difference, resulting in an "entrenched design of fieldwork as an encounter between ethnographic Self and native Other" (Bunzl 2004:435). One still occasionally encounters this assumption that researchers cannot be objective if they "come from" the culture they study. This assumption persists despite the fact that it had been challenged by the work of anthropologist Franz Boas's students in the early twentieth century (see Hurston 1935), and also by ethnographers working in traditions of regions such as Eastern Europe, where long travel for fieldwork was never the norm (Hofer 1968; for discussions of national traditions in ethnography, see Gerlholm and Hannerz 1982; Restrepo and Escobar 2005).

One key insight that has taken root in ethnographic inquiry has been a distinction between "emic" and "etic" understandings of culture. These

terms, coined by the linguist Kenneth Pike, were popularized in ethnographic research by Clifford Geertz (1983). For ethnographers, the outsider (etic) analyses of researchers are valid and informative—we do not expect that those we study will interpret their own lives exactly as we might in a scholarly context. However, ethnographers take insider (emic) analyses very seriously. We conduct research not just to mine data from informants, but to learn about their theoretical and pragmatic insights. An ethnographic approach thus implies drawing on both etic and emic forms of analysis. Above all, it implies keeping them distinct, for one of the clearest signs of a flawed or incomplete ethnographic study is confusion regarding which claims are the researcher's etic conclusions and which are the emic understandings of the informants themselves (although certainly at times emic and etic may overlap).

Another influential concept introduced to ethnographers by Geertz, derived from the work of philosopher Gilbert Ryle, is "thick description." This term refers to accounts of behavior that provide rich context. The argument is that without contextual embedding, it is not possible to meaningfully interpret what we see. Ryle illustrated this concept by contrasting three boys "rapidly contracting the eyelids of their right eyes"—in one case an "involuntary twitch," in the second a "conspiratorial signal to a friend," and in the third a parody of the first boy's wink (Geertz 1973:6). Ryle noted that a "thin description" of these three actions would term them all contractions of eyelids, but a "thick description" would account for their differing *meanings*. Building on this insight, Geertz noted that "the object of ethnography" is "a stratified hierarchy of meaningful structures in terms of which twitches, winks, fake-winks, parodies, rehearsals of parodies are produced, perceived, and interpreted" (Geertz 1973:7). This statement neatly encapsulates the goal of ethnographic research: an understanding of the cultural contexts in which human action takes place. These contexts exist in both physical and virtual worlds.

What do we call the people we study? In the early days of anthropology, researchers often referred to members of a culture as "natives." Although the term may now have ethnocentric or racist overtones in some contexts, it originally was keyed to cognates such as "nation" and "natal," connoting the integrity, legitimacy, and authenticity of the cultures early researchers encountered. As ethnographers grew increasingly self-conscious with respect to methodological development, they turned to the term "informant," which emphasized the knowledge ethnographers sought about unfamiliar cultures, their desire to be "informed." While the term was later critiqued as implying that culture members were voiceless

without the ethnographer (the native informs, the ethnographer writes; see Clifford 1992), "informant" was the term of choice for an anthropological pantheon including Malinowski, Mead, Bateson, and Benedict, who wrote with humility and respect about the cultures they studied, appreciating their immense complexity and beauty. This respect for those we study and their authority on their own cultures is an enduring posture that virtual world ethnographers would do well to emulate.

Two other terms that are frequently used in contemporary ethnography are "interlocutor" and "study participant" or simply "participant." "Interlocutor" suggests an equality of conversational exchange between ethnographer and culture member. We have chosen not to use it because it is rather uncommon in daily conversation. The term can be seen as implying an overly optimistic equality between ethnographers and those we study. Additionally, it emphasizes speech, while ethnography is as much about doing—participating in everyday activities—as talking. The term "study participant" captures members' dual roles as participants in their own cultures and participants in the researcher's study.

In this handbook we primarily use the terms "informant" and "participant." We think these appropriate for our broad audience, although all of us have used other terms, and we recognize that no term is ever a perfect fit. "Informant" signifies that members of a culture inform ethnographers, sharing understandings about their lives through conversation and participatory activity. "Participants" suggests active sharing of knowledge between members of a culture and ethnographers participating within it. "Collaborator" is a term occasionally used in ethnographic projects with an explicit applied or activist component, to signal a shared set of goals. In certain cases the term can be effective, but in most cases we do not have the same goals as those we study, who also do not have a single unified goal among themselves.

The practices and meanings of ethnography have undergone a significant shift "through a series of transformations whose impetus can be traced to the 1960s" (Bunzl 2005:188), including debates over colonialism and conflict. These debates were accompanied by the increasing presence of women, people of color, non-Westerners, and queer persons as ethnographers. The varied positions of these persons as "native" ethnographers (Haniff 1985; Abu-Lughod 1991), particularly if they studied communities to which they in some sense belonged, troubled the distinction between Self and Other pivotal to classic assumptions about ethnographic research. The relational distance between researcher and subject, the belief in standing somehow neutrally "outside of" one's fieldsite,

became problematized, offering the opportunity to reconsider principles of ethnographic research, including the possibility of "studying up" to explore "those who shape attitudes and actually control institutional structures" in one's own society (Nader 1969:284). From the 1970s through the 1990s, these varied shifts contributed to a rethinking of the practices of writing and representation that are at the core of ethnography as textual product (e.g., Geertz 1983; Clifford and Marcus 1986; Visweswaran 1994; Behar and Gordon 1995). While a detailed discussion of these developments lies beyond the scope of this short history, these interventions, as will be seen throughout this handbook, influenced our own thinking in various ways.

We point briefly to three other schools of thought that have shaped the history of ethnography—structuralism, postcolonialism, and feminism. Structuralism originated from linguistics, particularly in the work of Ferdinand de Saussure (1857–1913) and Roman Jakobson (1896–1982), and focused on the idea that one could study a language not just historically ("diachronically"), but in terms of the grammatical structures that make speech meaningful in a single slice of time ("synchronically"). Claude Lévi-Strauss (1908–2009) pioneered this approach to ethnography, viewing culture as a system of grammatical rules. By the latter half of the twentieth century, "poststructuralist" critiques asked if cultures really worked like languages, noting in particular the inability of a structuralist approach to account for power differentials within a culture, historical change, and phenomena like migration and globalization that made the argument that cultures are discrete entities difficult to sustain. This approach can be useful for researchers of virtual worlds as a way to approach coding, design, and ownership.

"Postcolonialism" refers to analyses by scholars skeptical of the "Orientalist" assumption that world history moves along a single path culminating in the West (Asad 1973; Gupta 1998; Said 1978). Much key scholarship in this field developed in relation to analyses of India and the legacy of British colonialism, but what "postcoloniality" means may differ in other contexts—for instance, Indonesia and the legacy of Dutch colonialism, Mexico and the legacy of Spanish colonialism, or former settler colonies like the United States and Australia that are in a sense postcolonial (Hall 1996). While virtual worlds are not colonies, questions of history, power, and global inequality are important for understanding them, and some scholars of virtual worlds have thus drawn on postcolonial theoretical frameworks. These foundations can be particularly useful when considering the underlying values embedded in the software of

virtual worlds, which influence the cultures that emerge there, as well as unpacking the complex relations between physical and virtual world cultures. For instance, when Celia first introduced members of a collaborative of Canadian First Nations artists to Second Life, they were appalled by the Western capitalist notion of land ownership embedded in the software, and hence the culture.

Feminist ethnography has had a long presence in both anthropology and sociology (Visweswaran 1994; Maynard and Purvis 1994; Skeggs 1995, 1997), dating back to the work of early anthropologists in questioning the universality of gender roles (Mead 1935). In the 1970s a new wave of feminist ethnographic work, exemplified in the contributions to the key volumes *Woman, Culture, and Society* (Rosaldo and Lamphere 1974) and *Toward an Anthropology of Women* (Reiter 1975), explored the apparent universality of women's subordination and the cultural construction of gender itself. Since that time the field of ethnographic work on women, gender, and sexuality has become truly substantial. Feminist ethnography has particular relevance to the study of gaming-oriented virtual worlds because of their pervasive gender imbalance, a topic that both T.L. and Celia have tackled extensively in their work. The underlying gender politics of game design itself can create what T.L. has termed an "impoverished" sense of female embodiment that pervades the design of avatars in many online games (Taylor 2003b). Celia and her colleagues in the women's game collective Ludica have studied issues of instrumentalism, aesthetics, and gendered rhetorics of costuming, typically framed as "gear" in the context of combat-based games (Fron et al. 2007a). Thus feminist perspectives have influenced virtual worlds research by providing conceptual and practical tools not just for interrogating gender, but also for looking at processes of cultural construction and how virtual worlds come into being and change over time.

We often associate ethnography primarily with anthropology, but ethnography has a strong history within sociology as well, which some trace to de Tocqueville's travels in the United States in the 1840s (Gold 1997). While anthropologists spent decades forging theoretical frameworks that narrowed the divide between Self and Other, ethnographers within sociology from the beginning turned attention to contexts in which they were themselves nationally (even personally) located (Whyte 1943; Goffman 1961; Willis 1977; Fine 1993). Qualitative sociologists have thus used ethnography to produce rich accounts of everything from urban communities to medical work to sporting activities. Three powerful threads reappear in sociology's use of ethnography: a fundamental assertion of

the valuable knowledge of participants as meaning-making actors, an attention to grounded (even mundane) practices, and a commitment to understanding the ways larger societal considerations or forms of social order shape everyday lifeworlds.

The realization that participants hold vital knowledge about their social worlds (and broader social processes) can be traced back to early sociological thought, most notably Weber's influential methodological considerations and his formulation of *verstehende sociologie*, which implied that one "could best understand society for what it is—not for what one thinks it might, should, or must be—by studying it from the points of view of its members. In effect, [Weber] required social researchers to become personally and deeply acquainted with their informants' experiences and views" (Gold 1997:389). This orientation provides sociologists a theoretical grounding for ethnographic work. In this view, those in the fieldsite can provide both data and core framings for those data, keeping in check assumptions and biases of the researchers themselves.

This attention to the fieldsite was echoed in some of the most influential early sociological ethnography, most notably the Chicago School associated with Robert E. Park and Ernest W. Burgess. Sociologists of this tradition produced a large corpus of ethnographic work dating back to 1917, perhaps best known from a body of mid-twentieth-century scholarship like *Street Corner Society* (Whyte 1943), *Outsiders* (Becker 1963), and *Asylums* (Goffman 1961). Such scholarship was based on a range of methods (e.g., participant observation, interviews, mapping, diaries) and often also drew on quantitative data like census information. Sociologists explored urban environments, deviance, race, and collective behavior, focusing on the "everyday life, communities, and symbolic interactions characteristic of a specific group" (Deegan 2001:11). Such a focus on the everyday was linked methodologically to "deep immersion." Park, for example, "exhorted students to 'go get the seat of your pants dirty in real research'" (Pollner and Emerson 2001:130). Yet for many researchers it was not simply about understanding experience, but about how structure is produced at the ground level. Paralleling how anthropologists sought to legitimize "native" cultures, Chicago School ethnographers often saw themselves as "giving voice to populations whose perspectives were ignored by institutions shaping their lives" (Katz and Csordas 2003:280).

In contemporary sociology ethnographic methods have remained important for weaving together grounded stories of everyday life with a broader social and often critical analysis. Building on pioneering work such as *The Sociological Imagination* (Mills 1959), this research has moved beyond a focus on urban poverty and "deviance" to explore a wide range of topics. For instance, this scholarship has examined the workplace, situating ethnographic research within a critical conversation about capitalism (Willis 1981; Burawoy et al. 1991). Other work has addressed the lived experience and institutional influences on gender and sexuality (Gamson 1999; Pascoe 2007), health care (Bosk 1979; Charmaz 1991; Timmermans 1999) and even scientific research itself (Latour and Woolgar 1979; Fujimura 1997).

We want to take a moment to place ethnography in the context of the related field of journalism. Ethnography and journalism share striking similarities, sometimes leading to confusion regarding critical differences in these practices. Both journalists and ethnographers travel to where the action is, working in the thick of ongoing human activity. Both rely on interviews, observations, and archival study as key research methods. Both produce written accounts that answer to carefully maintained professional standards of adequacy and truth (unlike novelists, who, while also keen observers of humanity, write with the freedom to fabricate and imagine).

The main differentiators between ethnography and journalism are the broader scholarly frame, the nature of the research activity, and the written product of that activity. As members of intellectual communities, ethnographers produce research that enters a stream of scholarly conversation grounded in an ongoing project of knowledge construction embedded in shared concerns and questions. The development of conceptual and theoretical understandings is central, and ethnographers situate their work within conversations often traversing decades. While good journalists also operate with a historical frame of reference, they are generally not involved in debates central to social scientific knowledge production. Ethnographers write accounts that present findings based on months or years of field research during which they track and record the cultural patterns and everyday lives of informants, including the mundane and routine. Most journalists, by contrast, generate copy on short deadlines and are tasked with producing "stories," usually brief texts that speak to the moment, that attain newsworthiness through political significance, "human interest," or sensation. While some investigative journalism may require months or years of research, it generally aims for a blockbuster result to justify its costs (and because journalists are generally not in the business of reporting the mundane). The demands forced by the written product in each case dictate divergent practices and behaviors, also highlighting the different forms of contribution the two traditions make. In

addition, ethnography and journalism operate on the basis of different ethical considerations and have different legal and institutional requirements to which they must adhere (see chapters 8 and 9).

In providing this short history of ethnographic methods, we do not mean to imply that they are limited to sociology and anthropology, nor that the schools of thought and topics of interest we discuss are in any way comprehensive. Across the humanities and the social sciences the approach has been fruitfully adopted to examine diverse topics. Ethnography has also been widely adopted across technology fields such as human-computer interaction (HCI) and computer-supported collaborative work (CSCW). Within the confines of the handbook genre, our goal has been simply to trace some important themes in the history of ethnographic methods and suggest a few ways they might shape the design and implementation of research projects in virtual worlds. To make these potential linkages clearer, we now turn to an equally brief historical overview of virtual worlds themselves.

2.2 A BRIEF HISTORY OF VIRTUAL WORLDS

Notions of a "virtual" aspect to human existence can be traced back to cave painting, early Greek and Chinese thought, through the development of writing and the printing press, and among Aboriginal cultures throughout the world. In the past several decades such notions have been further shaped by the rise of electronic mass media, as well as work in cybernetics and computing. Science fiction and fantasy literature have played a key role. For instance, early online games and virtual worlds were strongly shaped by *The Hobbit* (Tolkien 1937) and its sequels, including *The Lord of the Rings* (Tolkien 1954), as well as other fantasy literature such as the Conan series (Howard 1932). Also influential was early cyberpunk literature, such as the novella *True Names* (Vinge 1981), which mentioned griefing (antisocial behavior in a virtual world context) and the participation of disabled persons in virtual worlds, as well as the novels *Neuromancer* (Gibson 1984), in which the term "cyberspace" first appeared, and *Snow Crash* (Stephenson 1992), which included an early use of the term "metaverse."

While multiplayer games may seem new, "the advent of single-player genres as the central paradigm for games is an historical aberration of digital technology. . . . Prior to the introduction of the computer as a game-playing platform, the majority of games played by hundreds of cultures for thousands of years, with few exceptions, were multiplayer" (Pearce and Artemesia 2009:9–10). While many of today's video games are single player, historically the earliest electronic games were single-screen multiplayer games, including Tennis for Two (an oscilloscope-based demo created at Brookhaven National Laboratories in 1958), MIT's Spacewar! (1961), the Magnavox Odyssey (the first television-based home video game system, created in 1972), and Pong (1972; see Poole 2000; Herman 2001; Kent 2001). Although single-player games remain popular, the rise of the internet and faster broadband networks have enabled new forms of multiplayer gaming and online interaction, a return to the earlier paradigm of social gaming.

The first rudimentary virtual world in the contemporary sense was probably Videoplace, created in 1970 by Myron Krueger after an initial experiment involving networked collaboration with a colleague that included their virtual hands touching in an early experience of avatar embodiment (Krueger 1983; Popper 1993; Pearce 1997). Beyond early investigations like Videoplace, the first virtual world to possess the characteristics of our core definition was the 1979 MUD, also known as MUD1 (Bartle 2004). Entirely text-based, inspired by the fantasy literature genre, invoking conventions reminiscent of the tabletop role-playing game Dungeons & Dragons (Gygax and Arneson 1974), and enabled by early university networks, MUD1 became something of a cult favorite and spawned an entire genre of text-based worlds, generically dubbed MUDs. MUDs originated many social and technical conventions that persist in online games and virtual worlds, such as statistics-based combat formats that emulate throwing hexagonal dice.

Though text-based worlds continue to be found online, graphical environments have risen in popularity over the years. The first graphical virtual world, Lucasfilm's Habitat, released in 1986, was created for the Quantum Link network, a precursor to America Online. While rendered in two dimensions and with graphics that seem simplistic when compared with many of today's virtual worlds, Habitat was a milestone that introduced a number of important concepts (Morningstar and Farmer 1991). Most important was the notion of an "avatar"—a Sanskrit word meaning "a god's embodiment on Earth." Additionally, while MUD and its antecedents were free, Habitat (which was later developed into WorldsAway) was among the first commercial implementations of virtual worlds and brought the genre to a broader public.

A third historical watershed, LambdaMOO, released in 1990, was a free, text-based virtual world. An experiment in online collaboration, its innovation was that the world was entirely user created. Beginning with

descriptions of the founder's own home, LambdaMOO had a modular architecture that allowed players to add their own rooms and areas to the world, within the limits of allocated storage (Curtis 1992). Aided by the flexibility and creative affordances of text, players built a wide range of environments, including gardens, miniature rooms inside full-sized objects, sky structures, and treehouses. LambdaMOO set many precedents for user-created worlds like Active Worlds and Second Life.

In the early 1990s, on the heels of the World Wide Web, a generation of entrepreneurs embarked on making the "metaverse" envisioned by Neal Stephenson (1993) a reality. This was a period of great innovation and artistry in the development of online games and virtual worlds. Indeed, a handful of worlds created during this period persisted long after their release dates, such as The Palace (a series of graphical chat rooms), Active Worlds (the first contiguous graphical virtual world composed entirely of user-created content), and OnLive/Traveler (the first graphical world to use voice and lip-synching avatars).

More commercially successful were several game-based virtual worlds created in the late 1990s. The first of these, Meridian 59, released in 1996 by 3DO (Schubert 2003), was built on familiar Dungeons & Dragons conventions. Meridian 59 was quickly eclipsed by the similar but much more profitable Ultima Online, published by the game industry giant Electronic Arts (King and Borland 2003). Ultima Online had over 100,000 players at its peak and was justly regarded as a huge success at the time.

Many other fantasy-based online games have appeared since Ultima Online, including EverQuest (released in 1998) and World of Warcraft (released in 2004). Other themes for online games—including science fiction, space exploration, and superheroes—have also been successful, for instance, Anarchy Online (2001); EVE Online (2003), and City of Heroes (2004). Despite the differing themes, these online games largely preserve a basic format of advancing a character through skill levels via activities like team-based combat, exploring, crafting, and commerce. Many of the largest virtual worlds are oriented toward children and teenagers. Examples include Whyville (1999), Yohoho! Puzzle Pirates (released in 2003), and Club Penguin (released in 2005). Open-ended virtual worlds became more common by the early 2000s, with the release of virtual worlds like The Sims Online (2002), There.com (2003), and Second Life (2003). The number and range of open-ended virtual worlds continue to grow, but for the most part they are smaller than online games. Like many online games, some open-ended virtual worlds have shut down. For example, The Sims Online closed in 2008 and There.com closed in 2010, reopening again in 2012. Bridging both genres, so-called sandbox online games have built-in affordances for creativity. One influential example of these has been the independently produced Minecraft (2009), in which players build the world to their liking by removing and placing cubes within a three-dimensional grid.

While online games and virtual worlds draw participants internationally, many early commercial products were developed in the United States and presumed skills in English. Since the late 1990s, however, development and ownership of virtual worlds has globalized to a significant degree. For instance, Lineage, an online game developed in Korea, was released in 1998, the same year as EverQuest, but peaked at five million compared to EverQuest's roughly half a million players. Other examples of successful Korean-developed online games include Ragnarök Online, Guild Wars, Aion, and Maple Story; these and other games developed outside the United States (like the Finnish-based virtual world Habbo) have attracted tens of millions of players.

Despite the fact that the designers of many online games and virtual worlds have worked to include rich three-dimensional imagery, many of the most popular worlds have used simpler graphics, making them less taxing on computers and internet connections. This reflects a more complex story of engagement in these worlds, one often contrary to early notions of virtual reality driven by a technological fantasy of realism and total sensory immersion. While many early developers of virtual reality focused on individual hardware (for instance, head-mounted displays and data gloves), innovative virtual world builders were noticing the deeply compelling aspect of playing alongside other people. Morningstar and Farmer, the developers of Habitat, observed that a virtual world "is defined more by the interactions among the actors within it than by the technology with which it is implemented" (1991:274). Social interaction plays a powerful role for many (though not all) participants in virtual worlds, and so long as social interaction is robust, simpler renderings of the world are often sufficient.

2.3 A BRIEF HISTORY OF RESEARCH ON VIRTUAL WORLD CULTURES

As noted earlier, in the history of physical world ethnography some of the earliest and most influential accounts were produced by "gentleman scholars"—travelers, missionaries, and colonial officials without academic training—whose insights informed later academic research. The

history of virtual world ethnography follows a similar pattern. From the beginning, designers and managers have offered significant insights regarding social aspects of virtual worlds, for example, Curtis (1992) on LambdaMOO, Damer (1998) and Book (2006) on many early graphical worlds, Appelcline (2009) on the text-based MUDs of his company Skotos, Bartle (2004) on MUD1, DiPaola and Collins (2003) on OnLive!, Koster (2004) on Ultima Online, Star Wars Galaxies, and Metaplace, Morningstar and Farmer (1991) on Habitat, Ondrejka (2004) on Second Life, and Ventrella (2011) on the design of There.com's avatars. Some of this work pioneered key insights about virtual world cultures, from Curtis's explorations of emergent social norms (like pretending to be "away from keyboard" when a sensitive issue was being discussed) and DiPaola's observations in regard to avatar embodiment (for instance, the discovery that players would sometimes back up when other avatars moved too close to them), to Ondrejka's insights regarding participant-generated content and Morningstar and Farmer's reflections on the emergent nature of culture even within designed systems.

While virtual worlds and online games are still surprisingly poorly understood and poorly represented in mainstream media, for decades non-academic writers have provided critical insights. In some cases these writers have been professional journalists, though many have published more informally (particularly since the rise of blogs). Julian Dibbell's "cyberspace memoir" *My Tiny Life: Crime and Passion in a Virtual World* (1998), based on his earlier *Village Voice* article (1993), chronicled his year as an embedded journalist in LambdaMOO. (Other examples of journalistic accounts and memoirs of virtual worlds include Dibbell 2006, Guest 2007, Ludlow and Wallace 2007, Meadows 2008, and Au 2008). These astute accounts have coexisted synergistically with ethnographic research.

A range of early research on computer-mediated communication also produced important insights. Starting in the 1990s, scholars (often graduate students) began to turn their attention to virtual worlds. Located in diverse disciplinary environments, early examples of such work include Rosenberg's ethnography of WolfMOO (1992) and Masterson's ethnography of Ancient Anguish (1994). A number of themes emerged in this early work that continue to resonate today, such as identity construction (Bruckman 1992; Turkle 1995; Suler 1996), gender (McRae 1997; Kendall 2002; Schaap 2002), ethnicity and race (McDonough 1999; Nakamura 2002), embodiment (Stone 1991; Taylor 1999; Kolko, Nakamura, and Rodman 2000; Taylor 2002; Sundén 2003), and the forging

of community through narrative, speech, and social action (Kolko 1995; Markham 1998; Cherny 1999). Interestingly, some folklorists also developed an interest in these emerging cultures, such as Bruce Mason, one of the first people to use the term "virtual ethnography" in a published paper (1996), used by others and later adopted by Hine (2000). Another area of early and continuing research interest has been how the design and governance of virtual worlds inform the socialities within them (Mnookin 1996; O'Rourke 1998; Pargman 2000; Kendall 2002; Lastowka and Hunter 2004; Grimmelmann 2006; Balkin and Noveck 2006; Taylor 2006b; Duranske 2008; Burk 2010; Lastowka 2010). This theme has included organizational ethnographies of the companies that create virtual worlds (Malaby 2009).

As online virtual worlds grew in popularity and mainstream access, they prompted a second wave of ethnographic research, one inflected via considerations of these worlds as specifically spaces of play. Many earlier virtual world questions around identity (for instance, regarding role-play) and social interaction were taken up by game-world researchers (Jakobsson and Taylor 2003; Mortensen 2003; Copier 2005). Additional topics, including governance and intellectual property (Humphreys 2004; Taylor 2006a, 2006b; Kow and Nardi 2010), learning and mentorship (Kafai 1995; Squire 2005; Steinkuehler and Duncan 2008; Chen 2009), and relationships (Chee and Smith 2005; Carter 2005; Guimarães 2005; Bardzell and Bardzell 2007) were addressed as well.

2.4 THE USES OF HISTORY

All three of the brief histories we have recounted here—of ethnography, of virtual worlds, and of ethnographic research in virtual worlds—are intentionally truncated and provisional. This is a handbook of method, not a historical treatise. While we have included as many citations as possible given space limits, we make no claim to being comprehensive. If you are inspired to learn more about the history of ethnography (Stocking 1987) or the history of technology (Standage 2007), or to follow the breadcrumbs we have left to others' work, then these discussions have been successful. Their purpose has been to situate the historical contexts that shape both ethnographic methods and virtual worlds.

Our practice of ethnography in virtual worlds is informed by the twin trajectories of the development of methodological frameworks and ongoing technological change. With its development as a tool for the study of both local and distant cultures, its attention to everyday practice and

meanings, and its conceptual disruption of Self and Other, ethnography represents a particularly powerful method through which to study virtual worlds.

Changes in technology have also opened up the field in interesting ways. New modalities, new actors (social and technical), and new configurations have emerged. Aside from some notable exceptions, in their formative period virtual worlds were primarily designed and used by white men located in universities and research labs. As network infrastructures shifted (including higher in-home bandwidth, affordable personal computers with improved graphics capabilities, and the advent of gaming cybercafés around the world), those involved in the design and use of these spaces have grown into a broader demographic. This expansion of design, ownership, and participation has stimulated a parallel growth of virtual world ethnography. Alongside the millions of people inhabiting virtual worlds, a new wave of researchers has arisen. From the earliest worlds that allowed us to begin co-inhabiting virtual spaces to our contemporary moment in which the notion of having an avatar is fairly mundane, as virtual world ethnographers we are interwoven with technology: knowing its history (including previous research) is crucial to understanding its present.

One final note about the making of history: as virtual world ethnographers we do not stand outside these trajectories of ethnography and technology—we inhabit and co-construct them. In the same way that ethnography has been nudged and tweaked by researchers who pushed it into new territory or challenged core conceptual frames, through our work (in a domain unfamiliar to many traditional researchers) we participate in an ongoing conversation about what ethnography is, and what it can be, as a method. And while we should always remain aware of the ways we and our field are continually shaped in relation to technology, this need not be a deterministic story. Technologies can be made and remade, and our work chronicles the lived experiences that involve these artifacts. In this regard, our ethnographies contribute to important debates that expose and frame critical cultural issues about technology and society.

CHAPTER THREE

TEN MYTHS ABOUT ETHNOGRAPHY

We hope that our discussion of the history, practice, and promise of ethnographic methods in the previous two chapters has inspired a sense of excitement about the power, even the beauty, of this approach. In this chapter we build on that sense of promise by examining common myths about ethnography that we have encountered in classroom discussions, public forums, written texts, and informal conversations, and while reviewing paper submissions and developing interdisciplinary research proposals.

Specifically, we now tackle ten myths that, in our experience, have led to misunderstandings about the role and value of ethnographic methods. If you worry that there might be something flawed about the whole idea of ethnography, this chapter is for you. For those of you already working with ethnography, this chapter may provide some ways to help clarify and frame the methodology when explaining it to others. The myths speak to confusions about ethnographic research stemming from its status as a primarily qualitative, field-based science, an approach that does not follow the standard hypothesis-driven model of science many of us were first taught in school. The myths reflect understandable confusions about an unfamiliar approach to research, and our goal here is to eliminate those confusions to the greatest degree possible. We want to dispel these myths, and in doing so clarify the valuable contributions that ethnographic research has made and continues to make to the scientific study of culture and society.

The ten myths we examine are:

1. Ethnography is unscientific.
2. Ethnography is less valid than quantitative research.
3. Ethnography is simply anecdotal.
4. Ethnography is undermined by subjectivity.
5. Ethnography is merely intuitive.
6. Ethnography is writing about your personal experience.
7. Ethnographers contaminate fieldsites by their very presence.

8. Ethnography is the same as grounded theory.
9. Ethnography is the same as ethnomethodology.
10. Ethnography will become obsolete.

Let's look at each myth in turn.

3.1 ETHNOGRAPHY IS UNSCIENTIFIC

The most fundamental myth about ethnography is that it is unscientific. Elementary and secondary school science education typically emphasizes laboratory-based experiments (often whole classrooms are themselves labs). As a result, "science" comes to be conflated with lab-based physical sciences, to the exclusion of observational field-based sciences. From early encounters, a notion of science emerges based on two inferences: that the hypothesis-driven model is central to scientific knowledge production, and that scientific knowledge should be expressed numerically.

We see the impact of these restrictively conceived characteristics of science everywhere, from the popular media to the academy. Informally many people bifurcate sciences into "hard sciences" (for instance, physics and biology) and "soft sciences" (including anthropology and sociology) and imply—or even state outright—that soft sciences are not rigorous. In academia this debate is reflected in the contrasting epistemologies of positivism and interpretivism. The former is the view that knowledge should ideally be expressed in terms of generalizable laws, irrespective of cultural context. However, all scientific knowledge is provisional (sometimes referred to via Clifford's notion of "partial truths"; 1986). Yet "interpretive" does not mean a lack of robustness. A notion of interpretivism reflects the immense complexity of what we study, and that our scientific success is partial because we cannot fully grasp the enormity of culture. This stance is an impetus to continually improve methods and theories; it is not a retreat to satisfaction with "second best" accounts.

Interpretivism, originally introduced in the social sciences (e.g., Boas 1887; Geertz 1973; Denzin 2003), is the view that people studying another culture have a situated understanding shaped by their own cultural beliefs. This view can also be found among scholars of scientific practice, who have long argued that social, cultural, and political contexts shape all scientific inquiry (Kuhn 1962; Berger and Luckmann 1966; Latour and Woolgar 1979; Haraway 1988).

Those who construe a search for generalizable laws as the only scientific approach generally advocate that scientific inquiry must reflect some or all of the following criteria:

- Science must test hypotheses.
- Science must be based on experiments.
- Science must be predictive.
- Science must be quantitative.

These four criteria for science contribute to the view that ethnographic research is unscientific. Ethnographic investigation is a flexible practice, but its practitioners strongly trend away from structuring their work around these four criteria. In other words, ethnographers generally focus on complex processes of culture that resist treatment as testable hypotheses; we rely on field observation, not experimentation; we develop explanations rather than prediction; and we use qualitative methods (though not exclusively). But these moves do not mean that ethnography is not empirical or rigorous. To better understand the myth that ethnography is unscientific, it will help to discuss the four criteria in more detail.

Science must test hypotheses

A hypothesis is a testable statement regarding the outcome of a particular research protocol. The hypothesis-driven model of science includes the assumption that scientists have an idea about the outcome of their research before they begin. However, while all scientific methods involve research questions, these questions do not necessarily take the form of hypotheses. Ethnography centers on discovery and interpretation. Its questions are formulated to address broad problems of social and cultural life. How are identity and community constituted in virtual worlds? Do people behave differently online? If so, why? Social process and culture involve symbols, narratives, language, chronicles, conversations, scripts, dramas, rituals, rumors, visions, ideologies, practices, inventions, imaginations, motivations, historical events, and countless other cultural elements. Research questions about these elements generally do not lend themselves to expression in testable hypotheses. Cultural elements, as a rule, do not yield congenial terms for hypothetical statements because such elements do not primarily concern *outcomes*. Cultural elements shape and underpin the meanings that form our conscious and unconscious lives. They emerge in relational ways as we act. They are often habitual, routine, mundane, and repeated, scaffolding the structures of

everyday living. To pull these elements out as "effects" "caused" by "variables" is to kill their essence as flexible resources for living. As ethnographers we can discover and interpret cultural elements, but we lose the possibility of understanding their form and function if we insist that they submit to the Procrustean bed of testable hypotheses.

Because hypotheses are generally written with specificity and precision for statistical treatment, they may lead us to see only what we are looking for. Such a narrowing of the field of vision is antithetical to the spirit of open discovery fundamental to ethnography. Ethnographers, like historians, must be vulnerable to what is actually happening on the ground. Ethnographers arrive at their objects of study aware that they do not yet know what they do not know. Research questions can shift in light of new data. Social scientists have long noted that the potential for emergent research questions makes field-based methods more scientific, not less, because the research is directed toward understanding the fieldsite in its historical and geographic specificity.

As ethnographers, we frame our research as a mode of discovery, drawing questions from the fieldsite itself. A limitation of the hypothesis-testing paradigm is that it must work within the horizon of the known. If one has not yet conducted ethnographic research in virtual worlds and does not yet know of the existence of "alts," "lag," or "mods," it will be impossible to design a research framework examining them. As practitioners of a field-based paradigm, we must be open to what is happening in the flow of everyday life and craft research questions through our engagement with those lifeworlds. Like astronomers encountering new galaxies or zoologists studying the habits of whales, ethnographers conduct field-based research to study phenomena as they occur in context.

Science must be based on experiments

A good many sciences, including astronomy, biology, epidemiology, oceanography, geography, hydrology, botany, geology, climate science, primatology, and zoology, are often field based. As a practice that does not rely on experimentation, ethnography is thus part of a larger constellation of methodologies that advance science by studying phenomena in their natural environments—be they plants in a desert, birds in a forest, stars in the sky, or persons in a society.

If we conflate "science" with "experiments," we distort the scientific record and oversimplify scientific practice (Latour and Woolgar 1979; Hacking 1982; Knorr-Cetina 1999). Indeed, the most fundamental

discovery of biological science arose from Darwin's careful observations of passerine birds in the Galápagos Islands. Reliance on field study is not a lack to be remedied: it is the strength of the field-based sciences that they encounter phenomena at scale, in their natural complexity as they occur in real contexts. It is difficult to imagine Darwin's paradigm-shifting insights issuing from controlled experiments.

While many phenomena are amenable to experimentation, best investigated in carefully controlled trials, culture is not such a phenomenon. We have noted that cultural elements do not easily translate to statements of hypothetical outcomes. In addition, controlled experiments cannot capture the scale, complexity, flexibility, and dynamism of culture. We cannot meaningfully "pin down" the vastness of culture such that it can be parsed into separable variables controlled in experimental tests. As a peculiar and powerful adaptation to the problems of living and survival, culture has evolved as the most responsive, contingent, reflexive, and generative phenomenon that scientists have attempted to study. Our methods must be accountable to these properties of culture.

Even when it is ethically and practically possible to conduct controlled experiments by placing people in different cultures or social settings, the level of complexity and indeterminacy in human culture nullifies any illusion of control one might entertain (LeCompte and Schensul 1999). As one of us has noted, "the construal of persons as bacteria in a petri dish or atoms in a supercollider masks how . . . culture is not simply the aggregate of individual personalities and dispositions that . . . 'bang together' and can be understood through 'direct observation'" (Boellstorff 2009a:6). Humans exist not as separable atomic units, but as inseparable elements of a cultural matrix.

To take Bonnie's research as an illustrative example, World of Warcraft might seem a petri dish of sorts; it is a virtual world available in nine languages, popular in dozens of national cultures. But to understand player experience it is necessary to take into account *where* it is played (internet cafés, dormitories, homes, Starbucks), *who* plays it (young people in China but a more mixed demographic in North America, for example), and *why* it is played (a variety of reasons). The human actor playing an online multiplayer game is not cut off from the influences of the space in which the game is played, or his or her experience of other games, or life interests and situation (Taylor 2008). While it is possible to conduct experiments in which people are paid or otherwise induced to participate as subjects in virtual worlds, experimental situations cannot reproduce normal experience—that which occurs when people follow their own inclinations and interests as

they engage in authentic activities, sustained by their life experiences and personalities. Human activity flows and circulates in multiple locales, constantly inventing and reinventing itself. Many online multiplayer games, for example, are notable for the imaginative game-related activities that take place outside the game, such as modding and theorycrafting, and the production of machinima (Lowood 2008). These activities, which arose through interaction with the game and are derived from but not determined or predicted by it, occur on player-generated blogs, forums, websites, wikis, and download sites; they are part of the game but not contained within the bounds of the software platform (Taylor 2006a; Nardi 2010).

Science must be predictive

A third consideration is that science must be predictive. If we drop a rock today versus a hundred years into the future, the law of gravity predicts that, all other factors being equal, the rock will take the same amount of time to hit the ground. However, as ethnographers, our objects of study are not so simple. As anthropologist Gregory Bateson is purported to have remarked, "There are the hard sciences and then there are the difficult sciences." The powerful predictions that have made the hard sciences successful are not so easy for the difficult sciences. The materials ethnographers examine—human beings and their cultures—are highly provisional, variable, and mutable. Human life is subject to the instabilities of historical change. The nature of culture is to be agile and creative in meeting change; thus we have two orders of change to predict, each mutually dependent on the other. Anthropologist Franz Boas used the example of "the physicist" and "the historian" to illustrate a related point:

> The physicist compares a series of similar facts, from which he isolates the general phenomenon which is common to all of them. Henceforth the single facts become less important to him, as he lays stress on the general law alone. On the other hand, the facts are the object which is of importance and interest to the historian . . . [for such a researcher, the] mere existence [of a phenomenon] entitles it to a full share of our attention; and the knowledge of its existence and evolution in space and time fully satisfies the student, without regard to the laws which it corroborates or which may be deduced from it. (1940 [1887]:641–42).

In the 1970s scholars like Clifford Geertz worked to clarify this distinction by noting that "one cannot write a 'General Theory of Cultural Interpretation.' Or, rather, one can, but there appears to be little profit in

it, because the essential task of theory building [in ethnographic research] is . . . not to generalize across cases but to generalize within them" (1973:5). However, while this notion that ethnographic research is "not an experimental science in search of law but an interpretive one in search of meaning" (Geertz 1973:5) is hardly new, the conflation of "science" with "sciences that seek prediction" continues to shape the myth that ethnographic research is unscientific. If this conflation is not addressed, ethnographic research will be misunderstood because its objects of study evade the regularities of, say, the law of gravity. People and culture are emergently, dynamically constituted, constantly shifting, alternately undergoing periods of destabilization and stabilization.

Scientific research must be quantitative

A fourth way in which science can be defined too narrowly is in terms of quantification. Scholars and practitioners trained in a range of disciplines, from experimental psychology and economics to engineering and computer science, are deeply wedded to quantitative methods, and good results have been produced using those methods. Quantification can be a powerful and effective approach depending on the research question. But to study something scientifically does not always mean representing that thing numerically. A range of scientific practices, including but not limited to ethnographic research, collect and represent data in a qualitative fashion. In addition to anthropology and sociology, which concern themselves with constructs such as beliefs and rituals, certain branches of psychology use qualitative methods to study phenomena like dreams, feelings, and identities. Political scientists use qualitative methods to study political events, ideologies, and historical trajectories, which cannot always be understood via quantitative methods alone.

Furthermore, it is important to understand that qualitative and quantitative analysis alike share the common base of human language. Although in practice we speak of qualitative and quantitative approaches, we should not separate them too dogmatically. Numbers are inescapably *about something*, and that something is necessarily expressed in language. Gottlob Frege, the German mathematician and logician, noted that all acts of quantification rest on a qualitative foundation: "The content of a statement of number is an assertion about a concept" (1959:59). But equally, every act of qualitative analysis refers to quantities. When we say "members of Culture A believe Z," we have made a quantitative determination regarding the membership of Culture A, even if indirectly.

3.2 ETHNOGRAPHY IS LESS VALID THAN QUANTITATIVE RESEARCH

At conferences and workshops, ethnographers sometimes find their work classified as "statistically insignificant" or "inconclusive," with years of rigorous investigation disregarded in comparison with short-term, sometimes superficial forms of quantitative analysis. These dismissals rest on the underlying assumption that findings based on numerical data are more valid than other forms of knowledge creation. For instance, when working on mixed-methods projects, we may find our work framed as "illustrating" a quantitative finding, even if it is central to the finding itself. One of us discovered a finding through participant observation that was later rediscovered by our collaborators through quantitative means; the initial finding was discounted and ignored, even though it had predated the quantitative validation of the same finding by several months.

The unique opportunities in virtual worlds to collect and "mine" vast amounts of quantitative data with relative ease sharpen the debate. We have some concerns about claims made for these methods, and their putative superiority to ethnographic and other qualitative methods (see boyd and Crawford 2012). Data mining is the extraction of patterns from digital data with the use of automated techniques such as clustering, neural networks, regression analysis, and special-purpose algorithms. Automated techniques search for patterns across data categories. For example, Ahmad et al.'s (2009) study of gold farmers, based on back-end anonymized data from EverQuest II archived by the parent company, Sony, examined the following data: experience logs, transaction logs, character attributes, demographic attributes, and canceled accounts. In less directed searching, data mining analyses may count keywords in texts and attempt to relate high-frequency terms to one another.

Data mining is often viewed as a uniquely comprehensive methodology, with sources such as logs, automated activity records, and repositories framed as "complete," "objective," "comprehensive," a "God's eye view" of an entire virtual world. Digital data seem not only complete but highly reliable; they are collected with machines. These sources appear to herald a new era of social scientific investigation. As one enthusiastic data miner said during a conference presentation one of us attended, "It's all there!"

But is it all there? Because of the vast amount of data, studies based on data mining often draw results from a relatively small slice of data, such

as a month's worth of server information (e.g., Ahmad et al. 2009:342). When compared with long-term ethnographic fieldwork, a sample gathered over a single month seems meager. Was that particular month unusual? How does it reflect changes in activity over a longer time frame? Are there seasonal patterns or release dates to consider? One can imagine a similar "slice" being taken from an ethnography missing, for instance, the entire planting or harvesting season of an agrarian culture, or the intensity and excitement of a major game software expansion.

As easy as mined data are to capture, they may be onerous to parse and analyze. Such analysis may require elaborate and expensive software and possibly a supercomputer to process. Yet even with appropriate hardware and software, it is deeply problematic to suggest that such data convey objective mathematical truths that do not rely, to a significant extent, on human interpretation. Celia recalled a mixed-methods project in which an automated analysis of chatlogs from a virtual world identified the word "bunnies" as thematically significant, leading the quantitative researcher to wonder at this odd fixation on rabbits. Without contextual understandings afforded by direct engagement with a culture, there would be no way for her collaborator to have known that "bunnies" did not refer to rabbits but was a reference to "bunny slippers," a type of shoe that increased jump height.

Even purely quantitative studies require human intervention and interpretation; for instance, Ahmad et al.'s study deployed a manual analysis by game masters derived from their practice-based understandings of patterns of gold farming. With this emic interpretation, and the quantitative results, the findings of the study were still not entirely conclusive (2009:345). This leads us to ask, why is a month of quantitative data gathered by individuals who have not conducted systematic observation of the virtual world participants they are studying, augmented with subjective interpretation by the administrators of that world, somehow more accurate and valid than months or years of in-depth observation and participation in the field, engaging with participants over time, from a variety of viewpoints and perspectives?

This myth that ethnography is less valid than quantitative research is, of course, shaped by beliefs about validity itself. Validity denotes the extent to which a scientific explanation corresponds to the actual world. In the 1970s Ulric Neisser issued a sharply worded critique of the scientific validity of experiments. His provocative commentary, while directed at fellow psychologists, also articulated long-standing disquiet among ethnographers and others about the validity of data obtained from

experiments: "The subject is isolated, cut off from ordinary environmental support, able to do nothing but initiate and terminate trials that run their magical course whatever he may do. . . . Experimental arrangements that eliminate the continuities of the ordinary environment may provide insights into certain processing mechanisms, but the relevance of these insights to normal . . . activity is far from clear" (1976:36). Neisser's problematic was termed "ecological validity." While ethnographers did not name the problem, ethnography came into being precisely to create a research paradigm in which human beings could be studied with no fear of compromising ecological validity. Ethnographic practice is, in essence, the opposite of psychological experimentation. Ethnographers observe people in interaction with other humans and their social and physical contexts, which together compose the "environmental supports" of which Neisser spoke. As people, we arrange our lives and societies such that the environment presents a constant, flexible repertoire of resources. Ethnographers address systems of support anchored in culture. We organize ethnographic investigation so that we can access the complex arrangements by which people solve problems and make meanings. Our work has a high degree of validity because we directly observe and interact with what we want to know; we do not wrench phenomena out of their contexts, thereby rendering them uninterpretable.

Ethnographers have been devoted to avoiding the problem of separating the human from his or her context. The ethnographic approach of landing smack in the middle of an ongoing culture or activity in order to study it means that we must rely on qualitative methods of observation and conversation to absorb and analyze what is taking place around us. The very immediacy of the experience of life, its patterns and rhythms, its artifacts and practices, is not easily expressed in numbers. An ethnographer thrust into a culture is invariably awed and humbled by its vitality and charisma; we express our understandings and insights in nuanced reports and narratives that attempt to recover as much as possible of the animation and interest stimulated by culture as an object of inquiry.

Validity is essential to science's most fundamental purpose—to faithfully represent the world. We are not arguing that human life defies quantitative study or experimental methods. Such a proposition is clearly untrue. We are arguing that qualitative research can yield profound insights that elude quantification. Arguments that presuppose that only quantitative data are the stuff of science lack cognizance of the complex material and immaterial elements that constitute human life, which is best understood through both qualitative and quantitative approaches.

Ethnography is a flexible methodology, and ethnographers devise and use whatever tools are needed for the job. Although ethnographers emphasize qualitative methods, we may use quantitative approaches as well. Indeed, a cliché of anthropology is an ethnographer beginning his research in a remote village by conducting a census. Malinowski recorded that when he reached the Trobriand Islands, "I took a village census, wrote down genealogies, drew up plans, and collected the terms of kinship" (Malinowski 1922:4). As a contemporary example of the use of quantitative methods, Bonnie had long noticed that World of Warcraft players often played with family and friends. To determine more precisely the extent of such practices, she analyzed survey data from North America, Europe, Hong Kong, and Taiwan in which about 75 percent of players stated that they played with at least one person they knew (Schiano et al. 2011). This finding contributed to the ongoing body of qualitative research dispelling notions of gamers as loners and social misfits (Taylor 2006a; Pearce and Artemesia 2009). The quantitative finding is a crisp number, easy to communicate to others, and a reasonably precise measure of the extent to which players play with those they already know in the physical world.

Qualitative and quantitative data can productively interact. In Celia's survey of Baby Boomer gamers, the majority of respondents considered PCs their primary gaming systems, even though many had consoles at home. Subsequent group and individual interviews revealed that consoles were viewed as being "for the kids," while adults in the household typically played on PCs. So while survey respondents might answer that they had a console in the home, it did not mean they played it, a detail pieced together with the use of qualitative methods (Pearce 2008a).

The use of quantitative methods in ethnography need not involve elaborate, advanced statistical treatments. A fundamental type of statistical data analysis is nominal classification, which can enhance understanding. For example, when Bonnie became interested in World of Warcraft players with disabilities, she and a coauthor conducted an online survey to discover which disabilities were present in the player population (Lim and Nardi 2011). Data about types of disabilities were classified into nominal categories (sight; nerve/limb; hearing), which provided an organizing scheme for documenting the range of disabilities players could have and still play World of Warcraft. The survey was constructed according to the authors' extensive prior experience with World of Warcraft; questions were worded to be meaningful to the player population. Clearly the notion that ethnography must be purely qualitative misrepresents the

range of methods and techniques ethnographers can draw on in their research projects.

At the same time, it is crucial to remember that a given ethnography (or indeed any qualitative project) is not less valid, scientifically significant, or complete by not drawing in any quantitative material. Ethnography excels at rigorously capturing data in situ, and analysis is driven by a deep understanding of the object or culture under study, culminating in comprehensive and rich accounts that stand on their own.

3.3 ETHNOGRAPHY IS SIMPLY ANECDOTAL

The conflation of science with quantification regularly leads to the suggestion that qualitative results produced by ethnographers are nothing more than "anecdotes." In the context of findings expressed in other sciences as formulas, equations, statistics, graphs, charts, and tables, qualitative data can appear unconvincing and merely literary. Qualitative data are sometimes seen as issuing from the limited, biased observations of a researcher working without the power of numbers. Ethnographic data may appear, in fact, to be just a series of stories or a collection of anecdotes or impressions.

While part of this misunderstanding derives from the narrow formulation of science we discussed earlier, another rests with an incomplete view of the work of ethnographic texts. When crafting a book, article, or research report, ethnographers formulate holistic analyses from their data that explore beliefs and practices within and between cultures, linking together materials from a large corpus. The data are typically collected in the field over a prolonged period. They represent not isolated incidents but multiple instances and manifestations of phenomena involving many different individuals, observed in context. Ethnographic analysis involves a rigorous appraisal of a massive amount of data spanning participant observation, interviews, artifact collection, historical research, and content analysis.

Part of the challenge in ethnographic research is analyzing and translating rich qualitative data to the reader. In our written work we often present key critical cases, incidents, stories, or events to illustrate patterns we have observed. These draw attention to cultural practices, offering the reader concrete examples of issues under discussion. To misconstrue these moments, and such analyses, as "simply anecdotal" is to fragment them, taking a specific recounted incident or example in isolation, as if it speaks only to the single place and time the data were gathered. Yet

ethnographic critical cases, incidents, stories, and events are always situated within the larger, more holistic context of cultural patterns.

It is notable that quantitative researchers sometimes use anecdotes to start a discussion or make a point. In such cases the anecdote serves an illustrative purpose, setting the stage for a quantitative analysis. The problem arises when such researchers assume that ethnographers create similar anecdotes and nothing more, rendering the depth of the work invisible. Ethnographers' scrupulous attention to nuance and detail, the consistency and validity derived from months of immersive data collection, and the rigorous contextual, historical embedding of the analysis situate our work well beyond the anecdotal.

3.4 ETHNOGRAPHY IS UNDERMINED BY SUBJECTIVITY

Another myth regarding ethnographic research is that it is compromised by the subjective viewpoint of the researcher. Ethnography is predicated on the idea that ethnographers produce work of high validity from situated engagement in the field. Such engagement is not subjective in the sense of being the opinion of one person and nothing more. Ethnography may appear merely subjective because the materials it seeks to understand do not yield to the prediction and control possible when objects of study exhibit little self-invention, are far less dynamic, or are amenable to experimental manipulation. Ethnographers are, in essence, tracking a moving target, one capable of continual acts of self-determination and creativity.

All science contains strong elements of subjectivity in the sense that science results from the work of *subjects*, that is, scientists. Subjectivity is an inescapable condition of science; no pure realm of objectivity exists in which the interests, biases, predilections, concerns, attitudes, dispositions, conceits, judgments, axioms, and presuppositions of investigators are absent and without impact. We always begin from somewhere. Rather than pretend a "God's eye view" of the world is possible, it is more scientific to realize that science generates situated knowledge (Kuhn 1962; Berger and Luckmann 1966; Haraway 1988; Latour 1993; Denzin 2001) that is a complex product of what is already known (whether what is known is accepted or challenged) and the contemporary worldview shaping interests and attitudes.

Subjectivity is actually a vital part of ethnographic rigor, not only for how it offers us a position from which to engage and interpret, but because it forms the backbone of intersubjective understanding. Intersubjectivity,

the dynamic flow of communication and engagement between people, is one of the foundations of the ethnographic encounter. Through this grounded position and interactions with those in the field, we construct, as sociologist C. Wright Mills put it, "the capacity to shift from one perspective to another, and in the process to build up an adequate view of a total society and of its components" (1959:221).

It is useful to remember that even the hard sciences begin from somewhere, and that while their objects of study are steadier and more predictable, theories and scientific truths change over time as scientists' dispositions, assumptions, and so on, are more informed, developing through historical processes of discovery and reformulation (Kuhn 1962). What appears at one moment to be unproblematically "objective" is often seen later, as science shifts forward, as a subjective and situated outcome of a particular place and time. Now-refuted "scientific" approaches such as eugenics and phrenology (which used quantitative means of measuring the skull to determine mental function) seemed perfectly objective at the time they were in fashion.

3.5 ETHNOGRAPHY IS MERELY INTUITIVE

While it is true that intuition is a vital part of ethnographic research, the presumption that intuition is *all* that is required is both erroneous and dangerous: "Rather than devising research protocols that will purify the data in advance of analysis, the anthropologist embarks on a participatory exercise which yields materials for which analytical protocols are often devised after the fact" (Strathern 2004:5–6). This procedure, central to ethnographic practice, does sound like the dictionary definition of intuitive: knowlege "that consists in immediate apprehension, without the intervention of any reasoning process" (OED 2011). Dispensing with methods to structure data in advance, engaging in participation without fixing the kinds of protocols we may use, can seem an abandonment of the order and precision that characterize materials generated through hypothesis-based sciences. But to discover what is happening in the field—what people actually do as they live their lives, unmindful of the analyst's protocols—it is necessary to participate in the activities of a culture. It is out of such participatory exercises that we devise analytical protocols. The rigor that science cultivates is embodied in this approach—it is just that it arrives "after the fact."

The idea that ethnography is just intuition reflects a failure to acknowledge that intuition in *any* discipline is learned over time through

experience. Ethnographic research is intuitive in the same way that flying an airplane or doing brain surgery is intuitive—once we know how to do them. Olympic divers execute complex maneuvers without thinking of every move in the moment: they have developed through practice an intuition no amateur can duplicate on a diving board. A concert pianist develops an intuition for when to crescendo to a forte without thinking of every finger's move, while an amateur picks out each note with difficulty. Similarly, ethnographers develop a set of embodied intuitions for participant observation that far exceed those of everyday interaction.

All science relies powerfully on forms of intuition. As Kuhn (1962) showed long ago in his discussion of paradigm shifts in science, scientific progress depends on the intuitive transcending of existing conceptual frameworks. Even Albert Einstein remarked that "knowledge is limited, whereas imagination embraces the entire world, stimulating progress. . . . It is, strictly speaking, a real factor in scientific research" (2009:97).

3.6 ETHNOGRAPHY IS WRITING ABOUT YOUR PERSONAL EXPERIENCE

Ethnography is an immersive, naturalistic methodology, but not all personal experience constitutes ethnography. We have occasionally heard persons say they conducted an ethnography because they advanced a character in a game or spent two weeks hanging out in Second Life. These statements equate ethnography with simple experience rather than understanding it as a systematic method.

Personal experience is part of ethnographic research. However, the converse is not true: ethnographic research is not just personal experience. Nor is it simply the recording of firsthand experience. Thus it is a myth that writing about your own experiences is the same thing as ethnography. This reduces ethnographic research to an exercise in data collection, to the consternation of many ethnographers. Anthropologist Diana Forsythe recounted:

> I remember my own chagrin shortly after joining a medical informatics project at hearing the senior physician characterize my role in observing hospital work rounds as being "a walking tape recorder." As it happened, I had tried carrying a tape recorder for several days for this project and had taped the work rounds. The resultant audio tapes contained an indecipherable babble. . . . In contrast, on the basis

> of my written fieldnotes, I consistently produced readable transcripts with additional analytical comments . . . [but the physicians] did not perceive the creativity of the work I was doing. (1999:140)

Forsythe emphasizes her analytical expertise in understanding the data, not just recording it; expertise that was invisible to other professionals in her research setting.

A small genre of ethnography involves accounts in which the ethnographer is a member of the community or a participant in an activity. The written product from such research can legitimately be termed an "autoethnography" (Reed-Danahay 1997). Like ethnographies more generally, however, autoethnographies are based on careful research design, intensive data collection, and extended data analysis. Autoethnography is not the same thing as autobiography, nor would an autoethnography be constituted by brief forays into a virtual world, or examination of related materials such as pictures of avatars. All too often the term "autoethnography" is used to mask a lack of method (or even justify deception), rather than to pursue a legitimate course of study that, when carried out with rigor, can yield new insights and discoveries.

3.7 ETHNOGRAPHERS CONTAMINATE FIELDSITES BY THEIR VERY PRESENCE

An ethnographer's arrival in the field may stir interest, attention, even excitement or trepidation. However, in maintaining a lengthy presence in the fieldsite, we normalize our presence by being on the scene, observing and participating in everyday activities. Malinowski noted: "As the natives saw me constantly every day, they ceased to be interested or alarmed, or made self-conscious by my presence, and I ceased to be a disturbing element in the tribal life which I was to study" (1944:6). In making this statement Malinowski was not so naïve as to think that the members of this community on an island in the Pacific stopped noticing the presence of a Polish-British anthropologist. What he meant was that the presence of such a person was no longer that of an "outsider" in a simple sense: the outsider had become familiar and was no longer a "disturbing element."

This does not mean that ethnographers become invisible to those they study. No culture is completely isolated; all cultural groups have a history of taking in various forms of outsiders such that their members come to take these persons for granted in the flow of life. Furthermore, it is

often through interactions with outsiders that the most fruitful insights can be gleaned: what insiders think newcomers should know about their culture tells us a great deal about what is important to them. After initial interactions, study participants adjust over time once they become more comfortable with, and used to, the researcher.

Thus it is important not to overemphasize the impact of ethnographers on the cultures we study. Though we may affect a community (particularly in the case of more activist and policy-focused work), for the most part ethnographers are simply one of a multitude of actors within the space of a culture. Cultures exist in history; they are always changing. The presence of an ethnographer is rarely the driver of such change: "Every group is a collection of personalities and styles. As a consequence, the presence of an observer should not be too worrisome, as long as the impact is not excessively directive or substantive" (Fine 1993:283). Additionally, cultures always contain multiple points of view; the ethnographer can add new perspectives but does not shatter a fragile unity. Were cultures so vulnerable to change, they would not persist over time or in the face of disagreement, debate, external influence, and displacement.

3.8 ETHNOGRAPHY IS THE SAME AS GROUNDED THEORY

Perhaps because of their shared close attention to data and overlapping techniques (such as interviews or participant observation), ethnography and grounded theory are at times seen as the same thing. But this conflates a specific *analytic* technique and goal (grounded theory) with a *methodological* approach (ethnography). While grounded theory generally rests on qualitative data and methods, it is quite specifically focused on the inductive development of theory from data (Glaser and Strauss 1967). The investigator collects data and, through its coding and analysis, pulls out elements and relations to form a theory. Grounded theory contrasts, for example, with "grand theory," in which an existing comprehensive theory such as Marxism or structuralism frames and informs data analysis. Researchers using grounded theory eschew the use of working with existing theories in favor of letting new theory emerge directly from the data. Breaking data down into small analytical units in order to identify comparative or generalizable patterns becomes key: "by making frequent comparisons across the data, the researcher can develop, modify and extend theoretical propositions so they fit the data. At the actual working level, the researcher begins by coding data in close,

systematic ways so that he can generate analytic categories" (Emerson, Fretz, and Shaw 1995:143). While grounded theory has branched into several different schools of thought and diversified from its early positivist roots (Clarke 2005), analysis within it centers on the systematic development of a coding scheme. This approach, in which codes are sometimes applied to data very early and then iteratively adjusted over the course of the project for the purposes of generating theory, forms its backbone.

Ethnographers can deploy a range of approaches to coding, from quite open to linguistically precise. The data being coded can also be generated in a somewhat different manner. Some grounded theory practitioners slice up their field in specific ways, where "'sampling' is driven not necessarily (or not only) by attempts to be 'representative' of some social body or population or its heterogeneities but especially and explicitly by *theoretical* concerns that have emerged in the provisional analysis to date" (Clarke 2005:xxxi, emphasis in original). Theoretical sampling is central to some grounded theory approaches, whereas ethnography allows for flexible and diverse approaches in handling the issue of representation, sampling, and data collection. Finally, ethnographic research does not demand a particular stance toward theory. Ethnographers may employ grand theories such as actor-network theory, or "mid-range" theories targeted at explaining just a specific slice of things, such as those associated with studies of computer-mediated communication (Nardi 2005), or they may provide accounts that are primarily descriptive, with minimal theorizing. Ultimately, grounded theory can be used as an analytic approach in conjunction with ethnographic methods, but it is not in and of itself ethnography.

3.9 ETHNOGRAPHY IS THE SAME AS ETHNOMETHODOLOGY

Though anthropologists and sociologists attend to the creation and maintenance of social life, researchers drawing on the framework of ethnomethodology emphasize the micropractices or "methods" that people perform to enact orderly social life. Reacting to what they viewed as an overly formal, sterile sociology in which theories had little correspondence to everyday human social activity, ethnomethodologists called for studying the "commonsense knowledge of everyday activities" of members of some natural language group (Garfinkel and Sacks 1970:341). The ethnomethodological approach is distinctively anti-theory; it "refuses the call to engage in theory building," seeking instead to "recover" practical activity "in its endless detail" (Suchman 2000:17).

Ethnomethodological accounts may recover minute details of small events, such as a phone conversation or a brief episode at a workplace, to describe the wealth of commonsense knowledge necessary for even the most apparently mundane activities. The attention to social order is understood as deeply residing in embodied actors and their interactions. As such, ethnomethodology poses powerful provocations for those researching virtual worlds. For instance, it calls us to remember not only the open or "free play" aspects of these worlds, but the role of social order. It also helps researchers explore how that order is rooted in participants' actions, not simply in computational systems.

In some fields, such as human-computer interaction, the "pairing of ethnographic fieldwork and ethnomethdological analysis has often been a source of confusion . . . sometimes [leading] people to believe that they are the same thing, or that one necessarily implies the other" (Dourish 2001:76). While some of the techniques used by researchers employing this approach are shared with ethnographic practice (see Pollner and Emerson 2001 for an extended discussion), some ethnomethodologists also use other methods that would be considered anathema to core principles of ethnography. These include experimental interventions in the social order designed to expose various aspects of commonsense practice, such as the intentional breaching of social norms, for instance standing in line at a grocery store and trying to pay more for an item than its listed price, entering an elevator and facing the rear of it instead of the door, or behaving like a lodger to your family in your own home. Interviews within this tradition may also introduce deceptive materials and scenarios (Garfinkel 1991). Such methods are not ethnographic and raise ethical issues since they often involve forms of deception that are at odds with the values of ethnographic research (we discuss deception at length in chapter 8).

Ethnomethodological approaches have also been critiqued for inattention to larger-scale power dynamics not reducible to individual action (see Schegloff 1997; Wetherell 1998). Ethnographers regularly situate their studies of specific communities in broader social, cultural, and historic patterns. In this regard ethnographers move beyond the microfocus of most ethnomethodological work.

While researchers employing both ethnomethodology and ethnographic methods share an interest in the everyday life of participants,

including the mundane details of those lives, they can differ in their orientation to theory, their willingness to experimentally intervene, the level of "distance" they may assume in relation to the field, and the broader construction of a treatment that moves beyond microanalysis.

3.10 ETHNOGRAPHY WILL BECOME OBSOLETE

In discussing the nine myths above, we emphasized common and understandable misconceptions regarding ethnographic methods. Many factors shape the persistence of these myths. As noted earlier, ethnography is not a topic most people learn about in high school or even college. While ethnographers are often eloquent spokespersons for their approach and work in a range of interdisciplinary environments, we do not always succeed in conveying the value of our work to nonspecialists. However, in turning to our final myth, that ethnography will become obsolete, we address the politics of knowledge production.

In recent years there has been a trend in some schools of thought to dismiss ethnographic research as ineffective, exacerbated by a methodological partisanship asserting that only experimental or quantitative methods are valid (see Boellstorff 2009b). In this regard we have encountered scholars of virtual worlds claiming not that approaches other than ethnography are valid (a claim with which we wholeheartedly agree), but that ethnographic methods are by definition unscientific. Some have even sounded a "death knell" for ethnographic methods in virtual worlds (Bloomfield 2009) or suggested "a major realignment of social science research methods" that would involve eliminating research supposedly "based on the researcher's impression after having spent 12 months living with a small subset of one of the populations" (Castronova 2006:184). Such mischaracterizations entail a vision where only laboratory and experimental methods remain.

Some researchers subscribing to this view see virtual worlds as a dream come true, potential "laboratories" to test hypotheses about human nature (Castronova 2006). For those who consider ethnography beset by imprecision and subjectivity, the allure of laboratories holds the promise of a leap forward in social science that would render ethnographic methods irrelevant. But as we have sought to show throughout this chapter, understanding human culture is a complex endeavor. It may be tempting to temporarily create a controlled virtual world for the purposes of research, as some economists and other social scientists have done. However, we cannot overemphasize the fact that to create a virtual

world in this manner is not simply a laboratory experiment. It is potentially creating a lifeworld, a place of social interaction where unexpected and emergent meanings can take form, from new friendships to works of art and social movements. The rationale of such experiments seems to be that researchers can observe as an unobtrusive "fly on the wall," collecting information in the form of pure, unbiased data. However, no virtual world is a Petri dish hermetically sealed off from outside influences. Even as virtual worlds have certain boundaries in the sense that one logs into them and leaves them, they take in and transform ideas and practices from other virtual worlds and internet social contexts, as well as physical world cultures.

For other researchers, doubts about the future of ethnographic methods originate not in the temptations of laboratory-like experimentation, but in the possibilities for using the massive body of raw data automatically gathered by virtual world software. It can seem as if such "big data" methods, deploying terabytes of data to carry out calculations, could provide a comprehensive picture of human action in virtual worlds, replete with testability and generalizablity.

Many who pursue this line of reasoning assert that one of the core foundations, and challenges, of quantitative methods—the sample—will fall away. It is as if the numbers capture everything, comprising an entire population and not just a sampled segment, and thus have the power to speak for themselves. The truth will emerge unproblematically. In our view this confidence in the sheer mass of numbers often sidelines more important considerations regarding research design, data handling (for example, during the "clean-up" process), whether the findings have anything interesting to say, and if in fact the big numbers are truly complete.

All research results, including quantitative results, require *interpretation*. Indeed some who work with these types of data concede that they are not comprehensible on their own (Williams 2010). Frege (1959) shows us that numbers rest on a qualitative foundation of language. boyd and Crawford (2012) point out that numbers alone have no philosophical basis; what Berry (2011:11, cited in boyd and Crawford 2012) calls the "regulating force of philosophy" is essential to thought. Any turn to quantitative datasets therefore "reframes key questions about the constitution of knowledge, the processes of research, how we should engage with information, and the nature and the categorization of reality" (boyd and Crawford 2012:4). Howison, Crowston, and Wiggins offer strong cautions. They examined a big data methodology used in social network analysis in which "digital traces," for example, transactions

or conversations in a social network, constituted the data. The authors argued that while such methodologies can be productive, they should not be used uncritically as they often are. The authors noted that "a set of pernicious validity concerns" afflicts much current big data research (2012:52).

As increasing scholarly and corporate funding and attention turn to data-mining projects, or to designing small virtual worlds to carry out laboratory-like experiments, the value of ethnographic research has come into question. The danger is when ethnographic work is rejected outright or seen as limited to providing context or helping with illustrative stories, its ability to generate valid social scientific data is elided. The result is a privileging of quantitative and physical science approaches to knowledge production. This privileging often takes the form of inequitable access to funding, as noted, for example, in the U.S. National Science Foundation report on qualitative research (Ragin, Nagel, and White 2004). When misconceptions about the supposed limits of ethnography take hold, institutional and systemic problems arise, such as more funding opportunities for quantitative research, the emphasis of grant criteria better suited to quantitative research, and the populating of review panels primarily with quantitative experts (ibid.). As we have hoped to show throughout this chapter (and this book), the value of ethnographic techniques for understanding human culture cannot be overstated; such policy decisions have deleterious scientific consequences.

Historically, false alarms regarding the obsolescence of qualitative methods have been sounded before. We can trace a bias toward quantitative methods to Cold War funding priorities, the growth of big science, and the totalizing ideology that all phenomena can be represented through numerical models (Edwards 1997). And yet ethnography has survived. It is resilient because ethnographers offer compelling tools for understanding human action and society. Indeed, many quantitative researchers cite and collaborate productively with ethnographers, acknowledging the "peril of large datasets" and noting that on their own they are frequently opaque (Williams 2010). These scholars appreciate that ethnographic research can capture a culture in a specific time period, charting the dynamics of history in the making. Ethnographers' focus on meaning making allows them not only to describe social action but to provide interpretations that utilize both etic and emic perspectives. Huge volumes of data may be compelling at first glance, but without an interpretive structure they are meaningless, and it is in this regard that ethnographic approaches excel.

Thus in the face of this myth of obsolescence we would argue that, on the contrary, ethnographic research is a vibrant paradigm with a bright future. Ethnography has been widely and enthusiastically embraced by a range of scholars interested in online sociality because of ethnography's particular value in an age of networked cultures. In our view, a far greater concern than ethnography becoming obsolete is that it will become so broadly defined as to lose all meaning. We have reviewed papers or heard talks in which researchers claimed to have "done ethnography," "ethnographically inspired" research, or even "ethnography lite," when in reality they merely conducted interviews or made brief visits to a fieldsite, never participating in everyday life and becoming known to those they studied. Such work may be fruitful and valuable, but it is not ethnographic research. If, for instance, someone conducts a project involving interviews and a literature review, this would best be termed "qualitative research," not ethnography. Our challenge lies in making sure we continue to develop and use a sophisticated methodology in the best ways possible, upholding standards of integrity and rigor. It is for these reasons that careful research design, the topic to which we now turn, is so important.

CHAPTER FOUR

RESEARCH DESIGN AND PREPARATION

4.1 RESEARCH QUESTIONS: EMERGENCE, RELEVANCE, AND PERSONAL INTEREST

The most fundamental, consequential, and personal step in designing an ethnographic project is choosing the question we seek to answer. It is the decision from which all other choices and challenges follow, including that of selecting informants and fieldsites. Any ethnographer of virtual worlds must "ensure that that his or her research questions are both coherently addressed and adapted to the cultural landscape that emerges" (Hine 2009:2). We discuss three principal concerns regarding formulating a research question: emergence, relevance, and personal interest.

An obvious yet profound insight of ethnographic research is that in the end, everything is connected to everything else. It is the researcher's task to derive from this blooming, buzzing confusion a research question that will guide data collection, determine which literatures are most relevant, and shape the writing of the ethnography. We are in a historical moment in which the body of published research employing ethnographic methods for the study of virtual worlds is relatively small. At the same time, the number of potential research questions increases at a dizzying pace as new virtual worlds come into being and change, and as we learn more about them and appreciate their complexities.

From this abundance, the ethnographer must identify a workable line of inquiry for research. As LeCompte and Schensul note, "All good ethnographers try to create an overall design in which anticipated details and activities are spelled out as far as current information permits" (1999:98). This line of inquiry, however, can be broad and emergent—shaped by curiosity and "aha!" moments as much as a preset agenda. We can start with very little as long as we are pointed in a general direction. Bonnie began her ethnographic research in World of Warcraft armed only with an interest in how people socialize in online multiplayer games. Tom began his ethnography in Second Life with the general question, "How does 'culture' work in virtual worlds?" Celia's research on the Uru diaspora began with the question, "What is the relationship between the

software affordances of virtual worlds and the emergent behavior that takes place within them?" T.L. began her work on text-based worlds with the question, "How does embodiment work in virtual environments?" We can have a broad research question at the outset of ethnographic study, but that question must be clearly articulated and carefully linked to the methodological design of the research itself.

Often the research question emerges from observations gathered during informal visits to a fieldsite, before we have even begun to think of it formally in terms of research. We may prefer to conduct research in a particular virtual world and seek a research question appropriate to study in that context. Perhaps we have ventured into an online environment as a distraction from our work in another, only to find resonant research themes there. The research question might also arise out of an observation in a given context that leads to a new area of inquiry. Ethnographers often revisit the same site with a new set of questions.

In our own ethnographic projects, we can attest to many cases in which key research questions emerged only once participant observation research was well under way. For instance, while T.L. originally entered into her EverQuest work thinking about avatars and embodiment, over time her focus shifted as she saw the formation of social life there and the often complex relationship between the emergent culture of players and the role of corporate owners. Tom found that the seemingly incidental phenomenon known as "lag" fundamentally altered his core research question regarding how human culture takes form in virtual worlds. Exploring practices around lag allowed him to address key specificities of everyday experience in Second Life and also allowed him to link his Second Life ethnography to issues of temporality that are of broad interest in studies of computer-mediated communication and beyond. Bonnie developed an interest in governance in online worlds once she discovered the existence of modding communities and their relationship to Blizzard. Before she entered World of Warcraft she had no idea that players created mods. Governance is a facet of sociality and was thus within her original purview of interest, but the topic developed into a set of specific investigations. Celia's discovery that former Uru players self-identified as "Uru refugees" led her to questions about the role of community in the construction of individual identity.

Crafting a research question is thus often linked to exploration. As Hine observed, "ethnography is thought of as one of the most open of research approaches, which adapts itself to the social situations it finds. This does not mean, however, that ethnographers just wander around

aimlessly: Ethnography may be adapted, but it is still purposive" (Hine 2009:6). Ethnographers must be prepared to modify questions based on what they encounter in the field. Malinowski noted the need to both center on a question and open oneself to what he called "the pressure of evidence" as ethnographic research proceeds. In *Argonauts of the Western Pacific*, he emphasized that while "foreshadowed problems are the main endowment of a scientific thinker," it is also true that "If a [researcher] sets out on an expedition, determined to prove certain hypotheses, if he is incapable of changing his views constantly and casting them off ungrudgingly under the pressure of evidence, needless to say his work will be worthless" (1922:9).

The core method of participant observation allows the investigator to alter ethnographic research midstream in a manner difficult with many methodologies, including survey and experimental approaches. The adaptability of the method is one reason fieldwork requires a significant time investment. We might be interested in a practice such as role-playing; we may do preliminary visits to several communities and find one that approaches the practice in a particularly interesting manner. Other possibilities are that we already have strong contacts in a community or find one community receptive to our research. The research question may thus be formulated iteratively, in dialogue with the quest for an appropriate fieldsite. There is nothing remiss in such bootstrapping approaches to research design; indeed it is the most common approach employed by physical world ethnographers as well. Ethnography is an emergent process of discovery; participant observation is intended to stimulate and scaffold open discovery as much as possible.

Despite this flexibility in relation to emergent research questions, a second issue is that a good research question must, ultimately, center around issues relevant to wider research communities. Ideally ethnographers research narrowly and think broadly, in the sense that they link a delimited and thus doable research question to larger debates. These debates can be specific to the field of virtual worlds research, but they may also connect to other disciplinary and interdisciplinary discourses. Such connections are important because virtual worlds represent a new domain of study whose relevance may not be recognized in certain scholarly communities. For instance, it may not be apparent to everyone that virtual worlds can teach us valuable things about selfhood, embodiment, governance, globalization, learning, and many other topics relevant even to those without much interest in online technologies. It is easy for us

to become absorbed in our own personal and sometimes obscure fascinations. Pushing ourselves to answer larger questions like "what is at stake?" and "why does this matter?" is a way of helping link a study with larger literatures, frameworks, and sets of concerns.

To arrive at a relevant research question, it is essential to read and think deeply about prior work. The broadness of the centering question may sometimes seem daunting with respect to locating suitable literatures. It is usually best to think of some general topic areas relevant to your project and then just plunge in and start reading. Part of the productive work of doing a literature review is it allows you to begin to see the contours of the research domain you are interested in, mapping what has already been said about the subject and, as a result, helping you sharpen your own interests, sense of what issues are most important, and potential research design.

This process is easier for more experienced scholars, but social networking as well as online and library searches go a long way for everyone. A good starting point is to use the online resources of a library; most university libraries provide databases of books and journal articles (such as JSTOR) that can be searched by publication, keyword, or author; much virtual world research is currently available in electronic form and, increasingly, under open-access agreements. If unsure of how to conduct a robust review of the literature, one can usually also take advantage of consulting with a reference librarian, on whose expertise we can draw in navigating and searching databases. We attend carefully to the bibliographies of interesting work we read; these often act as pointers to other relevant research. We can find authors we like and visit their websites to discover new materials and even write to them, as not all websites are updated frequently. We can talk to people with shared interests. The essence of ethnography lies in talking to people and following emergent trails; it is useful and productive to apply the technique to searching for relevant readings, much like a detective might go about solving a mystery.

It is critical that we think historically. Even in a field of study as young as virtual worlds research, we often see publications that have neglected early studies such as the extensive investigations of MUDs. If our list of references does not include anything published before 2000, we should try again! Early work on virtual worlds goes back to the 1980s, but we should not stop there when looking for theoretical and conceptual footholds. It is also useful to go beyond the research literature on virtual worlds in building generalizations. By connecting to scholarly work in

other domains we can bolster our claims, helping broaden the conversations in which we are engaged.

As ethnographers refine their research topics, new literatures become relevant. Celia found particular relevance in Paul Willis's (1978) research on the customization practices of British motorcycle gang members, which related to both productive play and identity construction. She also found Erving Goffman's classic theory of frame analysis to be applicable to play, a point that Goffman himself observed in its formulation (1974). T.L. found herself engaging with the work of legal scholars and cultural critics (Coombe 1998; Lessig 1999) as she sought to understand the pivotal relationship between intellectual property and emergent player practices. The issues we engage with in virtual worlds often have important links to larger cultural conversations, and incorporating literature that goes beyond the digital can be a way of formulating stronger and more interesting arguments.

While relevance is important to arriving at a research question, we cannot overemphasize that all good science flows from a scientist's passion to learn something he or she is deeply curious about. Thus a third consideration for finding a research question is that, although it is important for the work to be broadly relevant, the question should be personally interesting and exciting to us. It is vital to underscore this point because we are best served by honoring our own passions and intellectual journey when deciding on a research question. Any ethnographic research project requires a lengthy period of engagement. The work is based on participant observation, which entails significant commitments of time, emotion, and energy. Because the socializing, interactive self is the foundation of ethnographic research, the more engaged we are in conducting research, the more patient, gregarious, and involved we will be, and the better the data will be as a result. Ethnographic work requires not just a clear head but fire in the belly—an enthusiasm for the research that can sustain us through the frustrations, wrong turns, dead ends, and conundrums that accompany long-term fieldwork.

Overall, arriving at a research question is the foundation of successful ethnographic research. It is for this reason that we speak of a research question in the singular. Of course, all research investigates multiple topics and each question has multiple facets, but simply pluralizing "question" into "questions" obscures how all successful ethnographic research begins from the conceptual work of specifying a focused objective. Crafting this intellectual point of departure can involve painful choices. Difficult decisions involve which questions to set aside because of lack of time and resources. The richness of what we will encounter during fieldwork will present new temptations for opening new avenues of exploration, risking the clarity and focus essential to a good investigation. A grounding research question, once established, asserts and protects precision and focus.

4.2 SELECTING A GROUP OR ACTIVITY TO STUDY

Historically, ethnographic studies have concerned specific people and the cultures they construct and inhabit; this is no different in virtual world ethnographic research. One of the challenges all ethnographers face is determining what constitutes the core unit of study. For example, Bonnie chose to study collaborative guild-based activity in World of Warcraft in contrast to, for example, solo questers or those who game the "Auction House" to make thousands of game gold. Celia had to constrain her study of Uru refugees to two subgroups in order to obtain meaningful data. In comparison to his Indonesia research, in which he focused on gay communities, Tom decided to explore Second Life culture in an overall sense for his book-length study; this meant, however, that he was unable to discuss issues like sexuality in an extensive manner. T.L. focused primarily on one particular world, Dreamscape, within a broader platform in her exploration of embodiment and graphical avatars. As with all decisions regarding the group to study, something was gained and something lost in this decision.

While ethnographers often say they study "communities," it bears noting that there is no agreed upon definition for "community" in the social science literature. As far back as 1955, sociologist George Hillery found nearly 100 definitions (Hillery 1955), and the situation has not improved; if anything, notions of "virtual communities" (Rheingold 2000) and "imagined communities" (Anderson 1983) continue to expand the conceptual space. If we denote our unit of study as a community, it is imperative to explain what we mean.

We do not always find precisely bounded geographies or communities in virtual worlds. Within online multiplayer games, for example, there are typically numerous servers, each of which replicates the basic game software. Within each server are various types of social groups and activities that may be configured in different ways depending on how their members define them and how the virtual world software shapes participation. Virtual world communities and activities are diverse and heterogeneous. Example group types include guilds, communities of practice (such as modders), and members of offline groups such as a professional

organization, family, or workgroup that enters a virtual world together, as well as diasporic game communities who choose to play together.

Ethnographers may also choose to investigate an activity rather than a particular group. In many game worlds, a study of pick-up groups or player versus player (PvP) battlegrounds would typically involve research on a series of temporary teams (which may play together for only a few minutes) rather than following a stable group such as a guild. The study of activities such as theorycrafting, in which players analyze game mechanics through mathematical, statistical, and logical means, may focus on the analytics of statistical treatments, computation, representation, and writing (Choontanom and Nardi 2012). Similarly, activities like modding could be important. Looking in detail at the sociotechnical components of these small bits of software as they were used within the game for creating and maintaining collective action became a part of the analysis and story (see also Taylor 2006b).

Once a group or activity has been chosen, how many people should be studied? Most research communities will be skeptical of very small sample sizes in any published work. Through lengthy fieldwork we encounter numerous people in a range of social contexts. Over time and with experience, we begin to get a feel for an adequate group size, which will arise from the themes and the community or activity we wish to study. Ultimately there is no hard-and-fast answer. It is important to note that in ethnographic work we study through a variety of modalities so there is no single measure; we will have a collection of interviews, fieldnotes documenting hours and hours of participant observation, even perhaps catalogs of objects and artifacts (including virtual ones) for analysis. Different projects will have different thresholds depending on the overall size of the field, the scope of the project and its research questions, and, ultimately, its claims. Bonnie generally aims to have at least twenty participants in her studies, although she has published papers with fewer, and she interviewed hundreds of people for the World of Warcraft research. T.L. tends to let this issue be led by the natural configuration of the field, with some fieldsites lending themselves to larger numbers of participants. Celia has studied groups of as many as three hundred people.

As ethnographers we often do not know in advance what the right number will be (in terms of either interviews or hours logged in the field). The answer is often emergent: "Ethnographers begin research with a set of questions, revise them throughout the course of inquiry, and in the end emerge with different questions than they started with. One's surprise at the answer to a question, in other words, requires one to revise the question until lessening surprises or diminishing returns indicate a stopping point" (Rosaldo 1993:7). One guiding principle to help us determine when data collection is complete is that of saturation. When we start hearing the same reflections repeated in interviews, when we are no longer seeing new things or getting new insight while undertaking participant observation, when we have reached a point where we can anticipate answers, practices, and the general everyday unfolding of the field, we have likely reached the point of diminishing returns in our data collection and can consider that phase complete. It indicates that reliable patterns have been established and we have begun to grasp the culture. Once we feel we have enough data to say something interesting and meaningful, that the sample is large enough to provide a cohesive foundation for our arguments and is up to academic standards, then enough work has been accomplished to turn our attention to writing up our findings. The arrival at this point is contingent on the foundation of a strong central research question from which other questions, and cohesive findings, can emerge.

4.3 SCOPE OF THE FIELDSITE

How we conceptualize the scope of our fieldsite will shape the way we formulate our research questions. The traditional fieldsite of anthropology in the early twentieth century was often construed as geographically discrete. Typically the site was a "village"—a recognizable place with a name and clearly delineated boundaries. In the past few decades, however, ethnographers have developed techniques for "multi-sited ethnography" predicated on "multiple sites of observation and participation that cross-cut dichotomies such as the 'local' and the 'global,' the 'lifeworld' and the 'system'" (Marcus 1995:95). "Modes of construction" for engaging in such ethnographic work suggested by Marcus include "follow the people," "follow the metaphor," and "follow the artifact." In other words, sites of investigation are in dynamic dialogue as we trace linkages between them, attempting to establish and explain critical interrelations. These issues are not just present but magnified with regard to virtual worlds, where "tracing the boundaries of the chosen social groups remains a challenge for the ethnographer interested in the local cultures in cyberspace" (Guimarães 2005:148).

Selecting which virtual world or worlds to study requires critical consideration with respect to the range of options and the research question being addressed. Virtual worlds may encompass millions of people, although the way virtual world populations are counted can sometimes

be misleading. For instance, Linden Lab, the company that owns Second Life, counts the Second Life population in three ways: the total number of accounts, the number of participants who logged in during the past sixty days, and the number online at any one point (concurrent users). However, since many people with Second Life accounts seldom use them, and some residents have multiple accounts, the first metric is not accurate and the company eventually began emphasizing the latter two metrics. In online games that allow multiple avatars attached to a single subscription, an individual player may have multiple characters, or multiple players may share a single account. Popular perceptions of virtual world size may be less a product of actual numbers than the result of press coverage—be that the positive coverage emanating from the public relations departments of the companies that own them, or the negative coverage of journalists seeking sensational stories of addiction, sex, and crime. For instance, based on her calculations (including verifying numbers with the developers), Celia concluded that it was likely that There.com had a larger population of regular users than Second Life during the time of her fieldwork, though it was less well-known. A large virtual world population is not a precondition for research relevance; ethnographers have produced important findings from studying communities with only a few thousand or even less than a hundred members. On the other hand, some virtual worlds with relatively large populations (for instance, Habbo and Maple Story) have been understudied.

A fieldsite may be understood as an assemblage of actors, places, practices, and artifacts that can be physical, virtual, or a combination of both (Taylor 2009). Multi-sited ethnography may thus be useful for capturing a holistic picture of the life of a community or activity, and the scope of the fieldsite may itself be emergent. Through participant observation, Celia discovered a constellation of activities when investigating how players of the game Uru: Ages Beyond Myst migrated to a different game, There.com, when Uru closed. She learned that an online forum was their primary form of communication, defining the group as transcending any one of the virtual worlds the diasporic community inhabited. As players moved around and virtual worlds came and went, the forum's "world agnostic" status became increasingly important. Although she had initially set the goal of maintaining exclusively online interactions with participants, when key group members collectively decided to attend the Real Life Gathering hosted by There.com's creators, she literally and figuratively followed her informants into the physical world. Later, in her study of the University of There, Celia

decided to visit participants in their homes to see how play contexts influenced their inworld activities.

To "follow the artifact," Bonnie "followed" World of Warcraft to China to investigate play activity there. She was interested in the extent to which the software artifact itself shaped player experience. She visited internet cafés, dorms, and homes where people played World of Warcraft. During her stay, issues of censorship and national governance of video games arose, and she took advantage of being on the scene to study matters responsive to "empirical changes in the world and therefore to transformed locations [in the world system]" (Marcus 1995:97). Bonnie also followed the artifact of software mods, studying modding in China and North America (Kow and Nardi 2011), an exploration guided not by a notion of community but by the existence of a particular software artifact and its related practices.

The need to account for one's fieldsite in terms of research design pertains regardless of whether one frames the research as single-sited or multi-sited. It is often forgotten that in his influential article on multi-sited ethnography, Marcus emphasized the importance of what he termed "the strategically situated (single-site) ethnography" (1995:110). His example of such work was Paul Willis's *Learning to Labor* (1977), a "now classic study of English working-class boys at school," in which "the particular kind of interest that [Willis] develops in the boys at school, *on which he focuses solely*, is guided by his knowledge of what happens to them on the factory floor" (Marcus 1995:110; emphasis added). In other words, Willis considered how factory labor affected working-class boys, though he did no ethnographic work in the factories himself. This notion of the strategically situated single-site ethnography describes Tom's research in Second Life. Tom did all his data collection online and did not conduct participant observation or interviews in the physical world. However, he constantly considered how physical world cultures affected the virtual world culture he was exploring, from notions of visual landscape derived from nineteenth-century European painting to assumptions about creating virtual world content shaped by religion.

4.4 ATTENDING TO OFFLINE CONTEXTS

In some cases our research leads opportunistically toward offline contexts; at other times we design explicit attention to offline concerns from the outset. We may, for example, want to attend to specific infrastructure issues, or to political conditions relevant to our informants. Bringing in the offline may occur simply through the process of following the field

where it leads, for example, by attending a fan convention or frequenting an internet café where our participants play. Depending on the research and its questions, we may find ourselves weaving together online and offline contexts and components in the fieldwork.

The relationships between physical world concerns and the virtual worlds we study may vary between worlds, as well as within the cultures within the worlds in question. Some of these relationships may be embedded within the software configuration itself. While some game servers segregate players by region, others operate with a more global structure, allowing everyone onto the same server. We should be aware of how this basic organizational mechanism shapes the field. In the case of Second Life and There.com, Tom and Celia could study participants from across the globe given the ways their respective virtual worlds were structured. In some cases virtual world participants do not know the physical world location of other participants. In other cases it might be common for geographical location to be divulged as part of the "getting to know you" process within a culture, or it might come up within normal conversation, such as discussions of the weather or current events.

Physical world considerations such as time zones, national identity, and language may come into play. For instance, the Uru community met regularly on their self-run servers at noon Pacific standard time to accommodate both U.S. and European members. If Celia wanted to interview someone in a different time zone, special arrangements were sometimes necessary. The significance of offline locality may, depending on the research interest, become an important analytic component of the project. Although T.L. did not encounter formal regional segregation in her EQ research, in both her and Bonnie's work in World of Warcraft they had to account for this division of the playerbase. While North Americans could, conceivably, order a copy of World of Warcraft from abroad, normally they would be confined to playing on North American servers. T.L. has written about the ways national identity is often complexly negotiated within European servers (Taylor 2006b). Issues of regionality and access highlight not only the ways we should be reflective about the scope of our field, but also the ways virtual world communities at times must negotiate their own internal regional diversity.

Infrastructural issues, such as quality of bandwidth (and resulting "ping times" and lag) can also form an important part of how a virtual world's culture is shaped. Studies of the differing physical world socialities linked to some virtual worlds can also reveal important differences, as when Bonnie found a propensity of players in China to play World of Warcraft

in internet cafés in comparison to players located in the United States, as well as a comparatively smaller number of female players in China. Chinese players were also not afforded the same direct communication lines with Blizzard developers (through official forums) as North American and European players (Kow and Nardi 2009). In cases like these, we do not assume that the virtual world culture in question extends seamlessly from a design experience originating in relatively distinct locales (say, Southern California, where Blizzard Entertainment produces World of Warcraft). Important disjunctures may occur as technology traverses new geographies. While we do not want to make a reductionist move in the opposite direction and assume that World of Warcraft in China and World of Warcraft in the United States are utterly separate, our research question may concern how players in differing physical world regions engage with a virtual world. For some projects, highlighting the complex negotiation between local cultures and global software products (the virtual world) may become an important point of exploration.

We would finally note the ways physical world social relationships may also be critical. All of us have encountered physical world friends, couples, and families who play together online, including those who, like Bonnie's Chinese World of Warcraft players, play online while physically co-located, or the family members T.L. spoke with who played EverQuest together. Virtual worlds have a long history of leveraging offline social connections for inworld affiliations and activities. And in a related move, they also have a solid tradition of offering people a possibility of forming new offline connections based on ones begun inworld (Kendall 2002). Carter, for example, noted that many of her informants eventually met face to face after becoming acquainted in the virtual world she studied, and two even married each other (2005:161). Virtual and physical world sociality often intertwine in meaningful ways.

One very important caveat here. Moving across cultures to expand and deepen research is not always aimed at finding difference; commonalities and linkages are just as important (see Boellstorff 2005; Nardi, Vatrapu, and Clemmensen 2011). The pressure to provide accounts of difference is strong, and we need to be particularly diligent about resisting such attempts when they do not fit the data. Bonnie is invariably asked, in reference to her field research in China, "What are the differences between Chinese and American World of Warcraft players?" But as noted in her book on World of Warcraft, "My biggest finding in China was that, overáll, Chinese players were remarkably like the North American players I studied" (Nardi 2010:179). Thus it is important to engage both

difference and similarity in our analytics. A good ethnographic account weaves together difference and similarity, showing commonalities where they occur yet also documenting the variable cultural formulations that demarcate cultures and make the very notion of the word "culture" so powerful. People are fundamentally the same in many key ways, deriving from our bodies and physical evolution, as well as our common need to deploy culture as the main adaptation for survival. At the same time, cultures develop powerful differences through varied historical trajectories and contexts. It is not easy to sort all this out, but it is the special burden of ethnographers to examine and analyze similarity as well as difference. Remaining alert to both is a critical aspect of good ethnographic practice.

CHAPTER FIVE

PARTICIPANT OBSERVATION IN VIRTUAL WORLDS

5.1 PARTICIPANT OBSERVATION IN CONTEXT

Ethnographers have an extremely broad methodological palette. Our work can include everything from individual and group interviews to historical research, quantitative surveys, and analyzing mass media, to name only a few common approaches. However, one method above all others is fundamental to ethnographic research. This method is participant observation, the cornerstone of ethnography. Participant observation is the embodied emplacement of the researching self in a fieldsite as a consequential social actor. We participate in everyday life and become well-known to our informants. If a methodological toolbox does not include participant observation, the approach may be legitimate and effective for exploring any number of topics, but it is not ethnographic. Through participant observation, ethnographers step into the social frame in which activity takes place. We sing with the congregation at a church service, feel the heat of the fires as slash-and-burn farmers prepare a patch of tropical forest for planting, sit on the bus with immigrant workers heading to a factory in the morning, watch strange fish swim into view with oceanographers thousands of feet below sea level. We also slay virtual dragons in the company of guildmates, play hide-and-seek in a virtual garden, attend a steampunk dance in Victorian attire. Becoming directly involved in the activities of daily life provides an intimate view of their substance and meaning.

Such participation, however, does not necessarily mean you need to be a practitioner of the cultures you are studying. While embodied engagement forms a central strength of ethnography (Wacquant 2004), offering us grounded experience in practices and entree into shared worlds with our participants, at the same time pragmatic and conceptual concerns dictate a range of appropriate and feasible levels of participation for any given project. For instance, it is not necessary to become a brain surgeon to study brain surgeons, or a physicist to study physicists. On the other