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Reconsidering Site and Self: Methodological Frameworks for Virtual-World Research

ROSA MIKEAL MARTEY[1]
KEVIN SHIFLETT
Colorado State University

In virtual worlds, the information communicated by environments and avatars is considered a powerful contributor to the development of social norms, group processes, and identities, and is fundamental to how individuals perceive themselves, the space, and others. Conducting research in virtual worlds must incorporate considerations of the spaces and actors that are necessary parts of those worlds. Although prior research provides solid guidelines for conducting ethnographies in virtual worlds, the implications of selecting site and self for non-ethnographic projects in such spaces have been largely overlooked. This paper examines the influence of research sites and presentations of self in virtual worlds in order to discuss how choices about these elements can influence study outcomes. To do so, we discuss how ethnographic paradigms informed the development and implementation of a mixed-method study conducted in *Second Life.* We conclude with suggestions for performing research in virtual worlds.

Research of human behavior in virtual worlds is distinct from that in other online settings. Unlike chat rooms, forums, or social media, virtual worlds are evocative, visually rich environments where people interact in a range of settings, from castles and forests to nightclubs and boardrooms. These spaces are not neutral backdrops, but instead bring cultural and interpersonal implications that vary within and across worlds, as well as over time (Stromer-Galley & Martey, 2009). Correspondingly, the site within a virtual world that researchers choose for their work can have important consequences for observing,

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Rosa Mikeal Martey: rosa.martey@colostate.edu
Kevin Shiflett: kshif@rams.colostate.edu
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interviewing, or surveying its residents. Research in virtual worlds, especially projects that explore human interaction, is often conducted in real time, requiring the creation of a researcher "self" in the form of an avatar. A researcher avatar performs as both an engaged actor who is part of that world and an external observer seeking to analyze it (Olwig & Hastrup, 1997); consequently, avatar design can also influence research processes.

This article examines the influence of the research site and the presentation of self in virtual worlds in order to discuss how choices about these elements can influence both processes and outcomes. We argue that for any type of data collection, from human observation or automatic logging to interviews or surveys, the cultural and personal associations of research sites and selves deserve careful consideration. We draw on ethnographic perspectives to examine the consequences of these choices even in non-ethnographic projects. We ask: How does the research site contribute to participant conversation and behavior there? When researchers are present in virtual worlds, how does their presentation of self, including their language, mannerisms, gender, race, clothing, and shape, influence participant behavior?

To illustrate how ethnographic frameworks can enhance a range of data-collection techniques in virtual worlds, we discuss the development and implementation of a mixed-method project that studies communication and group dynamics in *Second Life.* Through a close examination of two key factors in ethnography, defining the site and the role of the researcher, we discuss the process of using non-ethnographic *methods* with ethnographic *methodologies.* That is, we unlock the parameters, techniques, and steps taken from the conceptual frameworks within which research is conducted. We then explore the implications of these frameworks for virtual-world research in order to highlight insights that can emerge and changes that can be made to improve study design. This exercise helps illuminate ways in which scholars engaging in a range of empirical projects can enrich their work through contextualized and reflexive understanding. The paper concludes with a discussion of the implications for performing observational research of different kinds in virtual worlds.

Conceptualizing Virtual-World Research

Communication studies in digital environments have sparked discussions about the effectiveness of translating traditional research methods to online settings. Such debates incorporate questions about both the practices and the underlying principles of research epistemologies, and they offer important insights to conducting research in virtual worlds. Rogers (2009) argues that researchers must take into account the specific affordances and limitations of digital spaces to consider them from a "natively digital" perspective rather than simply digitizing offline methods. He suggests that scholars should approach online research as "studying culture and society *with the Internet*" rather than "on the Internet" (2009, p. 29, emphasis in the original) by using what Hayles (2004) calls "media-specific analysis." This approach requires taking into account the characteristics of specific spaces, including their aesthetics, cultures, norms, communities, and structures. The use of online surveys, for example, has evoked questions about how layout, distribution, and format can influence sampling, response rates, and data quality (Evans & Mathur, 2005; Yun & Trumbo, 2000). Interviewers have grappled with the consequences of different online settings, such as e-mail, instant messaging, and voice chat (Baym & Markham, 2009). Digital contexts have also evoked methodological shifts in ethnographic paradigms, such as questioning the

parameters and requirements of a "naturalistic" online setting (Hine, 2005), what observing truly means online (Pearce, 2009), what participation in a virtual space looks like (Webb, 2001), and what makes a virtual community (Rheingold, 1993; Ward, 1999) or culture (Forte, 2006).

The implications of research methodologies in virtual worlds, however, have been less thoroughly examined than those in other online spaces. Scholars have identified the importance of visual elements in virtual worlds to social interaction there, both in relation to setting (Guimarães, 2005; Harrison & Dourish, 1996; Malaby, 2006; Martey & Stromer-Galley, 2007; Yee, Bailenson, & Ducheneaut, 2009) and to avatar appearance (Boellstorff, 2008; Gee, 2003; Merola & Peña, 2010; Mitchell, 1995; Yee, Bailenson, Urbanek, Chang, & Merget, 2007). In such research, the information communicated by settings and avatars is considered a powerful contributor to the development of social norms, group processes, and identities, and is fundamental to how individuals perceive themselves, the space, and others. Conducting research in virtual worlds, then, must incorporate considerations of the spaces and actors that are necessary parts of those worlds, even in research that does not seek to examine these specifically.

Although it is clear that setting and self matter in virtual worlds, few scholars have discussed in detail the implications or best practices for selecting site and self in non-ethnographic virtual-world research. For example, observing chat in a virtual world requires choices about context and appearance that are distinct from those in other online chat settings, such as Yahoo! chat rooms. Which region in *World of Warcraft* or *Second Life* should be chosen? What type of building or terrain? At what time of the day? Should interviews be conducted by a researcher with a high-level or a low-level character? What race, gender, and class should that character be? More generally, what might be the consequences of choosing one setting or character over another?

To begin to answer these questions, we propose an approach that grounds research in virtual worlds within an ethnographic framework to highlight the consequences of different data-collection techniques and analysis. We argue that even for non-ethnographic work, ethnographic frameworks are effective in helping researchers make informed decisions about the parameters of their approaches. To explore the implications of choices among sites and researcher representations, we use what Vidich and Lyman (2000) call an "ethnographic attitude of engagement" that highlights the perspectives of those who live in that virtual world (p. 42).

Ethnography is often considered to be the most malleable of research approaches. It is organic, evolving, and interpretive (Hine, 2009), examining complex social phenomena personally and descriptively. It produces a reflexive and iterative narrative of experiences through which the nuances of culture can be described. Ethnography has associated methods as well as methodologies. That is, ethnography implies a set of procedural rules used to conduct research as well as philosophies, frameworks, or worldviews within which research is performed. As a *method,* ethnography asks researchers to observe and participate in a site of research, traditionally a culture or group, and demarcate boundaries of observation based on the research questions of interest (Guimarães, 2005). Ethnography emphasizes immersion in the ethnographic site, reflection upon researcher roles within the site, and descriptions of a culture "from the inside" (Malinowski, 1922). The researcher participates in activities, writes field notes, examines supporting documents, and performs interviews as a participant-

observer who is engaged in the site of interest. Although the specific parameters of behavior range from deeply engaged (McLelland, 2002) to "fly on the wall" (Jackson, 2008), traditional ethnography places the researcher firmly within the culture to be examined (Malinowski, 1922).

As a *methodology,* ethnography examines the relationships between the *knower* and the *known,* departing from objectivist stances seeking independent understanding of phenomena, and focusing instead on epistemologies based on embedded, subjective descriptions and perspectives (Geertz, 1979). We use the term *ethnographic methodologies* here to refer to some of the most basic principles of ethnography, specifically: Ethnography examines culture; it is carried out within a defined field; and it requires reflexive and engaged observation. Even these notions, however, are contested (see Hammersley & Atkinson, 1995; Hine, 2000; Jackson, 2008). Fundamentally, we align with Jackson's view that ethnographic communication studies "must include not just an investment in ethnographic holism but also a turn away from objectivist assumptions about qualitative research techniques as transparent windows" (p. 676). Ethnographic methodologies, then, invite us to contextualize our research within the cultures, perspectives, and experiences we study. Moreover, these approaches highlight the ways in which researchers influence the fields they examine, emphasizing analyses and interpretations that take that influence into account (Murphy & Kraidy, 2003).

Ethnographic *methodologies,* then, provide frameworks that can clarify epistemological consequences of various research choices, even when using *methods* such as surveys or computer logging. We argue that the subjective lens of ethnography provides additional perspectives from which to design, implement, and interpret objectivist methods such as these. Taking up Jackson's (2008) metaphor, the windows through we examine phenomena can be seen as including the warping and blurring of our own and others' perspectives, no matter what method is used. Rather than approaching such distortions as a hindrance, we emphasize how examining the consequences of the research site and researcher selves can contribute to better decisions about study parameters.

A Study of Virtual Behavior

To demonstrate how ethnographic approaches can enhance different types of research in virtual worlds, we discuss the pilot stage of a mixed-methods study of group dynamics and individual behavior in the virtual world *Second Life.* The project uses surveys, interviews, computer logs, and human observations of chat and avatar use to examine the relationships between online behavior and offline characteristics such as age, gender, and leadership. We created a short multiplayer game on a private island using that world's rich development capabilities to build houses, towns, and gardens. We populated the island with non-player characters (NPCs) and programmed creatures and objects to interact with visitors. The game is a point-and-click-style mystery designed to be solved in a few hours by groups of participants and to serve as a context in which group dynamics emerge. The project explores questions such as, How do groups interact with one another and communicate in this context? What norms emerge from their behavior? How do they enact leadership and social conformity within the group? What cues about their race, gender, and age do they give off? The discussion of that study here uses pseudonyms and staged images to preserve anonymity, according to participant wishes.

For the study, we first tested the quest with volunteers and then ran pilot sessions with participants in January and February of 2010. Those pilot sessions are the focus of this paper's discussion. We recruited 32 participants from university classes to take an online survey that measured demographics and Internet and game experience, as well as social indicators such as leadership and social conformity. Participants were then scheduled into nine groups of three to five avatars to play a mystery game for two to three hours on our island, Adamourne on Wells. Although they were recruited through classes, only two groups included participants who knew each other outside the sessions. Chat, avatar movement, and use of digital objects such as umbrellas and clothing were automatically logged. Afterward, participants took a second short survey. One researcher accompanied participant avatars throughout the session using the avatar "Vinny," their "Training Sergeant" (see Figure 1), operated mostly by this paper's authors. Additional researchers used other avatars to observe unseen from other parts of the island. Observers took detailed field notes, and sessions were video recorded for later analysis. The field notes that make up the core of our observational material include researcher thoughts, feelings, questions, and confusions as information vital to collection and analysis. Pilot-session participants had an average age of 22, 65% were female, 35% were male, and 91% were straight. The group included one African American and two Asian-Americans and the remaining 29 participants were white. Each had spent at least five hours in *Second Life,* and four were longtime residents with more than 100 hours of experience there.

Figure 1. Training Sergeant Vinny Shrugs as Players Examine Clues.

Ten pilot-session participants were selected for one-on-one follow-up interviews conducted in text chat that assessed the game, session procedures, identity, and group dynamics such as perceptions of leadership. Pilot-session field notes, interview transcripts, and session chat logs were analyzed qualitatively for themes and patterns in participant interaction, with a focus on the influence of the game

setting and of the Training Sergeant. After pilot sessions were concluded, we adjusted the island, session parameters, and data-collection instruments. We then ran 48 sessions with a total of 211 people during the summer of 2010. Participants in these full sessions were all active residents of *SL.*

In a sense, our project is closer to a digitally embodied version of laboratory text chat research such as that of Walther (1995) and Postmes, Spears, and Lea (1998) than to a study of virtual environments as cultural sites such as is found in the work of Turkle (1995), Taylor (2006), and Boellstorff (2008). However, the lessons learned from the pilot sessions of this project shed light on ways in which setting and researcher design have important consequences for virtual-world research of different kinds.

Defining the Research Site

Research conducted in virtual worlds often takes place in a location that includes visually evocative landscapes and structures. For methods such as in-world observation or interviews, researchers must select a specific forest, town, or city that brings with it a range of associations both within and outside the game (Martey & Stromer-Galley, 2007). Such spaces communicate social information that is "legible" to visitors (Mitchell, 1995), and by "reading" this culture, players can more rapidly process the context (boyd, 2001). As a result, we must ground our understanding of what emerges within the specific site where interaction occurred and carefully consider the ways in which participant perceptions shape behavior. For example, do people chat more casually in a virtual park than in a virtual boardroom? Are some spaces read as more feminine or more masculine? Are certain styles or themes associated with one ethnicity more than others? Is aggressive or competitive interaction evoked less in a city center than in its surrounding fields? More generally, what criteria should researchers use to select spaces for study?

Ethnography has extensively examined the implications of such choices. A fundamental exercise in conducting ethnographic field work is defining or otherwise identifying the boundaries of the site to be studied. Marcus (1986) explains that the ethnographer is "constructing the text around a strategically selected locale, treating the (cultural) system as background, without losing sight of the fact that it is integrally constitutive of the bounded subject matter" (p. 172). For Jackson (2008), the rationale for such an assertion is that the ethnographer must create boundaries around cultures in order for data to be presented clearly. In such work, boundaries serve to delimit the scope of data collected within a wide range of possible contexts. Thus, research projects must carefully examine the definitions and boundaries of the site, even if the site itself is not the focus of study.

The island in *Second Life* where we conducted our research, Adamourne on Wells, is a strategically constructed site designed to evoke a specific culture of game play compatible with our research goals. Unlike laboratories or focus-group rooms, which often aim to be neutral settings, the unique site we built deliberately drew on cultural associations and frameworks. We used both visual and textual cues to communicate the structure, norms, and tasks of this new space, as commonly occurs in online worlds (Stromer-Galley & Martey, 2009). For example, our island and its quest used the language of community, offered a history of the space, cultivated identity among players and researchers, established rituals, and encouraged specific social norms (Fernback, 1998). The overall design of the island drew on a fantastical, highly mechanized version of Victorian England known as *steampunk* (see

Figure 2), deliberately evoking Sherlock Holmes, Jules Verne, and Mary Shelley, as well as popular depictions of steampunk in contemporary American media, such as the 2003 movie *The League of Extraordinary Gentlemen*. Quest text, visual design, and explicit instructions invited participants to engage with the cultural information that we provided, through, for example, asking them to "dress appropriately" in steampunk garb. We established basic rules such as forbidding participants to fly and requesting that they use public chat channels to communicate with one another.

The implications of the island's appearance had to be carefully considered in selecting a theme and design for the space. We selected a steampunk theme because, first, it was a prominent style in *Second Life:* Several of the most active and populous regions in *SL* are steampunk themed, offering helpful models for design as well as large resident pools for recruiting. Second, steampunk style is recognizable in U.S. society more broadly. The dark streets, long dresses, and formal manors of its Victorian English roots are familiar to most people, even those unfamiliar with steampunk style as such. In addition, because we were designing a mystery game, our quest's similarity to the world of Sherlock Holmes helped participants understand the goals of the session quickly. Importantly, steampunk is not particularly associated with one gender over the other, and it attracts both younger and older followers. However, its Victorian English referent is largely Western, white, and straight. Steampunk as a style commonly turns certain Victorian conventions on their head, through, for example, the proliferation of women who wear suits and carry weapons. Little about the style speaks specifically to nonwhite or queer audiences, however.

Figure 2. Steampunk Settings from Adamourne on Wells.

In terms of participant interactions, drawing on steampunk themes and emphasizing a rich backstory implied that, like other steampunk regions in *Second Life,* this one was a role-playing island and experience. However, we did not intend for participants in our study to role play, so we had to make that very clear in recruitment and session instructions through statements such as "This is not a role-playing sim [island]." The richness of the setting helped encourage engagement with the plot and characters, enhancing the chat that emerged, but these unavoidable trade-offs in participant associations required careful analysis of how cultural implications affected behavior. We literally constructed our field, and doing so throws into relief the way in which all researchers must conceptually construct the fields they enter.

Drawing on ethnographic paradigms in the design, implementation, and interpretation of our study implied a type of immersion that was not possible because we built a unique research site rather than participating in a preexisting culture. However, in preparation for the project, we immersed ourselves

in *Second Life* cultures more generally by, for example, spending time on other steampunk islands and participating in different social groups in that world. We learned as much as we could about different spaces and communities in *SL* so that Adamourne on Wells would fit in with that world's cultures. Correspondingly, we examined participants' behavior as contextualized not only within our island specifically, but also within *SL* more broadly. That is, we sought to understand not only how participants' conversation and movement were embedded in the specific site we had built, but also how they were embedded in *SL* as a virtual world. In the next section we discuss an example of how player engagement with the space influenced our analyses of and subsequent adjustments to its design.

How the Researchers Responded to Cheating

We created a game, but as they do in other online games, players defined and re-defined the space through an interplay of our constructions with their own, developing interpretations of game play, cultural references, performances, and social norms (Steinkuehler, 2006). Thus, the behavior that emerges in virtual worlds is not simply a consequence of programmers' intentions, but is subject to participant engagement with the site and its structures. For example, one participant, Dina, scoured texts from the game documents and characters she encountered and shared what she found with her group to encourage discussion. Others all but ignored the game's story and structure and instead worked as quickly and pragmatically through the challenges as possible.

Scholars have noted that how games are actually played is not set by game designers, but rather by the intersection of players and the spaces through which they move (Harrison & Dourish, 1996; Steinkuehler, 2006; Stromer-Galley & Martey, 2009). Throughout the sessions, groups did things we did not anticipate when we designed the quest: For example, players frequently attached quest items to their avatars instead of placing them on the ground to activate them, as we had intended. In general, participants experimented throughout the sessions to discover the quest's rules and structures. Hammersley and Atkinson (1995) explain that:

> research cannot be programmed . . . its practice is replete with the unexpected . . . all research is a practical activity requiring the exercise of judgment in context; it is not a matter of simply following methodological rules. (p. 23)

We encountered the need for this judgment when participants started to cheat. To generate rich chat data, we designed problem-solving tasks that encouraged participants to discuss their options and solve puzzles together, often in order to access buildings or zones. During the pilot sessions, we conceptualized cheating in our quest as skipping over these challenges, by, for example, using Google to look up trivia questions or using *Second Life*'s teleport function to get around locked doors. We built in as many barriers to cheating as we could, and told participants they would lose points if they skipped challenges or found a way to fly instead of walk through the game, so that they would not circumvent the quest challenges and zones we designed. However, when we began to actually observe participants cheating, our perspective changed.

Kurt and Stubby were frequent cheaters. At every opportunity, they pushed the boundaries and rules of our quest by working around challenges to gain entry to restricted areas. In one instance, the group was attempting to solve a riddle that would unlock the front door of a factory. After a few minutes, Kurt and Stubby seemed to grow tired of trying to solve the riddle, deciding instead to climb and jump their way through a high window inadvertently left open when we built the factory. Vinny, the Training Sergeant, immediately called them back and announced to the group that they had lost points for cheating. Although Stubby rejoined the group, Kurt did not; he stayed inside and collected all the clues and plot information without sharing his knowledge with group members. Martey later reflected in her field notes,

> I'm kind of torn between being pissed off they cheated in our game and psyched they did because . . . data! I'm thinking that this kind of attempt at workaround/cheating is actually part of what makes this game fun for them. . . . and jumping through the window is actually moving things *forward*, not taking them off track. Maybe we *shouldn't* block off that window?

As a result of leaving the window and other areas open, we changed the affordances of the site and the implications of the resulting data. Because we later left in (and indeed, built in) opportunities for participants to cheat, our subsequent analyses had to incorporate more thoroughly whether, how, and when cheating occurred. For example, an NPC told participants they were not allowed to go to the second floor of a manor they were exploring; however, instead of blocking access entirely, we simply roped off the manor stairwell and examined when and how participants bypassed that visual barrier. If we had chosen to block cheating as much as possible, this dimension would have been a less common or central part of our understandings of how participants moved and interacted in this space. Ethnographic paradigms emphasize the interplay between these emergent and proscribed forces and encourage analysis embedded within both subjective and objective perspectives. In this case, we qualitatively examined our subjective perceptions recorded in field notes as well as the words of participants to determine that certain types of cheating were compatible with our overall research goals.

Another group, one that was progressing very slowly through the quest, evoked a different response from Martey. At one point, a group member repeatedly tried to jump a fence intentionally blocking access to a park area, and another attempted to follow. This exploration of an off-limits area was not precisely cheating, but it was a type of game play that we had not intended and that slowed down quest progression and reduced chat. Participants probably did not assume that they should stay out of the park, and we were initially unconcerned when they went there. We recognized that it was causing problems only because of our own frustration when they did so.

> The time this quest is taking is driving me crazy — is it driving participants crazy too? People are exploring too much, taking too much time wandering around, and not talking. Plus, they're getting frustrated. We have got block off more of the decorative alleys and whatnot. The boxes blocking the way clearly aren't cutting it. Time for invisible walls.

Through this recorded reflection and others, nuances of participants' experiences could be more clearly identified and addressed, but choices of how to handle such developments are not without consequences. Adding impassable barriers to the park influenced later participants' actions by reducing where they could go on the island. We traded freedom of exploration and a particular approach to game play for more manageable and focused sessions in order to preserve the quality of the chat and group-problem-solving data. We made the choices we did in part because the sessions *felt* longer and more frustrating to us subjectively, and in part because during exploration we observed very little chat or interaction.

Hine (2009) asserts that the field is defined in an ongoing two-way process through the researcher's relationship to it. Rutter and Smith (2005) urge virtual ethnographers to examine research boundaries "cautiously" and continually as part of the research process. Scholars from Geertz (1979) to Hine (2000) have noted that fields are not predetermined spaces waiting for the ethnographer to enter, but rather, and increasingly so, "quotation marked off" ones actively delimited and selected, as Jackson (1999, p. 23) describes. Or put more simply, culture happens everywhere, not just in identified sites — indeed, one of the benefits of designing a site and inviting participants in is that we actively acknowledge and analyze how that site influences participant behavior. Examining the culture of the research site in this way contributes to more-informed choices about the relationships among participant actions and the setting of choices. By using ethnographic approaches in writing and examining field notes, we had additional tools to take the influences of the site into account in our data collection.

Applying these tools led us to change the design of the research site. For example, researchers who observed the sessions remotely viewed the setting as rich and evocative, yet manageable. Being a researcher actually in the game as participant-observer, however, revealed that its design had some important problems: There was too much visual detail, slowing down participant comprehension of the site; the quest areas were too open, encouraging too much fruitless exploration; and non-player characters were not visible and present enough for players to remember them. Therefore, we simplified the decor and items on the island to make it easier for players to identify the important ones. To generate more meaningful movement-tracking data, we closed off more areas of the island, reducing individual exploration and encouraging the group interaction that was part of our research goals. We added more NPCs to help participants engage with the plot and characters. In addition, participant-observers noted that certain areas felt "too quiet," so we added background music and more sound effects throughout the island. Ultimately, as a result of taking careful field notes and analyzing them as part of our data, we were better able to be sensitive to participants' interpretations and the interactions that they had with the environment from both subjective and objective perspectives.

The Role of the Researcher

Pearce (2009), Turkle (1995), and others have noted that in order to fully understand the significance of communication and behavior in virtual worlds and games, it is necessary to play the games and live in the spaces of those worlds. Thus, conducting research in virtual worlds often requires the creation of a researcher self in the form of an avatar, especially in projects that explore human interaction. In part, this requirement is technical: In order to observe, you must enter the world by

creating an avatar and frequently place that "embodied" self close to others. In part, this requirement is methodological: Participation is the foundation of various data-collection techniques, including interviews and ethnography, especially as a participant-observer.

Offline human research also often requires the presence of a researcher, such as a lab assistant running a survey, an interviewer talking to participants, or an ethnographer entering the field. The identity, including gender, race, and age of that researcher, can have a profound effect on participants, as demonstrated by Steele, Spencer, and Aronson's (2002) research on stereotype threat. That work shows ways in which the race and/or gender of the researcher can change the answers of participants on surveys, interviews, and ethnography. Although researchers can carefully select their clothing and plan their words and demeanor, some aspects of identity cannot be selected in offline settings. Online, however, we have far more control over the self that we create. We can be invisible in some settings, but in much virtual-world research, we have to make choices about the appearance of the avatar we use to interact, often including its gender and race, and thus are likely to evoke similar stereotypes.

As a result, the self that researchers choose is an actor in this space, with an identity of its own. How does the way researchers are presented, including their gender, race, clothing, and shape, affect participants and their relationships? How do researcher reactions influence participant behavior? What boundaries should we set on participation? What are the consequences of such choices?

In selecting avatars to serve as greeter and participant-observer in our pilot sessions, we began with the avatars that Martey and Shiflett had been using for island and quest development. We ensured that they were dressed in steampunk garb, were "typical" humans according to *Second Life* conventions of appearance, and fit into the setting we had created. However, as representations of ourselves, the avatars had clear genders, were obviously white, and were, like most *SL* avatars, attractive (Martey & Consalvo, 2011). Similar to choices about setting, choices about researcher appearance bring specific interpersonal and cultural associations, encourage social roles, and communicate norms. Such choices, then, are not neutral or natural, but have powerful consequences just as they do offline.

Ethnographers have long considered the implications of these choices. As both participant and researcher, a researcher avatar performs as both an engaged actor who is part of that world and an external observer seeking to understand it (Olwig & Hastrup, 1997). We follow Murphy and Kraidy's (2003) suggestion that researchers can view their role as akin to that of a dancer who "has entered the dance floor to dance with the others, but who the others are to the ethnographer shapes the ethnographer's way of moving and interacting, indeed, of the ethnographer's own sense of self and community" (p. 315). It is precisely the complexity of this "dance" that drove our decision to use ethnographic frameworks in the development of our roles as researchers in this study.

The Training Sergeant avatar used for pilot sessions, Vinny, was a resident of the world we created, and was a consistent part of the game. If Shiflett was not available to drive Vinny during the study sessions, Martey or another researcher used his avatar to do so. For participants, his role was as supervisor, guide, and, when needed, disciplinarian. Both Vinny and Martey's avatar, Belladonna, followed scripts to keep participant experiences as consistent as possible. Vinny was the guide on an interactive

tour, part extroverted researcher and part introverted participant. Olwig and Hastrup (1997) describe this balance as "interplay" between observation and reflection and suggest that it involves a constant struggle between "being part of life and stepping out of it" (p. 35).

Such balance required the researcher driving Vinny to navigate a fine, constantly shifting line between participation and interference. For example, at times, to encourage players who were stuck, Vinny made comments such as "To be thorough investigators, make sure you explore and click through every room . . . including the kitchen." Such suggestions were carefully considered and discussed before they were made, and researchers had to balance their influence with the project's aims of generating chat and movement among participants. Indeed, Vinny's role is closely aligned with what Janesick (1998) calls "choreography" in ethnographic research, whereby researchers draw on a series of established moves and improvise as needed.

What a Researcher Said About a Naked Participant

Vinny's role as participant drew on a defined set of parameters while allowing for freedom of performance according to the specifics of each group. Janesick's recommendations are especially appropriate to a study of games and the performative and improvisational nature of moving around in the open space of *Second Life.*. For example, during one session, Mina, a female avatar, stripped off her clothes in the middle of the quest (see Figure 3). This prompted the following entry in Shiflett's field notes:

> I felt embarrassed for her and quickly, if not sheepishly typed, "Ummmm, clothes thief?" thinking that she hadn't realized her clothes were gone. I was hoping that my comment would spur her to get dressed as her sudden nudity was a disruption in the group's progress through the quest. I had a visceral reaction to the sight of a nude participant. As the researcher, I felt responsible for Mina's actions and her well-being during the quest. I did not want her to embarrass herself or anyone else in the research environment. Had I established that nudity in SL was taboo? Did my somewhat sheepish treatment of the incident bar others from offering their opinion of it?

Figure 3. A Participant Ends Up Half-Naked During a Quest.

Shiflett rightly wondered whether his treatment of the incident colored the way others received it and questioned how much Vinny's behavior influenced participant actions and reactions. Sundén (2009) argues that acknowledging such influence should encourage an increased awareness of the researchers' online embodiment. She notes in her study of the text-based virtual world *WaterMOO* that her presence in the field fundamentally altered the behavior of those she observed. She found that her participants "put on a show" once they noticed she had entered the room, and argues that her decision to overtly establish herself as a researcher was a contributing factor. In a similar fashion, we influenced the behavior and interaction we observed. For example, during both the pilot sessions and the full sessions later on, we observed very little flirting, almost no heated argument, and virtually no swearing among participants. Is the lack of these common human behaviors a result of participants' awareness of an observer? Would such exchanges have been more likely if participants played the quest on their own without a researcher present?

Variants of Researcher Selves

Throughout the development of this project, the team experimented with different identities of the researcher avatar. In retrospect, we can see these identities as corresponding to Linderoth's (2005) avatar-player relationship facets: the avatar as a *tool* for handling game interaction, as a *role* for social interaction, and finally as a *prop* for the presentation of the researcher self in the social arena of the game.

Vinny, the tool. During the development phase of the project, our initial need for a researcher to accompany players during the game was technical: We planned to use a human-driven avatar to serve as a "help" function, because we could not program one into the game. In a sense, we planned for him to be our own steampunk version of Microsoft's chatty paper clip, emerging only when problems arose to provide hints and corrections. Although it was chiefly Shiflett's avatar Vinny that was used, during testing we allowed any available avatar to fulfill this role. Fundamentally, we treated Vinny simply as a piece of equipment that extended our agency into the virtual space of the game (Linderoth, 2005).

However, we quickly realized that although we had constructed this avatar as a dehumanized tool used exclusively for support and troubleshooting, early testers had their own constructions of him. They treated the researcher as a knowledgeable citizen of Adamourne on Wells and turned to him during challenges instead of solving them on their own. For instance, one tester, K. L., looked to the researcher in every puzzle, saying, "Ask our guide what to do," or "What are we supposed to do now, sir?" Others assumed that the researcher was the intended solution to challenges, asking questions such as "Is he supposed to get us through the door?" We acknowledged that using a human-driven avatar was unlikely ever to be seen as a strictly utilitarian tool. It was at this point that we realized Vinny would be less a technological component of the game than a participant-observer in the ethnographic sense.

Vinny, the role. To accommodate the social position that the researcher clearly played, we redesigned Vinny to fulfill a narrative role for the pilot sessions. We adjusted session protocols to reflect ethnographic practices, such as incorporating field notes into data collection, establishing boundaries of participation, and choreographing the interplay between engagement and reserve. In Vinny's design, we had sought to create a character that was, in effect, an NPC in the mystery we had created (indeed, this is why the title "Training Sergeant" was used), with contextually suitable clothing, language, and movement. Vinny's role was scripted to watch over participants and make sure they "proved their worth as Trainee Detectives" in the process of solving the mystery. As part of the introductory scripts, the very first words Vinny said to participants were, "Good evening. I am Training Sergeant Vinny Paolino in charge of training you to be detectives here with the Adamourne on Wells police department." We viewed Vinny as an authored character in our constructed world outside of everyday reality (Linderoth, 2005).

Once again, however, participants' behavior revealed that our constructions were not their own. Our analyses of field notes, interviews, and survey and session data helped us identify important consequences to our scripting and design of Vinny. Although participants reinforced Vinny's role as Training Sergeant through comments such as "Thanks, Sarge!" and "Oops, the boss is watching," Vinny was still seen as a fully engaged member of the group who was, to our dismay, positioned as its leader. For example, one participant, C. F., turned to Vinny at every challenge, saying, "WTF? Now what?" and "Dude, what do we do?" Others appealed to Vinny's sympathy, claiming, "Vinny will help us!" or "He won't just leave us locked out here." This reliance on Vinny posed critical problems for our research, as we were specifically interested in how players solved problems as a group and in ways that leadership emerged among them. Moreover, the researchers playing Vinny frequently wrote in field notes that they felt more connected to and involved in the group than we had intended.

Vinny becomes Unit Nyn, the prop. To address the problems created by Vinny's over-engagement, we again turned to ethnographic scholars for paradigms and practices for conducting sessions. We sought out ways that Vinny could be transformed from deeply engaged participant to "fly on the wall," while recognizing the importance of acknowledging his place within the culture we had created (Jackson, 2008, p. 23). We re-conceptualized the Training Sergeant as a prop that was part of the setting as well as part of the player-researcher's self-presentation (Linderoth, 2005). To do so, we changed the look and behavior of the Training Sergeant to be more neutral in gender, personality, and appearance by turning *him* into an *it* that was a robotic "unit" identical to robot NPCs found throughout the quest (see Figure 4), and named it Unit Nyn. We also changed the language used by the new "unit" to express less personality, such as referring to itself in the third person and forbidding it from laughing. Only Martey's avatar contacted participants and discussed study-related topics, while Unit Nyn had exclusively in-character exchanges. As a result, many later groups identified the Training Sergeant as "in the background" and "part of the island more than the group." At the same time, we acknowledged the importance of the researcher in group dynamics no matter how we conceptualized ourselves, which led to analyses of group interaction that took the Training Sergeant's role into account more explicitly. For example, we developed a variable that measured how closely participant avatars stood to Unit Nyn as a potential element of leadership and social conformity.

Figure 4. The Adjusted Training Sergeant, Unit Nyn, Surrounded by NPC Robots.

Reflections on Site and Self

In many ways, the field will always be altered by the presence of the researcher. This project is quite clearly not an ethnography, but ethnographic methodologies provide frameworks we can use to better understand the strengths and weaknesses of the tools we use and the data we have collected. Along with changes to the design of the site and of researcher roles, this approach led to changes in other tools used in this study. For example, our qualitative analyses of participant engagement with the game helped us adapt the recruitment and participant communication to emphasize the game play and adventure aspects of the sessions. In addition, bringing rich understandings of *Second Life* culture as well as the specific culture we developed at Adamourne on Wells to our study design allowed us to create more focused and effective survey questions. We added questions about avatar use and appearance during the quest in order to contextualize our analyses within participants' choice of avatar, role-playing habits, and clothing-style selections. Analysis of the surveys also revealed that some participants gave inconsistent answers to demographic questions such as age ("2 years old"), gender ("none"), and race ("fairy"). Our experiences in the quest helped us identify those answers not as "bad data," but instead as part of *Second Life*'s culture of immersion: Participants were answering these questions as their avatar, not as their offline self as we had intended.

The self-reflexivity of ethnography profoundly enriches our ability to examine more deeply our own roles, reactions, behaviors, and their consequences. We drew on these methodologies to establish strategies, or "choreography" (Janesick, 1998), in the development of the research, and to emphasize the position of the researcher as self-aware and even strategic in interactions with participants. These perspectives helped identify ways in which the research site and researcher selves could be adapted to contextualize not only data collection, but also analysis and interpretation.

Conclusions

This paper explores the pilot stage of a research project in *Second Life* in order to examine how ethnographic approaches can enrich research methods beyond ethnography per se. We argue that any type of virtual-world research can benefit from developing researcher field notes, surveying participant perceptions of researchers and the environment, and examining the social and cultural frameworks invoked. Applying these perspectives to the pilot stage of our virtual-world research resulted in a range of adjustments to the study's design and implementation.

We suggest that the value of ethnography for research in virtual worlds is not just in its specific processes, but in its ways of approaching research. The framework we chose was a vital component of our process because, as Markham (2005) notes, "Every choice we make about how to represent the self, the participants, and the cultural context under study contributes to how these are understood, framed, and responded to by readers, future students, policy makers, and the like" (p. 811). These considerations are not, of course, limited to virtual-world settings. However, those spaces offer distinctly more possibilities for researchers to control the study context. Researchers can always use the same avatar, for example, regardless of who is doing the typing. Chat can be varied to test whether one design is perceived

differently than another. For example, does the chat interface facilitate public messages more than private ones, as could be said of chat in *Second Life* but not necessarily in *World of Warcraft*? Does the researcher use capital letters in chat? Does s/he use or avoid chat shorthand such as "lol"? How do these choices affect the norms that emerge among participants? Similarly, researcher race, gender, class, and other social markers can be obscured—though probably not eliminated—with careful design and scripting. Frequently, however, some of these identity markers must be selected, leading us to ask: Do the race and gender (or species or sophistication level) of the researcher's avatar influence how participants perceive that space and their place in it? Ultimately, the value of ethnographic approaches is in their ability to explicitly examine the consequences of these and all the other choices researchers make in the design and execution of research.

The ethnographic framework we use, combined with quantitative data and analyses, provides a type of integration, or, to use a more ethnographic term, crystallization, allowing us to examine data from different angles, subjectivities, and scales. We can and do draw on tools from a range of research traditions to seek patterns and relationships, including content analysis, discourse analysis, linguistics, and grounded theory. Like ethnographers, we are committed to embedding our research in the context in which participants reside, and we are self-reflexive as we perform our analyses. Like social scientists of all types, we want to use the best tools at our disposal to understand as much of the complexity and nuance as we can.

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