Chapter 4

PLACE AND TIME

Visuality and land—Builds and objects—Lag—Afk—Immersion—Presence.

Visuality and land.

One evening in Second Life I received an instant message from an acquaintance, Samuel: "would you like to teleport real quick to see how blight is driving people crazy? There's another big sign demo out here in Greenacre." I accepted Samuel's teleport offer and after several moments of blackness was alongside him and five other people, floating in the air near two structures in the eastern part of the Greenacre sim. Below us was "Zazzy's," a black building with brightly colored windows, their neon reds, blues, yellows, and greens in a constantly changing pattern. Through the windows one could see a range of items for sale. "I'm sick about this," Samuel said. "This glowing monstrosity was just built on this land."

Looking past the new store with its neon windows I saw a second building, a streamlined metal-and-wood structure with modern furniture and a large deck facing the Second Life ocean. This was Joanie's, a popular dance club. Zazzy's new store was adjacent to Joanie's, and on her side of the border a series of signs had been put up to block Zazzy's store from view (figure 4.1). Authored by a group calling itself "Polite Neighbors," the signs read:

> If you support Joanie's, do not buy from this store!!! Stores of this nature belong in commercial areas. For someone to take the atmosphere of one of the most Romantic Venues in all of Second Life and trash it with flashing Nightclub lights is rude and uncalled for . . .

As we surveyed the scene we suddenly noticed Zazzy floating near his store, complaining about the protest signs: "if they think that by being mean they will get me to go they are wrong." Samuel moved toward Zazzy and began speaking to him:

> Samuel: You have no idea how much effort people have put into making this area nice. Your store here comes as a horrible shock. People here hate blight like this.

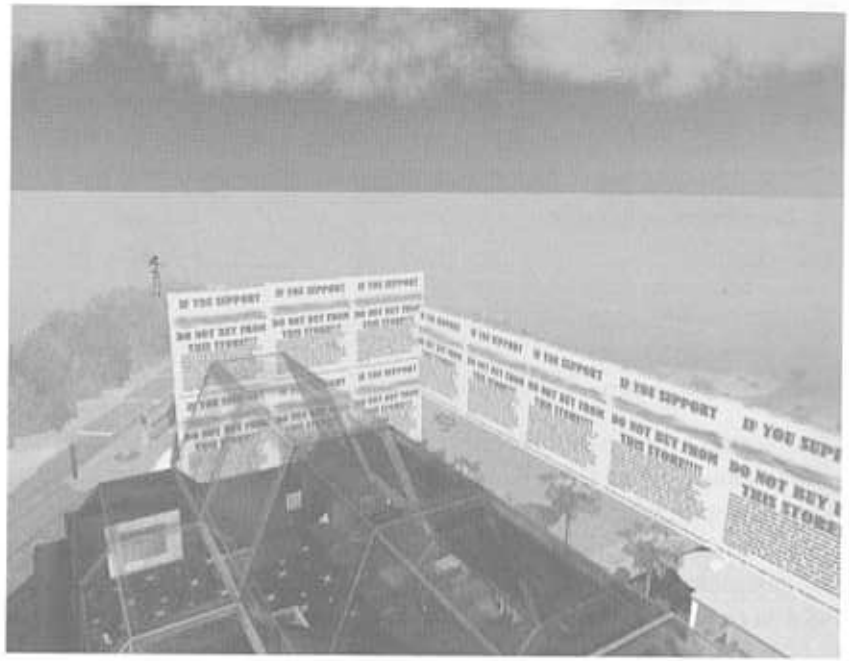

FIGURE 4.1. The protest at Zazzy's store (image by author).

SAMUEL: They need to have neighbors who are considerate. You just barged in here with this flashing monster, ruining the view, they don't like this flashing crap, it's really hard on the eyes.

SAMUEL: We all have to live here on this sim. This is a neighborhood. Try to understand what they are going through.

SAMUEL: I know these people, they spent months building up their club from scratch. Your store ruins the whole look of this area.

SAMUEL: It is causing a heart attack, it's huge and flashing and obnoxious. I'm having an epileptic fit here dude

SAMUEL: Try to understand that all the work you put in your store, Joanie did the same on her club. Whatever you can do to make Joanie's view less a shock please try.

SAMUEL: This is a neighborhood. Try to understand: this club is this woman's LIFE

SAMUEL: It's her SECOND LIFE

SAMUEL: She has spent MONTHS working on it, 24/7, getting in customers.

SAMUEL: It's the highlight of this whole sim and the area

ZAZZY: This store is my life too

SAMUEL: Yeah but she was here first dude, Joanie moved here when the sim was new and now it's like threatened for her. Zazzy, why did you build out to the property line? when you do that, it ALWAYS makes people mad. It's that feeling you are crowding her that is getting to her.

SAMUEL: We care about this neighborhood Zazzy. We live here.

To those unfamiliar with virtual worlds all this might seem nonsensical, even trivial. After all, the incident took place within Second Life, which at the end of the day is a body of binary digital information: ones and zeros rendered on a computer screen. What such an interpretation would miss is how placemaking is absolutely foundational to virtual worlds. The conflict over Zazzy's store exemplifies some of the most basic cultural assumptions shared by Second Life residents during the time of my fieldwork, assumptions common in many other virtual worlds as well. Many studies of virtual worlds have focused on identity (particularly gender), economics, or language (e.g., Castronova 2005; Cherny 1999; Schaap 2002). These are important issues I address later in this book, but prioritizing them obscures how place, above all else, makes virtual worlds what they are: "they may simulate abstractions of reality; they may be operated as a service; creating them may be an art; people may visit them to play games. Ultimately, though, they're just a set of locations. Places" (Bartle 2004:475; see also Fernback 1999; Gelernter 1991:23; Graham 2002:4; Poster 1996:188–89). Even the term "resident" underscores how "a sense of place" is fundamental to Second Life (Ondrejka 2004c:3; see Turner and Turner 2006).[1]

A few commentaries have assumed on philosophical grounds that "the virtual, as such, is inaccessible to the senses" (Massumi 2002:133), so that "place" and "virtual" cannot coexist: "there is no 'place' in the virtual beyond the metaphor" (Rutter and Smith 2005:85). This belief that placemaking is antithetical to the virtual has a fairly long history in studies of mass media (e.g., Meyrowitz 1985). Other philosophical and empirical work, however, has shown the salience of place and sensory experience online, including in virtual worlds (Hillis 1999:73, 88; S. Jones 1997; Markham 1998:40; Morse 1998:181; Poster 1996:186; Reed 2005:230). That virtual worlds are places means they can be fieldsites; it makes an ethnographic approach conceivable. Virtual worlds are not the latest example of globalization making place irrelevant; globalization makes place relevant in new ways, and what makes virtual worlds so revolutionary is that they are new kinds of places. What some have described as "a shift from the 2D web to the 3D web" is really

the shift from network to place, or, more accurately, the addition of online places, since networks will continue to exist.

My starting point for discussing place is the central role of vision in Second Life during the period of my fieldwork. This is part and parcel of how "with the shift to graphical virtual worlds . . . the connection between identity and knowing . . . is problematized and complicated by the visual" (Thomas 2005:1; see also Virilio 1994; Wheliye 2002). Consider the relationships of place and vision in the conflict over Zazzy's store. What had to be presupposed by all parties for this conflict to exist? We all shared an understanding of a virtual world with land that could be bought and sold and built upon, proximity, area, residency, buildings, a community in the vicinity of a building, indeed a neighborhood, a neighborhood in which people live, into which they put effort so that it looks nice. And also: a view, a view that can be ruined by blight, that can be trashed by flashing lights or a glowing monstrosity built out to the property line, by buildings that can shock and make people feel crowded, driven crazy, and threatened.

The simultaneous presence of more than one person has been key to cultural understandings of virtual worlds. This is why nongraphical virtual worlds like MUDs could be understood as places; even the "place" where a telephone conversation seems to occur can be seen as a virtual world (Sterling 1992:xi; see chapter 2). A broad cultural shift during the time of my fieldwork was that the notion of "virtual world" increasingly presupposed three-dimensional visuality: a defining characteristic of a virtual world (versus a blog or website) was that it was a place in which you could look around.[2] Consider the emphasis on vision in the following definition: "a user can log into [a virtual world] from any computer on the Earth. . . . The screen turns into a window through which an alternative Earth . . . can be seen. . . . The window by which your computer is depicting the world is, in fact, the surface of somebody's eye, and that somebody is *you*" (Castronova 2005:6, emphasis in original). An emphasis on visuality as precondition for knowledge and agency predates the emergence of virtual worlds: "the roots of yearning for a virtual world are partly anchored by an ongoing Western belief in the eye as the most noble organ, and in vision as a sensual metaphor for extending understanding" (Hillis 1999:37). Even the notion of nation-states as "imagined" communities (Anderson 1983) refers etymologically to the notion of an "image."

In the dominant Western tradition, vision and place are linked through the idea of the landscape, which "represents a way of seeing—a way in which some Europeans have represented to themselves and to others the world about them and their relationship with it, and through which they have commented on social relations" (Cosgrove 1998:1). When one resident defined Second Life as a "landscape engineered by its residents," his notions of landscape, residency, and engineering thus reflected a pivotal aspect of virtual worlds. The clash over Zazzy's new store was not that it encroached on any building but that it damaged a landscape. This is intelligible because it links up to an actual-world history within which "in landscape we are offered an important element of personal control over the external world" (Cosgrove 1998:18). A perceived loss of control over landscape can thus have consequences for a sense of efficacy, since landscapes ascribe power "to the unitary viewer who can also be understood to depend on his or her eyes for a 'point of view' . . . [and] naturalize a distinction between the self and a living world" (Hillis 1999:86). Second Life residents were aware of this when they told me how the presence of an "ugly" building could compel neighbors to move, "just go inside and never look outside," or turn down the "draw distance" on the Second Life program so that everything beyond sixty-four virtual meters would be lost in a grey mist. One resident noted "the problem is seldom what one has on one's land, but what is in one's view." Another complained that "just taking my new home in Lakeland as an example: I have this wonderful oasis there. And now on one side there is a sex club, and on the other end a slave dungeon."

Since there was little official zoning in Second Life, much of its landscape consisted of small plots of land (512 to 2,048 square meters) with homes or stores on them, a quite chaotic jumble of styles and scales of building. In response to this, a number of experiments to create zoning agreements between residents took place during the time of my fieldwork. Zoning guidelines often included prohibitions on billboards, spinning signs in the air, and building out to the property line, as well as limits on building height. These guidelines worked to protect the visual field, yet often resulted in what was disparaged as "endless suburban sprawl."

In *Techniques of the Observer: On Vision and Modernity in the Nineteenth Century*, Jonathan Crary tracked how "a reorganization of the observer occurs in the nineteenth century . . . visual experience . . . is given an unprecedented mobility and exchangeability, abstracted from any founding site or referent" (Crary 1990:14). As the title "techniques of the observer" indicates, Crary focused on questions of technique and observation, noting how vision became valorized over sound (see also Friedberg 2006; Sterne 2003). He pointed out the polysemy of "observer," which refers not just to seeing but to "observing rules, codes, regulations, and practices. Though obviously one who sees, an observer is more importantly one who sees within a prescribed set of possibilities, one who is embedded in a system

of conventions and limitations" (Crary 1990:5; see also Crary 1999). While never mentioning anthropology, Crary here linked observation to the Malinowskian tradition within which "participant *observation*" would, by the mid-twentieth century, become the dominant mode of ethnographic investigation. To, in Crary's words, be "embedded in a system of conventions and limitations" is to be within a culture. Crary's interest in technique linked these methodological issues to questions of techne. In this regard it is striking that Crary opened *Techniques of the Observer* by noting that the book: "was written in the midst of a transformation in the nature of visuality probably more profound than the break that separates medieval imagery from Renaissance perspective. The rapid development [today] . . . of a vast array of computer graphics techniques is part of a sweeping reconfiguration of relations between an observing subject and modes of representation" (Crary 1990:1).[3] The notions of place and landscape that shaped the most fundamental principles of Second Life's culture—and reflected an American sense of landscape in terms of undiscovered frontier (Healy 1997)—were part of this "sweeping reconfiguration of relations between an observing subject and modes of representation." This reconfiguration is one aspect of what I term the Age of Techne.[4]

During my fieldwork Second Life appeared as a series of square "sims" (simulators) 256 meters on a side, linked into a "mainland" of several continents, surrounded by thousands of single-sim islands. Some of these islands touched each other, forming medium-sized landmasses. Linden Lab terraformed new land, providing rivers, bays, rolling hills, even mountain regions with a snowy theme.[5] However, the most popular land often had a low-lying, beachfront feel to it. Land was continually added as new residents joined Second Life; as there is no way to increase the amount of land on the planet earth, such a capability represents a distinguishing feature of virtual worlds and complicates the scarcity presupposed by actual-world theories of property. By August 2006 over half of Second Life was islands, leading to concerns over the "future of the mainland."[6]

A fundamental assumption of Second Life was that land was owned. Linden Lab divided the land into parcels that were sold "at auction"—that is, to the highest bidder within a set period of time. Land could be resold at will for any price, and could also be subdivided or joined to other contiguous parcels of land. Through the work of savvy land owners and people working as real estate agents, parcels could sell for hundreds of U.S. dollars or more. While virtual, Second Life "real" estate was quite "real" in economic terms.

How could virtual land gain differential value, since it was all online? Given the importance of landscape, it is to be expected that surroundings

played a role: someone wishing to build a home might have avoided land near Zazzy's store, for instance, and a waterfront was a plus. Linden Lab created differential land value by labeling all sims "PG" or "M" ("parental guidance" or "mature," terminology taken from the motion picture ratings system).[7] Linden Lab also created differential value by adding "telehubs" in the version 1.1.0 (October 2003) upgrade to the Second Life platform.[8] Under this encoded relationship between place and time, if attempting to teleport to a particular location a resident would appear at the nearest telehub, a location outfitted with a building that usually looked like a bus stop or kiosk. After rezzing at the telehub, a resident would have to fly to their destination.[9] Land near telehubs became valuable, particularly desirable for commercial venues like stores or clubs, since residents had to cross such land en route to other locations. Some residents liked the telehub system because it forced persons to fly over large swaths of the Second Life landscape, where they would encounter buildings of which they might otherwise be unaware. Other residents found the teleport system cumbersome. The fact that objects had to "rez" (see chapter 1) meant that flying away from a telehub often resulted in bumping into buildings that were not yet visible because the data of which they were composed had not entirely downloaded. Due to these issues, the December 2005 (version 1.8) upgrade to the Second Life program eliminated telehubs and allowed "point-to-point" teleporting anywhere in Second Life.[10] While they existed, telehubs recreated a feature of actual-world physicality that is not obligatory in a virtual world—the idea that it takes time to traverse distance (Williams 1996:295).

The Second Life platform allowed landowners to limit access to a select group of residents, or to ban particular residents from entering their land. In either case, when approaching land so designated the resident in question would encounter "ban lines" floating in the air, composed of red text reading "no entry." During my fieldwork many landowners did not use ban lines; they permitted full access, protecting their properties by using a default setting that prevented visitors from altering anything built on their land. One reason for permitting access was that the amount of time avatars spent on a given parcel of land was calculated by Linden Lab into a figure known as "dwell" or "traffic."[11] For much of my fieldwork Linden Lab provided cash incentives for parcels with "high traffic" (that is, a high number of visits by avatars); even after this was phased out, traffic provided one of the few quantitative measures for the social status of a property. In addition to low traffic scores, ban lines were disparaged for making it difficult to fly across the terrain and for their effect on the visual field: "ban lines are eyesores," as one resident put it.

In place of ban lines, residents seeking privacy were more likely to use "sky builds." A Second Life landowner had rights over the "air" above their land. Since avatars could fly and teleport, and since virtual objects could ignore gravity and stay suspended aboveground, residents could create a room (even an entire home and yard) hundreds of meters in the air, invisible to casual passers-by at ground level.[12] I recall being introduced to the "skybox" of my friend Rhed. After some fumbling around to find a "teleporter," hidden in a potted plant in her ground-level home, I found myself transported to the edge of a small pond. Rhed and I were now hundreds of meters in the air in a large box, on the inside of which Rhed had placed images depicting a countryside receding into the distance. This was a virtual virtual landscape. When I complimented Rhed on the idyllic images, she noted that:

> Rhed: The scenery on the walls . . . is actual scenery here in sl
> Me: Oh wow, you're right
> Rhed: It took a while to get all the edges to line up so that it flowed smoothly. I wanted to go for that outdoorsy feel. Sometimes people pop up here who heard about it from someone else. I thought about hiding it better, but it's nice to see people enjoy this place. When my partner and I come up here and need privacy, I just pick up the teleporter, lol

It was only when reviewing my fieldnotes from this day that I was struck by Rhed's emphasis that the images in her skybox represented, in her thinking, "actual" (not virtual) scenery of Second Life and an "outdoorsy" feel. The referentiality here is complex: Rhed knew that her skybox, outfitted with images of Second Life at ground level, simulated an already virtual landscape, yet this doubly virtual visual field could represent an emotional landscape of pastoral bliss. Sky builds constituted an attempt to forge privacy by removing a structure from the landscape (rather than highlighting its exclusivity with ban lines). Yet sky builds could be incorporated into a social landscape in which both free access to land and "free" sight lines across a landscape virtually embodied an aesthetic of openness and community.

Builds and Objects.

As Linden Lab proclaimed in its advertising during the period of my fieldwork, Second Life was "imagined, created, and owned by its residents." Ownership was more complicated than suggested by this slogan (and in late 2007 the word "owned" was quietly dropped from it). Yet it was true that

less than one percent of things found in Second Life during my fieldwork were created by Linden Lab: it was a resident-built environment organized around the creating and selling of objects. Through building, Second Life was constituted as a commodity economy, with consequences for understandings of selfhood and society. But this virtual world was not simply a reification of neoliberal thought or a showcase for runaway consumerism; it was also a place for forms of barter, donation, and communal ownership. Building was a common activity for many residents, a source of great pleasure and meaning. While often solitary, building could also be a form of socializing: residents would say things like "I found that my building has let me come into contact with many people," or "I started in Second Life by building, and then I stumbled upon friendships."

"Building" occurred when residents used the built-in capabilities of the Second Life program to create "primitives," or "prims" for short. They did this without exiting Second Life; other residents could watch as someone created content, and groups could build collaboratively (figure 4.2). Prims began as a wooden box one-half meter on a side; once "rezzed" their creator could change their size (up to ten meters on a side), transform them into

Figure 4.2. The ability to build in "real time" inworld (image by author).

other shapes like a pyramid or sphere, rotate them, or make them hollow.[13] They could be linked together to create large and complicated structures consisting of hundreds or even thousands of prims. Residents could also place "textures" on a prim to change its appearance, like the images inside Rhed's skybox. Textures were aesthetically important; additionally, a good texture (say, a brick pattern) could make an object appear to be composed of more prims than was the case, reducing download time. Textures exemplified the implicit visual economy of surfaces in Second Life: meaning was located primarily on the surface of objects. Prims could also have "scripts," or computer programs, placed inside them, written in a programming language internal to Second Life, LSL (Linden Scripting Language).[14] Scripts could do everything from make a texture rotate (so that, for instance, a water texture would appear to flow across a prim's surface), produce glowing particles, or offer an avatar a "notecard" containing text and images, to truly complex behaviors like acting as a blackjack dealer or managing a series of rental properties.

When linked to a plot of land, things created from prims were often known as "builds": buildings were builds, but so were waterfalls, parks, forests, and plazas. When prims were not linked to a particular piece of land or were simply smaller, they were typically known as "objects": this referred to items like vehicles and clothing, but could also include sofas or paintings, even partially functional laptop computers and musical instruments. The distinction between builds and objects was heuristic, and either "build" or "object" could be used as an overarching term. Whether composed of one prim or hundreds, when placed on a piece of land objects persisted in Second Life even when their creator was offline, since the data was held on servers, not the creator's personal computer. An object of any size (or a copy of the object) could also be placed in an avatar's "inventory": this was like taking information about an object, with the proviso that in question was a virtual object already composed solely of information. An object in an avatar's inventory was thus a virtual virtual object. When dragged out of an avatar's inventory onto the ground, the object rezzed into virtual existence, and any avatar could then see and interact with it.

Prims were linked to property in that one was allocated 117 prims for each 512 square meters of land one owned. This scarcity function was one means by which Linden Lab worked to ensure that the Second Life landscape rezzed as quickly as possible as one moved across it: a large number of prims in one area would take a correspondingly longer amount of time to download. This scarcity function also shaped land value; a major reason residents wished to acquire additional land was to have their prim allocation increased.[15] It was common to encounter situations like the one I

experienced one day when teleporting to the home of Mick. I was startled to find him standing in the middle of an empty living room:

> ME: Am I still rezzing or is your furniture missing?
> MICK: My furniture is missing. I needed the prims temporarily [to build something else]

Manufacturers of objects like furniture often advertised their products as "low prim": a resident with a small piece of land permitting, say, only 200 prims might balk at a chair composed of 50 prims, since to rez it would consume one-fourth of one's prim allotment. There were a few exceptions to this linkage of prims to parcels of land. Vehicles created from prims could move across the Second Life landscape. Prims attached to an avatar did not count toward the total prims allocated to a parcel. Residents could thus link together small prims to create hair, jewelry, glasses, weapons, shoes, and other items.[16]

Because objects could have permanence only on property, residents without property were largely excluded from building, an important dimension of Second Life sociality. Such residents often termed themselves "homeless." Some residents were homeless because they did not like building or saw no benefit in owning property; others were homeless because they could not afford to own virtual land. During the time of my fieldwork, those without property had limited possibilities for building. If they belonged to a group that owned land in common, they might be able to build on that land. Otherwise, residents without land could build only in "sandboxes," sims set aside by Linden Lab in which anyone could build but within which all builds were deleted after a short period of time (typically, every twelve hours). Sandboxes were significant locations for social interaction; they acted as a commons where persons without shared interests or social networks could interact as they learned how to use the building function of the Second Life program or experiment with a new idea. This emergent social character of sandboxes is one reason why during my fieldwork, a number of landowners marked off portions of their land as small "sandboxes" by changing a setting so that any avatar could build there; this attracted residents to the land, increasing its popularity and "traffic."

Fundamental to Second Life culture during my fieldwork was that textures, scripts, prims, and even entire builds could be sold; Second Life was a commodity economy. Drawing upon the work of anthropologist Marilyn Strathern, Alain Pottage has argued that "in a commodity economy, both persons and things are objectified as things. . . . The agency of persons is therefore understood in terms of an idiom of labor, or productivity, so that personal relations are reified in the composition of things" (Pottage

2001:114).[17] This is an aspect of what in chapter 8 I term "creationist capitalism"; it is a social order constituting relationships between persons through what are held to be prior acts of individual creativity—in the case of Second Life, through building. Yet Second Life was not simply a testament to crass capitalism. The price of any object in Second Life could be set to zero; that is, infinite copies of an object could be given away. Thousands of such free objects circulated through the virtual world, objectified analogues to the acts of altruism I examine in chapter 7.

It may be that despite Second Life's corporate underpinnings and widespread consumerism, a gift economy played an important role. Pottage notes how "gift exchange stages a relation between persons. . . . Persons constitute themselves as such, *actualizing* the *virtual* relations from which they are composed, by anticipating the effect on their counterpart in the exchange relation" (Pottage 2001:114, emphasis added). Through gift exchange—even when no gift is immediately expected in return—virtual relations become "actual," a form of self-constitution that in the Age of Techne is possible entirely within a virtual world. Given my interest in methodology, I am intrigued by how Pottage links this distinction between commodity and gift economies to ethnographic representation: "The 'reflexive position of seeing oneself through others' that is so characteristic of a commodity economy has an 'anthropological companion: concern about the representation of others' (Strathern 1999:252). . . . The reference to gift exchange opens a different horizon . . . an exchange of perspectives . . . in which the interaction itself 'creates' what is observed by supplying its context. . . . In this mode, ethnography itself might be presented as a mode of (gift) exchange" (Pottage 2001:115).

This invocation of gift exchange underscores the social meaningfulness of objects. For instance, the psychologist D. W. Winnicott's notion of "transitional objects" identified objects like a child's teddy bear or blanket that "belong at once to them and to the outside world" (Rudnytsky 1993: xii), working to create a "potential space between the individual and the environment" that is "the place where cultural experience is located" (Winnicott 1993:8). In Second Life, itself a space of potentiality, all objects were transitional objects. They instantiated experientially real places; like objects in the actual world, they could participate in forms of social action and take their worlds "as present or given" (B. Smith 1996:195; see also Latour 2005:70–72).

In virtual worlds like Second Life, transitional objects could be inhabited and embodied in new ways. For instance, for many Second Life residents the analogue to the child's teddy bear or blanket was the home, which acted as a personal virtual place. One resident described how when entering

Second Life "I log in and walk around my house. I love being here." Another noted how "having a place that I can go to when I want is a security for me . . . a refuge even." A third resident, recovering from a serious injury in the actual world, spoke of his Second Life home by saying "I built this place to relax. It's my place, it's mine."

Builds and objects demonstrate the need for a theoretical framework that acknowledges the truly novel implications of virtual worlds without predicating their significance on their being different from the actual world—a theoretical framework I have elsewhere termed an anthropology of similitude (Boellstorff 2005). As late as the 1990s, scholars could conclude "there seems to be a widespread acceptance of Heidegger's claim that the authenticity of dwelling and of rootedness is being destroyed by the modern spread of technology" (Harvey 1993:12). However, residents of Second Life found technology a precondition for virtual dwelling and rootedness; while online they inhabited virtual but authentic places. Building could act as a craft—a form of techne—by which the virtual became real.

Lag

During the conversation at Zazzy's store, Samuel noted that "Joanie's is one of those nice clubs that is low-lag, and now it's lagged by this stupid store. This is just awful." By "lag" Samuel meant that many of the prims making up Zazzy's new store had scripts inside them (for instance, to make the windows change color). The processing power needed to run the scripts was seen to slow down the Second Life program, so that patrons of Joanie's might find themselves dancing out of sync with the music, or might not hear the music altogether. By saying Joanie's club was "low-lag," Samuel implied that Joanie avoided unnecessary scripted prims (for example, she might have chosen a still pool over a fountain requiring scripts to create the effect of moving water), and that Zazzy had not been so conscientious.

Many forms of computer-mediated communication are asynchronic in that people need not be online at once; email is a well-known example. Even in virtual worlds, forms of asynchronic sociality are important to resident experience (Bogost 2004). For instance, Second Life residents often built collaboratively: one person might work constructing a building, then log off; several hours later, another person would log on and add to the building. Despite such asynchronic sociality, a key factor making virtual worlds seem like "worlds" at all was that sociality in them was primarily synchronic (e.g., Fornäs et al. 2002:17). The vast majority of social interaction in Second Life took place between residents who were "inworld" at the same time.

The virtuality of online worlds inheres in their status as places, but it is with regard to time, particularly synchronic sociality, that the actual world intrudes most fundamentally into online culture. As Sherry Turkle noted with reference to playing video games, "in reality there is so much time. Doing some things precludes others" (Turkle 1984:83). One Second Life resident echoed this observation by saying that "you can have a dozen different avatars, but it still doesn't buy you time. There's still only one person at the keyboard." While in many cultures time is experienced as a continuous movement, in all virtual worlds during the period of my fieldwork cybersociality was bracketed by "logging on" and "logging off." This distinction between online and offline may be the most consequential boundary-marker between the actual and the virtual. Between logging on and logging off was the "session," the period of time during which, in Turkle's terms, the virtual precludes the actual. If sitting in a room in Second Life talking to three other people, it could be that in the actual world my conversation partners were located in Brazil, Japan, and Greece. However, for the sociality to be synchronic, all four of us had to be inworld *at the same time*.

One of the most common topics of incidental discussion during my fieldwork was "lag," a sense of disjuncture between actual-world time and virtual-world time. For instance, one day I was participating in a trivia game when one resident shouted out an answer. Then another resident complained "The lag ate me! I was going to say that!" In other words, in the actual world this person knew the answer to the trivia question, but her avatar was unable to express her thoughts in the virtual world because of lag. Almost every period of time I spent in Second Life was marked by lag being mentioned in some offhand manner—textures taking a long time to rez, avatars temporarily without clothing or jewelry, jerky bodies strolling down an urban street. As one resident put it, "small talk about lag is like talking about the weather in rl." The phenomenon of lag may seem utterly boring compared to the sensational topics that dominate the literature on virtual worlds—gender swapping, cybersex, virtual sweatshops. Often, however, ethnographic research discovers its greatest insights in the most innocuous, tacit dimensions of social life. As time out of virtual joint, lag provides a socially salient means to ethnographically explore the coconstitutive status of temporality and place. Lag reveals how a problem with notions like "time/space compression" (Harvey 1989; see also Fornäs et al. 2002:9) is that time resists compression in a way that place does not; the "death of distance" (Cairncross 2001) does not correspond to a death of time. It is not always the case that "Internet time" accelerates our experience of time (Gleick 2000); it can lead to the form of deceleration experienced in virtual worlds as lag. Globalizing forces can lead

to forms of "temporal integration" requiring, for instance, computer technicians on different parts of the globe to labor at the same time, producing a temporal inequality where some workers have their sleep schedules disrupted and others do not (Aneesh 2006:84–99). This robustness of time in relation to space is central to the constitution of virtual worlds.

Scholars of cybersociality have discussed lag since the days of MUDs (e.g., Carlstrom 1992; Shah and Romine 1995:27), noting how lag reveals "the extent to which time delays in communication disrupted the feeling of shared space" (Kendall 2002:7). In the context of Second Life, lag originated in the truly immense amount of information represented by its land, the objects on that land, and the avatars inhabiting that land. By early 2007 there was by one estimate about one petabyte (a million gigabytes) of data in Second Life. At that point, were all of the books in the Library of Congress digitized (about 30 million volumes), it would have been equivalent to only about 2 percent of the data stored inside Second Life.[18] The subset of this data located in the proximity of any avatar had to be continually rezzed into existence as that avatar moved about the world. During the period of my fieldwork the Second Life program favored rezzing the landscape first, then avatars, followed by prims (builds and objects). As a result, while lag could occasionally take the form of a delay in the appearance of text chat or in a sound being heard, it most often manifested itself as a longer-than-normal amount of time for builds and objects to rez: an incomplete landscape, a failure of the visuality so important to virtual worlds. Technically this was a decline in the FPS or "frames per second" rate at which the visual field was updated. Residents could only know the exact FPS if they opened a special window called the "Statistics Bar." According to residents who looked at this information (and based on my own experience), the best possible FPS one could get in Second Life during the period of my fieldwork was around 22; 15 to 20 was considered good, below 10 less so, and anything below about 5 FPS would be experienced as lag. Many residents never bothered opening the Statistics Bar: lag was primarily experienced rather than quantified. The point at which a low FPS became interpreted as lag varied: some residents experienced even as slight delay as lag, while others, particularly those with substandard Internet connections or older computers, were more accustomed to delayed rezzing and would not term it "lag" until the delay became quite pronounced.

Lag existed because Second Life, like all "massively multiple" virtual worlds during my fieldwork, was based on a "client-server" architecture, where most of the virtual world was housed on servers rather than the personal computers of residents (Castronova 2005:82). Were the virtual

world stored on individual computers it would not be persistent; parts of the world would disappear as residents shut down their computers. Client-server architecture avoids this problem but requires that the virtual world be accessed through the Internet—and it is this fact that made lag such an issue.[19] "Sim load" lag, the primary form of lag in Second Life during my research, referred to the processing power needed for any sim and thus the server supporting it. For instance, as more residents entered a sim it would take more time for information about objects in the sim to be streamed to those residents' actual-world computers. As the number of residents in a sim increased, lag would become noticeable. In other words, lag increased in proportion to synchronic sociality. When I once heard someone new to Second Life ask "are some parts of SL laggier than others?" a more experienced resident replied "most definitely; look for something relatively quiet." Any large event—a dance at a club, a live music performance, a class on "how to build," an inworld "town hall" meeting with Linden Lab staff—would experience lag, even when residents asked each other to remove objects attached to their avatars like shoes and jewelry (particularly "bling," jewelry with embedded scripts that emitted particles). As in the example of Zazzy's store, lag could also be caused by scripts, since they had to be downloaded and then executed inworld. For this reason it was common to hear things like a club manager announcing: "whoever's firing that damn gun cut it out—those things lag sims down."[20]

Lag was relative, not absolute; while most forms of lag slowed everyone down equally in one virtual locale, all lag was relative to the actual world. The continents and islands making up Second Life did not need to be located in relation to Europe, North America, or Japan: there was no expectation that the Second Life map should correlate with any actual-world geography. In contrast, the default time for the clock constantly present in the upper-right hand corner of the Second Life program was "Second Life Time," but this was identical to Pacific Standard Time, the time zone in which Linden Lab's offices were located. The clock could be changed to any time zone, but had to correspond to some actual-world time. Once while dancing at a club, I noticed the following exchange:

PERSON A: Is anyone in Northern California by any chance?
PERSON B: <~~ Nor Cal
PERSON A: How's the weather? I have to pack for Thurs-Sun.
PERSON B: Hottest July on record here.
PERSON C: I WISH this was California, because then it wouldn't be 1:00am

In this example "California" first indexed an actual-world location with nice weather but shifted to indexing a time zone, and it was temporality that made it attractive in relation to Second Life. It was not necessary to hold events in two distinct geographical parts of Second Life for residents whose actual-world locations were in the United States versus Europe.[21] In contrast, "European time" events were common from the beginning of my fieldwork: a club might hold a dance at 8pm Pacific Standard Time, and another at 1pm Pacific Standard Time so that Europeans could attend during their evening. While residents from across the actual world could be found in Second Life, the predominance of North Americans in its early years meant that residents from Europe, Asia, and elsewhere sometimes complained of getting "left out" because important events would be scheduled in the middle of their nighttime. One resident spoke of being "always jet-lagged from living evenings on Pacific Standard Time," which has become the new Greenwich Mean Time for many virtual worlds.[22]

This temporal inequality was distinct from lag, but both reflected how time resisted virtualization in a way that place did not. It is therefore incorrect to assume that "everything in the new computer world is temporary and fleeting. . . . Time is now a resource, not a reference point" (Rifkin 1987:155). Virtual worlds create a gap between virtual and actual not just in terms of place, but in terms of time as well. But where the gap with regard to space is typically intended and desired, the gap with regard to time is not. The gap with regard to space constitutes the binarism between virtual and actual; the gap with regard to time threatens it. Even when place becomes virtual, time remains actual. In a sense, techne produces an "intratemporality" that links actual and virtual with regard to time (Stiegler 1998:4). This touches on longstanding questions of time in human sociality. In *Being and Time* (Heidegger 1962), Martin Heidegger worked to show how "different ways of being . . . are all related to human being and ultimately to temporality" (Dreyfus 1991:1). To simplify one aspect of a complex philosophical argument, Heidegger distinguished between the "thrownness" of everyday life and what he termed "breakdown." One of his favorite examples of this was that of a man hammering a nail: in the activity of doing so, the man is not aware of the hammer as such, only of the activity of hammering. It is only when, for instance, the handle of the hammer cracks that a moment of breakdown ensues and the hammer as an object enters conscious perception. This breakdown "necessitates a shift into a mode in which what was previously transparent becomes explicitly manifest. Deprived of access to what we normally count on, we act deliberately, paying attention to what we are doing" (Dreyfus 1991:72).

Lag is nothing less than an interruption in the thrownness of temporality, a breakdown of time made possible by the gap between virtual and actual. In this sense, lag is an annoyance but is also a kind of gift from virtual worlds; it represents a moment of breakdown demonstrating the cultural construction of time. Lag is not like waiting for a bus to arrive or an email to download; it is experienced not as a delay *in* time, but a delay *of* time, a breakdown in the thrownness of time. Concerns with lag may reflect ways in which virtual worlds contribute to a "synchronic society" that "sets high value on the human engagement with time" (Sterling 2005:53). During my fieldwork, Linden Lab updated the Second Life program approximately once a week, and residents expected that the technology used to create and sustain Second Life would continue to advance. Yet everyone knew that no possible future technology would allow one person in Chicago at 1:00 p.m. to be in any virtual world simultaneously with another person in New York at 5:00 p.m. (where the time-zone difference between those cities is one hour). When one Second Life resident—living in the United States while her boyfriend lived in Europe—said "we have time issues," she was referring to this problem of simultaneity, the resistance of time to virtualization. She did not have "place issues" because Second Life created a virtual place she could share with her boyfriend. When exchanging email with her boyfriend, these "time issues" did not exist: but in virtual worlds, shared *virtual* place assumes shared *actual* time.

Afk.

One day in Second Life, I was dancing at a club with my friend Denny when we saw a mutual acquaintance, Jeff, at the other end of the room. We walked over and said "hello"; Jeff did not reply, but there was no apparent lag in the club. Neither of us took offense; Denny typed "looks like he's afk" and we continued to dance. About five minutes later Jeff suddenly turned to face us: "I'm back, was afk on phone." "No problem, wb [welcome back]," Denny replied.

This was an incident of "afk" or "away from keyboard." (A related term is "brb" or "be right back.") This state of affairs, where a person leaves their computer without logging off, so that their avatar remains, was commonplace in Second Life and other virtual worlds during my fieldwork. In many actual-world cultures, to have someone stare at you blankly for two minutes when you approach them would be interpreted as rudeness or intoxication. In Second Life, afk occurred so often—yet was so rarely the topic of explicit discussion—that like lag, it might appear to be no more than a distraction.

No one came to Second Life so that they could go afk. Yet this apparently peripheral phenomenon strikes at the center of questions of selfhood and sociality in virtual worlds. Afk and lag are both apparently banal aspects of cybersociality with important theoretical implications for questions of place and time.

Like all aspects of virtual worlds, afk has a history. It is not really possible to be afk from a newspaper or other print media: afk presupposes synchronic virtual sociality. A busy signal is not really afk, but just as telephone conversations can be seen as the first form of cyberspace (Sterling 1992:xi), so the dawn of afk was probably some unrecorded, mundane incident at the beginning of the telephone era where someone in the middle of a conversation set their receiver down on a table without hanging it up to answer the door or pour tea from a kettle in the next room. Although "afk" is a contraction of "away from keyboard," what afk really means is "away from virtual world, but with virtual self still present." Before it even had a name, observers noticed the phenomenon of afk in early text-based virtual worlds: "it is often the case that MUD players are connected but idle, perhaps because they have stepped away from their terminal for a while. Thus, it often happens that one receives no response to an utterance in a MUD simply because the other party wasn't really present to see it" (Curtis 1992:133).

During my fieldwork Second Life was accessed through a computer program available as a free download from Linden Lab. Once the program was activated, you could access Second Life from your computer after entering the name and password of an avatar. As long as the program was running, your avatar existed in Second Life and could be seen (or bumped into) by anyone in the avatar's proximity. If you selected "quit" and shut down the Second Life program, your avatar disappeared from Second Life until the next time you logged on (though any objects or buildings you created would persist). However, if you got up from your chair in the actual world without shutting down the Second Life program, stepping away for a few minutes to use the bathroom or send your child off to school, your avatar did not disappear from Second Life. It remained there, standing and looking around, sitting on a sofa, or dancing at a club thanks to an automated animation. After about three minutes the avatar's head would bow down and the word "away" appear over it;[23] after about fifteen minutes the program would shut down of its own accord, but sometimes the program failed to do so, or residents would install a program to click the mouse button every few minutes, fooling the program into thinking they were present.

There were many reasons for going afk, which could last from less than a minute to hours. Some had to do with actual-world embodiment: a need

to eat or sleep. Often Second Life residents went afk for domestic reasons: to fix dinner for their families, dust the furniture, or spend time with an actual-world spouse. Persons entering Second Life while at the office would go afk to attend a meeting or use the office computer for work-related activities (compare Kendall 2002:23–29). Those who worked at home could also alternate between Second Life and other programs on their computers. Residents spoke of going afk to check their email, surf the web (including looking at Second Life-related websites or blogs), or use Photoshop to design clothing to sell in Second Life. Multitasking in and out of virtual worlds in this way dates back to the earlier days of MUDs (e.g., Turkle 1995:184), revealing how "windows have become a powerful metaphor for thinking about the self as a multiple, distributed system" (Turkle 1995:14). Uses of "afk" for this kind of multitasking underscore how "away from keyboard" often did not literally mean being away from the keyboard; rather, it meant being away from virtual sociality.

I have emphasized that during the time of my fieldwork one of the most fundamental distinctions in Second Life culture was being online (or "in-world") versus offline. There were many websites associated with Second Life, but residents clearly understood the difference between such sites and the Second Life program itself, which was either on or off. In the phrase "away from keyboard," the term "keyboard" stood in metonymically for the personal computer as a whole. It referenced the presence of a person in front of their computer, and by implication their presence in a virtual world. Afk revealed the complexities of presence, but multiple redeployments of the virtual/actual binarism were occurring, not the erasure or transcendence of that binarism. While the logged-off resident was not present even in a virtual sense, the afk resident was actually absent but virtually present—we could even say "virtually virtually present." This explains why it was that during my fieldwork, many residents used the notion of afk metaphorically within Second Life itself. For instance, if someone was online and received an im (instant message) demanding an involved response (a renter having trouble with their property, a partner in need of comfort, etc.), it was common to say "I'm going afk" with the understanding that the person was not actually stepping away from their keyboard or even minimizing the Second Life program, but would be focused on instant messaging privately to another person and thus would not be responding to chat in their avatar's vicinity. As one resident observed, afk could just mean "temporarily distracted" and "cannot be taken literally anymore." In fact, there was a continuum with afk at one pole and a focus on one's avatar's immediate environment on the other: this is why one encountered phrases like "sorry, had to go afk-ish." One's avatar

was present at any point on this continuum; what varied was the presence of one's actual-world self in the virtual context. This is why one resident noted that there was a need to define afk with care, because "I'm always watching chat unless I say otherwise, but that doesn't mean I'm always responsive."

Confusion could even arise as to whether a particular invocation of afk was meant to index the virtual or actual world. I recall when I was once sitting with Trishie, a resident living in Second Life as a child. We were in her playhouse when I noticed some plates with sandwiches sitting on top of a toy table:

TRISHIE: Mommie left us lunch.
YOU: Yum!
TRISHIE: Yes, it's good
TRISHIE: Brb, gotta check my meatloaf.
YOU: Ok

In this interaction, Trishie and I were talking about virtual food in her playhouse when she suddenly said she had to go afk and would "be right back" (brb) because she had to check an actual-world meatloaf in an actual-world oven.[24] Trishie had told me earlier that in the actual world she was a mother with two children; she was preparing food for her actual-world children while her virtual-world parents had left food for her in Second Life.

Regardless of the degree to which someone went afk, unless they logged off of Second Life (or the program logged them off automatically), at some point the person would return. Residents typically said they were "back"; "welcome back" or "wb" was thus a common response to someone who had been afk. This notion of "back" implied that the person and avatar, separated temporarily due to being afk, were reunited: it signaled that the actual was once again present in the virtual. There was often a moment of readjustment after being afk, marked by activating the "history" window and reading the chat it had recorded. Since during the time of my research text-based chat was the primary means of communication, it was possible for persons who had been afk to catch up on a conversation from which they had been actually absent but virtually present, as revealed by statements like the following:

LUCY: sorry, back :)
LUCY: <scrolling>

Here Lucy was telling those around her to be patient; she was no longer afk, but needed a few moments to read through the chat history so that she could catch up on the conversation. Had Lucy logged off this would not

have been possible, since chat was only recorded within a limited radius around a (logged-in) avatar.[25]

Afk could even be turned to economic uses, as in the case of "camping." For much of the period of my fieldwork, it was common to see a large number of green dots on the map, teleport to see what was happening, and find a group of people sitting on chairs or "dance pads" indicating how long a resident had been stationary and the amount of money to be paid as a result. This phenomenon—camping—originated in the notion of traffic. As noted earlier, traffic was a number attached to a piece of land based on how many people were spending time on that property: the more persons spending time on the property, and the more time each person spent there, led to a higher traffic score. Linden Lab would pay cash rewards to properties that received the greatest amount of traffic, based on the reasoning that high traffic reflected success in creating content attractive to Second Life residents. At some point in 2005, Second Life residents figured out how to script objects that would pay residents a token amount for spending time on a property (typically three lindens, or about one penny, every ten minutes); as a result, the property in question could in theory receive a high-enough traffic score to receive a cash reward from Linden Lab, only part of which went out to reimburse those camping on the property.[26] Persons who were camping—some for twelve hours or more—were typically afk for much of that time, but camping could also serve as a social venue where participants chatted with each other or caught up on their ims.

Afk is so fundamental to cybersociality that ways to regularize it are often woven into virtual worlds. Linden Lab programmed two forms of afk into the Second Life platform by providing commands to "set away" and "set busy." "Set away" caused the word "away" to appear over one's avatar, whose shoulders and head then drooped as if sleeping, in the same manner that occurred after not moving the mouse or typing for a period of time. This made one's avatar visibly afk immediately (for instance, at the moment one heard one's actual-world telephone ringing or one's actual-world kettle of water beginning to boil), avoiding the interval when one went afk but one's avatar still appeared unchanged. This was a form of courtesy to other residents, so that they knew the person in question was actually absent though virtually present. The second form of afk woven into the platform, "set busy," caused the word "busy" to appear over one's avatar: chat and ims were hidden, and teleport invitations and inventory offers declined. In effect, "set busy" acknowledged that a metaphorical form of afk could exist internally to Second Life—it was used, for instance, when a resident was building and might not be able to immediately respond to someone who

approached them and said "hello." The distinction between these two commands reflects an understanding that someone could appear afk because in the actual world they had stepped away from their computer, or because they were engaging in some virtual-world task that took their focus away from their avatar's immediate environment. I was struck by how rarely these two built-in functions were used. Broad cultural understandings of afk, in particular a tolerance for persons not responding immediately to a greeting, made these built-in functions somewhat superfluous.

The phenomenon of afk revealed how in Second Life and virtual worlds more generally, people were not expected to always be "present"; they could be "away." Afk is not the same thing as walking out of a room in the actual world, because with afk one's avatar remains and contributes to the social situation. That is why residents who were afk could even become the focus of joking attention during my fieldwork. For instance, if at a dock fishing, an afk resident's friends might push the resident's avatar off the dock into the water (causing no lasting harm, but leaving the avatar submerged among the fish).[27] Another common practical joke was to arrange objects and other persons around an afk avatar so that it appeared the avatar was having sex, vomiting, or getting ready to stab someone with a knife. Snapshots of the hapless avatar could then be circulated to further tease the resident upon their return from being afk. Residents told stories of going afk to make dinner for their actual-world families, then finding that "they had made my bent-over avatar look like he was doing all sorts of evil things I won't mention, and took pictures!" Such jokes could also take place at the level of chat, as in the following excerpt, when I got up from my computer to snack:

> Joe: Tom are you here?
> Joe gets out a pen and draws all over Tom
> Joe: hehe
> Tom: yes sorry was afk

This shows how the idea of afk can be put to conscious use. From the early days of MUDs, afk could be incorporated into forms of cybersociality: "This commonly understood fact of MUD life provides for the MUD equivalent of pretending not to hear. I know of players who take care after such a pretense not to type anything more to the MUD until the would-be conversant has left, thus preserving the apparent validity of their excuse" (Curtis 1992:133). During my fieldwork it was common for someone to simply stop typing in an uncomfortable situation, leading those around them to conclude they had "gone afk" due to some actual-world interruption. Residents sometimes explicitly scheduled mundane actual-world activities

like laundry to coincide with events in Second Life, so that they could run back and forth to the washing machine: as one resident emphasized, "afk works so well because people do not know what we are doing [in the actual world]." Residents sometimes said they wished they could "go afk" in the actual world to escape uncomfortable situations, but knew this was not possible: "no one ever says 'afk' in real life." Such conscious uses of afk reflect the consequentiality and durability of the virtual/actual binarism: the boundary between virtual and actual is *constituted and reinforced* by movements between them. Like lag, afk reveals how virtual worlds are places in their own right, temporally linked to the actual world but constantly at risk of falling out of synch. Indeed what I term the "afk test" provides one of the clearest means for identifying virtual worlds: if you can go "afk" from something, that something is a virtual world.

Immersion

Lag and afk are not just tardiness and daydreaming online; they are novel aspects of cybersociality that reveal how configurations of place and time constitute virtual worlds. These mundane phenomena illuminate implications of "immersion" and "presence," two common terms in the scholarly literature concerning online sociality (Castronova 2005:80). For instance, it has been possible for afk to be incorporated into cybersocialities since the rise of MUDs because afk persons are connected-but-idle in a specific sense: the person is absent but their avatar remains present. If both person and avatar go away, the person is said to be "logged off" or "offline," not afk. The idea of "*away* from keyboard" encodes assumptions about virtual agency and selfhood embedded in "awayness," the unacknowledged antonym to "presence." Afk ethnographically demonstrates the possibility—indeed, the constitutive ubiquity—of *presence without immersion*. This decoupling of presence and immersion—the appearance of a gap between them—is one hallmark of the virtual.

In the study of virtual worlds, "immersion" historically referred to a sense that sensory experience of the actual world was sufficiently muted, and sensory experience of a virtual world sufficiently heightened, so that persons felt they were no longer in the actual world. This notion of an "immersive virtual environment" (Blascovich 2002:128) has been associated with virtual reality technologies like visualization helmets and data gloves (Schroeder 1996). The ethnographic materials I have presented thus far indicate how this notion of immersion does not accurately characterize the dominant cultural logics at play in Second Life; it partakes of the

"immersive fallacy" that "the pleasure of a media experience lies in its ability to sensually transport the participant into an illusory, simulated reality" (Salen and Zimmerman 2004:450). In virtual worlds, "virtuality" refers to sociality, not the senses.

The example of voice provides a useful example with which to consider these imbrications of virtuality, immersion, the senses, and the social. During the period of my fieldwork, communication in Second Life was primarily text-based. The virtual world was full of ambient sound (wind, footsteps, waterfalls, a typing sound as people chatted), and Internet radio or other sound could be streamed into specific parcels of land, but voice was not used for everyday communication. The question as to whether or not Second Life should acquire voice capabilities was the topic of heated debate and even protests (Au 2007c; Llewelyn 2007; see figure 4.3).[18] At times this debate touched upon questions of disability: people who had trouble typing wanted voice, while those who were hearing-impaired did not. (I never saw visual impairment discussed, reflecting how vision was a near-precondition for virtual worlds during the time of my fieldwork.) For the nondisabled, the controversy often touched upon questions of language. Many residents, particularly those living in countries where languages other than English

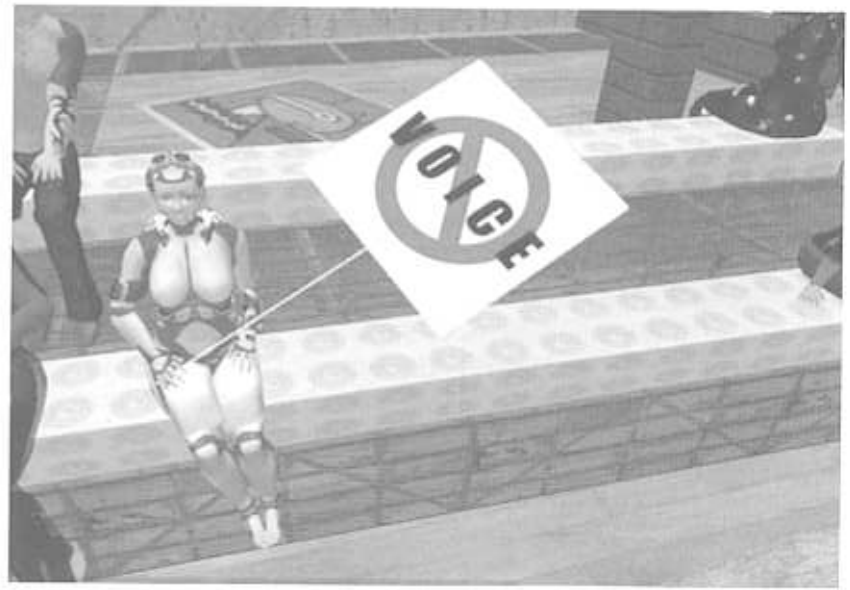

Figure 4.3. A sign protesting a proposal to add voice capabilities to Second Life (image by author).

dominated, understood spoken English only with difficulty, but could communicate effectively in written English. Residents sometimes described how "it's fun to convey nuance in typing," an attraction to textual communication that extended, for instance, to many dominant/submissive sexual relationships, where for the submissive partner carefully crafted chat could demonstrate obedience to their dominant partner.

What made debates about voice particularly impassioned were questions of presence and immersion that implicated the boundary between virtual and actual. Some residents felt voice would facilitate greater intimacy. For instance, Kimmy recalled how, after several months of increasing closeness to her Second Life boyfriend Jax, they decided to speak to each other using third-party software: "The first thing Jax said to me after he got his microphone working was 'can you hear me?' I said 'yeah' and he goes sweeeeeeeeeeeeet lol. It was cool how he said it, cause right then I could tell he was the same person he was on Second Life. Just the whole tone of his voice."

However, other residents felt that voice would damage a border between the virtual and actual that they wished to maintain—that it would "destroy the fantasy." When one resident said "I think voice will be doom," it was to this border that he was referring. Many worried that even if voice were optional or one's voice could be electronically altered, the choice not to use it would have social implications. One resident who had participated in a different virtual world that had added voice capabilities described how her refusal to use voice was taken to mean that she was actually a man ("what are you hiding?" she was asked); another resident who had participated in a different virtual world emphasized how he "missed out on quite a bit because I didn't have voice [capabilities on my computer]." As one resident put it, "voicechat is an extension of rl"; as "a reminder of rl stuff some people would rather leave behind," it would blur the line between virtual and actual in an undesirable fashion: "for some people, it can break the illusions that they create in sl . . . to hear someone's real voice . . . it can ruin everything." In this view "if you introduce reality into a virtual world, it's no longer a virtual world: it's just an adjunct to the real world. It ceases to be a place, and reverts to being a medium . . . [and] voice is reality" (Bartle 2003a; see also Castronova 2005:89–90). Voice was thereby assumed to have a kind of direct link to the actual, a link assumed to be missing for visual phenomena (textures based on actual-world wood or stone, avatar skins derived from digital photographs of actual human skin) or physical phenomena (gravity, day and night, the distinction between land and water). Such phenomena were not necessarily "reality" when appearing in a virtual world, but voice was widely assumed to be irredeemably actual.

The debate over voice underscores how sensory input can be important even in virtual worlds that do not employ "virtual reality" technologies like helmets or data gloves, but it also shows how questions of sensory input have been subordinate to an understanding of immersion in social terms. Voice capabilities have not been needed for Second Life to form as a virtual world with its own culture, and could even lead to fragmentation: "I've found that voice chat splits people in two or three groups," one resident noted. "You'll have the ones who use only voice, the ones that use only text, and the people who don't care what they use." There is more than one way for a person to be "immersed": "Either the sensory inputs are so good that you actually think the crafted environment you're in is genuine, or, you become so involved mentally and emotionally in the [virtual] world that you stop paying attention to the fact that it is only [virtual]. *It turns out that the way humans are made*, the software-based approach seems to have had much more success. . . . As we head into the twenty-first century, the dominant paradigm for virtual reality is not hardware but software" (Castronova 2005:5, emphasis added).

While in the 1990s virtual worlds were commonly seen as "the form of reality that VR [virtual reality technology] enables" (Balsamo 1995a:348), it is now clear that virtual immersion is above all a social product, as Castronova's invocation of "the way humans are made" suggests. "Virtual" has come to index the cultural practices I term techne; only secondarily does it reference the striking graphics and creative possibilities that make such an impression upon the newcomer to online worlds. An entailment of this cultural logic is that single-player video games or three-dimensional design programs are less definitively virtual worlds, despite their graphic capabilities. What such video games and design programs lack is social immersion. At the intersection of place and time, social immersion comes into being as the constitutional ground for homo cyber.

As virtual worlds increase in size, questions of immersion will complexify. For instance, as my research progressed debates using phrases like "immersion versus augmentation" or "world versus platform" appeared with greater frequency (Bennetsen 2006; see also Almond 2005; Ondrejka 2004b). These phrases reflected a potential conflict between two cultural logics for virtual worlds. A logic of immersion predicated virtuality on a one-way transfer of analogies from the actual to the virtual. A logic of augmentation accepted analogical traffic between the virtual and actual; it presumed that virtual worlds could be one among many "platforms" for computer-enhanced sociality and work (in line with things like email or a web browser). In this view, virtual worlds could augment actual-world capabilities, social networks, and concepts. Like many binarisms, the dichotomy

of immersion versus augmentation identifies two extremes that rarely manifested themselves in daily life. It marks stances toward virtual worlds that shade off into each other or even shift independently: more immersion does not necessarily mean less augmentation. Both assume a constitutive gap between the virtual and actual. Even an "augmentationist" understanding of virtual worlds acknowledges forms of immersion; indeed, it sees the actual world as becoming at least partially immersed in the virtual. In the Age of Techne, the most significant shift is not from augmentation to immersion or vice versa; it is the shift from sensory immersion to social immersion as techne's assumed effect.

Presence.

Presence is often identified as a characteristic making virtual worlds "worlds" at all, even those that are solely textual (Markham 1998:17). Like the notion of immersion, the notion of presence is founded in a relationship to place and time: presence assumes both "the present" and conceptions of locality. It has been linked to immersion, so that an "immersive virtual environment" can be equated with virtual worlds "that organize sensory information in such a way as to create a psychological state in which the individual perceives himself or herself as being present or having 'presence' in" them (Blascovich 2002:129). As with immersion, most research on presence has focused on virtual reality rather than virtual worlds, but even in this literature there is a recognition that presence can result from "social richness" as well as "perceptual realism" (Schuemie et al. 2001:184; see also Heeter 1992; Lombard and Ditton 1997; Towell and Towell 1997:590).[29] As a result, "presence is one of the most elusive and evocative aspects of virtual systems—and yet it forms the very foundation on which immersion is built. . . . This grounding of presence not only consists of embodied practice, but of embodied *social* practice" (Taylor 2002:42, emphasis in original; see also Schroeder 2006).

The phenomenon of afk highlights the role of presence in virtual worlds. While afk is distinctive to virtual worlds, specifying this distinctiveness can be difficult: "people daydream, sleep, and imagine themselves in other settings even while in a given physical environment. . . . Individuals 'tune out' others in their physical presence all the time" (Blascovich 2002:129–30). The difference is that the afk person is not just daydreaming. They are *away*; they have shifted their presence to the actual world, or (in secondary meanings of afk) elsewhere in a virtual world.

Just as there are gradations of afk, so there are gradations of presence. For instance, during the time of my fieldwork there was a broad understanding that communication using ims involved less presence than communication within visual range using chat. Virtual place signified intimacy. For instance, one day I was im-ing a friend when they suddenly teleported to my location, saying "I just wanted to say hi in person—it feels so rude to only talk through ims."

While it has often been thought that emerging technologies will lead to inauthentic forms of placelessness (Relph 1976), it is clear that virtual worlds come into existence through a social field constituted by practices of place and time (Tuan 1977), even phenomena like lag and afk that are forms of breakdown in the thrownness of virtual place and time. These practices, even afk, are all forms of techne. The afk person leaves the keyboard in some sense; there is no equivalent way to leave one's body in the actual world, except perhaps as a ghost. It is thus no coincidence that an avatar which, due to a program error, remains after a person has logged off is often called a "ghost." The afk person haunts the virtual world of which they are a part. Afk straddles the border between online and offline; it is a kind of ghostly absent presence. In *Specters of Marx*, Derrida set forth the idea of a "hauntology," a theory of haunting (rather than an "ontology" or theory of being), linking it to the virtual and to techne: "the differential deployment of *tekhne* . . . obliges us more than ever to think the virtualization of place and time, the possibility of virtual events whose movement and speed prohibit us more than ever . . . from opposing presence to its representation" (Derrida 1994:169). Derrida wished to show that "the virtual is essential to the real, that 'ghosts' haunt the full presence of the real" (Poster 1999:50).

From such a hauntological perspective, afk is not a state of exception, but a specific "metaphysics of presence" (Derrida 1974:131). It can even be seen as the essence of culture in virtual worlds, the point where immersion and presence meet. When persons are in a virtual world, they are still embodied in the actual world and so are always already "away from keyboard," even when typing in front of their computer screens. The resolution of "be right back" is endlessly deferred: residents never completely "come back" to a virtual world because they were never completely there in the first place. This reveals the affinity between ethnography and the virtual, since ethnography is based upon the paradoxical method of participant observation, an "awkward presence" in the culture of those being studied (Strathern 1991:26–27). Phenomena like lag and afk indicate how "the ultimate lesson of the 'virtual reality' is the virtualization of the very 'true' reality: by the mirage of 'virtual reality,' the 'true' reality itself is posited as a semblance of itself, as a pure symbolic construct" (Žižek 1992:135). Virtual worlds show how we have always been virtually human.

Chapter 3.
Method.

1. See Holmes 1987:7; Orans 1996:19.

2. Mid-twentieth-century structuralists, for instance. See Kurzweil 1980; Lévi-Strauss 1963.

3. My "first land" and the first Ethnographia was built in the Kane sim; in February 2005 I moved to the Dowden sim, where I built four different versions of Ethnographia, partially because I learned how to make interior spaces work better for interviews and discussions, but primarily because I enjoyed building.

4. Toward the end of my fieldwork, Linden Lab began distinguishing "the grid" from "the world," "the grid" referring to the platform that could be used, in theory, to create virtual worlds other than Second Life.

5. One aspect of Second Life "beyond the platform" that I do not draw upon in this book are "meetups" residents would occasionally hold in the actual world. Such meetups were rare and only a tiny fraction of Second Life residents ever attended them. The only exception to this was that I attended the 2nd "Second Life Community Convention" in San Francisco in August 2006 (an event sponsored by Linden Lab, composed primarily of expert panels discussing various aspects of Second Life).

6. I did not pay residents for their involvement in interviews or focus groups, and was never asked for such compensation.

7. In a sense, leaving an actual-world fieldsite is like going offline, but since one can always log back into a virtual world, one never has to take permanent leave of one's fieldsite. I found that in order to write this book I had to drastically reduce my presence in Second Life for several months, which frustrated many of my fellow residents.

8. This has become a fairly standard procedure in ethnographic work on virtual worlds; see, for instance, Campbell 2004:48; Kendall 2002:241.

Chapter 4.
Place and Time.

1. For the purposes of my analysis I treat "place" and "space" as synonyms, although some geographers and others create analytical typologies that distinguish them.

2. As virtual worlds have become more graphical they have drawn more extensively from video games: the term "video" (from Latin *videre*, "to see") signals the importance of vision in their constitution. Only some virtual worlds aimed at children remained two-dimensional, perhaps because of their similarity to cartoons.

3. At this point what Crary termed "fabricated visual 'spaces'" (1990:1) were best-known through video games. There have been many conventions for representing place in video games, from "one screen, contained, with wraparound" formats used in video games like Asteroids (where a object disappearing off one side of the screen reappears on the other side), to various forms of "scrolling" (one of the first examples of which was the video game Defender) where the screen moves from side to side or even in four directions, to a truly "interactive three-dimensional environment" (Wolf 2001:65). At the time of my research into Second Life there were some popular two-dimensional graphical virtual worlds, but three-dimensional environments were already the norm. See Wolf 2001 for a detailed typology, and also Poole 2000.

4. Since virtual worlds always exist in relation to the actual world, they can be seen as examples of what Foucault termed a "heterotopia," a place seen as set apart from everyday life and so "a sort of place that lies outside all places" (Foucault 1997b:352). In the relation between utopian ideals and a heterotopia "I see myself where I am not, in an unreal space . . . a sort of shadow . . . allowing me to look at myself where I do not exist" (ibid.).

5. The first such "snow sims" were added on July 19, 2004.

6. See Neva 2006b. Islands had become popular for a range of reasons, including the fact that guidelines concerning landscape were easier to enforce (residents of islands typically rented parcels from a single landlord or group of managers, who could ban avatars if they wished).

7. See Ondrejka 2004c:5. PG sims were supposed to be free of anything inappropriate for a PG movie (particularly in terms of sexual context and violence), while "anything goes" was the rule for an M sim. While this was a vague distinction and not actively enforced, land in M sims was worth more than land in PG sims. The absence of "G" sims reflected the larger absence of children from Second Life, save the segregated "Teen Grid."

8. See Ondrejka 2004d and http://history.secondserver.net/index.php/Telehub, accessed October 17, 2006.

9. A handful of telehubs were created in the air. It was possible (and remained possible throughout the period of my fieldwork) to have someone "offer a teleport," which would teleport the invited person directly to a specific location.

10. Mainland telehubs were renamed "infohubs" and were to be used as information kiosks, but were not popular.

11. As of January 12, 2005, with the release of version 1.5.1 of the Second Life program, dwell was renamed "traffic," but the term "dwell" was still used quite often. The system of awarding financial incentives to property owners based on dwell/traffic was phased out entirely as of June 13, 2006.

12. Occasionally residents whose properties were partially or wholly on a sea or other waterway would build a structure under the water for the same reason, covering the outside of the structure to camouflage it. During the time of my fieldwork it was not possible to build underground.

13. An update during the final phases of writing this book (1.16) allowed for "sculpted" prims that could take a range of shapes determined by the textures applied to them. Residents also found ways to create a limited range of prims much larger than the official limit of ten meters on a side.

14. Such internal programming languages have been available in some virtual worlds since the early 1990s; LambdaMOO, for instance, had such an "embedded programming language" (Curtis 1992:122).

15. To count toward the prim allocation of a particular parcel, such additional land, sometimes called "prim land," had to be located in the same sim.

16. Basic clothing like shirts and pants were not created from prims, but were a kind of texture applied to the body of an avatar.

17. Strathern and Pottage are obviously also drawing upon traditions of Marxist thought in this analysis. For readers without a background in social theory, it bears emphasizing that social scientists find Marx's analysis of capitalism useful without thereby endorsing communism, just as psychologists and others can draw upon Freud's thought without accepting his quite dated understanding of the human psyche.

18. Gwyneth Llewelyn, personal communication, April 20, 2007.

19. To reduce lag, some aspects of the Second Life virtual world (for instance, the location of the sun and moon) were "client side." The ability of prims to be "flexible," a feature added to Second Life in May 2006 and used in everything from skirts to flags, was also client-side: a flexible-prim flag waved in the breeze slightly differently for each resident.

20. Another form of lag, "client-side" lag, was caused by the actual-world personal computer a resident used to log into Second Life: for instance, an inferior graphics card or slow processor could cause lag. Still other sources of lag existed (for instance, asset server responsiveness). Most Second Life residents did not have high levels of expertise in computer technology, and so these various forms of lag were usually experienced as the same phenomenon.

21. Sometimes events like town hall meetings would be held at the intersection of four sims, or would have "repeater" events where the text or audio from the event would be streamed to another location, but this was due to the limit of about forty avatars on any one sim during most of the period of my fieldwork, not to issues of time.

22. Celia Pearce, personal communication. By the time I completed the final version of this book (November 2007), the presence of Europeans was quite pronounced; by July 2007 Americans already constituted only 29 percent of resident accounts (Au 2007e). In some cases, persons living outside the United States (where all servers for Second Life were initially located) might experience lag due to their being more distant from the servers. However, I did not encounter this form of lag discussed with any frequency.

23. During the time of my fieldwork, some residents developed ways to disable this feature (first through the "God mode" third-party software, and then directly via the "client" menu).

24. "Brb" was also sometimes used when residents planned on logging out of the Second Life program and then relogging on within a few minutes.

25. Exceptions to this are that another resident could have cut-and-pasted the chat that took place while Lucy was afk and given it to her in the form of a note card, or if the conversation took place on land owned by Lucy or a group to which Lucy belonged, she could have placed an object on the land with a script that would have recorded the chat even while she was logged off.

26. As noted in chapter 8, even after such incentives were discontinued, camping could be used to increase a property's dwell score and thus how high up it appeared on the "find" window.

27. Residents often sat on an object before going afk so that their avatar would be less vulnerable to being pushed in this manner.

28. Second Life acquired broad voice capabilities in August 2007. I hope to address this in a future publication.

29. See chapter 1 for a discussion of the distinction between "virtual reality" and "virtual world."

Chapter 5. Personhood.

1. For an example of resident discussions about selfhood, autonomy, and governance, see the "Flack Attack" collective's "Issue #1: Flack Attack on Autonomy," www.flackattack.org, accessed May 17, 2007.

2. Toward the end of my fieldwork, Linden Lab announced they intended to make it possible for residents to purchase unique last names by the end of 2007. In other virtual worlds it has been possible to change one's screen name (going back at least to LambdaMOO [Curtis 1992:124]), but even in such contexts screen names remain consequential.

3. Toward the end of my fieldwork, Linden Lab started permitting select organizations and companies to create their own orientation areas, in essence contracting out the labor of teaching newcomers about Second Life.

4. The phenomenon of "farming," where actual-world persons were paid to play an avatar inworld to raise its skill level, so that the skilled avatar could then be sold to a different actual-world person, represented a way to accelerate through such a structured life course (Dibbell 2006).

5. The version 1.7 update to the Second Life program (October 2005) added an "open" command when right-clicking on a prim, to make it easier to extract anything placed inside it and reduce the possibility of a resident inadvertently wearing the prim.

6. During my research a company, Virtual Death, began offering services in Second Life and other virtual worlds to inform online friends in the event of one's actual-world death. See http://www.virtualdeathllc.com, accessed November 24, 2006; *Metaverse Messenger* 2(13):22 (November 21, 2006).

7. See Stephenson 1993; http://en.wikipedia.org/wiki/Avatar_%28virtual_reality%29, accessed July 19, 2006.

8. nwn.blogs.com/nwn/2006/09/open_forum_secu.html, accessed September 11, 2006.

9. In some virtual worlds alts have been mandatory; for instance, during the period of my fieldwork, The Sims Online required persons to create three avatars. In other virtual worlds (including Second Life), residents could add alts through the same process by which they created their original account. In Second Life, for a period of time there was a limit of five alts per credit card; when the requirement of a credit card was abolished, this limit was effectively abolished as well.