MAKING VIRTUAL WORLDS

LINDEN LAB AND SECOND LIFE

THOMAS M. MALABY

1_THE PRODUCT

Second Life, Capital, and the Possibility
of Failure in a Virtual World

Sitting at a free desk in Linden Lab's Second Street offices, I have just finished some work on my avatar, ending up with some slightly spiky red hair that I like and a frame more human than superhuman (though perhaps a touch more trim than my own). A Linden on the QA (quality assurance) team walks by, and I catch his attention to point proudly at my handiwork. "Very nice," he says, "but, my friend, you need clothes." I look at my avatar. It is (I am) not naked; I am wearing the jeans that one begins one's Second Life wearing, and a T-shirt I picked up at a special event a few days before, with the name of the dance club on it. "What do you mean?" I ask, perplexed. "Look," he says, "let me tell you a few places that sell *good* clothes, you know what I'm sayin'? Now, let's start with what you want. What look are you going for?" Feeling that I had fallen into the deep and treacherous waters of fashion, I hemmed for a moment before mentioning that I admired the crisply tailored white suit that the avatar of Wagner James Au (then-"embedded" journalist at Linden Lab) wore. "I know someone who makes *gorgeous* suits," he answered, "Now here's where you go." Shortly thereafter, and a couple of thousand L$ poorer, my avatar sported a beige linen suit, complete with white dress shirt and stylish

red and teal tie, along with sunglasses whose lenses could change color at a command and teal sneakers, to make the look just a touch more casual. "There. Now you're ready to be seen," he said, and headed back to his desk.

The bulk of media attention that Second Life and other virtual worlds have received has concerned the surprising "reality" of their markets, the way they generate goods that are exchanged for familiar currencies (or for local, virtual world currencies that can themselves be bought and sold in currency markets; Castronova 2005, Lastowka and Hunter 2003). Trade in virtual items is still a new idea for some, but it should not be as unfamiliar as it may seem. After all, many people regularly pay for items that have no tangible existence, such as mobile phone accounts or downloaded computer software. The items in Second Life are in this respect no different, but what makes things a bit more complicated is the fact that almost everything you can buy in Second Life, at least at first glance, can only be used *in* Second Life. (Interesting exceptions include PDF files, which can be printed out, and images or video files, which can be distributed beyond Second Life quite easily).

This might lead some to think of the objects in Second Life as more like tokens in a game than valued possessions, things that are owned by the venue owner, like the putters at a miniature golf course. According to this view, users of these virtual worlds are players, effectively renting use of the in-game objects, which must then be returned. But there are a number of reasons why such objects accumulate "real" value in Second Life, and this changes the attitudes of users to "their" stuff. We can recognize why this is so by beginning simply with the fact that these objects and other things, like Second Life, persist. Access to them by the user persists as well, and in this sense they are a resource for that user's action in Second Life. What is more, these objects can have different properties that shape this social use. The creator of something has a number of options available when making an object. It can be set as copyable or not copyable, modifiable (meaning others with a copy of it or the original can change it) or unmodifiable, and transferable or nontransferable. For transferable objects, a price can be

set, and sellers can in fact set their stores up as virtual vending machines, requiring no one on-site to make their sales. I bought my suit by right-clicking on a picture of the suit and then selecting "Purchase." So the first thing we must understand about virtual world economies like that of Second Life is that they have all the necessary elements to support trade: alienable goods, a currency, and (most important) persistence (this persistence need not be guaranteed—like a frontier economy, it need only be sure enough for some to "bet" on).

My next encounter with what this means in practice came in one of my early explorations of Second Life after buying my first land. Having upgraded my account from the one-time fee version (US$9.95—later this basic subscription became completely free) to the monthly subscription (US$9.95 per month), I enjoyed some of the benefits of a "premium" account, including the right to own land, and I shopped around until I found a small plot on the corner of one of the many squares that make up the "grid" of Second Life. Each of these squares is called a "sim" (short for simulator) and each corresponds to an actual server that controls that square. The servers, like those of many Internet companies) are housed at a high-security and temperature-controlled "co-location" or "colo," a separate building in which Linden Lab rents space for its servers. On a visit there in 2005 I stood before the racks and racks of servers on which all the data for Second Life sat and marveled at the disjunction between the cramped, warm space in which I stood and the wide open, and often somewhat empty, vistas of Second Life.

My plot of land had (and has) a beautiful vista: a nice water view (waterfront properties in Second Life, as offline, are always more valuable). With an effective size of 512 square meters, this is not a large piece of Second Life, by any stretch, but it was big enough that I began to think that I ought to put something on it—a place where I could invite others to sit down for a chat. And here again we confront what is strangely familiar yet unfamiliar about Second Life. What does it mean to sit down in Second Life? It means that you sit your avatar (your virtual body) down, and the object you sit on (if it is programmed be sat on) will actually contain a bit of software that tells your avatar

how to sit, whether to lounge, to sit upright, to cross your legs, or what have you.

Much of the conversation in Second Life in 2005 (long before the ability to speak in Second Life and hear others was introduced) was text-based "chat," typed comments that were visible to every avatar close enough to "hear" them.[1] In thinking about providing a social space on my land, I had already learned (from my own interactions with other users) that sitting down was preferred for this kind of conversation—perhaps it was the familiar sight lines, or the familiar arrangement of virtual bodies that suggested intimacy and focused attention. As many scholars who have spent time in virtual worlds have noted (Castronova 2005, Dibbell 2006, and Taylor 2006, to name a few), it takes little time for a user to identify strongly with his or her avatar. With it you can take meaningful actions in the virtual world and, more important, you can fail while trying. It may seem a bit strange for me to tie these two things together—meaning and failure—and even to discuss failure in Second Life at all. With no preset goals, what is failure in Second Life?

To answer this question we should begin by recognizing the place of failure in our everyday social experience. As the sociologist Erving Goffman showed (1959), the way we present ourselves is always related to the particular domain in which we act, and furthermore, we seek to put forth certain impressions while avoiding others. A server in a fine restaurant manages the front of the house like a stage set (Goffman's "frontstage"), protecting from view or other discernment any messy contingencies that may befall the "backstage" (for an extended discussion of this from an insider's perspective, see Bourdain 2007: 64–74; see also Fine 1996). At a job interview, the applicant strives to project a specific version of his or her self, one that is an apt fit with the open position. Social differentiation (status) trades to a certain extent on those who can perform these roles with élan, and it is the possibility of failure that makes success meaningful (and vice versa); thus are the culturally "competent" (and this often informs class differences) separable from those that are, well, not. Social expectations for successful performance are ever-present (Bauman 1977), even when there are no

Figure 1. My Second Life home, complete with sitting area (below the "hammered copper" dome), and with the Second Life sun setting. Another user's home sits in the background to the right.

specific goals; often the only goal is to be seen as a competent member of a social group in the circumstances at hand.

In Second Life, not to have a social space of this sort risked such failure for me. By having one, I would be more likely to present myself as a knowledgeable, competent user of Second Life—something other than a "newbie" (or "noob"; see Boellstorff 2008: 72–75, 134–136). I found a nice, towerlike structure from a "free content" area (a place where other users drop modifiable objects that others can grab copies of for free) and proceeded to tweak it (and my land) a bit until I had a nice bridge attached to a domed sitting area on the top of the tower (see figure 1).

Now I could invite others to my land and appear the thoughtful (or at least minimally competent) host. I could respond proudly to inquiries about how I managed to make the roof appear to be hammered

copper by alluding to creative use of a Spanish-tile texture, wrapping one tile over the entirety of the dome (in fact, this happy outcome was very much an accident—I expected to see a full-fledged tile roof when I applied the texture). It is Second Life's persistence *and* its open-endedness (here, the possibility of failure, or accidental success) that makes it possible for this kind of specific local meaning to accumulate there. Later in the book I connect these features of Second Life to what it owes to games, but here I would like to focus on what the presence of success and failure mean for the stakes of Second Life. Its users are playing not just a game with borrowed tokens that will eventually end but a never-ending game with tokens they make themselves. That this could just as well characterize other domains of our lives is exactly the point.

(-: :-)

Computer games pioneered the avatar and a particular interface for its mastery, one that by convention involves the combined use of a QWERTY keyboard for movement and a mouse for adjusting what you see and how you interact with objects/other avatars. Alongside this development came a number of other features of 3-D online environments and the objects within them: the apparent physics by which these objects and avatars interact, as well as the idea of persistence, whereby user actions can make durable (if limited) changes to the game world.

What drove this innovation in computer games? All games make performative (in the Austinian sense; Austin 1975) demands on their players—actions they must master (along with guesses they must successfully make) to accomplish game objectives. This is one respect in which games are open-ended in a way quite similar to Second Life—at any given moment, things may turn out one way or the other. They are, to use the philosophical term, *contingent* (as opposed to *necessary* or determined). This performative contingency of avatars—the never-perfect mastery of a body analogue through a refined interface of fine-motor skills—is a crucial part of Second Life, and something that helps

us account for why it feels like "play" or a "game" to many of its users. This is because *it is possible to fail*, and to fail quite visibly and in multiple ways, when acting within Second Life. This contingent performance begins with mastery of one's avatar, often in view of others. And unlike in many other domains of online interaction, such as those that are primarily text-based, the scope for failure is much wider, containing text performance (in chat or instant messaging [IM]) along with avatar presentation and competence. In its physics, avatar affordances, and persistence, Second Life therefore owes an enormous amount to computer games.

Second Life's open-endedness, the way it is a fertile landscape for new uses, is inextricably linked to the experience of being in Second Life as someone who must perform through an avatar and is aware that one might fail in doing so, even in mundane ways (such as accidentally toggling off while flying, leading to an embarrassing fall, complete with an animation of limbs flailing). One soon realizes that, in many of the other actions one takes in Second Life, one is similarly called upon to perform in what feels like a social game. One of my first tasks as a new user was to "make" myself—shape my avatar via a complex set of "tools" for managing everything from my jaw width to my waist height—knowing all the while that this would be my presentation of self to others in Second Life, with whatever judgments of competence that might entail. It was at the conclusion of this process, having considered my work on my appearance done, that I showed it off proudly to the passing Linden, only to be whisked along on a shopping spree.

Thus there is urgency to much of the performance in Second Life, quite similar to that which characterizes language immersion. A user is driven to master movement, chat, building, flying, and other skills to a great extent because of the contestation over performance that characterizes games, in a contrived fashion, and everyday life, in a boundless fashion. But Second Life, although "boundless" in its open-endedness in the same way that other aspects of life are (there are no shared and established game objectives), is more like games in one important respect: it is an environment that is subject to the contrivance of its makers, who have leveraged these elements from games to make something

that can compel involvement (Calleja 2007) and effectively begin to approach the texture of everyday life.

This performative and social, gamelike quality to Second Life not only forms the foundation of its scope for failure and success but also points the way toward a better understanding of the bases of trust. Goffman is again helpful, as he recognized how groups that seek to maintain an impression together (a "team") themselves generate and depend on trust—trust that the frontstage will be maintained. As current research on online games has shown, collaborative action in urgent conditions is highly generative of trust and belonging (Ducheneaut, Moore, and Nickell 2007). This point should not really surprise us; teams build trust through a combination of interaction that is sufficiently high in bandwidth and oriented toward a common objective amid uncertain circumstances. Trust is something that many games (those that allow for teamwork) are contrived to accomplish, and the lesson to take from them is that a sufficient scope for social action, beyond the textual or aural, becomes fertile ground for social bonds *because* of the broad range of small to large acts of coordination (of bodies, of avatars) that take place within them, any one of which may succeed or fail. Much like a dance, then, avatar-mediated interaction can become a source of trust that builds over time, not simply because of the prospects for successful coordination but because of the multiple small moments of success and failure, and not just with direct reference to the explicit aim at hand. The mutual coordination of performance in Second Life extends to the most mundane practices of managing avatar distance, sight lines, posture, and the like. It is through this emergent practice, as an arena where some are masters and some are learning, that trust is generated, and this means the generation of one component of the stakes in Second Life: social capital.

Capital in Play

It is tempting to account for the breadth of creative action in spaces like Second Life by citing the effective removal of certain constraints,

such as the constraining effects of geography (Ondrejka 2007). In this way, freedom is associated with creativity and, in fact, with the *absence* of stakes. Although there are understandable reasons why we might look at virtual worlds and see them as places that have so radically reduced certain kinds of costs that they are effectively consequence-free (and that this therefore accounts for why people do creative things there), this is an error. Failure to present myself properly (or host visitors properly) in Second Life had consequences, as my QA friend underscored. To understand these consequences, we should be ready to look more closely and recognize how the stakes in virtual worlds are not eliminated but instead radically *reconfigured* as compared to most other domains. It is this realignment of resources and constraints that may account for the stakes that virtual worlds have generated.

Virtual worlds do transform and vastly reduce many of the material costs of the virtual commodities produced within them as compared to their offline analogues; specifically, those associated with production and distribution (any Second Life object is near-instantly replicable code). But there is always a temptation, on seeing the ways in which virtual worlds seem to collapse geography in this way, to see this reduction as removing constraints altogether. The radical reduction in material costs can lead us to think that a place like Second Life is effectively a post-scarcity economy. But this conclusion is actually only the result of a long-ingrained habit of thinking of the economy as constituted and bounded by the market, a habit to which many decades of academic treatment have contributed.

Scholarship, however, has slowly come to reflect more closely the human experience of the economy and has developed a picture of it that incorporates not only the ways material resources (cash, commodities) accumulate and move about through market exchange, but also how other resources are accumulated and circulate, such as through reciprocity, the source of social capital (trust), as well as learning and authorization, the sources of cultural capital.[2] As most social actors recognize, we frequently parlay one of these kinds of resources into another. We may invest market capital in learning (tuition), social capital to find a job, or cultural competence to establish networks of reciprocity

(through hosting a dinner party, for example). For Pierre Bourdieu, human practice over time accumulates in these different forms, whether in the congealed labor of commodities, the lasting obligations of social networks, or the established cultural practices of taste (Bourdieu 1986). All these resources accumulate over time; human effort congeals in these various kinds of capital that then become the resources available to us as we seek to accomplish our daily objectives. To put it another way, human capital is the first resource for people, and with its application over time it generates material, social, and cultural capital.

What does this mean for virtual worlds? The first thing we must notice is that their structural characteristics of persistence and open-endedness (contingency) make the accumulation of these forms of capital just as possible within them as they are elsewhere. Goods (with vastly reduced production and distribution costs, it is true), human relationships, and skills can be created and obtained in virtual worlds as a result of the expending of effort over time, assuming such effort is successful. Whatever the reconfiguration or reduction in material production and distribution costs, trust and competence, at least, continue to be scarce commodities in virtual worlds, because social failure is an ever-present possibility. Establishing and maintaining a network of trust and obligation does not become a trivial exercise simply because many of the material costs of communication are lowered. Similarly, gaining competencies that can be applied toward innovation is also not a costless (or even near-costless) transaction. This is because reciprocity and learning, as forms of human exchange, have always required time in a way that isolated market transactions, over and done with as they often aspire to be, do not.

We are better able to account for the stakes of virtual worlds when we see them as reconfiguring the relationships among these kinds of resources and putting them at risk to be gained or lost on the basis of successful or failing social action. It may be accurate to say that, over much of history, market capital has dominated other forms of human exchange precisely because of the high costs of producing and transporting material goods, and that therefore virtual worlds bring this situation more into balance (at least for those with the material re-

sources to access them!) by elevating the impact of reciprocity and learning, so that all these forms of exchange are on a par with one another. But each of these forms of capital develop in virtual worlds with certain distinctive features, and examining them further gives us insight not only into what is at stake in places like Second Life, but also how the architecture of virtual worlds can shape this production of value.

Market Capital

The most familiar form of capital, market capital tends to be both durable and transferable, existing in the form of goods and services (commodities) or currency. But the power of market capital lies in its capacity to be re-exchanged, achieved most fully in the form of currency. Market capital, unlike other forms, enables exchanges that are immediate and isolated, demanding no corresponding moral exchange (reciprocity) or cultural exchange (learning and authorization), although these other dimensions are often present. In its ideal form, then, market capital is a resource that can be drawn on in isolation from one's connections (one's social capital) or one's credentials and competencies, beyond the minimum cultural competencies required by the market itself. In this respect, success and failure tend to be less of a defining feature of market transactions—they are done, and it matters little if they are done well or poorly.

Commodities

Virtual worlds have surprised many with the degree to which they generate tradable goods that can now be found easily through online markets (eBay, IGE). While the lack of tangibility to these goods makes some of those unfamiliar with virtual worlds initially hesitant to accord them equal status with offline goods, it should take only a moment's consideration to render such reactions untenable as a basis for analytical distinctions. The purchase of goods that we durably own but which

are intangible applies equally well to such items as software, telecom accounts, ringtones, and other elements of digital life that people rely on around the world. F. Gregory Lastowka and Dan Hunter (2003), writing from a legal point of view, have demonstrated that both normatively and descriptively these goods must be considered property, and this signals a larger trend where the status of information as a commodity is becoming undeniable.

Initial skepticism may also be colored by a suspicion that these virtual commodities are, like the worlds themselves, somehow not serious or worthwhile. Whether these goods are frivolous, however, is a normative question, and in any case it is one that presupposes the very distinction—that these are worlds without consequences, as opposed to the "real world" with its consequences—that the reality of virtual world economies should help us overcome. In any case, commodities are the most obvious instance of the exchange of value across worlds, as they are widely available for purchase through simple credit-card transactions. Buyers thus convert their market capital (in the form of currency or credit) into market capital in the form of commodities, virtual goods. They make the conversion not simply within the world's economy but across the world's economy and the national economy of their currency. (This is analogous to the purchase over the Internet of goods from another country.)

But the most important feature of virtual world commodities is the possibility of transforming the costs of producing or distributing them. Instead of letting the code-based environment dictate easy replicability, many virtual worlds have *imposed* scarcity, such that acquiring, making, or developing things of value demands significant amounts of time and most objects of value cannot easily be duplicated. This tends to be true for those virtual worlds that are foundationally games (MMORPGs), such as World of Warcraft. As a result, the values for these commodities can bear a strong relationship to the amount of time required to make or acquire each item. These efforts to control scarcity on the part of the worlds' makers are not immutable—players with the right access (perhaps by drawing on social capital) or abilities (cultural capital) can hack or exploit under certain circumstances; this

is just one more way that these domains exhibit their complexity—they cannot be perfectly governed.

Also at play here is the use value of the item; that is, what it allows you to do, whether as a marker of status, an element of in-game combat, or otherwise. This value, the product of the item's supply and demand, can be exploited by those who acquire or make goods for sale by the application of cultural capital in the form of skill or credentials necessary or helpful (in terms of minimizing time) to acquire the item, by the application of social capital (connections) to locate the item, and so forth. That difference—that is, how much easier it is for someone to acquire or make an item more efficiently than a prospective buyer—is what the seller depends on to make a profit. This virtual world entrepreneurship has been most fully explored by Julian Dibbell (2006).

So in the generation of these commodities we already see multiple kinds of resources in play, as players in MMORPGs leverage them to generate commodities that can be exchanged for currency. It is also worth noting that the distribution costs are in any case transformed, as the virtual nature of the commodities makes their transfer relatively easy, although this result depends as well on the architecture of the virtual world itself. Can items, for example, be sent via asynchronous communication (such as e-mail) from one account to another? Must this be done within the world? Even more interesting is to consider the limits of the objects' use value. Can we imagine that some of them could be "used" outside their original domains? What are the consequences of someone posting screen shots or other "proof" of ownership of an item to personal blogs and photo sharing sites? To what extent are items constrained by the "story" of the world from which they originate?

Second Life and other creations like it (ActiveWorlds, There) are different on this point, with important consequences for the configuration of these forms of capital. In these worlds the (re)production and distribution costs of creating items are both drastically reduced. Let us recall that Second Life in particular is built on the premise that users make their own content, and that they furthermore own the intellectual property rights to whatever they make. The permissions (for copying, transfer, and the like) for objects made in Second Life are set by their

maker (or anyone with access to a modifiable object). Thus in Second Life not only is it extraordinarily inexpensive to distribute items, but also their duplication costs can be near zero as well. As a result, the investment of time and effort involved designing and (initially) making in-world commodities has a disproportionate weight for these virtual world commodities. One implication of this is a suggestion that "creativity" is the preeminent source of value in Second Life—it is the scarce commodity (see Boellstorff 2008: 205–236). This returns us to the core issue of success and failure. Any user can design a new T-shirt in Second Life, but what makes one design a success and another a failure? The right product, as in offline fashion, must tweak existing forms in just the right direction, resonating with potential buyers, each of whom is eager to distinguish him- or herself from what has come before with an eye-catching new look.

In the Second Life fashion designer and the Second Life consumer we find a meeting point of performances, and mutual success brings capital to them both, at least until that look itself has become tired. In some ways, it is the deeply fashion-oriented economy of Second Life that argues most strongly for the "success" of Linden Lab's attempt to recreate "First Life." It is here that we must confront how the value of commodities can rely as much on a set of cultural meanings in addition to the factors heretofore described. A common example is that of the baseball card; its value accumulates relative to the cultural importance placed on such objects, which elevates some materially nearly worthless items to an exalted status as "memorabilia" or the like. As outlined below, this is a particular form of cultural capital, its objectified state, but I foreshadow that discussion here because cultural capital is conventionally parlayed into market capital through events such as assessments and appraisals, which themselves depend on a combination of scarcity and meaning. We might then ask: If the cultural capital of meaningful objects is generated in virtual worlds, how are these forms of nostalgic or innovative value supported or undermined by the nature of virtual items as potentially replicable code themselves?

There is a further wrinkle to understanding commodities in virtual worlds: How are services to be understood? Are they a form of market

capital? Services are highly commodified, but they are not durable and transferable in the ways that most commodities or currencies are. They appear to be a direct application of cultural capital (expertise), rather than the accumulation of human capital that we see in goods, virtual or otherwise. Nonetheless, services are a form of market capital because what is purchased is the labor and expertise of one or more others as delimited by time. Purveyors of services sell their time, and hence make a direct parlay of their embodied cultural capital, acquired in human effort over time, into market capital, the application of cultural capital in time. The distinguishing feature of market capital transactions still remains; the service transaction is minimally possible without any necessary elements of moral obligation (reciprocity) or learning and authorization.

There are a number of services sold in virtual worlds, such as notary services, design consultations, writing services, and (in World of Warcraft) enchanting and lockpicking. Here, as in offline experience, the conversion of cultural capital, in the form of both competencies and credentials, into market capital is accomplished by applying those competencies through time, and that application of competencies in the service is the exchangeable commodity, the market capital. A number of important questions remain: How are emerging or existing means to display competence and credentials involved in service providers' efforts in the marketplace? Do services, so closely tied to competence and credentials, rely also more heavily on social capital; that is, are social networks, as opposed to advertising and other forms, particularly good paths to potential customers? In all these dimensions, how does the architecture of virtual worlds specifically shape these practices?

Currency

Currency is market capital in its most liquid form: highly transformable, frequently anonymous, and productive of immediate exchanges that most clearly suggest no moral relationship (Parry and Bloch 1989). Unlike commodities, which have a use value, currency has value only in its exchange for other currencies, commodities, or when parlayed

into other forms. Many theorists have noted that as a phenomenon money is ultimately and peculiarly reliant on a shared sense of trust, and many of the ingredients of this trust are deeply practical.[3] Common practical knowledge and use of currency provides one part of the foundation required for any money to be "real" and to represent and store "real" value (Dominguez 1990). Unlike commodities, then, currency has long been embedded in the mundane practices of person-to-person transactions, involving verification both of the currency itself and of the transaction (ensuring correct amounts, change, and proper application of things like taxes and fees). In the absence of many of these features of cash transactions in virtual worlds, how is collective trust in currency established?

This transition in the foundations of trust in currency from the mundane to the virtual is already under way for conventional currencies. The establishment of the euro is a particularly apt case that illuminates the position of virtual currencies. The euro was a fascinating, and perhaps unprecedented, instance where the introduction of a virtual currency not only preceded its physical rollout but was deemed a necessary test of the currency's viability (Malaby 2003b). This reversal reflected an important landmark in a long transformation in the concept of trustable currency, away from specie and toward an abstract representation of value. For much of the past two centuries, this transformation has hinged on the effectiveness of verifying the physical currency itself and on training citizens to be competent (that is, to have the cultural capital) to verify their currency in the course of face-to-face exchange. With the euro's rollout, the first test of verification of the currency rested not on mundane, unmediated verification by everyday users but instead on the establishment of its value online, in currency markets, where it was available two years before it ever saw the streets.

What does this mean for virtual worlds? It demonstrates that the generation of value for currencies is already resting increasingly not on the physical verification of notes and coins but on the collective trust in networked financial institutions, including currency markets, banks, and transaction verification services (like VeriSign and PayPal). This

trust is built, in turn, on a small, wealthy segment of the global population's increasing familiarity with the practices of virtual trade. In short, it demonstrates in a different way why we should not be surprised to see virtual world currencies act like more familiar currencies; after all, the euro itself was virtually real first, and this signals that the very foundations of the peculiar phenomenon of money are shifting further toward the institutional and away from the phenomenological. For virtual worlds, this raises the following questions: What kinds of institutions underwrite virtual currency? Is it the company that makes the world itself, existing banks and other financial institutions, new third party vendors, currency markets, or some combination of all three? How is the relationship of trust necessary for the legitimacy of a currency established among these institutions and between them and the users, and therefore how might we recognize practices of reciprocity in this process? Just as important, how does the architecture of the Internet itself and of particular domains shape users' practices and expectations so as to generate new paths toward legitimacy for lending institutions?

One answer may be found in the establishment of Stagecoach Island, by Wells Fargo Bank, on a private island within Second Life wherein residents could participate in a private economy. According to news.com:[4]

> Visitors there can skydive, fly hovercrafts, dance, and shop. But woven into the experience, to which Wells Fargo has been inviting groups of people in San Diego and Austin, Texas, is a series of financial messages intended to help them learn something about money management. . . . Stagecoach Island takes place on several private islands inside Linden Lab's virtual world, "Second Life." But while "Second Life" is open to the public, the Wells Fargo islands are accessible only by those who have received invitations from the bank and, thus, is branded entirely as a Wells Fargo environment. Regular "Second Life" members cannot access Stagecoach Island. . . . Stagecoach Island players are given $30 in imaginary money with which to buy clothes, pay for rides, and the like. The idea, though, is to

teach the players to save money—they earn 10 percent per day on "deposits"—and to learn new things about money management through a series of quizzes that, when completed, reward players with $5 of new funds.

By making access to the island, and an allowance in its virtual currency, available for free—or rather, in exchange for contact information—to select young adults, Wells Fargo tried to leverage its cultural capital as a credentialed financial institution with its social capital in its connections to select groups to generate both market capital in the form of new accounts and the cultural capital of the credential of widely acknowledged competence in online finance. The effort was ended after some months, and Wells Fargo moved on to do a similar project in a competitor of Second Life's, There.com. Similar attempts to parlay social capital into market capital and cultural capital, and back again, are prevalent throughout Second Life, whether by corporations, nonprofit and government institutions (such as the National Oceanic and Atmospheric Administration's island), or individual Second Life users.

Social Capital

Social capital is a resource that depends on the special qualities of reciprocity, as first outlined by Marcel Mauss (1967). Unlike immediate and equivalent exchanges, such as those of the market, reciprocal exchanges (in the form of objects, services, expressions of concern, and so forth) imply a moral relationship, where the account is "never settled" among individuals or groups, and success and failure become all the more possible. Central to this phenomenon is time, but in contrast to the commodification via delimited time in the service industry, here time is specifically not delimited: any given exchange continues a relationship into the future, leaving open the possibility of the nature and quality of the next transaction. Over time, social capital is the resource constituted by these relationships, one that can be drawn upon for advice, support, or other resources. As such, social capital must be culti-

vated, maintained in a way that market capital does not require; here success is measured by the ability to participate in an ongoing exchange of obligations, and failure is either not to return such a concern or favor or to demand too many without return.[5]

Connections

In virtual worlds, social capital is a resource that has garnered increasing attention, primarily with respect to the generation of new social relationships within virtual worlds and with respect to how social ties can bridge within and between virtual worlds and other parts of people's lives (Taylor and Kolko 2003). It is perhaps not surprising then that we are drawn first to identify the familiar social groups within worlds (such as groups in Second Life or guilds in World of Warcraft) or outside them (such as kin networks or peer networks), all of which recreate or draw on conventional forms of social organization. But we thereby pay less attention to the practices of reciprocity that create and sustain these networks. This is unfortunate, because a research focus on the practices of reciprocity in virtual worlds would allow us to see where new forms of social networks are created, even if they are never realized in conventional social forms. I am thinking in particular here of guild structure in conventional MMORPGs, where a form of social organization is written into the code of the world itself, and how focusing on this as the social formation par excellence in World of Warcraft might blind us to other kinds of social networks (such as those associated with World of Warcraft's auction houses, for example). For Second Life, it was the existence of such ongoing relationships between Linden Lab and many of its longtime users that drew critical attention, with a number of users complaining that these users were given special favors and other attention by Linden Lab. One example of this was Linden Lab's support for the user group Bedazzle's attempt to create a game within Second Life. These connected users were labeled the "Feted Inner Core" (FIC for short; see Boellstorff 2008: 226). The Wikipedia entry for Second Life defines the FIC as "a derogatory term for any . . . 'clique' of successful residents on Second Life, especially where such a

group is seen as having been granted special favors (by Linden Lab, landowners, or other influential organizations) that maintain its success." As in similar offline charges of cronyism and the like, the moral economy of reciprocity does not simply generate civically healthy social capital (in Putnam's sense [2001]); it always contains as well the possibility of social exclusion. When I was directed by a Linden to one set of stores to outfit my avatar, and not others, who is to say if that kind of guidance bespeaks unfair competition?

The parlay of social capital into other forms is also possible between Second Life and other domains, with a prominent example being the novelist Cory Doctorow's launch of a novel in virtual form within Second Life (Doctorow 2005). Doctorow, with the credentials (a published author) and competence (the ability to write this novel and others and to present his work publicly), made use of his connections with the Second Life community (and one of its primary journalists, Wagner James Au, in particular) to create an event where virtual copies of his book (designed by residents in a competition) were available, and at which he was available to talk about the work and to sign the books (virtually).[6] The Second Life copies of the book were free, so a direct parlay of social and cultural capital into market capital for Doctorow was not the effect, but this does not mean that the event had no consequences in terms of market capital for Doctorow, who argues that such distribution in fact increases his material gain from writing. In any case, the exchange is all the more interesting because market capital was not at its forefront. As in many such events, on- and offline, the conversion of social capital into cultural capital (in the form of status) is the central exchange.

Cultural Capital

Cultural capital is the realization of what a given cultural group finds to be meaningful or important in bodies, objects, and offices. It includes the competencies and credentials that individuals or groups acquire over time within a particular historical context and the objects

that become valuable through their association with such meaning. It has three forms: embodied, objectified, and institutionalized (Bourdieu 1986: 243–248). Cultural capital is distinctive for its specificity to a context of meaning and practice, such as contexts associated with nation, class, region, or sources of social separation, and thus its acquisition is not amenable to immediate and isolated transactions. Instead, cultural capital is acquired through the culturally embedded practices of learning, in the informal sense, and authorization, in the official sense. Such exchanges generate a feeling of belonging, of identification with a cultural group. The exception is cultural capital in the objectified form, here termed *artifacts*, where the purchase of such goods does not entail the cultural competence necessary to consume, that is, "appreciate" them.

Competencies (Embodied)

The competencies embodied in individuals as a result of their learning form a basic resource for all human beings. It is the application of this cultural capital in action that enables an individual to engage the world and to interact with others in it, beginning with the basic application of language and gesture but encompassing every other means by which individuals are able to act meaningfully. A very small set of examples includes: making small talk, being literate, hitting a major league curveball, navigating social service bureaucracies, tracking and shooting a deer, tracking and clicking on a target in a networked computer game, typing witty comments quickly in a synchronous chat-based environment, and demonstrating unflappability in the face of unexpected gambling losses.

These competencies are acquired through learning, often in childhood, a practice that involves long-term tutelage under the guidance of either competent others—such as parents, teachers, mentors, or peers—or the objectified cultural knowledge found in objects such as books, tools, built environments, and technology. Cultural competencies are powerful markers of background and are more specifically associated with cultural distinctions such as class, gender, ethnicity, profession,

religion, age group, and many more. Jerome Karabel (2005) has documented how over the course of the twentieth century Harvard, Princeton, and Yale developed admissions policies that gathered information to evaluate applicants in terms of a broader array of cultural capital than simply scholastic ability. This allowed them, for example, to slow the rise of successful Jewish entrants over the first half of the twentieth century. By expanding their forms of information gathering and evaluation into such areas as athletic team membership they sought to measure "character," a form of cultural capital that could be relied on as a predictor of future wealth because it excluded those not already enculturated to the relatively ethnically homogenous upper class.

In virtual worlds, we see a scene much more in flux, as the cultural competencies within it are in the process of becoming. As a result, the economy of practices there may not currently, as in Karabel's cases, simply reproduce entrenched socioeconomic differences. Where in virtual worlds, then, are existing competencies finding new purchase, and where are new competencies generated? Although here we might be tempted to identify the avatar as the "actor," the entity that acquires the ability to act competently in places like Second Life, we must keep in mind that cultural competencies are inescapably embodied. The need for a tool or technologically mediated environment (such as the avatar) to utilize some of these competencies does not change this fact, and thus to separate the physical from the avatar is to reintroduce a gap between online and offline that does not exist. More familiar competencies—piloting an airplane, rowing a canoe, handling customer service telephone calls, pedaling a bicycle, or even writing—also require the proper circumstance to be employed, including the requisite technologies and forms of mediation.

If we think of competencies developed within and across virtual worlds, then, as essentially not different from those individually and collectively developed in other domains, we can see more easily how the application of such competencies can itself transcend one domain for another. The influx of corporations and other institutions into Second Life reflects an investment on their part in being able to pursue

their interests effectively within it. In doing so, they not only mobilize material capital (to purchase islands, custom avatars and buildings, and the like) but also seek to apply their competencies (in marketing, fundraising, etc.) to this new space. What is more, the brand name that such organizations adopt as the last name for their workers in Second Life stands as a credential.

Credentials (Institutionalized)

Institutionalized cultural capital appears when capacities are formalized into offices and licenses, when an institution with a purview over a certain arena gives its imprimatur to an individual or group as authorized to carry out certain kinds of activities. Thus it is capacity removed from the body of an individual and reified as a credential, and a credentialed individual may or may not have all the competencies thereby implied. The credential nonetheless acts as a resource for action in any case, as a credentialed actor can carry out acts formally allowed by the institution, many of which may in fact be disallowed otherwise. Marrying a couple, firing someone, and speaking or signing a contract on behalf of an institution are instances of the application of institutionalized cultural capital. Bourdieu, speaking specifically of institutionalized cultural capital in the form of academic credentials, elaborates (1986: 248):

> With the academic qualification, a certificate of cultural competence which confers on its holder a conventional, constant, legally guaranteed value with respect to culture, social alchemy produces a form of cultural capital which has a relative autonomy vis-à-vis its bearer and even vis-à-vis the cultural capital he effectively possesses at a given moment in time.

So where do we find credentials in virtual worlds that are not simply imported into the space, as are the brand-based last names noted above? Future research may find it important to look at the rise of education in virtual worlds, both on the part of existing educational

institutions (such as the growing community of academics from conventional universities making use of Second Life in their classes) and of new ones (new groups of educators that emerge within and across virtual worlds).

But credentials appear in noneducational contexts in Second Life as well, as the case of Zarf Vantongerloo in Second Life illustrates. Zarf set up shop in Second Life as a notary public, verifying that documents submitted to him are signed by the parties involved at a specific time and retaining a verifiably unchanged version of the document at an offsite (out of Second Life) server.[7] How are his credentials as a notary (he is not one beyond Second Life) established? In his interview with Zarf, Wagner James Au asks:

> "So really . . . the only possible flaw in all this is whether everyone trusts *you* and your code, right?"
>
> ". . . which is true of any notary," Zarf replies. "In real life, the state makes you take a test and you [do] some reporting requirements— but you have to trust that the notary down the street isn't faking your signatures on things. So yes, you have to trust me to not create fake notarizations." He says his code is open source and verifiable in common software packages like OpenSSL, so "the only part of my code you need to trust is how I ensure that my communications are tamper proof."

Here Zarf points to open source verification software to establish his credentials, an innovative way to appeal to credibility in waters that are currently uncharted by any state institution (as Zarf notes elsewhere, his research suggested that in fact virtual notaries might be disallowed by much existing legislation). As academics interested in virtual worlds have suggested (Crawford 2005), following a legal realist approach, there are good grounds for believing that acts such as those by Zarf may generate legitimacy for themselves from the ground up, once they are employed and relied on by sufficient numbers of actors. Public policy might allow new formal laws (or interpretations of existing laws) to follow a then-established cultural practice.

Artifacts (Objectified)

Artifacts are objects that draw a significant amount of their value from their status as repositories of cultural capital. Invested within them are meanings from a given context. Examples include antiques, art, baseball cards, and books. I have noted some of the features of artifacts above in their connection with the market economy, but I want to reintroduce a discussion of an item that I first examined in a previous work (Malaby 2006a): the trading card for Kermitt Quirk's Tringo.

In February 2005 an individual by the name of Kermitt Quirk signed a contract licensing the use of a popular game that he had made, called Tringo, to a company interested in distributing the game worldwide. He designed, scripted, built, and initially distributed the game in Second Life. In Tringo, participants sit facing a large gameboard that displays a number of Tetris-like objects. One at a time, one of these objects is selected and displayed. Each player has a card with a five by five grid and must place the displayed object somewhere on his or her grid. The object is to make complete squares, which give a certain value (the larger the square, the higher the score) and then vanish from the grid. Tringo had already become all the rage in Second Life in late 2004, with residents flocking to Tringo locations to play and socialize, and Quirk turned this popularity into a significant monetary gain.

Linden Lab's marketing team created a remarkable cultural artifact in response to this phenomenon: a trading card. The cards (there were others in a series) were distributed at a variety of events where Linden Lab had a presence in 2005, including academic conferences, trade shows, and the like. Linden Lab aspired to leverage the power of trading cards—which ideally travel through social networks—to generate interest in Second Life and ultimately more users. "Kermitt Quirk's Tringo" is the first card in the "Games" series, and features a screenshot of a game of Tringo (taken within Second Life) on its front, along with the Second Life logo (see figure 2). This is a dense cultural document, filled with carefully written texts that aspire to teach the reader about many things. It seeks to connect things of value (such as income/net worth, connections, occupation) across two different domains of
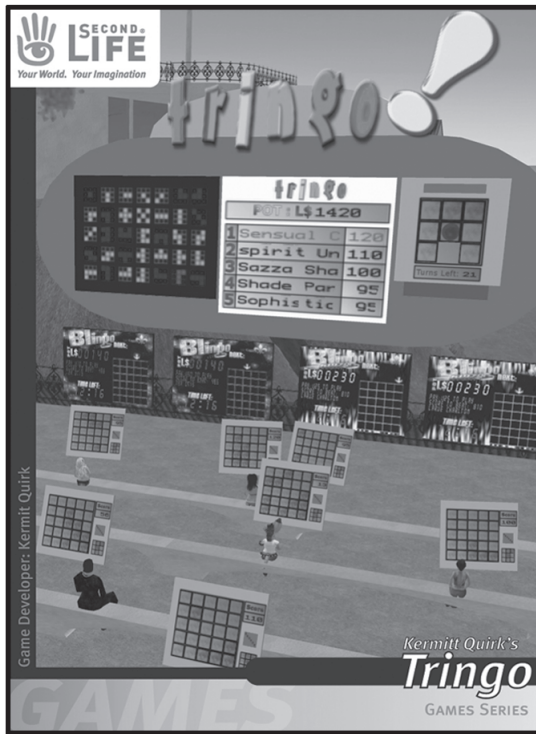
Figure 2. Kermitt Quirk's Tringo, as presented by Linden Lab in the trading cards they produced for marketing purposes in 2005. The back of the card constitutes an education in Second Life's possibilities.

human action: Second Life and "First Life" (a resident's existence beyond Second Life, in most cases taken to mean "real life," outside online worlds altogether). Also, as a trading card, this object constitutes in itself an artifact that aspires to be valued, and this value furthermore depends on the card's potential for circulation in social networks or material reward through auction.

The card juxtaposes key components of an effort to establish Second Life as an environment with real consequences, material and otherwise, and to do so it points to the various forms of value that actions in Second Life generate. I indicate just a few of these here. Most nota-

GAMES SERIES **1**

Tringo

WHAT IS TRINGO?
A simple, multiplayer board game with elements of Bingo and a fast-action jigsaw arcade game, Tringo consists of a display board, to track scores and pieces in play, and game cards, for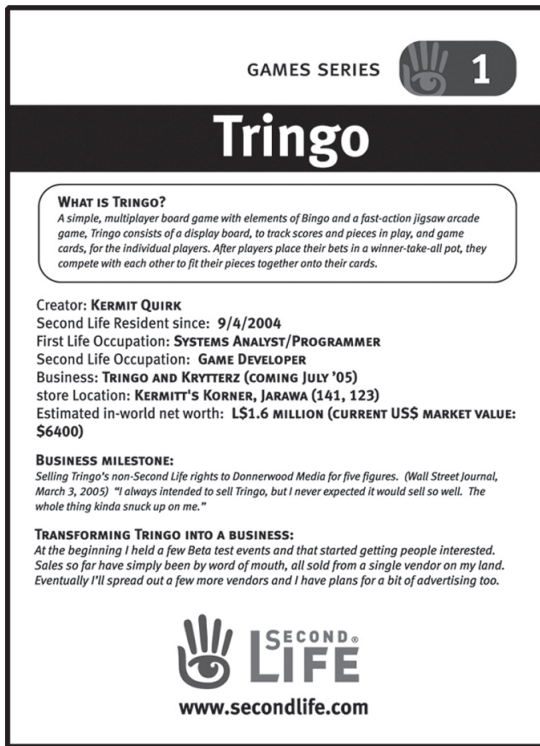 the individual players. After players place their bets in a winner-take-all pot, they compete with each other to fit their pieces together onto their cards.

Creator: **KERMIT QUIRK**
Second Life Resident since: **9/4/2004**
First Life Occupation: **SYSTEMS ANALYST/PROGRAMMER**
Second Life Occupation: **GAME DEVELOPER**
Business: **TRINGO AND KRYTTERZ (COMING JULY '05)**
store Location: **KERMITT'S KORNER, JARAWA (141, 123)**
Estimated in-world net worth: **L$1.6 MILLION (CURRENT US$ MARKET VALUE: $6400)**

BUSINESS MILESTONE:
Selling Tringo's non-Second Life rights to Donnerwood Media for five figures. (Wall Street Journal, March 3, 2005) "I always intended to sell Tringo, but I never expected it would sell so well. The whole thing kinda snuck up on me."

TRANSFORMING TRINGO INTO A BUSINESS:
At the beginning I held a few Beta test events and that started getting people interested. Sales so far have simply been by word of mouth, all sold from a single vendor on my land. Eventually I'll spread out a few more vendors and I have plans for a bit of advertising too.

SECOND LIFE
www.secondlife.com

Figure 2. (*continued*)

bly, the first item in the trading card's list of Tringo's attributes (analogous to facts about an athlete) is "Creator," which answers one question about the card's purported subject, Tringo. But every item thereafter refers not to Tringo but instead to Kermitt Quirk, who has taken over as the focus of the card's information. We then learn, in quick succession, that he has been a resident since September 4, 2004 (seniority is one of the primary credentials by which social difference is constructed in Second Life), that his First Life occupation is systems analyst/programmer, and that his Second Life occupation is game developer. This juxtaposition places an occupation in Second Life ontologically on a par with one's occupation in the conventional sense.

We learn the name of his business and when it will appear, but it is not a "Second Life Business"—the business as an entity transcends whatever boundary we might expect between First and Second Lives. We are given the location of one of his stores, but the (for the uninitiated) cryptic coordinates are the only indication that this is within Second Life. Lastly, we learn about his net worth, in L$ and US$— again with an element, "L$"—tantalizingly undefined. We then hear of the "business milestone" of Quirk selling distribution rights to Donnerwood Media for "five figures" and hear Quirk himself comment on this, first in brief, and then at length. He points to how the speed of events surprised him, even though he always intended to sell Tringo, and to how he relied on word of mouth to grow his business.

The Tringo trading card, in teaching us about Kermitt Quirk, makes a set of claims about how we are to understand the relationships among a product, money, credentials, skills, and networks. Quirk has credentials outside Second Life (systems analyst/programmer) that can be applied within Second Life. He now has a credential in Second Life, authorized by the signing of the contract with Donnerwood Media, that could be applied beyond it. He has assets, in the form of a business and in-world net worth, the latter of which is readily describable in and, it suggests, convertible into, U.S. dollars. Quirk also has a network of people who know about, enjoy, and recommend his product, such that he as yet does not need to advertise. Beyond this, he, or the game, has a trading card! Again, the card itself aspires to add to the economy of practices by existing in a form distributed by Linden Lab and, potentially, to be valued. More fundamentally, however, Second Life itself is in this picture as an environment where all this can be done, as a place where one can viably leverage skill into connections into credentials into a product into money, and the combinations thereof. But Quirk's success stands in sharp contrast to a contemporary failure, another attempt to make a game in Second Life called Chinatown that was supported and extensively hyped by Linden Lab itself. The success of Tringo, like other such social successes, can seem self-evident, even inevitable, after the fact. The key to understanding the role of failure in Second Life is to realize that such retrospective impo-

sition of meaning always runs the risk of obscuring the contingencies that Second Life's makers face going forward.

New Business

The stakes of Second Life are generated out of the actions of hundreds of thousands of people expending effort in a space where the consequences of their actions can accumulate. That some of these actions can fail, and some succeed, is what gives them meaning. Furthermore, to think in these terms makes it possible for researchers and others to engage seriously the relationships not only within virtual worlds but *among* the various domains of human activity, broadly speaking. The boundaries that only appeared to separate the real and the virtual are fading fast, from both sides, and it is the social actors on the ground who are making use, in every new moment, with every new challenge, of the increased scope that these new domains afford. Without the proper tools to describe their efforts, academic understanding of the digital society will lag irredeemably behind.

For Linden Lab, this entire economy (again, in the broad sense) was what the staff sought to maintain. They strove to protect it from disruption, but equally important (and more a day to day focus of their work) was the continual provision of new affordances, new possibilities for their users, whether in response to user demands or (more often) simply rough guesses about new features that might be useful. For Linden Lab, this was the continual project of providing tools.

11. For example, new media scholars have sought to develop an approach to games that connects them to critical theory (Bogost 2006; Galloway 2006).

12. See, for example, Burke 2002, 2004; Castronova 2005; Consalvo 2007; Steinkuehler 2006; Taylor and Kolko 2003; and Taylor 2006.

13. On post-bureaucratic organizations and their relationship to ever-changing technology, see Kellogg, Orlikowski, and Yates (2006), and Orlikowski (1996).

Chapter 1. The Product: Second Life, Capital, and the Possibility of Failure in a Virtual World

1. Instant messaging (IM) is also built into Second Life, so users can send private messages to individuals wherever in Second Life they may be.

2. Learning generates competencies; there are other forms of cultural capital—credentials and artifacts—that are generated by other kinds of exchange.

3. See Crump (1981: 8), Simmel (1978: 153), Cohen (1998: 11–12), Leyshon and Thrift (1997), among others.

4. http://news.com.com/Wells+Fargo+launches+game+inside+Second+Life/2100-1043_3-5868030.html.

5. Reciprocity as the basis for the establishment of social relations that could be drawn on to acquire status is classically represented in the "big man" system at one time prevalent in Melanesia. See Sahlins (1963).

6. One account of the event can be found at http://secondlife.blogs.com/nwn/2005/07/day_of_the_doct.html.

7. See http://secondlife.blogs.com/nwn/2005/10/laying_down_the.html.

Chapter 2. Tools of the Gods

1. William Gibson is a perhaps better-known author who wrote about virtual environments in novels such as *Neuromancer* (1984), and his work predates Stephenson's; nonetheless, around Linden Lab Stephenson was cited far more frequently as having provided the model for what Linden Lab was making.

2. In this respect, Tom Boellstorff's identification of the neoliberal underpinnings of Second Life is on target (2008: 209), but it is important to note how the ideas of Brand and others that found their way into Linden Lab did not restrict the arena of the invisible hand to the market alone. The economy of Second Life is indeed "creationist capitalism" of a sort, but the implications