# MAKING VIRTUAL WORLDS

## LINDEN LAB AND SECOND LIFE

THOMAS M. MALABY

# 3_KNOWING THE GAMER
# FROM THE GAME

The day wears on at Linden Lab's Second Street office in March 2005. As five o'clock approaches, I see a developer here, a marketing person there, start to gather personal possessions and head home for the day. But the room is still mostly full as the first shout rings through the air: "Yes!" Some scattered laughter follows, and a quick look around the room shows about six Lindens, their faces illuminated by the swiftly moving and colorful graphics on their monitors, sitting in the classic PC gamer pose: one hand on mouse, another with fingers poised over the w, a, s, and d keys of the keyboard. I glance at the nearby screen of a member of the QA team, and catch a brief glimpse of futuristic guns firing and armored avatars running around a hilly landscape, with many objects and buildings around as available cover. This is not the comparatively placid Second Life landscape—it is a game of Tribes: Vengeance, a multiplayer online game that allows two teams (of up to sixteen players) to play Capture the Flag and other contests while equipped with powerful weapons, armor, and jetpacks (these allow players to fly for a short distance). The generally dark environment of Linden Lab adds to the atmosphere; as one Linden put it, "It [makes] the Tribes games kind of eerie. . . . Shouting, you know, and . . . all these screens with action on them."

I later learn that there have been a number of games that have occupied the role of end-of-the-day diversion, and in interviews with Linden employees it was clear that many of them considered themselves committed gamers. Those who did not, correspondingly, often went out of their way to mention it to me and how it related to hearing about Linden Lab ("I'm not a gamer, so I just got a forward with about twelve [job] postings"), being interested in Second Life ("I thought it was gaming . . . that just sound[ed] too game geeky"), and using Second Life ("I kept bumping against the wall and I couldn't figure out the spatial things—I wasn't game-savvy enough,"). These comments were, by and large, the exception—gaming was part of Linden Lab practice. The category of the "office game" existed as a social fact around Linden Lab. As Cory Ondrejka put it in a comment he contributed to a Web log discussion (Combs 2006):

> [Members of] the core development team [the earliest members of the company] . . . were fairly serious FPS [first-person shooter], console, and other game players. Counter-Strike was the office game for nearly three years. My background was arcade, combat/race, and race games, all about as far removed from MMOs as you could get.

The online office game was supplemented by offline games, the most popular of which was the Nerf battle—many Lindens kept loaded Nerf brand guns (which shoot small, polyurethane foam rockets) close at hand. At any moment (though more likely toward the end of the day or just before lunch) a Nerf battle could break out. There were also a number of games available to play in the gaming room, including a number of gaming consoles (PlayStation2, Xbox), "stand up" arcade games (Street Fighter II, Galaga), and a pool table (after moving to the larger, Sansome Street location). What is more, a good number of Lindens came to the company, like Ondrejka, from game development backgrounds. Of the approximately fifty regular employees (that is, not counting contractors) in early May 2005, about twenty had some professional background in games, whether computer games or others,

and this number was disproportionately high among developers (a group of about fifteen at the time).

Of course, Tribes was quite different from Second Life in some ways. Its environment was not a persistent world (its games began and ended), it could not accommodate more than thirty-two users, and there was a narrower scope for user creation. But the two pieces of software shared a number of important characteristics, and these are most obviously seen in the interface itself. In both of them one controls an avatar via the combined use of the mouse and the keyboard. The mouse selects/targets/interacts with objects in the environment as well as on-screen buttons and menus and controls the view (the "camera"). The keyboard is used for movement ("w" for forward, "a" for left turn or to slide-step or "strafe" left, "d" for right turn or to strafe right, "s" to move backwards, and the space bar to jump) and for "hot keys"—other keys on the keyboard that instantly activate certain abilities or use certain items. This interface was pioneered in a specific genre of computer games called "first-person shooter," and it emphasizes rapid movement of the avatar (to evade others' attacks as much as to get the player from place to place) in combination with the ability to target things in the environment. These games can be multiplayer, in which case at least part of the game involves targeting and/or collaborating with other players, but they can also be single player games, in which the player targets enemies controlled by the software ("nonplayer characters," or NPCs).

Additionally, Tribes, like Second Life, has a "physics"; that is, it has what is called in the gaming industry a "physics engine." This is the part of the game's software that applies a set of behaviors to objects (including avatars) in the environment about how they move as a result of "impact" or "gravity" or the like. In Second Life, as in Tribes, if you bump against an object, your avatar "bounces" back in a way analogous to offline experience. Similarly, if you throw an object down a hill, it bounces and rolls until it comes to a stop.

Already we can notice that Second Life users with experience in PC games of this type come to Second Life with some cultural capital—they are competent, to some degree, in moving about the space and in

interacting with its objects according to the local physics (in a sense). For users unfamiliar with this interface, failures of social performance exhibit themselves in stop-and-start moving, walking into walls, and the like and are easily recognizable to other users. For users that come from other games it is the subtle differences that prompt failures, at least for a time. Second Life has no dedicated "strafe" keys (often, in other virtual worlds, "q" and "e"), so when I enter Second Life after having spent time in another virtual world, such as World of Warcraft, I do not move elegantly. The primary point, however, is that Second Life owes a great deal to games in just this distinctive interface. But the relationships between Second Life, Linden Lab, and games go much deeper, and to sort them out we must first begin by seeing games in a different way from that to which we are accustomed.

When I earlier discussed how things came to be at stake in Second Life and other virtual worlds, I pointed out that the possibility of failure as much as the persistence of the environment made this possible. But to speak about what people do in places like Second Life, and the consequences of that, in terms of success and failure is actually too narrow. It is too narrow because it makes everything seem to depend on users' or players' agency, and specifically their performance in relation to their intentions. But what we need to be able to do is to talk about the effects of user's actions in these spaces in a way that encompasses even the *unintended consequences* of what they do—results that may not be success *or* failures but may be consequential nonetheless (Giddens 1984). At times, after all, these new outcomes are innovations that have a lasting impact on practice (although I have no idea whether my accidental discovery of how to make a dome appear to be covered in hammered copper has lived on anywhere but in my own mind).

In addition, we need to be able to accommodate the fact that outcomes are shaped not just by what people do, accidentally or intentionally, but by other processes in play, as in the way that, for example, the weather shapes outcomes in everyday life. We need to be able to talk about the reasons why, in the course of events, things can simply go another way. What are the sources of this indeterminacy of social process, and how are they present in virtual worlds as the result of design

or accident? The emergent effects that complex spaces like virtual worlds generate depend on this open-endedness, the lack of determinacy in the environment and participants' actions in it, and this open-endedness is to a certain extent contrived.

In a sense, this is similar to what the New Communalists recognized about the collective effects of human action over time amid an array of material affordances—the way that system-level effects grow out of a complex array of microactivities. But after recognizing the existence of unpredictable effects, they took a further, normative step that portrayed emergent effects as *legitimate* by virtue of being emergent. But we need not take that step—in fact, I am striving here to distinguish my take on emergence from theirs on that point—to appreciate that the open-endedness of Second Life and places like it—the way they are complex enough to generate contingent outcomes—bears closer inspection. Once we do that, we start to recognize that the roots of *architecting* that open-endedness lie in games and in the techniques of game design that some Lindens brought to bear on both Second Life and Linden Lab itself. What we see is the appearance of a perhaps unexpected distinction between two types of makers—the makers of the game and the makers of the environment for the game.

## The Elements of Gameness

There is a standard account of what games are that saturates both popular and academic accounts of games. This is the idea that games are a subset of "play," where play is understood to be something fundamentally opposed to "work." The primary shortcoming of seeing games as play, and play as opposed to work, is that games become domains intrinsically set apart from everyday experience.[1] As separate, safe (consequence-free), and pleasurable (or, conversely, dangerously seductive), games in this view stand as something very different from people's day-to-day life (with its "real" stakes, a distressing unwillingness to stay compartmentalized, and ample supply of both pain and pleasure). But to look at games differently is to see how their ability to

command human attention may be the result of quite the opposite—it is what games *share* with everyday experience that accounts for how they engage us.

What do they share? At root, games share the mixture of pattern and indeterminacy that also characterizes human experience, no matter how routinized or chaotic that experience can at times be. It is this that makes games seem to occupy an almost oppositional position with respect to bureaucracy, as I suggested in the introduction. Here is a definition to work from:

> *A game is a semibounded and socially legitimate domain of contrived contingency that generates interpretable outcomes.*

By "contrived contingency" I mean the mixture of constraint and open-endedness that all games have. All games are relatively separate (the degree of separation is highly context-dependent—it is a cultural accomplishment) and socially condoned arenas. In them, one or more sources of indeterminacy (or the proper philosophical term, contingency) are present along with certain constraints; together and over time these generate contingent or indeterminate outcomes. These outcomes are subject to interpretation—in this way games can generate meaning.

When we consider the matter for a moment, we can see that games are distinguished by their *legitimate* indeterminacy: at their start participants (and, possibly, spectators) accept the fact (in fact, they expect) that they do not know what the outcomes will be. Many games have a series of outcomes all along their playing out (the missed basketball shot, the dice roll in craps, the initial deal in bridge), and some games have no "end conditions" at all—they never end, such as role-playing games like Dungeons and Dragons. This is again not to say that games are unconstrained—they achieve a mixture of constraint and unpredictability, and this mixture generates outcomes that are then interpreted (winners and losers, yes, but also less dichotomous conclusions, such as whether a player has footfaulted in tennis).

But it is not enough that games through their playing out generate indeterminate outcomes that can be interpreted; after all, that would

also be a fair characterization of much of our human experience. Games occupy *contrived* and *legitimate* spaces, and this legitimacy is generated socially, by participants and spectators (if there are any), as well as at times by institutions (such as the International Olympic Committee). This point bears repeating. Games are socially constructed by a shared commitment to their legitimacy as contrived spaces where indeterminate outcomes can unfold. Their contrivance furthermore makes games semibounded; that is, held to be in some *relative* sense separable from other domains of our experience, in a manner analogous to how, for example, courtrooms can be seen as imperfectly separate spaces.

One vital implication of this account of games, and it accords with what we see in games empirically, is that games are open-ended even with respect to their form. Games can change, and this can alter the conditions for further participation in them. In a word, games are in this respect characterized by *process* (they are *processual*)—they demonstrate the constant potential for change and reconfiguration.[2] The taking of professional American basketball "above the rim" by Oscar Robertson and Julius Irving is one example of how games can change as they are played, and the ability to "dribble out" time at the end of a game by Bob Cousy years earlier is another. These changes in practice can further lead to adjustments of constraints or possibilities (basketball's twenty-four second clock). Complicated questions of legitimacy arise as a result of this dynamic quality—when is a change legitimate and when does it turn a fair competition into something more like a confirmatory rite? I return to the question of legitimacy further on, but first we can pause for a moment and consider in a more fine-grained fashion just what kinds of constraints and indeterminacies constitute games.

As may be obvious already, the rules are only one part of the picture—games cannot be reduced to their rules. This is because the "rules" of a game are not like the rules of a bureaucracy, which are intended to reduce unpredictability across cases. Even if bureaucracies are unpredictable and inefficient in practice, their rules are of a different order from those of games because they are rationalized in the Weberian sense: they are supposed to produce regular, consistent outcomes (even if they

fail in practice). The same might be said of most computer software code, such as that found in an income tax program. Dibbell (2006: 109) draws an interesting parallel between online games and such programs. While both make use of code and Internet connectivity, the income tax program is not designed to generate unpredictable outcomes. On the contrary, variations in its estimates of owed tax from one try to the next are an indication that something has gone quite wrong. Games, however, are about the opposite: they are about contriving and calibrating multiple contingencies and constraints to produce indeterminate (though perhaps patterned or expected) outcomes, which are then interpreted (made meaningful).[3]

The contrivance of these sources of unpredictability is achieved in part through the presence of various kinds of constraints, including but not only the rules. These constraints additionally include the architectural (encompassing the gamut of relatively non-negotiable and concrete constraints, from physical layout and landscape to the implicit code of online games); the cultural, such as social conventions (the set of practices and expectations that are often implicit and taken for granted); and the economic (the familiar constraints of the market in all its forms).[4] In this I follow Lessig (1999), among others, in seeing these four modes of control as the primary means by which we are constrained throughout our experience. Any game may contain one or more of these types of control, but unlike bureaucracies games evince a balance between these modes of control and various sources of contingency. Games are distinctive in their achievement of such a generative balance between the open-endedness of contingencies and the reproducibility of their conditions, and this is what makes the practice of game design useful to those who, like many at Linden Lab, want to find a way to govern via a means that rejects purely top-down control.[5]

Contingency is also a fruitful path to follow if we are interested in what makes games compelling. According to Heidegger and the phenomenologists, our existence in an uncertain world not of our own making is a fundamental aspect of human experience. For the pragmatists, this uncertainty extended to pure contingency, the assertion that

the universe did not simply *seem* unpredictable because of our own imperfect ability (now or perhaps ever) to grasp its nevertheless determinate processes but *was* indeterminate (see Menand 2001). In this respect the wide-ranging indeterminacy of our everyday experience and the contrived indeterminacy of games point toward a bridge, rather than a gap, between games and other aspects of our lives.

By *contingency* (or indeterminacy—I use them interchangeably here) I mean *that which could have been otherwise*; that is, that which was *not necessary* (or determined) in a philosophical sense. The potential sources of contingency that are found in games are the same sources we encounter throughout our lives. They are just relatively (though not perfectly) bounded in a game. That games have this fundamental quality of multilayered indeterminacy allows them both to mimic and constitute everyday experience, and this is what makes well-designed games compelling. The unfolding of contingent outcomes in games commands our attention because it presents just the right mix of the expected and the unexpected (provided the game is well-designed, whether by a game designer or by historical practice). A game that is too predictable becomes routine and uninteresting. A game that is too unpredictable becomes frustrating and uninteresting. Game designers are notable for their ability to calibrate these unpredictabilities to engage the participant and make the experience compelling (I am avoiding more explicitly or obviously valenced normative terms such as "enjoyable"). Making a "balanced" game (as it is termed in game design) is about creating the complex, implicit, contingent conditions wherein the texture of engaged human experience can happen.

If the contrivance of contingency is a defining feature of games, what kinds of indeterminacy are involved? Or, rather, from where does the indeterminacy come? The most familiar source of contingency in games is *stochastic contingency* (what the philosopher Alasdair MacIntyre called "pure contingency"; 1984: 99–100). This is the randomness produced by, for example, a well-shuffled deck of cards or a tossed die. Here, unpredictable outcomes spring forth as the result of a process sufficiently complex as to produce chaotic results. Some of the oldest archaeological finds are objects of this kind: bones, dice, or lots. Other

less obvious (more implicit) examples of sources of stochastic contingency in games include the weather at a baseball game or other sporting event, participants' illness or injury, and "lag" in an online game as a result of high Internet traffic. It becomes easy (and important) to recognize that stochastic unpredictability can be generated by explicit, contrived means (dice, wheels of fortune) but also generated by means beyond the control of the game's participants. This is further confirmation of how the separability of games is not absolute; games, by their design, can achieve at best only a relative separation from other parts of experience. More recently, this form of contingency in games, specifically computer games, has been steadily transformed away from previously predominant explicit mechanisms, such as dice, and toward implicit stochastic generation.[6]

Another source of contingency is *social contingency* (MacIntyre calls this "game-theoretic" contingency; 1984: 97–99). This is the indeterminacy of never being certain about another's point of view (and often, resources), a key component of chess, poker, and countless other games. The extent to which (economic) game theory has focused on differences in information is a reflection of the correct recognition of social contingency as a factor in games, but it is never the only source of contingency. The challenge involves not simply making accurate guesses about others' points of view but acting on those guesses, and that leads to a third source of contingency, *performative contingency*. Here the issue is the execution of an action by a participant, an action that may succeed or fail. This kind of indeterminacy plays a most obvious role in athletic contests and is the core of many action-oriented computer games, but it is present in all games. It is the avenue by which a player's actions influence the outcomes (if sometimes in unexpected ways). At times this performance is embodied and rapid, such as in FPS games; at other times, it is simply about not making errors in following game procedures, such as in counting the proper spaces in a game of Monopoly. In a way, all our actions in games, as in life, are performative in this sense; they run the risk of success, failure, or some new result that demands an accounting (an innovation or exploit? See Consalvo 2007). Games call on you to perform, to accomplish the actions that give you

the best opportunity to succeed in the game, even if the definition of success is itself a moving target.

This moving target signals a different source of contingency in games, and that is their *semiotic contingency*, the indeterminacy of meaning in them. Outcomes may always challenge existing schemes of interpretation and lead to new meanings. In addition to the changing game of basketball noted above (which prompted never-before confronted questions about whether dribbling out "should" be legal, for example), Bobby Fischer's match against Boris Spassky was another case where the meaning of the game was transformed by its context. Jesse Owens at the 1936 Olympics is another—the meaning of any given gaming outcome is not set in stone.[7] The complex contingency of today's large-scale online games has powerful effects on meaning, conceived here as always arising from the meeting point of existing, shared interpretive frameworks and unique, contingent circumstances. Additionally, as games themselves show most powerfully, the shared engagement of contingency is a powerful means for the development of trust and belonging. Together these implications suggest that, if a domain is rich enough in possibilities, it can generate for its users a distinctive disposition (Mauss and Bourdieu's *habitus*) about how to act within it.

Defining games as, first and foremost, contrived forums for the generation of indeterminacy avoids the normative judgments contained in the modernist (i.e., work vs. play) account of games. Instead, and crucially, *it places game contexts and other arenas of human experience ontologically on a par with each other.* Everyday experience and game arenas, each filled with uncertainties, can inform each other through metaphor, but they can also both be the site for real stakes and real consequences. Gaming becomes sensible not as an escape from everyday life but as just one of its multiform domains, an activity that is compelling precisely because, like life, it presents ongoing, unpredictable outcomes to its players that challenge them to perform. The only difference is that the game presents multiple contingencies in a relatively bounded, explicit, legitimate, and perhaps more readily graspable form, one that is the product of design.

It bears restating, however, that I am not, by this emphasis on games as sites for the generation of contingent outcomes, proposing that games (or life!) are not largely marked by regularities, patterns, recurrences, and reproductions, whether of institutions, practices, or meanings. It is only that any view of games that makes the crucial mistake of forgetting that their contingency, however minimal, is always present, takes an inevitable step toward a mistaken conclusion. It separates them from the rest of our experience and undercuts what makes them compelling, powerful, and consequential, just as any deterministic account of social change founders on the accidents and contingencies that undoubtedly play a role in history.

## Task Masters

This approach to games makes it easier for us to recognize the place that games occupied for Turner's New Communalists. It is an issue about which he provides some tantalizing details, and we can use them to expand our understanding of how games relate to the problem of authority for Linden Lab and more generally for the emerging institutions of the digital age. "[Ken] Kesey and the Pranksters turned to various devices to distribute and, ostensibly, level . . . power. One of the devices was a simple spinner. The Pranksters regularly played a game in which a number of them would sit in a circle. Someone would spin the spinner, and whoever it pointed to would then have full power over the group for the next thirty minutes" (Turner 2006: 65). Ken Kesey and the Merry Pranksters were close to Stewart Brand and strongly associated with the New Communalist counterculture of the 1960s. When they turned to stochastic contingency for their game of authority, they were incorporating both a source of indeterminacy— the spinner—and a constraining rule that interpreted the spinner's outcome and dictated an arrangement of power. Another example is a game they played with the *I Ching*; a person would toss a set of coins and then consult the book for a correlating bit of text, which would then be taken as guiding action.[8] Turner is right to zero in on the denial of authority these games necessarily involve (Turner 2006: 65):

The spinner and the *I Ching* did serve to take power out of the hands of designated leaders. If the former turned group members into followers, it did so only temporarily, and only with the members' consent. If the latter threw up an obscure ancient fortune, it also demanded that one work out its meaning on one's own. In both cases, the individual remained empowered. But within the context of the Pranksters, these devices also served an ideological function. That is, they not only distributed some power among group members and decision-making devices, but they also diverted attention from the very real and centralized leadership Kesey was exerting. . . . Kesey and the Pranksters did everything they could to deny the fact of concentrated power in their midst. In a pattern that would become familiar around the digital technologies of the 1990s, they reassigned it . . . to devices.

I would make a friendly amendment to this conclusion, however. It was not in devices—in technology alone—that the Pranksters sought to invest authority. The account of games I have given above allows us to recognize that they sought to invest power in gamelike *processes*, aided by technology. It was *game design* that they engaged in—the combining of constraining rules and sources of indeterminacy (the coins, the spinner)—and this was a harbinger of what was to come.[9] Kesey and Pranksters had only familiar, "analog" sources of stochastic contingency ready to hand, the accessible computers that followed soon after allowed for a vast multiplication of both controls and contingencies.

Thus, what the example of Kesey and the Pranksters should lead us to consider is the nature of individual agency *in* a game as it relates the authority to *make* a game. Allow me to explain. A core idea exemplified in the *Whole Earth Catalog* was of an individual, amid a complex system of affordances, pursuing enlightened self-interest and contributing to collective and emergent effects that were thereby legitimate. In this view, authority is collectively generated out of many individuated acts of agency within a system. With the spinner and *I Ching* games the Pranksters sought to contrive that circumstance. That is, they sought not only to provide "tools" to people in the unbounded world of the everyday but to set up a circumstance of constraints and possibilities

*within which* that individual pursuit of enlightened self-interest would take place. But something very important changes when the aim is no longer simply the provision of tools but rather the broader project of contriving (and providing) the conditions—the system, in a sense—in which those affordances are encountered and used. We might say that in this the Pranksters, like current virtual world makers, sought to have their authority and eat it, too.

For Linden Lab, this was not simply an opposition between themselves as game makers and their users as game players, however. Like the Pranksters, this gaming of authority characterized their relationships within the company. Given the way in which the same ideals informed their attempts to govern themselves, we can begin to explore how games came to be used around Linden Lab, and what this had to do with the employees' puzzle of authority over themselves. The way in which Jira offered a wide scope for customization meant that it was an avenue through which the application of game design technique could find a footing. In mid-2005 there was one particularly revealing effort, through a turn to both computer programming and techniques from games, that constituted a practical answer to Linden Lab's political dilemma: how to make legitimate collective decisions that accorded with a disposition both highly individualized and characterized by a high degree of faith in technology. This was the implementation of a chess ranking system to generate out of Jira a list of the most important tasks for the company.

Chess ranking systems are one application of "Elo rating systems," a group of algorithmic methods for calculating the relative skill levels of large numbers of players for two-player games. Based on a system developed originally by Arpad Elo (1978) for generating a ranking of chess players, they have since been both modified and improved within chess and adapted for other two-player games. The challenge that generates the need for this system for chess is twofold. On one hand, there is an interest in measuring and ranking players relative to one another. On the other, the game itself involves only two players, and these players are dispersed in space (and in time), so there is no perfect opportunity for all possible players to compete and determine who is the best.

What is more, absolute skill cannot be observed; it can only be inferred from wins, losses, and draws. A ranking system generates a rating for each player and is seen as legitimate in the degree to which these ratings seem to accord with the matches that do get played. Thus a key aim of these systems is also to predict the outcomes of matches between rated players, and its accuracy is thereby judged (and thereby the system may also be modified). In this way, Elo rating systems generate an *emergent* ordered ranking, and this emergent quality made this technique an attractive solution for the challenge that faced Linden Lab: if the right game could be designed, the Elo system could be used to generate a ranked order of prioritization from a heterogenous collection of company tasks. It would also have the important effect of encouraging voting by being "fun"—despite Friday presentations and other encouragement by Rosedale to vote on Jira tasks, the voting system was "underused" (as a Linden in marketing put it to me).[10]

In June 2005 one developer at Linden Lab, quite familiar with chess ranking systems, set about to code onto Jira such a game. Pitting two (and only two) tasks against each other for Lindens to choose, the results of these "matches" would automatically be plugged into a version of the Elo ranking system and over time generate a list of highest-ranked to lowest-ranked Jira tasks. Rosedale enthusiastically supported this effort, and in two days the programmer had created the system and sent an e-mail over the company e-mail list containing a link to a Web site where employees could participate. Upon arriving at the site, one saw a simple presentation of two Jira tasks, including each one's title, unique Jira number, and a brief description. Employees were simply to pick one (the "more important") of the two (or pick a "draw"—they could also push a "don't understand" button for either task), and the system would record that match result and immediately refresh the page with another match of two more tasks.

Many Lindens tried out the system with some enthusiasm, as it seemed relatively resistant to vote lobbying (seen as a problem for their first attempts to incorporate voting into Jira). Hundreds of matches were "played" in a short span of time (a matter of days), and a ranked list was generated. For Rosedale, this was a step on the road toward

realizing an ideal of company decision making from the ground up. For others, the system was suspect at the point of participation; presented with two entirely heterogenous tasks (add a urinal to the men's bathroom versus add a Web browser to the Second Life client), they felt that picking between them was nonsensical. Whereas more direct systems of voting foundered on problems of exploitation (vote lobbying), this one foundered on heterogeneity. It is also important to mention that the developer himself was skeptical of whether this system would generate legitimately ranked company priorities. For him, this was something that was worth trying and interesting as an exercise. It was eventually abandoned in practice, and other initiatives to tap into the wisdom of Linden Lab's crowd were tried.

The turn to a game system in concert with programming technique reveals a great deal about how Linden Lab's paradox of political control and political aspirations was confronted in practice (Kelty 2005, Coleman 2004). As an anti-institutional space, Second Life was designed to be open-ended for its users to allow for creativity but not so wide open as to leave them with an overwhelming (perhaps even paralyzing) sense of possibility. Game mechanics were an attractive solution for Linden Lab because games generate outcomes not through vertical directives, nor through individual cheating (provided controls against "gaming the system" are in place), but as the result of a complex and open-ended set of processes resting at least in part on individual performance. It is but a small step to see these outcomes as inherently legitimate and consonant with the political attitudes that Turner and others have outlined.

But Linden Lab did not thereby achieve escape velocity from the puzzle of authority. Just like the case of the Pranksters, we can recognize how this turn to games ultimately generates a distinction between the agency provided the game's players and the standing authority of the game makers, who set the conditions under which the game takes place. This has important implications for how Second Life users (and, indeed, the human in general) were imagined around Linden Lab. But the approach to what games are that I have laid out only gets us so far in attempting to pursue these implications. This is because we must

also delve into how game players themselves were imagined around Linden Lab. It turns out that Lindens imagined themselves and their users as a particular kind of gamer, and therefore favored a particular kind of game, one that accorded with the technoliberal ideology that reigned around Linden Lab. We can begin to understand this picture of the gamer by looking more closely at what ideas underwrite the "gamer" in the Western cultural imagination.

## Homo Lindens

> Most engineers . . . consider themselves to be professionals . . . and . . . engineers do have a professional code. Among its tenets is the general idea that the engineer's right environment is a highly structured one, in which only right and wrong answers exist. It's a binary world; the computer might be its paradigm. And many engineers seem to aspire to be binary people within it. No wonder. The prospect is alluring. (Kidder 1981: 146–147)

While the picture that Kidder provides of man the engineer rang true to a certain extent for me around Linden Lab, what is missing from it in thinking about how the human was imagined around Linden Lab, even given the prevailing influence of its computer engineers, is games. Linden Lab's engineers were gamers and saw games, in all their indeterminacy, as not incompatible with the notion of a godlike figure designing an entire world. What happens when *homo ludens* meets *homo creans*?

Johan Huizinga set the tone for much of the inquiry into games and society in the latter half of the twentieth century with his book *Homo Ludens* (1955). In it he did much to contribute to the unfortunate view of games as separate and consequence-free (see 1955: 10–12; developed more rigidly still by Caillois [1961]), but as with many such mid-century works of cultural history, illuminating contradictions abound. As Huizinga's argument develops and he reaches the end of his text, he seems to focus on something quite different: "Civilization is, in its earliest

phases, played. It does not come *from* play . . . it arises *in* and *as* play, and never leaves it" (1955: 173). Huizinga is much more enlightening when he speaks of the "play-element" (a type of experience or disposition), rather than of "play" as a (separable, safe) activity. The play-element for Huizinga is marked by an interest in uncertainty and the challenge to perform that arises in competition, and he opposed it above all to utilitarianism and the drive for efficiency. This play-element is marked by the legitimacy of improvisation and innovation that it allows. Caillois, despite his misleading claim that games are occasions of "pure waste," similarly recognized the centrality of contingency in games (see his discussion of *alea*; 1961). The fact that games legitimize failure (as often cited in discussions of their advantages for learning; see Gee 2003) is a consequence of this legitimate indeterminacy. Huizinga felt that the play element was on the wane in western civilization since the eighteenth century (see also Dibbell 2006: 59–60), threatened by the drive for efficiency (and in this way he in part foreshadows my own contrast between bureaucracy and games).

Play as a mode of experience was productively explored further by Csikszentmihalyi (1990), who found that this disposition could be found wherever people faced an ongoing mixture of pattern and unpredictability that demanded a practiced mastery of performance (what he calls "flow), such as a factory worker who happens to confront the properly engaging mixture of constraint and (perhaps dangerous) possibility in manipulating multiple machines and objects. Practiced makers of cedar shingles, for example, deftly handle the slight variations in every piece of wood that comes their way as they coordinate their bodily movements in extremely close proximity to two open and spinning saws. The focus on a state of mastery that one finds in Csikszentmihalyi leaves us in a less than an ideal position from which to recognize much play experience, because so much of human experience in games takes place before such mastery is achieved (if it ever is).

On the way to mastery, the experience of playing a game is perhaps best characterized as *learning*, in the broad sense (see Gee 2003). It is a situation where each new moment may bring new circumstances, new information, and that novelty needs to be incorporated (often in the

literal sense) into the player's practice and understanding. It is, in short, a readiness to improvise, and it therefore demands an attitude perhaps best described as pragmatic.[11] Louis Menand notes how Oliver Wendell Holmes characterized the pragmatic approach to knowledge as making a "bet" on the behavior of the universe (2001: 217), a universe that was in Menand's words "charged with indeterminacy" and therefore never perfectly knowable (195). More recently, a number of social theorists have also felt drawn to the metaphor of games, bets, and risk taking to describe how human beings experience an always-changing world.[12] This approach to social life is quite consistent with pragmatic thought, in that it seeks to capture the ongoing and open-ended nature of human experience while recognizing the ongoing influence of rulelike constraints on our actions. These kinds of connections suggest that games, properly understood, have a great deal to teach us about the history of social thought, but I leave further (and incomplete) wrangling of this weighty subject to its own venue.

To a certain extent, then, when many Lindens imagined their users, they imagined game players in this sense. But, and this is vital to note, these were gamers in a highly individualistic sense. For many Lindens a game constituted, at root, a challenge to an *individual* to act within an open-ended system, whether that game involved other players or not, and this logic applied to themselves as well. In this way, their idea of games effectively emphasized their performative contingencies at the expense of their social and semiotic dimensions. Consider how vote lobbying constituted a problem for their initial efforts to generate ranked lists out of Jira through a straight voting system. Vote lobbying contradicted their aims because it introduced "social" elements (social capital, and cultural capital in the form of credentials) that, in their view, corrupted the process. The irony is that such promotion and persuasion was undoubtedly a part of how work was moved forward under the previous As & Os system. This is, on pause, quite remarkable, because it even suggests an almost complete rejection of open debate or discussion in the Habermasian sense (Habermas 1987; this is again consistent with what Kelty has argued about the nondiscursive politics of computer programming [2005]). Instead, the ideal was a game in which players

each performed within a contrived system, and did so individually. Even randomness (stochastic indeterminacy) was included only insofar as it provided a bulwark against outwitting the game system's attempt to provide a properly limited situation in which to perform (as in the apparently random selection of Jira tasks). Humans performing in this way in such contrived systems epitomized "gamers" around Linden Lab. Only the effects of their aggregate efforts could be trusted.

There is another important issue here. To self-identify as a gamer around Linden Lab (and, I would suggest, more broadly in the current moment) is not only to claim an affinity for games and to think primarily in terms of individual challenge. It is typically to identify oneself as someone with a preference for *these kinds* of games, and not others. As scholars of so-called "casual" games have noted (Cassell and Jenkins 1998), this usually marks a rough gender divide: women constitute a significant proportion of online game players, but the games that they play the most tend to be discounted by the (mostly male) gaming media, developers, and others as "simple" (or "casual") games, and therefore their players are not "gamers." An example is Scrabulous, a version of Scrabble that in 2008 was very popular on the networking site Facebook. Often these games are marked by a significant social component—they provide a context for game playing and other social interaction. I would also suggest that such games rely more on stochastic elements (which are loosely tied to games labeled as more "luck"-based than "skill"-based). For Linden Lab, at least part of the test of the legitimacy of game-derived outcomes is that the game is not a "social" game but rather an individual one, even if it is one which many people happen to play, and that furthermore it is a game that can be pointed to as emphasizing performative competence over chance.

This is consistent with what we recall from the early imaginings and then versions of Second Life, about which Rosedale reported some surprise that Second Life was generating secondary, social effects. Repeatedly in my discussions with Lindens, but most often with some of the developers, I was brought up short by the realization that they had not expected the cultural aspects of Second Life to happen at all, and they were still very much in a period of adjustment in this regard. For

Lindens within the company, the same assumption held true. One can see the emphasis on Lindens as primarily individuals exercising enlightened judgment in one of the sections from the "Tao of Linden" (reprinted in appendix A):

> *Your Choice Is Your Responsibility*
> There's a dual meaning here.
>
> Most companies tell you what to do. Then they make you accountable to the person who told you what to do, not to yourself. We don't think this gets the best long-term results with a truly ambitious project like Second Life. At Linden Lab, you are expected to choose your own work, you have to decide how you can best move the company forward. This isn't always easy, but it can be very rewarding for you and it is a huge win for the company. This doesn't mean that you can't ask someone else what to do—it means that you are responsible for choosing who to listen to! You are responsible for listening well and broadly enough to choose wisely.
>
> And once you have chosen, you are responsible for executing well to [make] your choices work. You must understand that other people now rely on you for single-minded execution, and it is time to shut out the noise and work without distraction. Sometimes you will fail, and in those cases it is very important to fail fast and fail publicly— that is how we learn and iterate and ultimately win.

This document neatly fits together the gaming metaphor with notions of individual choice and individual performance. Failures are legitimate (and public). The "huge win" is the emergent effect of all these individual choices, themselves made in the context of an open-ended system and without social "noise."

## Not Quite Content

We again encounter the (initially) unexpected intrusion of the social when we revisit Tringo as the most popular game in Second Life, but

first we are presented with a puzzle of our own. While I have suggested the increasing significance of a distinction between game players and game makers, the content tools that Linden Lab provides in Second Life seem to suggest that Linden Lab did not only imagine its users as gamers, but as makers (*Homo fabricans*, perhaps). They provide their users with a gamelike interface to an interactive and persistent environment with a built-in physics, but they also provide a set of tools for making in that environment, and the marketing emphasis throughout much of 2005 was on making. For Boellstorff, this effort underwrote the "creationist capitalism" which characterizes Second Life. As he writes: "In creationist capitalism, the prosumer has become a kind of minor god, and we find not predestination but a performative notion of production that assumes the relationship between the economic and the social is [complicit]. . . . In creationist capitalism it is persons who create, not God" (2008: 209). This picture neatly skips over how this creation may be better understood as acts of *making* within a system that others (certain Lindens) are *creating*. "Making," in this view, sits precariously between "gaming" and "creating." In acts of making within Second Life were its users seen by Lindens as more like gamers or more like creators? To answer this question, it helps to examine the content creation tools provided to Second Life users more closely.

As I have noted, this set of tools also owes a great deal to games, but not to what game players typically experience. Instead, it owes a lot to what some game *developers* do (often called "content developers"). Three-dimensional modeling, scripting (programming), and texture mapping are the tools with which content developers make the "stuff" that fills a computer game: the items, the buildings, the avatars, the trees. This is interesting to consider in the broader sense of the nature of creativity as imagined by Linden Lab in its initial design. Charged with creating an environment for "making," in a limitless sense, what tools did the early Lindens feel were the foundational ones necessary for this grand purpose? The very same ones used by content teams in computer game companies everywhere. "Content" as originally conceived around Linden Lab was boundless in ambition but quite narrow and bound to a specific notion of making. As one developer put it, "We

don't have to hire five thousand people to make and build content for us, they're all doing it all and they're paying us."

Because of this, some of the innovative uses of Second Life were a challenge for Linden Lab to grasp, and this was revealed in the changing status of "content" around Linden Lab. Even in 2005, it was clear that for the most part Second Life "content" was for Lindens content in the game developer sense: stuff that was built, scripted, and texture-mapped in Second Life. As users created other things, such as support groups, or social events, Lindens had to work to get in the habit of thinking of these social creations—which depended little if at all on the conventional content creation tools—as content just the same (see Malaby 2006c for a more complete discussion of this issue). This also has implications for the status of creativity around Linden Lab: the original tools for content creation in Second Life at least suggest a view that game content tools are all someone needs to make, well, anything.

But the content creation tools, even though they include a programming language, are not the tools by which the world's foundations (such as the physics engine) themselves are made. Again we see a contrast between creating an environment and making within an environment. By teasing this out a bit more, we can start to see how games influenced how Lindens imagined themselves and their users in these two distinct ways—as game makers and as game players. The easiest way to do this is to consider again the example of Tringo.

Given the gaming background of many company employees, there was a continuing interest around Linden Lab in making Second Life appeal to gamers. But there was significant tension in 2005 because Second Life in fact did *not* appeal to gamers, or at least not as much as many at Linden Lab would have wanted. Around the time that Tringo was beginning to make a splash (the first quarter of 2005), I noticed something a bit surprising: Tringo was *not* the focus of Linden talk about what would lead to an influx of new residents. Another effort to make an in-world game preoccupied and involved Linden Lab, and that was a project called Chinatown (or more properly, U:SL—Chinatown). Whereas Kermitt Quirk, the maker of Tringo, worked on

his own and to a certain extent below the radar, a development team of residents within Second Life was working to build an elaborate FPS game on an island in Second Life.

This team, Bedazzle, involved a number of well-known builders, scripters, and mappers and was run by a user with a strong reputation as a project manager, as demonstrated in several of Bedazzle's prior projects. Chinatown was to be the culmination of Second Life's technical capabilities, at least as a gamer might measure them: an actual real-time FPS, with its own homemade combat system, multiple weapons, fast and responsive action, and a gorgeously rendered environment—a few blocks of a mythical "Chinatown"—in which to play. It was also to be a culmination of Second Life's promise as an environment for creativity, especially creativity that was collaborative. Chinatown would testify to the world's viability as a *development environment*, one in which a globally far-flung team could coordinate and produce a sophisticated product (see figure 3).

Before its opening, Chinatown was featured on the Second Life home page, and the office was abuzz with excitement about it. Again, for a company with many employees with backgrounds in computer games, who loved to play Tribes at the end of the day, this anticipation was understandable. This was content in the gaming sense, this was what Second Life could do, and this would bring in at least a portion of the potentially huge audience of gamers and game developers out there. Tringo, meanwhile, continued to grow, and one heard it mentioned around the office as something fun and worth checking out. By February 2005 roughly one in four in-world events was a Tringo competition—a staggering number. Tringo's success and subsequent licensing shouldered the highly touted Chinatown project aside. Chinatown itself, while widely lauded for the beauty of its design, suffered from serious lag problems, especially the more users played it. Second Life is always a moving target for Linden Lab's marketing team, and they deftly shifted gears to promote Tringo more prominently.

But the Tringo/Chinatown example should direct us to a striking insight into how Linden Lab tended to imagine its users. In seeking to make an environment for game making, Linden Lab was drawing the

**Figure 3.** A promotional screenshot for Bedazzle's game USL: Chinatown, depicting a scene from the few blocks of a mythical Chinatown located on an island in Second Life.

division between game makers and game players at a different point from the one we might expect. Chinatown was supposed to be the culmination of what Second Life could do because it would testify to a productive relationship between the makers of an environment (Linden Lab) and the makers of games within that environment. By providing the tools with which to make games like Chinatown within Second Life, Linden Lab did only *part* of what a game developer might do—it created the fundamental parameters for further work as well tools to do that work. The "content" work would be done by a different group, the users, in a wholly different relationship to their environment. Their tools were not for tinkering "under the hood," as Lindens put it.

In drawing the distinction between game makers and world creators in this way, Linden Lab was recreating a broader trend in the gaming industry, in which a developer (Id, Epic, Havok, to name a few) provides

a "game engine," which includes the physics engine and other tools for game development, but no game "content" to other developers. These developers pay to license these engines (some are freely available as well), and then, much like Second Life users, create the content to go into them to make a complete game. So what was going on here? Linden Lab, by providing the fundamental conditions of Second Life, was offering, in a sense, a ready-made game engine with built-in tools for game content developers. The added value, from their point of view, was that Second Life is theoretically accessible from anywhere in the world with a broadband Internet connection. The Bedazzle team had members in several different countries, many of whom never met face-to-face. Chinatown was supposed to show that Second Life was a gaming "platform," as it was called around Linden Lab.

Nonetheless, the surprising success of Tringo over Chinatown was not a refutation of this point of view for Lindens. For themselves as well as for Second Life, Lindens on the whole saw complex processes engaged by individuals pursuing enlightened self-interest as the legitimate path to self-governance; that is, to emergent effects that would be right by virtue of that emergence. Second Life was supposed to govern itself in this way, assuming that "access to tools" was ensured. Tringo's surprising rise and the way it pushed Chinatown out of the Linden Lab marketing spotlight was, despite the way it ran contrary to many Lindens' expectations, a proof for Linden Lab of just this logic. This was because, at a "meta" level, the broader game of Second Life had led to an unforeseen outcome: Tringo had trumped Chinatown for Second Life users.

For Linden Lab, the fact that their environment had spawned such divergent attempts at game making and the unexpected "win" by Tringo was something that confirmed their approach—they had successfully contrived contingency. Even game making was a game in Second Life, and this competition and outcome testified to Second Life as a well-made game itself. This helps us understand the continuing categorical confusion of Second Life. Was it a game, or was it not a game? In a way, we might say that Second Life was something like a game engine—it contained many of the elements of games but

depended on the further making of content by users to exhibit the indeterminate outcomes that games generate. The outcome, in this case, was legitimate, even though contrary to many Lindens' expectations. The broader lesson that they might have taken from Tringo's success—that of the importance of the "casual," the random, and the social over individual mastery—was not explicitly confronted. Like the many ways in which the social seemed to surprise Linden Lab, Tringo's success was taken as a surprising testament to the world's robustness, but not as an illuminating critique of their own imagining of the human.

For the Elo ranking of Jira tasks, we can see a similar distinction between game players and game makers at work. Access to the game provides an opportunity for agency on the part of its players, who collectively contribute to an emergent outcome. The Linden who was the game creator set the conditions of the game implicitly, however, and resided in its unfolding to a great extent behind the scenes. The plausibility of this as a strategy for generating a basis for decisions at Linden Lab was never questioned publicly (although misgivings about it were voiced to me privately). This did not keep the outcomes of the game from being *practically* illegitimate, however. The ranking did not ring true enough for either a sufficient number of Lindens as a whole or those Lindens at the top of the organization to point to it as a basis for what should be done next. Instead, there were further refinements of voting for Jira tasks (including more prominently rewarding those who had completed tasks that had received more votes).

As we move forward with an understanding of the nature of virtual worlds as domains for human action, we must pay close attention to the relationship among political ideals, professional practice, and the allure of games as instruments of social policy. Future work will be essential for ferreting out the new place of games and gaming practice in our political and digital lives to come. The emerging social distinctions between system (or world) creators, game makers, and game players constitute an important thread in the currently expanding digital society. The techniques of game design give institutions tools for contriving open-endedness, and they are then always applied with

particular ideas about the human in mind. In this case, an imagining of the gamer as an individual performing within a complex system underwrote both the kinds of games that Lindens tried to use to sort out their own self-governance and the kinds of games whose success they imagined would constitute proof of Second Life's viability.[13]

of this faith in aggregated individual performance amid a complex system reach beyond commodities and the market for Brand, following Wiener and Bateson, as Turner (2006) shows.

3. For the developers, there was a constant struggle on the part of Cory Ondrejka and their project managers both to ensure that sufficient developer time was devoted to fixing bugs (generally an undesirable task) and that new developers were not the ones saddled disproportionately with this kind of work.

4. Another interesting development which came after I completed my research was the opening up of portions of Linden Lab's Jira to users (and anyone—it is available on the Web at https://jira.secondlife.com) for their comments and votes. Discussion of this will have to await further research.

5. This is also an abbreviation for "peer-to-peer," as in P2P networks—there are possible connections to be drawn between these uses, but they lie outside the scope of this chapter.

6. Another option was for another user to "Offer a Teleport" to their current location, which would allow P2P, provided there was a contact at the location to ask.

## Chapter 3. Knowing the Gamer from the Game

1. For a more detailed argument on why games should not be viewed simply as play, see Malaby 2007a.

2. Process in this recursive sense is a concept that may be best understood as situated within the history of American thought, specifically pragmatism and semiotics (Peirce 1998; see also Menand 2001), but one finds it in many schools of thought, although often under different names. The concept can also be found, with some variations in meaning, in legal realism and the anthropology of law (Moore 1978), Marx (1978), phenomenology ( Jackson 1989), ritual studies (Turner 1969; "ritual as process"), performance theory (Bauman 1977; the "emergent quality of performance"), practice theory (Ortner 1984), and science and technology studies (STS; Pickering 1995; the "mangle of practice"). We are also seeing important gestures in this direction from game scholarship (Galloway 2006, Taylor 2006, Steinkuehler 2006).

3. A significant history remains to be written about the early period of computer games, when an accommodation in practice had to be reached between highly rationalized, Boolean code and the demands to provide contingency in games.

4. For more on game constraints, see Malaby 2006b.

5. This aspiration to something between top-down control and laissez-faire faith in emergence also appears under other names. See, for example, Richard Thaler and Cass Sunstein's (2008) argument in favor of "libertarian paternalism."

6. This randomness need not be "true" randomness; it need be only practically random; that is, indistinguishable from true randomness from the point of view of the participant (allowing for any technological or other aids available to him or her to identify patterns and thereby recognize it as otherwise).

7. For an extended discussion of the potential of gaming events to transform local meanings, see Malaby 1999.

8. See also Julian Dibbell's (1998) landmark account of LambdaMOO, the text-based virtual world, in which his own Herculean effort to build a garden of forking paths based on the *I Ching* figures prominently.

9. See also the game of Dealer discussed by Michael Hiltzik in his book on Xerox PARC (2000: 145–150). There, too, the appeal to a gamelike system of redistributing authority masked the ways in which certain established power structures went unchallenged (149).

10. A summary of the Elo rating system and links to further resources were found at http://en.wikipedia.org/wiki/Elo_rating_system on March 27, 2007.

11. My thanks to Bonnie Nardi for helping me develop this characterization of play as a disposition.

12. This is clear in various respects in the work of, for example, Pierre Bourdieu (1977), Michel de Certeau (1984), Anthony Giddens (1984), and Marshall Sahlins (1985).

13. As a postscript to these efforts to use voting to generate priorities out of Jira, Linden Lab opened up voting for some Jira tasks after I completed my research. At http://jira.secondlife.com Second Life users can sort, read through descriptions about, and vote on any of a set (not complete) of Jira tasks for Linden Lab to complete. In this way, again, Linden Lab sought to provide access to tools for individuals whose collective action would issue forth in collective wisdom, while maintaining its position as the maker of the larger game.

## Chapter 4. The Birth of the Cool

1. As a result, I found the "collaborative creativity" phrase somewhat out of keeping with the individualist emphasis I saw elsewhere around Linden Lab. On gently inquiring further, I learned how the trope may have appeared. One Linden from the marketing department pointed to the period when Linden Lab