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The Laws of the Virtual Worlds

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The Laws of the Virtual Worlds

F. Gregory Lastowka & Dan Hunter

Virtual worlds are places where millions of people come to play, trade, create, and socialize. In this Article, we provide a brief history of virtual worlds and examine two legal questions raised by virtual world societies. First, we ask whether virtual objects might be understood as constituting legal property. Second, we discuss whether democracy and governance are concepts that might be applied meaningfully to social conflicts that arise within virtual worlds. As virtual worlds continue to evolve into virtual communities with separate rules and expectations, it is important to understand the interaction between the laws of the real world and the laws of the virtual worlds.

Imagine the plains, caves, and abysses of my memory; they are innumerable and are innumerable full of innumerable kinds of things

—Saint Augustine¹

[A virtual world] is a place you co-inhabit with hundreds of thousands of other people simultaneously. It's persistent in that the world exists independent of your presence, and in that your actions can permanently shape the world.

—Ultima Online website²

INTRODUCTION

A snow-capped mountain range stretches over the town's northern border and tapers down to a southward-facing, concave bay embracing a small archipelago of glittering islands. Homes are clustered in predictable locations: on the islands, against the seaside, and close to the mountains. This is the community of Blazing Falls, a town with over 25,000 inhabitants—roughly the size of Timbuktu or Poughkeepsie. Its young and attractive twenty-something inhabitants can be found chatting and working together in their eclectically furnished dwellings. Most live with roommates, with whom they share both rights of ownership and the duties of

1. ST. AUGUSTINE, THE CONFESSIONS OF ST. AUGUSTINE 227 (Rex Warner trans., New American Library 1963).

2. *What is UO?*, Ultima Online, at <http://www.uo.com/ageofshadows/viscent.html> (last visited Aug. 18, 2003).

taking out the garbage, washing the dishes, and paying for parties and furniture. In their leisure time, they chat with neighbors, attend shows, dance at nightclubs, work out, and visit local attractions. Undoubtedly, many Blazing Falls residents are engaged in such activities at this very moment. As you are reading this, they are eating, sleeping, or resting on comfortable couches in front of television sets while they discuss politics and the latest movies with their roommates.

All manner of social groups exist in Blazing Falls—Christians, Wiccans, Goths, Punks, and poets. Many professional types are represented: some work as telemarketers; others work as repairmen; some are aspiring musicians; and there are even people who manufacture lawn gnomes for a living. Most people do business honestly, but there is a shady side to Blazing Falls. Some Blazing Falls residents are confidence men, preying on gullible newcomers. There are even a few brothels and strip clubs, though the legality of these establishments is dubious.

All of this seems familiar. Yet there is much about Blazing Falls that is decidedly unfamiliar. A casual visitor might at first be nonplussed by the common social practices in the community. Homeowners in Blazing Falls generally encourage strangers to enter their property, lie in their beds, eat their food, use their bathrooms, and monopolize their possessions. When these visitors break their pinball machines and exercise equipment, the owners may complain a bit, but for the most part they cheerfully repair the items and let the visitors have at them again.

Other aspects of Blazing Falls are even harder to explain. No one there has ever been ill. And though marriages occur often enough, no children have ever been seen. Strangely for a town of 25,000, even if one of the nubile and newly married residents were to become pregnant, she would find no hospital where a child might be delivered. Most importantly (for the purposes of the legal scholar) there are no courts, no halls of Congress, and not even a visible police force—yet not one murder has ever been reported.

If you ask the average resident of Blazing Falls what she thinks about the absence of familiar legal institutions, however, she will generally seem more intrigued than alarmed. In Blazing Falls, she will ask, is all of that messy business of law and government truly necessary? After all, none of this is *real*.

A. *Virtual Worlds*

Blazing Falls, as you probably guessed, is a virtual world. Using less lofty language, you might call it a computer game. Blazing Falls is just one town in the larger environment of *The Sims Online*, a popular game with

reportedly over 100,000 subscribers.³ Other contemporary virtual worlds include the tropical beaches of Tiki (There.com's *There*), the fantasy world of Norrath (Sony's *EverQuest*), the interstellar expanses of the Milky Way (Electronic Art's *Earth & Beyond*), and even a galaxy far, far away (Sony's *Star Wars Galaxies*). In Blazing Falls and these other places, millions of people with Internet connections are currently living large portions of their lives, forming friendships with others, building and acquiring virtual property, and forming social organizations.⁴ In South Korea, the game *Lineage*⁵ is currently more popular than television, with some four million registered participants.⁶ In the United States, *EverQuest*'s Norrath is the most popular virtual world, with over 440,000 subscribers at last count.⁷ *Ultima Online* and *Dark Age of Camelot* are serious competitors, having 250,000 and 200,000 participants, respectively.⁸

The Sims Online, of which Blazing Falls is a part, is the brainchild of Will Wright, the legendary figure in computer games who created a long line of popular "God-games" such as *SimCity*, *SimLife*, and *SimEarth*. These simulation games allow players to manipulate a simulated city, life form, or planet, respectively.⁹ In *The Sims Online*, each tiny figure on the computer screen represents a real person reacting in real time. Your computer monitor will display twelve tiny figures talking, dancing, and eating in the living room of a spacious home. One of these figures will be "you," while the other eleven will be representations of eleven other real people who are speaking and interacting with you through their virtual representations. These people gathered in your virtual living room in Blazing Falls will in all likelihood be hundreds or thousands of miles away in reality.

This is obviously a new concept in games, if it is even properly characterized as a game at all. Non-networked computer games resemble the mental world of a two-year-old: everything revolves around you and nothing happens when you are not present. Virtual worlds are different. *The Sims Online*, like all virtual worlds, is both persistent and dynamic. Even

3. Bruce Sterling Woodcock, *An Analysis of MMOG Subscription Growth—Version 7.0*, at <http://pw1.netcom.com/~sirbruce/Subscriptions.html> (last visited Oct. 7, 2003).

4. See Geoff Keighley, *The Sorcerer of Sony*, *BUSINESS 2.0*, Aug. 2002, at 48, available at <http://www.business2.com/articles/mag/0,1640,42210,FF.html>.

5. *Lineage*, at <http://www.lineage-us.com> (last visited Aug. 5, 2003).

6. Brad King, *Online Games Go Multicultural*, *WIRED NEWS*, Jan. 30, 2002, at <http://www.wired.com/news/games/0,2101,50000,00.html> (last visited July 26, 2003).

7. Woodcock, *supra* note 3.

8. Brad King, *Gamers Click Home for Holidays*, *WIRED NEWS*, Dec. 11, 2002, at <http://www.wired.com/news/games/0,2101,56759,00.html>; EDWARD CASTRONOVA, ON VIRTUAL ECONOMIES 2 n.1 (CESifo Working Paper No. 752, July 2002), available at <http://papers.ssrn.com/abstract=338500> (last visited Aug. 8, 2003); *Dark Age of Camelot News*, May 9, 2002, at <http://www.darkageofcamelot.com/news/> (last visited Aug. 8, 2003).

9. See CHRIS MCGOWAN & JIM MCCULLAUGH, ENTERTAINMENT IN THE CYBER ZONE 69-72 (1995); Robert Levine, *The Sims Online*, *WIRED*, Nov. 2002, at 176, available at <http://www.wired.com/wired/archive/10.11/simcity.html> (last visited Aug. 8, 2003).

when you are not in Blazing Falls, the environment continues to exist and changes over time. While you sleep in real life, other people's representations may be eating and dancing in your home in Blazing Falls; your neighbors' virtual houses will be remodeled and redecorated while you commute to work; virtual weddings will take place while you chat at the physical world water cooler; and new social structures will emerge while you have dinner. By the time you get back to Blazing Falls in the evening, you may find the entire infrastructure and character of your neighborhood has changed.

Of course, all of these changes occur in a represented reality, and the inhabitants of Blazing Falls know each other through representational proxies that may or may not reflect the physical attributes of their controllers. Representational proxies in these virtual spaces are known as "avatars," a word of Hindu religious origin.¹⁰ Avatars, unlike prior video game alter-egos, can be richly customized and are designed primarily for social interaction. Currently, the avatars of virtual worlds speak with each other through either textual chat windows or "speech bubbles" that float over their heads. Avatars express themselves through appearance as well. You can choose the face, clothes, and body shape of your avatar and communicate with others through body language. For instance, in *The Sims Online*, avatars yawn, clap, shout, shake their fists, cry, hug, kiss, dance, and perform hundreds of other ordinary human actions to let others know how they're feeling.¹¹

Perhaps because virtual worlds support this kind of rich social interaction, many of those who have chosen to visit virtual worlds remain residents of them. The average *EverQuest* player and *Norrath* avatar, for instance, spends about twenty hours a week within the virtual world.¹² Virtual-world participants design costumes, furniture, and houses for their avatars, and sell their creations to others.¹³ They buy and barter virtual

10. See CASTRONOVA, *supra* note 8, at 7. The term was adopted in the context of computer-generated games by the creators of Lucasfilm's *Habitat*. See *infra* notes 117-21 and accompanying text, and later popularized by Neal Stephenson in his 1992 novel *SNOW CRASH*.

11. Charles Herold, *Win Friends, Influence People, or Just Aim and Fire*, N.Y. TIMES, Feb. 6, 2003, at G5 ("You can also have sex. I came across one home devoted to erotica, where a girl named Tanea offered to have sex with me for 100 simoleons.")

12. EDWARD CASTRONOVA, VIRTUAL WORLDS: A FIRST-HAND ACCOUNT OF MARKET AND SOCIETY ON THE CYBERIAN FRONTIER 25 tbl. 3 (CESifo Working Paper No. 618, Dec. 2001), available at <http://papers.ssrn.com/abstract=294828> (last visited Aug. 4, 2003); see also Nick Yee, *The Norrathian Scrolls: Real-Life Demographics*, at <http://www.nickyee.com/eqt/demographics.html#3> (last visited Aug. 8, 2003); Nick Yee, *Codename Blue: An Ongoing Study of MMORPG Players 3* (2002), at <http://www.nickyee.com/codeblue/Report.PDF> (last visited Aug. 8, 2003).

13. See Julian Dibbell, *The Unreal Estate Boom*, WIRED, Jan. 2003, at 106, at <http://www.wired.com/wired/archive/11.01/gaming.html> (last visited Aug. 8, 2003); eBay Listings, Internet Games, at <http://listings.ebay.com/pool2/listings/list/all/category4596/index.html> (last visited Aug. 8, 2003).

chattels on eBay.¹⁴ They form clubs and organizations devoted to mutual aid and protection.¹⁵ They pressure their roommates and organizational members to spend more time in the virtual world in order to foster the common good.¹⁶

Yet despite these substantial investments of time and creativity, and despite the emergence of new virtual social orders, the activities within virtual worlds are viewed by some as games and diversions, not worthy of serious attention. In a nutshell, the standard argument is that, at a fundamental level, these social environments are not real and, therefore, not worthy of serious consideration. This argument is mistaken. In the next section, we discuss the difficulty of drawing simple lines, from a cultural and legal perspective, between what is real and what is unreal. Our conclusion is that, for numerous reasons, virtual worlds, and the social interactions that occur within them, constitute an important societal development that deserves careful investigation.

B. *On the Real and the Virtual*

Virtual worlds are indeed unreal.¹⁷ We mean by this that they are artificial, fictitious, imaginary, intangible, and invented.¹⁸ Yet virtual worlds are real, as well. All things artificial or invented do not fall entirely outside the ambit of reality. If they did, we would need to banish from reality all manner of human actions and creations, including buildings, languages, and—most important for our purposes—laws. As Jack Balkin and Julian Dibbell have noted, while laws may be invented and intangible, they are hardly insignificant.¹⁹

14. See Dibbell, *supra* note 13, at 108; see also *infra* Part III.

15. See Massive Multiplayer Online: Clans and Guilds, Open Directory Project, at http://dmoz.org/Games/Video_Games/Roleplaying/Massive_Multiplayer_Online/Clans_and_Guilds/ (last visited Aug. 8, 2003) (listing hundreds of guild websites); Allakhazam's Magical Realm, at <http://links.allakhazam.com/Everquest/Guilds/> (last visited Aug. 8, 2003) (listing hundreds of *EverQuest* guild websites).

16. See N'Gai Croal, *Sims Family Values*, NEWSWEEK, Nov. 25, 2002, at 47 ("Upon our return [our roommate] JB said, 'You're not online enough to help the cause,' and kicked us out of the house.").

17. See THE AMERICAN HERITAGE COLLEGIATE DICTIONARY 1508 (3d ed. 2000) (virtual things "exist . . . or result . . . in essence or effect, though not in actual fact, form, or name"); see also Marie-Laure Ryan, *Cyberspace, Virtuality, and the Text*, in CYBERSPACE TEXTUALITY: COMPUTER TECHNOLOGY AND LITERARY THEORY 78, 84-91 (Marie-Laure Ryan ed., 1999) (discussing the history of the word and the notion of the "virtual-as-fake"); Dibbell, *supra* note 13, at 108.

18. For example, see the entry for "unreal" in ROGET'S INTERACTIVE THESAURUS, at <http://thesaurus.reference.com/search?q=unreal> (last visited Aug. 8, 2003).

19. See JULIAN DIBBELL, *MY TINY LIFE* 74 (1998) ("[It may seem that] sociopolitical reality is not that different, finally, from the virtual kind, and that a human being never inhabits a physical landscape without also inhabiting its ghostly, abstract counterpart—the geography of language, law, and fantasy we overlay, collectively, on everything we look at."); Jack Balkin, *The Proliferation of Legal Truth*, 26 HARV. J. L. & PUB. POL'Y 5, 6 (2003) ("[L]aw creates truth—it makes things true as a

There are, of course, many senses of the words “real” and “unreal.” Ontologically speaking, virtual worlds have much in common with Disney World.²⁰ Tomorrowland, Fantasyland, and Main Street are physically real, but that physical reality is largely a faux representation of environments from science fiction, fantasy, and American history—the real and the represented are blended together. Common cultural spaces such as movie theatres, carnivals, and even mock trials at law schools share a similar status. They all provide settings where we may be scared, saddened, and frustrated by things that are significantly unreal. Our culture is awash in such unreal realities, which take the form of deceptions, myths, fantasies, neuroses, and daydreams. Indeed, mythologies and shared illusions may provide an important basis for cultural cohesion.²¹

Millions of individuals are embracing the unreality of virtual worlds by paying substantial sums of money to exist in them. Hundreds of millions of dollars in revenue are flowing into the coffers of Sony, Electronic Arts, and the other companies that own virtual worlds.²² Intel and McDonald’s have reportedly paid millions of dollars to place their products in front of the eyes of avatars.²³ One might predict that where large amounts of real money flow, legal consequences follow. Brute cash alone, however, doesn’t establish the legal significance of virtual worlds. Cereal and children’s television make money too, but one rarely sees articles on the laws of Frosted Flakes or *Sesame Street*.

We suggest that the laws of virtual worlds are significant for three primary reasons. First, virtual worlds are attracting an ever-increasing population of participants who believe that the social interactions that occur within these environments are important. The reasons for this attraction are evident from considering a virtual world called *There*, which has

matter of law. It makes things true in the eyes of the law. And when law makes things true in its own eyes, this has important consequences in the world.”).

20. Disney World seems to be a choice subject for ruminations on unreality. See DIBBELL, *supra* note 19, at 51; Mark Poster, *Theorizing Virtual Reality*, in *CYBERSPACE TEXTUALITY: COMPUTER TECHNOLOGY AND LITERARY THEORY*, *supra* note 17, at 42, 45. As Mark Poster notes, postmodern cynics like Jean Baudrillard have gone so far as to claim that Disney World is reality and America is the simulation. (Baudrillard also opines that the Gulf War never happened.) Poster, *supra*, at 45-46.

21. For instance, in the classic Hans Christian Andersen story, *The Emperor’s New Suit*, an innocent child ultimately reveals that an Emperor’s new suit, which no one has ever seen, does not exist. *THE COMPLETE HANS CHRISTIAN ANDERSEN FAIRY TALES* 438 (Lily Owens ed., 1984) (1981). The greater moral of the story, however, and the reason for its popularity, is that it is common to encounter social conventions which require participants to embrace a shared illusion. The Andersen story, and the stories in other cultures that resemble it, merely highlight extreme examples of this phenomenon.

22. Hiawatha Bray, *Hello, World*, *BOSTON GLOBE*, Dec. 16, 2002, at C1; Mike Snider, *When Multiplayer Worlds Collide*, *USA TODAY*, June 24, 2003, at 1D.

23. Ellen Edwards, *Plug (the Product) and Play: Advertisers Use Online Games to Entice Customers*, *WASH. POST*, Jan. 26, 2003, at A1; Matt Richtel, *Big Mac Is Virtual, But Critics Are Real*, *N.Y. TIMES*, Nov. 28, 2002, at G8.

recently gone into beta testing.²⁴ *There* is not a gaming environment; instead, it is being marketed simply as a virtual “place” where people can meet, interact, and play within vivid representations of the South Pacific islands and other exotic locales. So if your family members are spread out in the real world, why call them on the phone when you could go *There* with them virtually and spend some time skiing together?²⁵ For those who may be searching in vain for a new social scene, why not go *There* and meet a virtually attractive group of trendy-looking singles, engage in witty conversation around a Tiki bar, and then go hiking together up the side of a virtual volcano?²⁶

When Edward Castronova, an economics professor at California State University at Fullerton, undertook a study of the economics of *EverQuest*,²⁷ he was challenged by the impression that others within his field might have thought he was wasting his time on something lacking in real-world relevance. His explanation for why this “silly game” really mattered was as follows:

[E]conomists believe that it is the practical actions of people, and not abstract arguments, that determine the social value of things. One does not study the labor market because work is holy and ethical; one does it because the conditions of work mean a great deal to a large number of ordinary people. By the same reasoning, economists and other social scientists will become more interested in *Norrath* and similar virtual worlds as they realize that such places have begun to mean a great deal to large numbers of ordinary people.²⁸

Castronova is right. Millions of people spend a large portion of their waking lives in virtual worlds.²⁹ A significant number of users even claim primary citizenship in virtual worlds. In Castronova’s study, 20% of participants in a large survey of *EverQuest*’s users attested to living their lives mostly in *EverQuest*’s *Norrath*, 22% expressed the desire to spend all their time there, and 40% indicated that if a sufficient wage were available in *Norrath* then they would quit their job or studies on earth.³⁰ Since people expect places to be governed by some law, we should attempt to fashion

24. See Michel Marriott, *Now Playing: Reality Without the Downside*, N.Y. TIMES, Jan. 9, 2003, at G1.

25. See Julian Dibbell, *Your Next Customer Is Virtual. But His Money Is Real*, BUSINESS 2.0, Mar. 2003, <http://www.business2.com/articles/mag/0,1640,47157,00.html>.

26. *Id.*

27. CASTRONOVA, *supra* note 12, at 3.

28. *Id.* at 7.

29. See An Analysis of MMOG Subscription Growth—Version 6.0, at <http://pwl.netcom.com/~sirbruce/Subscriptions.html> (last visited Aug. 5, 2003).

30. CASTRONOVA, *supra* note 12, at 23.

some decent answer to the question of what laws might (or should) apply to virtual worlds.³¹

There also illustrates a second reason virtual worlds are worthy of consideration, namely that the economic boundaries between the real and the virtual world are not as distinct as they might appear. If you're going on a virtual date with a new acquaintance you met in *There*, you'll probably want to dress to impress. So perhaps you'll pick up some baggy Levi's jeans, a Nike sweatshirt, or maybe a snazzy new hoverboard for your avatar. You may even want to fine-tune your avatar's face and haircut. All of these virtual chattels and services will set you back a tidy sum of Therebucks at the *There*-controlled rate of 1,787 Therebucks to the U.S. dollar.³² Your nonvirtual credit card will be charged for these purchases. Nike and Levi Strauss seem to be intrigued by a market for virtual "goods" which requires no costly physical inputs.³³

This notion of buying nothing but a visual representation is really no more strange than paying an extra dollar or two for a certain logo printed on a T-shirt. As a *There* executive explained: "If the way I dress is part of how I define myself in the real world, and I make style choices and brand choices based on that, it's a logical transition to do those same things in this virtual world."³⁴ There.com, the company behind *There*, is so serious about the creation of the parallel *There* economy that it consults an economist for advice on monetary and fiscal policy.³⁵

Even where the creator of the virtual world does not facilitate markets for virtual goods, the residents may take it upon themselves to do so. For instance, if one spends enough time in virtual worlds, one can accumulate property that other people value: virtual castles, swords, silk sashes, and even one's own avatar. By listing a well-developed avatar and its virtual castle on eBay, you can convert your virtual asset from a virtual value to

31. Calling the virtual worlds of Norrath or *There* "places" is consistent with the common popular and judicial treatments of cyberspace as a place. See Dan Hunter, *Cyberspace as Place and the Tragedy of the Digital Anticommons*, 91 CALIF. L. REV. 439, 454-58, 472-97 (2003) (arguing that we all share a cognitive metaphor of cyberspace as place and providing evidence of this in linguistics and law). However, even if we presume that virtual worlds will be understood as "places," this does not mean it is wise to apply the laws of physical spaces to the realms of cyberspace. *Id.*

32. Dibbell, *supra* note 25. The 1,787 Therebucks-to-dollar rate is said to be arbitrary.

33. Leslie Walker, *Will Women Go There?*, WASH. POST, Jan. 12, 2003, at H7. Nike and Levi Strauss have reportedly entered into licensing agreements with There.com whereby the clothing companies promote their real products through the sale of virtual renditions of these items to *There*'s avatars. The virtual transactions for Nikes and Levis, however, are also sales for virtual equivalents which are transacted using Therebucks.

34. Dibbell, *supra* note 25.

35. See Matthew Maier, *Can a Metaverse Have Inflation?*, BUSINESS 2.0, Mar. 2003, <http://www.business2.com/articles/mag/0,1640,47159,00.html>.

real U.S. dollars.³⁶ In fact, these transfers happen so often that one can calculate an exchange rate between virtual- and real-world currencies.³⁷

Simply put, the real and the virtual overlap from an economic perspective. For better or for worse, it is now possible to work in a fantasy world to pay rent in reality.³⁸ The process differs little from, say, a Filipino overseas contract worker who works in another country for a period and sends money back to the Philippines. The implication is that some day people will walk their well-dressed avatars to virtual offices, where they, through their avatars, will labor to convince other avatars to cough up real cash for virtual goods. One obvious question that emerges from these transactions is how to deal with the jurisdictional issues presented by the disputes that will inevitably arise over virtual assets and transactions. It is unclear how existing property rules apply to such virtual rights and properties.³⁹

A third reason for exploring the laws of virtual worlds is that they provide a parallel alternative to existing legal systems, where new forms of social regulation can be explored. This point was made several years ago by Professor Jennifer Mnookin in her discussion of the virtual world of *LambdaMOO*. As Mnookin observed in regard to *LambdaMOO*'s emerging legal system, "[V]irtual communities like LambdaMOO, odd hybrids between games and worlds, simulations and society, may prove to be spaces for institutional reimagining, for questioning and reshaping conceptions of self, politics, and law."⁴⁰ The same arguments Mnookin applied to *LambdaMOO* apply to the far more prevalent phenomenon of today's virtual worlds, which have progressed far beyond the small communities and textual interface of early virtual worlds like *LambdaMOO*. The laws of virtual worlds, where hundreds of thousands of individuals interact and form social bonds, can provide researchers with

36. See eBay auction listings for in-world assets, at <http://listings.ebay.com/pool2/listings/list/all/category1654/index.html?from=R11> (last visited July 26, 2003).

37. CASTRONOVA, *supra* note 12, at 2; Edward Castronova, *Synthetic World Economic Data*, at http://business.fullerton.edu/ecastronova/Synthetic%20Worlds%20Economic%20Data/economic_data.htm (last visited Aug. 8, 2003).

38. Julian Dibbell, the author of *MY TINY LIFE*, recently attempted to break into this profession. His weblog recounting his experiences can be found at <http://www.juliandibbell.com/playmoney/> (last visited Aug. 1, 2003).

39. See *Kremen v. Cohen*, No. 01-15899 (9th Cir. July 25, 2003) (finding that the plaintiff's ownership of a URL domain name constituted ownership of property for the purposes of the tort of conversion). At a recent Internet security conference held in Las Vegas, invited attorneys from the United States Department of Justice argued to a federal district judge in a moot court that the loss of an avatar's virtual assets constituted real damage pursuant to 18 U.S.C. § 1030. See email from Edward Castronova (on file with the authors).

40. See Jennifer L. Mnookin, *Virtual(ly) Law: The Emergence of Law in LambdaMOO*, 2 J. COMPUTER-MEDIATED COMM. (1996), available at <http://www.ascusc.org/jcmc/vol2/issue1/lambda.html> (last visited July 26, 2003).

interesting insights into the emergence of law within new societies that exist purely through the medium of computer software.⁴¹

One might respond that the laws of virtual worlds are not really laws at all, but merely something law-like. Orin Kerr recently made this point in arguing against Lawrence Lessig's well-known "Code Is Law" thesis:

Saying that the power of code is akin to the power of law is simply too loose a use of the word "law" to be helpful. If code is law to an Internet user, then a sports referee's calls are law to an athlete, and Steven Spielberg's decisions about how to shoot a movie are law to a movie viewer.⁴²

Of course, there are differences between federal laws and the rules of games or the writing of computer software. Some may wish to define "law" as only that which is enforced by men with guns and nifty uniforms. Obviously, such a definition would ignore substantial swaths of significant social regulation. As Robert Ellickson has shown, the informal agreements between farmers and ranchers in Shasta County about cattle trespass may not be "law" in a narrow sense of the word, yet they are more important than law for that community: they are the basic mechanism of resource allocation, dispute resolution, and social binding for a tight-knit and interdependent group of individuals.⁴³

Even Kerr's chosen examples of "nonlaw" are more slippery than he admits. To a professional athlete, the official rules enforced by referees are probably more meaningful to her life, career, and worldview than certain obscure portions of the United States Code. Indeed, the U.S. Supreme Court has cited the laws of golf as authority in applying the Americans with Disabilities Act.⁴⁴ Kerr's references to Spielberg are equally interesting, given that at least one film rental company has filed suit seeking the right, for instance, to edit out the gruesome carnage from the initial scenes of *Saving Private Ryan*.⁴⁵ Is that company entitled to do so or are Spielberg's decisions about how to shoot a movie "law" to those who would like to view his films differently?

Law regulates action within a social system. If the social system is something more significant than a football match or a movie, then the

41. See Dan Hunter & F. Gregory Lastowka, *To Kill An Avatar*, LEGAL AFFAIRS, July/Aug. 2003, at 21, 24.

42. Orin S. Kerr, *The Problem of Perspective in Internet Law*, 91 GEO. L.J. 357, 372 (2003) (arguing that internal and external perspectives can be used in analyzing Internet laws).

43. ROBERT C. ELICKSON, ORDER WITHOUT LAW: HOW NEIGHBORS SETTLE DISPUTES 1-11 (1991).

44. PGA Tour, Inc. v. Martin, 532 U.S. 661, 685 (2001) ("[T]he walking rule that is contained in petitioner's hard cards, based on an optional condition buried in an appendix to the Rules of Golf, is not an essential attribute of the game itself.").

45. See *Huntsman v. Soderbergh*, No. 02-M-1662 (D. Colo. filed June 18, 2002). Briefs and other associated materials are available at http://www.eff.org/Cases/Huntsman_v_Soderbergh/ (last visited Aug. 4, 2003).

impact of regulatory mechanisms is surely worthy of study, and we might meaningfully describe them as law. Virtual worlds involve millions of people engaged in social and commercial activity. For the sake of simplicity, we will talk of “law” henceforth. Regardless of whether we call these things “law,” “norms,” or “grue,” the regulation of actions within these worlds is a topic worthy of legal study. In this Article, therefore, we explore two emerging legal issues within virtual worlds: property rights and avatar rights.

In Part I, we provide an extensive primer on virtual worlds, in order to place today’s virtual worlds in their historical context. We consider very briefly the relationship between prior representational forms and virtual worlds and then trace the history of virtual worlds as computer-based, interactive, and persistent environments. We also provide a brief description of some of today’s popular virtual worlds and the lives of avatars within them.

Part II begins our analysis of property interests within virtual environments. Adopting economic accounts that demonstrate the real-world value of virtual objects and the exchange mechanisms for trading these objects, we show that, descriptively, these types of objects are largely indistinguishable from other legally recognized property interests. We conclude that while various theories of property may apply in different ways to the concept of virtual assets, the primary theories of property are consistent with the concept of property rights in virtual assets. However, we conclude that courts will encounter some problems in attempting to allocate these rights using real-world legal rules.

In Part III, we investigate the close interrelationship of avatars and their controllers, and query whether the decision to view the human/avatar combination as a cyborg might lead to new and enforceable legal and moral rights. We argue that cyborg entities may possess rights distinct in nature from the rights of the human controller. However, we acknowledge the substantial difficulties that would flow from such a recognition. Cyborg entities are created through the authorship of proprietary code and the function of proprietary computer systems. Because cyborg entities must rely on the efforts of the authors and owners of virtual worlds (often called “wizards”) to maintain their existence and community, it is difficult to theorize how any general notion of cyborg rights could be recognized or asserted. In addition, the courts and juries of the real world may prove either incapable of grasping the divergent laws of virtual worlds or unwilling to accept the legal significance of actions that take place within these worlds. Thus, we conclude, while cyborg rights may eventually develop within legal systems, they will likely emerge within virtual worlds rather than through outside efforts to impose those rights through real-world law-making.

I
A VIRTUAL-WORLD PRIMER

Alice started to her feet, for it flashed across her mind that she had never before seen a rabbit with either a waistcoat-pocket, or a watch to take out of it . . . In another moment down went Alice after it, never once considering how in the world she was to get out again.

—Lewis Carroll⁴⁶

To understand the legal framework of virtual worlds, it is vital to understand the social and technological forces that have brought them about. The notion of moving through a spatial representation is an ancient idea present in any map or early game. The first game in recorded history, *The Royal Game of Ur* (c. 2500 B.C.), involved moving an avatar-like game piece around a board—that is, an abstract world.⁴⁷ Contemporary virtual worlds, however, are closer kin to fiction and art than they are to simple games. To understand virtual worlds, therefore, we need to understand them in the context of their literary and artistic traditions. In the two sections that follow, we split the history of computer-based virtual worlds into two threads, one literary and one visual.⁴⁸

A. Writing the World

As lawyers⁴⁹ and parents⁵⁰ are well aware, language allows humans to invoke, out of thin air, their own imaginary worlds. The first virtual worlds were spoken myths and legends that made early audiences intimately familiar with imagined people, places, and circumstances. When such stories were later captured in a fixed medium, the virtual world of literature was born.⁵¹ Literature is “virtual” in that the reader willfully disbelieves that a narrative exists as a mere set of symbols, and instead becomes immersed in

46. LEWIS CARROLL, *THE ANNOTATED ALICE: ALICE'S ADVENTURES IN WONDERLAND & THROUGH THE LOOKING GLASS* 26 (Clarkson N. Potter, Inc. 1960) (1865).

47. CASTRONOVA, *supra* note 8, at 7.

48. The reason for this division may not be immediately apparent to the reader. While the history of literary and visual representations are obviously intertwined, in the case of virtual worlds as an artistic medium, textual virtual worlds (MUDS) are clearly the predecessors of image-intensive worlds (MMOGs). However, today's visual and corporate-owned virtual worlds are reaching a much wider audience.

49. See 18 U.S.C. § 1621(1) (2000) (defining as perjury a person stating under oath “any material matter which he does not believe to be true”).

50. See A.A. MILNE, *WINNIE-THE-POOH* (Puffin Books 1992) (1926).

51. See Poster, *supra* note 20, at 44 (“Thus novels are just as much virtual realities as computer-generated immersive environments.”). Marie-Laure Ryan has also stated:

[S]uspension of disbelief is the literary-theoretical equivalent of the [virtual-reality] concept of immersion. It describes the attitude by which the reader brackets out the knowledge that the fictional world is the product of language, in order to imagine it is an autonomous reality populated by solid objects and embodied individuals.

Ryan, *supra* note 17, at 89.

the fictive environment.⁵² Willful belief in representations is, of course, inherent in many forms of communication and occurs in factual histories and biographies, as well as in fictional accounts. Indeed, when one looks to the earliest examples of literature, fact and fiction are hard to separate. Did the original audiences of the *Epic of Gilgamesh*, Homer's *Odyssey*, and the Book of Genesis understand those narratives as fact, fiction, or something in between?

Invented worlds feature prominently in the literary canon. Dante Alighieri's *Divine Comedy*, William Shakespeare's *The Tempest*, Jonathan Swift's *Gulliver's Travels*, and Lewis Carroll's *Alice in Wonderland* are all classic works of literature that depict elaborately detailed, often unfamiliar, imagined worlds which bear little resemblance to the world we know as real. Today, much of this type of literature (the type that conjures imaginary worlds) can be found in a back-shelf ghetto of the average bookstore in the science fiction and fantasy section.

Fictional geographies, often lovingly detailed, are frequently an important part of imagined literary worlds.⁵³ The most important twentieth-century popularizer of virtual worlds, J.R.R. Tolkien, created comprehensive maps of Middle-Earth and its Shire, the imaginary places where *The Hobbit* and *The Lord of the Rings* trilogy take place. One of the distinct pleasures of reading Tolkien stems from the richness of his imaginary topography, expressed through his hand-drawn maps. One can trace the movement of the protagonists across a landscape of forests, mountains, and marshes, and wonder at the nature of those regions that his text does not explore.

Perhaps because of the richness of Tolkien's world-building, his works have had an enormous and varied influence on contemporary fantasy novels and, arguably, gave birth to the fantasy-literature genre as it exists today. Tolkien's Middle-Earth books, first published in Britain in the 1940s and early 1950s, became required counterculture reading in U.S. high schools and colleges during the late 1960s, spawning a campus vogue so feverish that it resembled a "drug dream."⁵⁴ Even Led Zeppelin made

52. Written pornography is powerful example of this effect. For some people, experiencing textual descriptions of sex may serve as a substitute for the actual experience of sex. See Anne M. Coughlin, *Representing the Forbidden*, 90 CALIF. L. REV. 2143, 2145 (2002) ("[O]ur porn scholar aims to produce a work not 'of' but 'on' pornography. As philosophers might say, she wants to mention porn, not create it. If she succeeds, her text will describe it, not do it."); DIBBELL, *supra* note 19, at 235-63 (discussing "tinysex").

53. DIBBELL, *supra* note 19, at 51-53 (discussing cartography and virtual worlds).

54. See, e.g., Phyllis Meras, "Go, Go, Gandalf," N.Y. TIMES, Jan. 15, 1967, at <http://www.nytimes.com/books/01/02/11/specials/tolkien-gandalf.html> ("The Tolkien Society of America first met in February, 1965, beside the statue of Alma Mater on the Columbia University campus. Today, it numbers about 1,000 members."); Philip Norman, *The Prevalence of Hobbits*, N.Y. TIMES, Jan. 15, 1967, at <http://www.nytimes.com/books/01/02/11/specials/tolkien-mag67.html> ("[A]t the Berkeley campus bookstore Fred Cody, the manager, said: 'This is more than a campus craze; it's like a drug dream.'").

regular references to Tolkien in its music.⁵⁵ Today, Peter Jackson's film trilogy has revived the popular interest in Tolkien's elves, dwarves, and hobbits.⁵⁶

Those who designed the precursors of today's virtual worlds were not immune to this influence. Among Tolkien's earliest devotees were medievalists, some of whom enjoyed the hobby of staging battles involving miniature lead soldiers.⁵⁷ In 1974, two medievalist wargamers, Gary Gygax and Dave Arneson, transformed Tolkien's richly imagined world into a game called *Dungeons & Dragons (D&D)*. While billed as a wargame, *D&D* was a far cry from traditional historical reenactment.⁵⁸ The *D&D* game simulated the adventures of individual dwarves, elves, hobbits,⁵⁹ and humans. The players of the game identified with their individual avatars rather than controlling armies of game pieces, leading to the description of *D&D* as a "role-playing" game.⁶⁰

In the game, a "dungeon master" creates opponents and obstacles for the players and describes them verbally. These challenges usually consist of hostile monsters such as dragons and orcs, as well as deadly puzzles.⁶¹ After defeating a certain number of obstacles according to the game's rules, a player's avatar increases in power. This process is known as "leveling"—a beginner starts as a weak level 1 avatar, progresses to become a more powerful level 2 avatar, and so on.⁶²

55. Some obvious examples are in *LED ZEPPELIN, Ramble On*, on *LED ZEPPELIN II* (Atlantic 1969) ("Gollum" and "Mordor"); *Misty Mountain Hop*, on *LED ZEPPELIN IV* (Atlantic 1971) ("Misty Mountains"); and *Battle of Evermore*, on *LED ZEPPELIN IV* (Atlantic 1971) ("ringwraiths").

56. See Sherry Turkle, *Lord of the Hackers*, N.Y. TIMES, Mar. 7, 2002, at A31.

57. On the history of wargames, see generally Wargames, at <http://www.wargamesdirectory.com/html/articles/wargames/default.asp> (last visited Aug. 8, 2003) (providing general information about various types of wargames). Arguably, wargames can also constitute virtual worlds. DIBBELL, *supra* note 19, at 52-55. Indeed, it seems no coincidence that one of history's most famous wargamers was the fabulist H.G. Wells. See DANIEL MACKAY, *THE FANTASY ROLE-PLAYING GAME 13* (2001).

58. *D&D* was subtitled *Rules for Fantastic Medieval Wargames Campaigns Playable with Paper and Pencil and Miniature Figures*. It was preceded a few years earlier by a game called *Chainmail*, which was an intermediate step from traditional wargaming toward contemporary role-playing games. See Benjamin E. Sones, *Here There Be Dragons*, COMPUTER GAMES MAGAZINE, Dec. 18, 2001, <http://www.cgonline.com/features/011218-fl-fl.html> (last visited Aug. 5, 2003).

59. After a legal threat from the Tolkien estate, the game modified the race option of "hobbit" to "halfling," a variant that was actually also used by Tolkien. See FAQ, Games Domain, <http://www.gamesdomain.com/faqdir/rec.games.frp.dnd-3.txt>, at C9 (last visited Oct. 7, 2003). For an example of Tolkien's usage, see J.R.R. TOLKIEN, *LORD OF THE RINGS: THE RETURN OF THE KING* app. f. 408 (Houghton Mifflin Co. collector's ed. 1987) (1955) ("*Hobbit* was the name usually applied by the Shire-folk to all their kind. Men called them *Halflings* and the Elves *Periannath*.").

60. Sones, *supra* note 58. The use of "avatar" in this sentence is an intentional misnomer. Gygax and Arneson actually used the term "character" to describe the player's alter ego. GARY GYGAX, *PLAYER'S HANDBOOK* 9-10 (1978). The term "avatar" is generally used to describe a player's alter ego in visual virtual worlds. However, instead of switching terms constantly, we will use the term "avatar" throughout this Article.

61. See GYGAX, *supra* note 60, at 7.

62. See Sones, *supra* note 58.

The Byzantine rules and imagination-taxing quality of the game prevented *D&D* from ever achieving the popularity of *Monopoly*.⁶³ However, for the niche market of computer programmers, Byzantine rules and unreal environments were par for the course. Perhaps as a result, Tolkien and *D&D* ended up playing a crucial role in the development of computer-based virtual worlds.⁶⁴ The process began in 1976, when Will Crowther, a Tolkien and *D&D* aficionado, wrote a computer game called *ADVENT*.⁶⁵ The game, which Crowther wrote to amuse his children, presented a navigable textual database⁶⁶ based on the real-world Mammoth Cave in Kentucky, spiced up with *D&D* elements to make it more interesting.⁶⁷ The game emulated the conversational style of a *D&D* dungeon master: “You are standing at the end of a road before a small brick building. Around you is a forest. A small stream flows out of the building and down a gully.”⁶⁸ Nothing further would occur in the game unless the player typed a textual command. For instance, if the player typed the word “enter,” thus ordering the avatar to enter the building, the computer would respond by displaying the sentences: “You are inside a building, a well house for a large spring. There are some keys on the ground here.”⁶⁹ Like a *D&D* game, Crowther’s program was replete with complicated puzzles requiring players to perform certain tasks with specific objects to avoid death and to progress in the game.⁷⁰

63. Bad press has also plagued the game. *D&D* players, like computer programmers and law professors, are generally tagged as geeks—but *D&D* players have also been stereotyped as suicidal psychotics and/or Satanists. Rona Jaffe’s novel *MAZES AND MONSTERS* (1981), for instance, told the story of a mentally imbalanced *D&D* player who came to believe the game was real. It was later adapted as a terribly cheesy film for television with a young Tom Hanks in the starring role.

64. See Turkle, *supra* note 56 (noting how Stanford programmers in the early 1970s designed three elvish fonts for their printers).

65. MCGOWAN & MCCULLAUGH, *supra* note 9, at 49-52.

66. One could describe *ADVENT* as a database of textual descriptions. See SHERRY TURKLE, *LIFE ON THE SCREEN: IDENTITY IN THE AGE OF THE INTERNET* 181 (1995) (noting that in MUDs “[a]ll users are browsing and manipulating the same database”). Insofar as the program was simply a navigable textual database, it was nothing new. In 1972, Mike Mayfield, a high-school student in California, had created a text-based version of the *Star Trek* galaxy on a University of California mainframe, and Gregory Yob created *Hunt the Wumpus*, a program allowing players to navigate through a series of 20 “rooms” in pursuit of a mythical beast. Nonetheless, while Mayfield’s and Yob’s games were popular among computer programmers, neither provided players with a particularly interactive or interesting textual environment. Yob’s rooms and Mayfield’s star systems allowed for navigation through spaces that were essentially vacuums. The BASIC code of Mayfield’s *Star Trek* game can be found at <http://www.classicgaming.com/features/articles/computergaminghistory/sttr1.txt> (last visited July 26, 2003).

67. DIBBELL, *supra* note 19, at 56; Julian Dibbell, *A Marketable Wonder: Spelunking the American Imagination*, TOPIC (Autumn 2002), <http://www.topicmag.com/articles/02/dibbell.html> (last visited Aug. 5, 2003).

68. Dibbell, *supra* note 67; Rick Adams, *Colossal Cave Adventure Page*, at <http://www.rickadams.org/adventure/> (last visited Aug. 4, 2003). Adams’ website provides several variants of the original game in a “downloads” section.

69. See Adams, *supra* note 68.

70. See *id.*

Don Woods of MIT subsequently modified and expanded Crowther's *ADVENT*, renaming it *Adventure* and giving it away for free to those who wanted to host it on university mainframe systems elsewhere.⁷¹ As the personal computer market emerged in the next few years, the profitable sale of text-based games became possible.⁷² Only four years after *ADVENT* was authored, the Infocom company sold its first text-based game, *Zork*, which became one of the first commercially successful home computer programs.⁷³ Subsequently, Infocom created a multitude of text-based games for the personal computer market.⁷⁴

The weak point of *ADVENT* and similar games was that they were not social. Only one avatar could exist within the textual space.⁷⁵ In 1979, Roy Trubshaw and Richard Bartle created the first social textual world, *MUD1*, at Essex University in England.⁷⁶ In *MUD1* and its derivatives, avatars could talk with others in the same "room" via simple text commands.⁷⁷ If an avatar named Alice was in the same room as another avatar named Gulliver, the computer would alert Alice and Gulliver to each other's presence. If Alice wanted to speak, she would type "Gulliver hi," and Gulliver would then see the words "Alice tells you 'hi'" appear on his terminal.⁷⁸ This feature had substantial appeal simply as an early instant messaging system.⁷⁹

MUD1 and the other original MUDs, however, were not primarily friendly chat rooms. The primary game goal of *MUD1* was navigating the textual environment while killing opponents and gathering treasures to

71. STEVEN L. KENT, *THE ULTIMATE HISTORY OF VIDEO GAMES 186-88* (2001).

72. MCGOWAN & MCCULLAUGH, *supra* note 9, at 53-54.

73. *Id.*

74. See *Infocom Timeline*, at <http://www.csd.uwo.ca/Infocom/Articles/timeline.html> (last visited Aug. 8, 2003).

75. Because MUDs, explained *infra* note 76, operated on university-based mainframe systems, participants connected to these environments with terminals consisting of little more than a computer monitor and a keyboard. These terminals served only to converse with the mainframe and display the mainframe's output. The same centralized model is used for MUDs today, even though participants today use software to allow their sophisticated computers to emulate terminal connections. See generally Lauren P. Burka, *A Hypertext History of Multi-User Dimensions* (1993), at <http://www.apocalypse.org/pub/u/lpb/muddex/essay/> (last visited Aug. 8, 2003).

76. MCGOWAN & MCCULLAUGH, *supra* note 9, at 88. The original *MUD1* developed by Trubshaw and Bartle has been renamed *British Legends*, and is still in operation. *MUD1* was an acronym for *Multi-User Dungeon 1*, again a nod to *D&D*. Some MUDers believe the MUD acronym now stands for "Multi-User Dimension," though apparently this is a euphemistic variation. Trubshaw, the original *MUD1* creator, acknowledged a debt to an earlier *Adventure*-type program named "DUNGEN" and to *D&D*. DIBBELL, *supra* note 19, at 57-58.

77. TURKLE, *supra* note 66, at 181 ("MUDs are a text-based, social virtual reality."); HOWARD RHEINGOLD, *THE VIRTUAL COMMUNITY: HOMESTEADING ON THE ELECTRONIC FRONTIER 161-64* (rev. ed., MIT Press 2000) (1993) (presenting his visit to the *MicroMUSE* MUD).

78. TURKLE, *supra* note 66, at 183; Richard A. Bartle, *MUD Glorious Mud*, at <http://www.mud.co.uk/richard/gnome.htm> (Jan. 31, 1999).

79. RHEINGOLD, *supra* note 77, at 184 (placing the original IRC in 1988).

score points and level up.⁸⁰ The ultimate goal of the game was to reach the level of “wizard,” at which one became an all-powerful entity within the game environment.⁸¹ When choosing targets, perhaps the most interesting way to score points was by killing other players.⁸² If Alice decided to kill Gulliver, she would simply type “Kill Gulliver” rather than “Gulliver hi.” Gulliver would then need to type either “retaliate” or “flee.” If Alice killed Gulliver (which would depend mainly on her avatar’s skill and weaponry) she would gain points,⁸³ and Gulliver would need to start his virtual life anew.

Through the 1980s, Trubshaw and Bartle’s original *MUD1* spawned hundreds of derivative MUD-type environments, known variously as MOOs, MUSHes, and MUCKS,⁸⁴ on university computer systems. Some MUDs actually made money: when commercially released in the United States on CompuServe, *MUD1* cost \$12.50 an hour to play.⁸⁵ Probably the most interesting development in MUD history occurred in 1989, when

80. *Id.* at 167-68; Bartle, *supra* note 78.

81. TURKLE, *supra* note 66, at 181; Richard A. Bartle, *Adventures on the Magic Network*, at <http://www.mud.co.uk/richard/chfeb85.htm> (last visited Aug. 8, 2003). Bartle has posted a rough map of the original *MUD1* world on his website, <http://www.mud.co.uk/richard/mud1map.gif> (last visited Aug. 8, 2003).

82. RHEINGOLD, *supra* note 77, at 167 (“In [MUD1 worlds,] beheading new, inexperienced players as a way of gaining experience points is frowned on but not outlawed.”).

83. *Id.*; Bartle, *supra* note 78.

84. Authoritatively describing the taxonomy and nomenclature of MUD derivatives is a daunting task. The Open Directory’s attempt to do so can be found at <http://dmoz.org/Games/Internet/MUDs/> (last visited July 26, 2003), and its explanation for its results can be located at <http://dmoz.org/Games/Internet/MUDs/desc.html> (last visited July 26, 2003). Lauren Burka is usually cited as a key authority in the area, but even she seems exasperated by the whole enterprise. *See* Burka, *supra* note 75; *see generally* Lauren P. Burka, *The MUDdex* (1993), at <http://www.apocalypse.org/pub/u/lpb/muddex/> (last visited July 26, 2003).

Generally, the appellation “MOO” stands for “MUD Object-Oriented,” denoting the programming methodology—object orientation—which was used to build the MUD. *See* Leigh Ann Hussey, MOO/MU* Document Library, at <http://www.hayseed.net/MOO/> (last updated May 4, 2000). Object-oriented programming languages are ideal for building MUDs, since these languages allow one, for example, to build a simple prototype room and spawn multiple children-objects from this ur-room. This greatly reduces the programming task of hand-coding individual rooms and other objects. *See id.* (providing several programming tutorials).

According to most participants, “MUSH” stands for “Multi-User Shared Hallucination” and is generally reserved for MUD environments with a strong and enforced role-playing convention. *See, e.g.,* FAQ, PernMUSH, at <http://www.pem.org/faq.html> (last visited Aug. 8, 2003). In *PernMUSH*, users play roles from Anne McCaffrey’s fantasy books set on the world of Pern. *See id.* Users are strongly encouraged to play within character, and deviations from character—such as using modern language, swearing, or referring to the real world—are discouraged to the extent that, in some MUSHes, a failure to role-play seriously can get a participant booted from the system.

Exactly what “MUCK” stands for is subject to debate: some say it refers to muck (in other words, something like mud) while others argue it stands for “Multi-User Consensual Kingdom.” For example, see the results of a Google search on “MUCK stands for” at <http://www.google.com/search?q=%22Muck%22stands+for%22> (last visited Aug. 8, 2003). In any event, MUCKs are generally much like MUSHes in their emphasis on roleplay, but place more emphasis on achieving goals.

85. *See* Reviews—Rest of the World: British Legends, at http://www.iol.ie/~ecarroll/mud/mr_5a (last visited Aug. 8, 2003).

James Aspnes wrested MUDs away from their *D&D* roots by writing a short and easily portable MUD program known as *TinyMUD*.⁸⁶ *TinyMUD* deemphasized traditional *D&D* elements, such as killing for points.⁸⁷ Instead, the program gave avatars greater abilities to describe themselves and invent objects. In the multiple *TinyMUDs* that were quickly established, avatars did not kill each other quite so often. Rather, they spent a lot of time simply hanging out, chatting, and amusing each other with new virtual objects.⁸⁸ This dimension, of course, appealed to a whole different social set, and *TinyMUDs* quickly branched out from Tolkienesque settings to encompass more diverse themes.⁸⁹ Some were based on *Star Trek*; some were set within specific novels; and some were even set in real-world locations such as a virtual California.⁹⁰

Perhaps the most widely known social MUD is *LambdaMOO*, initially created in 1990 by Pavel Curtis of the Xerox Palo Alto Research Center.⁹¹ *LambdaMOO* still has over a thousand active participants, of whom one or two hundred are active at any given moment.⁹² The first virtual spaces of *LambdaMOO* were based on Curtis's home in California, although the environment has since greatly expanded.⁹³ *LambdaMOO* is not a remarkable MUD in any way, except that it can be altered by its participants and it has served as a focal point for research of virtual space. Its popularity has led its community to post an unusual disclaimer on the welcome page: "NOTICE FOR JOURNALISTS AND RESEARCHERS: The citizens of LambdaMOO request that you ask for permission from all direct participants before quoting any material collected here."⁹⁴

Each avatar in *LambdaMOO* has the power to create a set of rooms and unique programmed objects.⁹⁵ Members of the community have programmed interactive textual gardens, robots, Frisbees, butlers, toys, helicopters, puzzles, and fireworks in order to amuse and impress other participants. In the living room of the *LambdaMOO* mansion (the *de facto*

86. See Burka, *supra* note 75.

87. DIBBELL, *supra* note 19, at 60; RHEINGOLD, *supra* note 77, at 167-68.

88. TURKLE, *supra* note 66, at 181 ("[In] social MUDs, the point is to interact with other players.").

89. *Id.* at 11, 181 (classifying all of these as MUDs); DIBBELL, *supra* note 19, at 58 (identifying various MUD themes).

90. We say this only to the extent we are comfortable describing California as "the real world."

91. See *Welcome to LambdaMOO!*, at telnet://lambda.moo.mud.org:8888/ (last visited July 26, 2003).

92. Julian Dibbell's book *MY TINY LIFE*, *supra* note 19, is generally recognized as the authoritative treatment of *LambdaMOO*. Interesting discussions of *LambdaMOO* can also be found in TURKLE, *supra* note 66, at 182-83, 210-12, 242.

93. *LambdaMOO* is a MOO-variety of MUD.

94. *Welcome to LambdaMOO!*, *supra* note 91.

95. RHEINGOLD, *supra* note 77, at 153-54; DIBBELL, *supra* note 19, at 15. The ability to program requires being granted programming privileges, known as a "progbit," by the wizards. These are handed out freely on request.

social hub), there is a cockatoo programmed to repeat random lines of overheard dialogue at regular intervals; a fireplace that will burn or toast objects placed inside; a large couch, which one can reupholster in garish patterns, and which consumes objects from one's pockets.⁹⁶ Objects such as a blender and a black hole allow avatars entering them to commit "MOOicide," or virtual suicide—destroying their avatar existence in order to force the players to return to their "real" lives.⁹⁷

The full scope of *LambdaMOO* geography is hard to describe or even ascertain. Some areas are private, while others are hidden behind complicated puzzles. New places are constantly being created while others are retired.

As we explain in Parts II and III, a careful study of MUDs can be valuable to those interested in the laws of virtual worlds. Yet MUDs, for all their liveliness and social complexity, are not the most popular virtual worlds today. MUDs are like poetry compared to television. While MUDs offer what is perhaps a more valuable and rewarding medium for those who participate in them, people seem to be drawn to visual spectacle. Indeed, while most MUDs are free, millions of individuals pay to interact with visual virtual worlds. A picture, it seems, is worth a thousand words—and quite a few dollars as well.

B. *Drawing the World*

The history of visual virtual worlds arguably dates back at least to cave paintings.⁹⁸ All visual representations, like language, are forms of virtual reality. Roman trompe l'oeil murals, for instance, would blur "distinctions between real space and image space."⁹⁹ Today, photography is trompe l'oeil technology, real enough to trigger epistemological concerns.¹⁰⁰ Through photography, many people believe they have viewed the

96. DIBBELL, *supra* note 19, at 39-41. The living room's basic description reads:

It was very bright, open, and airy there, with large plate-glass windows looking southward over the pool to the gardens beyond. On the north wall, there was a rough stonework fireplace. The east and west walls were almost completely covered with large, well-stocked bookcases. An exit in the northwest corner led to the kitchen and, in a more northerly direction, to the entrance hall. The door into the coat closet was at the north end of the east wall, and at the south end was a sliding glass door leading out onto a wooden deck. There were two sets of couches, one clustered around the fireplace and one with a view out the windows.

Id. Of course, it has much to offer beyond that initial description. For an excellent account of the history and features of the various rooms in *LambdaMOO*, see ELIZABETH HESS, *YIB'S GUIDE TO MOOING: GETTING THE MOST FROM VIRTUAL COMMUNITIES ON THE INTERNET* ch. 7 (2003), <http://www.yibco.com/ygm/ygmpdf/Chapter7.pdf>.

97. DIBBELL, *supra* note 19, at 84; HESS, *supra* note 96, at 26-27, 147.

98. OLIVER GRAU, *VIRTUAL ART: FROM ILLUSION TO IMMERSION 5* (Gloria Custance trans., rev. and exp. ed. 2003).

99. *Id.* at 25.

100. See, e.g., Jennifer L. Mnookin, *The Image of Truth: Photographic Evidence and the Power of Analogy*, 10 *YALE J.L. & HUMAN.* 1 (1998).

Mona Lisa, witnessed Nixon's resignation, seen the Earth from space, and understood the bombing of Baghdad.¹⁰¹ Some claim the additional value of seeing the real *Mona Lisa* would be negligible. Many still adhere to the view the Supreme Court of Georgia expressed in 1882: that it could not "conceive of a more impartial and truthful witness than the sun, as its light stamps and seals the similitude of the wound on the photograph put before the jury."¹⁰²

The most exciting feature of virtual environments, however, is not simply their capacity for vivid representation. As Ovid's *Pygmalion* explains, vivid representation often falls short of what is really desired. Representation offers a window to a world, but what the viewer aspires to do is step into that world.¹⁰³ Until recently, one could not commingle visual representation with interaction. When this technology arrived, its most popular embodiment was, perhaps unsurprisingly, amusement. Thus, the history of interactive visual virtual worlds has been largely a history of video games.¹⁰⁴ This is not to say that Internet chat rooms, business teleconferencing, flight simulation, and other instances of nongame computer-mediated virtual environments are not important. However, from a historical point of view, video games have been on the cutting edge of socially significant visually interactive technology.

In 1961, Stephen Russell, then a student at MIT, created the first computer program recognizable as a video game.¹⁰⁵ As Russell noted at the time, his game *Spacewar!* had value as a simulation: "The most important feature of the program," he told a student reporter, "is that one can simulate a reasonably complicated physical system and actually see what is going

101. See Kathleen Connolly Butler, *Keeping the World Safe from Naked-Chicks-in-Art Refrigerator Magnets: The Plot to Control Art Images in the Public Domain Through Copyrights in Photographic and Digital Reproductions*, 21 HASTINGS COMM. & ENT. L.J. 55, 58 (1998) (noting point in passing); *Conspiracy Theory: Did We Land on the Moon?* (Fox television broadcast, Feb. 15, 2001) (casting doubt on the reality of the Apollo moon landings).

102. *Franklin v. State*, 69 Ga. 36, 43 (1882). Of course, this decision was issued in a time before photographs of UFOs and Sasquatch were commonplace. As courts have learned, photographic images, like all other representations, are subject to creative manipulation. See Mnookin, *supra* note 100. "Augmented" reality is a standard feature in sporting events: in football games, a yellow first-down line appears on viewers' screens but is invisible to players; in hockey games, the puck may leave a trail of virtual light. See *Introduction to Augmented Reality*, at <http://www.se.rit.edu/~jrv/research/ar/introduction.html> (last modified Aug. 22, 2002).

103. OVID, 10 METAMORPHOSES 327 (Samuel Garth trans., Heritage Press 1961) ("He kisses her white Lips, renews the Bliss, / And looks and thinks they redden at the Kiss.").

104. CASTRONOVA, *supra* note 8, at 7-9.

105. *Nintendo of Am. Inc. v. Magnavox Co.*, 707 F. Supp. 717, 734-35 (S.D.N.Y. 1989) (recounting the invention of *Spacewar!*); KENT, *supra* note 71, at 17-20; D.J. Edwards & J.M. Graetz, *PDP-1 Plays at Spacewar*, 1 DECUSCOPE 2 (April 1962), at <http://www.wheels.org/spacewar/decuscope.html> (last visited July 26, 2003). A faithful rendition of the original *Spacewar!*, compatible with most Web browsers, can now be found online at <http://lcs.www.media.mit.edu/groups/el/projects/spacewar/> (last visited Aug. 8, 2003).

on.¹⁰⁶ Russell's simulation was simple by the standards of today's video games: two opponents piloted representations of spaceships around a high-gravity sun and attempted to shoot each other. Perhaps realizing there was no market for a game that ran on a million-dollar mainframe in 1961, Russell freely shared the *Spacewar!* code with others, contributing to its popularity.¹⁰⁷

One *Spacewar!* addict, a California businessman named Nolan Bushnell, created the first video arcade game. In 1971, gambling on cheaper components enabled by advancing computer technology, Bushnell convinced a partner to help him make 1,500 *Computer Space* machines—essentially *Spacewar!* machines—to place in pinball arcades.¹⁰⁸ *Computer Space* was a dismal failure. Outside of one Stanford University drinking establishment, no one was interested in playing. Unlike the average MIT student or *D&D* gamer, the average pinball player was not willing to pay a quarter to read an instruction booklet.¹⁰⁹

Undeterred, Nolan Bushnell founded Atari the next year. He instructed his first engineer, Al Alcorn, to create a simple tennis game so that Al could become familiar with the process of creating video games. At the time, Bushnell had no serious intentions of marketing Alcorn's product.¹¹⁰ Alcorn spent a couple of weeks producing a game of virtual Ping-Pong, and Bushnell changed his mind when he saw the product. The first public encounter with a prototype of *Pong* took place in a bar in Sunnyvale, California. Unlike *Spacewar!*, *Pong* was intuitive,¹¹¹ a video game haiku essentially consisting of three lines and a dot. Yet it contained all the essential features of today's virtual worlds. Two of the lines, the paddles, served as the respective avatars of the two players, while the square ball was the contested virtual object and the black background was the virtual world on which the battle was joined. *Pong* soon was making buckets of quarters for arcade owners, and its success made the video game industry

106. Edwards & Graetz, *supra* note 105, at 2-4.

107. *Nintendo*, 707 F. Supp. at 730-35; KENT, *supra* note 71, at 17-20; MCGOWAN & MCCULLAUGH, *supra* note 9, at 6.

108. KENT, *supra* note 71, at 30-35.

109. *Id.* at 28-43.

110. *Id.*

111. Users did, however, experience a moment of bafflement at encountering what was likely their first virtual world:

They watched dumbfoundedly as the ball appeared alternately on one side of the screen and then disappeared on the other. Each time it did the score changed. The score was tied at 3-3 when one player tried the knob controlling the paddle at his end of the screen. The score was 5-4, his favor, when his paddle made contact with the ball. There was a beautifully resonant "pong" sound, and the ball bounced back to the other side of the screen.

SCOTT COHEN, *ZAP!: THE RISE AND FALL OF ATARI 29* (1984); *see also* Welcome to PONG—Story!, at <http://www.pong-story.com> (last visited Aug. 8, 2003). As the quoted passage notes, the element of sound plays a key role in the illusion of virtual worlds, and we have given the auditory element somewhat short shrift by emphasizing the visual. This is in part due to the difficulty of locating reliable documentary evidence of the auditory aspects of virtual worlds.

possible.¹¹² Not long afterwards, Atari and others were producing sports, driving, and warfare games for the home and arcade market that allowed a generation of children to grow up in partially virtual environments.¹¹³

Designers quickly made significant strides in the visual components of virtual environments. In 1978, Warren Robinett authored a graphical take on Will Crowther's *Adventure* program for the Atari home console system.¹¹⁴ By 1980, graphics had advanced enough that Atari's *Battle Zone* allowed players to navigate a tank avatar through a reasonably detailed, three-dimensional environment populated with roaming computer-controlled adversaries.¹¹⁵ Two-dimensional and isometric "scrolling" games such as Williams Electronic's *Defender* (1980) and Sega's *Zaxxon* (1982) also extended the virtual world beyond the four corners of the game screen.¹¹⁶

Despite their increasingly sophisticated graphics, arcade games lacked a world that could persist over time. Once the "GAME OVER" message appeared, a player's investment in the virtual world was set back to zero. Only with the introduction of personal computers could designers explore the possibilities of persistent visual virtual worlds. Persistence through local data storage led to a new breed of immersive games. For instance, *King's Quest: The Quest for the Crown*, introduced in 1984, popularized visual virtual worlds as much as *ADVENT* had text-based worlds.¹¹⁷ *King's Quest* let users pilot a tiny but vivid-enough avatar (you could see the feather in Prince Graham's cap) across the screen of the first IBM PC in order to solve puzzles in the virtual world of Daventry. *King's Quest* was immensely successful and spawned seven subsequent titles.¹¹⁸

112. KENT, *supra* note 71, at 43-48. It should be noted, however, that in 1967, an inventor named Ralph Baer had invented a game remarkably similar to *Pong*, which he had patented. Magnavox, the company that held Baer's patents, sued Atari. The litigation was quickly settled and Atari paid Magnavox for an exclusive license. *Id.*

113. Nintendo of Am. Inc. v. Magnavox Co., 707 F. Supp. 717, 722 (S.D.N.Y. 1989).

114. See DAVID KUSHNER, MASTERS OF DOOM 68 (2003); Warren Robinett's Home Page, at <http://www.warrenrobinett.com> (last visited Aug. 9, 2003). An abbreviated version of the game can be played at *Atari Adventure*, at <http://www.scottpehnke.com/programming/flash.htm> (last visited July 26, 2003). Robinett's *Adventure* also introduced the first video game "Easter egg," now a familiar feature of most games and other software. An Easter egg is a hidden aspect of a program that produces a hidden presentation—for instance, one version of Microsoft Excel contained a racing game within its program. See Excel Oddities, at <http://www.j-walk.com/ss/excel/odd/odd01.htm> (last visited Aug. 9, 2003).

115. PATRICIA MARKS GREENFIELD, MIND AND MEDIA 97-125 (1984); KUSHNER, *supra* note 114, at 20 (describing *Battle Zone*).

116. See Williams Elecs., Inc. v. Artic Int'l, Inc., 685 F.2d 870, 872 (3d Cir. 1982) (discussing *Defender*). A "first-person" game provides the player with a three-dimensional perspective view through the eyes of the avatar. A "scroller" game, such as *Defender*, presents an external view of the avatar as it proceeds (usually horizontally) across the environment. An "isometric scroller" game, such as *Ultima Online*, presents the viewer with a three-dimensional external view. *The Sims Online* is an isometric scroller. *EverQuest* supports multiple views but is generally played in first person.

117. MCGOWAN & MCCULLAUGH, *supra* note 9, at 58, 86-87.

118. *Id.*

Prince Graham, like the solo *ADVENT* player, was alone in Daventry. Only a year after *King's Quest* was released, however, and only a few years after *MUDI* created a networked version of the *ADVENT*-type game, Lucasfilm created a persistent visual virtual world called *Habitat*.¹¹⁹ *Habitat*'s graphics were crude and cartoonish by today's standards, in part because it was designed for the primitive Commodore 64 personal computer.¹²⁰ *Habitat* players customized their avatars mainly by selecting among a variety of fanciful heads for avatar bodies. As in *The Sims Online*, avatars communicated through speech bubbles appearing above their heads. The environment was built to accommodate as many as 20,000 avatars present simultaneously.¹²¹

Like *TinyMUD*, *Habitat* didn't emphasize leveling up so much as hanging out virtually. Two of its lead designers, Chip Morningstar and F. Randall Farmer, explained that the greatest challenge for *Habitat*'s creators was simply figuring out what all the avatars were supposed to do.¹²² Originally, the planners had intended to organize group events for the whole community, but the first attempts at central planning were disastrous. As a result, the *Habitat* team "shifted into a style of operations in which [the designers] let the players themselves drive the direction of the design."¹²³

The *Habitat* experiment ended with the obsolescence of the Commodore personal computer for which it was designed. Since the demise of *Habitat*, connection speeds have increased and computers have become more powerful; as a result, visual virtual worlds have become larger, more finely detailed, and populated with an increasing number of avatars.¹²⁴ The most popular worlds are profit-driven. A prospective avatar can generally sign up for about \$40, with an extra \$10 monthly subscription fee.

119. Chip Morningstar & F. Randall Farmer, *The Lessons of Lucasfilm's Habitat*, in *CYBERSPACE: FIRST STEPS* (Michael Benedikt ed., 1991), available at <http://www.fudco.com/chip/lessons.html> (last visited Aug. 9, 2003). *Habitat* lacked most of the features we expect of games, such as a goal and puzzles. It was much more like a social MUD in which the interactivity among avatars was a goal in itself. *Id.*

120. *Habitat* also ran on the soon-defunct Quantum Link network, which was terminated in 1994, shortly after the demise of the Commodore. RHEINGOLD, *supra* note 77, at 194-200.

121. Morningstar & Farmer, *supra* note 119, at 189.

122. *Id.* at 190-92.

123. *Id.* at 192.

124. See *Virtual Reality: Multi-User Systems*, Open Directory Project, at http://dmoz.org/Computers/Virtual_Reality/Multi-User_Systems/ (last visited Aug. 9, 2003) (listing various virtual-world platforms). Of the many virtual worlds, however, only a few are successful. For instance, *Active Worlds* is a social virtual world that can be entered (as a tourist) for free, yet despite this, the authors have usually noted only a few hundred avatars participating. See *Overview of Activeworlds*, at <http://www.activeworlds.com/overview.asp> (last visited July 26, 2003).

Sony's Norrath (*EverQuest*) is the most popular virtual world among United States citizens, with over 420,000 monthly subscribers.¹²⁵ *EverQuest* fits squarely within the tradition of *D&D*-based virtual worlds.¹²⁶ Participants begin the game by selecting a "shard," or game server, a subset of *EverQuest*'s virtual world containing several thousand participants.¹²⁷ After selecting a shard, the new player chooses an avatar. The game begins when the player presses a button labeled "Enter World" and views on the computer display a real-time three-dimensional image of the virtual world. The player sees other avatars nearby and "hears" their conversations in a chat window. The other visible avatars may be "bots" or "nonplayer characters," meaning they are controlled by a computer program and not another human. Generally, one can ascertain whether an avatar is a bot by simple observation: real avatars move erratically and generally don't speak medieval English.¹²⁸

The *EverQuest* "Level 1" avatar is penniless, carries a flimsy weapon, and lacks any significant skills or abilities. He or she starts in a "beginner's section" of the *EverQuest* world that has a nearby area conveniently over-run with computer-generated killing fodder such as rats, bugs, or snakes.¹²⁹ Prior to reaching Level 5, which may take a day or a week, depending on one's level of commitment, an avatar will generally be too frail to venture outside this area. Most players, however, quickly get down to the business of increasing the power of their avatars, or "leveling," as it is more commonly known. This does not mean that players do not interact. Indeed, the game encourages avatars to group together to accomplish an objective. Avatars that combine their skills in teams or guilds are more effective at

125. Hunter & Lastowka, *supra* note 41, at 22.

126. See Jin David Kim, *Lucrative Lessons from Online-Game Players*, INT'L HERALD TRIB., Mar. 12, 2003, at Finance 23, available at <http://www.ihf.com/articles/89432.html> (last visited Aug. 9, 2003).

127. The choice of a particular shard, like the choice of a town in *The Sims Online*, is a significant decision. Only players on the same shard share the same specific virtual world. Real-life friends will be unable to arrange meetings of their avatars unless they are on the same shards. Certain shards encourage role-playing, which means that users are essentially supposed to make their best attempts at typing in medieval English. Other shards are indifferent to this, and cries of "1337," "d00d," and "!0wnj00" are commonplace. See discussion *infra* note 128. Some shards allow avatars to kill one another; others don't. Predictably, some virtual worlds have located revenue streams in charging players to move their avatars from one shard to another. See, e.g., Ultima Online Update Center, at http://update.uo.com/design_479.html (last visited Oct. 10, 2003).

128. Many avatars speak in leetspeak (a.k.a. "1337sp34k," "133+5pe4k," and so forth) and other chat room conventions that will mystify those not fluent. See Kris Axtman, *'r u online?': the evolving lexicon of wired teens*, CHRISTIAN SCI. MONITOR, Dec. 12, 2002, at 01. For instance, "brb afk" means "I'll be right back; I'm going away from my keyboard." For those more comfortable with 1337 than English, Google actually offers a leetspeak hacker ("h4x0r") language version of its search engine. See <http://www.google.com/intl/xx-hacker/> (last visited Aug. 8, 2003).

129. Collectively, these creatures are also called "mobs," an abbreviation of "mobile object" that originated in MUDs. See Posting of Michelle Thompson, m.a.thompson@mindspring.com, to mud-dev@kanga.nu (Feb. 23, 2000), at <http://www.kanga.nu/archives/MUD-Dev-L/2000Q1/msg00472.php> (last visited Aug. 5, 2003).

defeating enemies and, therefore, can “level” more quickly. The most intimate interactions usually occur during the lulls in combat, while avatars are waiting for their bodies to “heal.” During this down time, individuals often discuss their real-world lives and identities.¹³⁰ The avatar bonds formed between individuals may extend to the formation of more elaborate *EverQuest* guilds with binding rules of membership and websites promoting social events.¹³¹ A close association with another avatar over a long period of time may even lead to an in-game *EverQuest* marriage, which may in turn lead to a real-world marriage—or the dissolution of one.¹³²

Other Tolkienesque leveling worlds such as *Ultima Online*'s Britannia and the three realms of *Dark Age of Camelot* operate in much the same manner as *EverQuest*, though each has some notable variations. *Ultima Online*, released two years before *EverQuest*, creates more significant opportunities for avatars to specialize in nonviolent skills, such as blacksmithing or baking bread. One interesting feature in *Ultima Online* is the possibility of home creation and ownership. A current advertising campaign for *Ultima Online* features the availability of new tools for the creation and customization of virtual castles. The more recent *Dark Age* is one of the most visually lush virtual worlds. *Dark Age* generally hews closely to the *EverQuest* and *Ultima Online* model of success, though it differs by coding into the environment an interesting factional system, where one must align one's avatar with one of three realms based on medieval British, Celtic, and Norse cultures.

Despite the socializing that takes place in these *D&D*-type worlds, the clear goal in each is to become a more powerful avatar. If one wishes to obtain the pinnacle of virtual success in Norrath or Britannia, such as becoming the powerful leader of a guild or a flashy and impressive wizard,

130. See Nicholas Yee, *Befriending Ogres and Wood-Elves: Understanding Relationship Formation in MMORPGs* 4 (2002), at <http://www.nickyee.com/hub/relationships/homc.html> (last visited Aug. 9, 2003) (quoting one *EverQuest* player as stating, “We have spent some nights in dungeons waiting for people or spawns chatting about our lives, what we want to do, and so on.”); Ann-Sofie Axelsson & Tim Regan, *How Belonging to an Online Group Affects Social Behavior—A Case Study of Asheron's Call* (Microsoft Research Technical Report No. MSR-TR-2002-07 2002), at http://research.microsoft.com/research/pubs/view.aspx?msr_tr_id=MSR-TR-2002-07 (last visited Aug. 9, 2003).

131. More than a thousand links to various *EverQuest* guilds can be found at Allahkham's Magic Realm, a well known source of *EverQuest* information. See <http://links.allakhazam.com/Everquest/Guilds/> (last visited Aug. 1, 2003).

132. See Daniel C. Miller, Note, *Determining Ownership in Virtual Worlds: Copyright and License Agreements*, 22 REV. LITIG. 435, 436 (2003) (introducing the article with a description of a virtual marriage). While there are certainly married couples who met first in the world of Norrath, the more common situation is complaints from “*EverQuest* widows” who say the game has destroyed real-world marriages. See Julia Scheeres, *The Quest to End Game Addiction*, WIRED NEWS, Dec. 5, 2001, at <http://www.wired.com/news/holidays/0,1882,48479,00.html> (last visited Aug. 9, 2003). One Yahoo! community named “*EverQuest* Widows” has more than 3,000 members and 10,000 angry posted messages. See *EverQuest Widows*, at <http://groups.yahoo.com/group/EverQuest-Widows/> (last visited July 26, 2003).

one must (in theory) earn that status through hours and hours of “play” at killing things.¹³³

The Sims Online is the leading example of a nonleveling world. Most nonleveling worlds also abandon the trappings of fantasy: instead of choosing to become an elf or a hobbit, one customizes one’s avatars by choosing from hundreds of doll-like physical components, including tuxedos, leather jackets, and t-shirts. If a goal exists in *The Sims Online*, it is never stated.¹³⁴ Most people seem interested in making money, however, and the primary means of making money is engaging in work activities. Increased skills can bring wealth to an avatar, as well as provide the avatar with improved capabilities, such as the ability to play a musical instrument.

A new avatar generally arrives on the sidewalks of Blazing Falls (or one of the other towns in *The Sims Online*) with a modest amount of cash and few skills. The owner of the lot where the avatar arrives normally offers the newcomer a friendly greeting, inviting him or her to enter, get something to eat, and take a look around. Unlike *EverQuest*, *The Sims Online* has no death-dealing mobs of rodents—so there is little risk in exploring all of the homes in the environment. Given the lack of any clearly defined goals, most avatars in *The Sims Online* seem content just finding interesting places and people with whom to chat.¹³⁵

In the nonleveling genre, the major competitor to *The Sims Online* is probably There.com’s *There*, which is currently still in beta testing. According to its promotional materials, *There* will be “the first online getaway that gives you the freedom to play and talk naturally while having fun and making friends.”¹³⁶ *There* has video game elements (e.g., virtual paintball, hoverboarding, and dune-buggy racing), but it is targeted primarily to those interested in hanging out and chatting with friends. Some design features of its interface are explicitly reminiscent of chat rooms.¹³⁷ Interestingly, There.com is being marketed primarily to women, with the belief that if the world builders can attract them, men will follow.¹³⁸

As these examples indicate, each virtual world is different, making categorical statements about virtual worlds suspect. Still, the lines drawn

133. Of course, one can also simply buy this prominent virtual status on eBay. See *infra* Part II.

134. See, e.g., Herold, *supra* note 11, at G5 (“When I met Platinumkitty, she asked me to make her my friend. One can declare someone as a friend, and while Platinumkitty said she was not sure what benefit friendship might confer, she was still trying to make as many as possible for the sake of prestige.”).

135. *Id.* (“I played The Sims Online in much the same way that I behave in real life: hanging out, practicing the guitar and skating by.”).

136. *What Is There?*, There.com, at http://www.prod.there.com/what_is_there.html (last visited Aug. 9, 2003).

137. Robin J. Moody, *Nike Explores Virtual Brand Placement with There.com*, BUS. J. PORTLAND, Jan. 17, 2003, at <http://portland.bizjournals.com/portland/stories/2003/01/20/story3.html> (last visited Aug. 9, 2003).

138. Chris Gaither, *Battle for the Sexes*, BOSTON GLOBE, Jan. 13, 2003, at C1. The full text of the article may be found at <http://www.there.com/bostonglobe.html> (last visited Oct. 7, 2003).

between worlds might not be as bright as they seem at first. For instance, while *The Sims Online* does not involve gaining power and wealth through leveling, prestige and affluence are motivating forces for many participants. And while leveling worlds such as *Ultima Online* often force players to engage in repetitive killing exercises, what makes this bearable seems to be the social bonds formed among players, who may find more fulfillment in being virtual seamstresses, alchemists, and blacksmiths.¹³⁹

As this virtual-world primer has shown, current virtual worlds are the end products of a long tradition of interactive representational environments, and this history helps illuminate both the social practices found in today's virtual spaces and the likely potential of future environments. In the next Part, we will focus on the notion of property within virtual worlds and ask whether virtual properties are deserving of legal recognition. In Part III, we will take the lessons of virtual-world property rights and examine the possibility of avatar-specific rights in virtual spaces.

II VIRTUAL PROPERTIES

There is nothing which so generally strikes the imagination, and engages the affections of mankind, as the right of property; or that sole and despotic dominion which one man claims and exercises over the external things of the world, in total exclusion of the right of any other individual in the universe.

—William Blackstone¹⁴⁰

Property is a contingent fact within our world. It is neither ordained by nature nor necessary for human survival. So the development of virtual worlds gives us an excellent opportunity to experiment with the legal relationships, transactions, and obligations that, in the real world, fall within the category of property. In this Part, we examine whether, and why, property systems have emerged in virtual worlds. Our conclusion is that the existence of property within these worlds may speak to our inability to imagine any other way of structuring relationships between individuals under conditions of resource scarcity.

It is one thing for property to be recognized within a virtual world. It is another for this fact to have any significance—outside the anthropological—in the real world. However, property interests in the virtual worlds bleed over into the real world, and assets accumulated in a virtual world sometimes have value in ours. Already, we have seen cases filed over the ownership of various virtual assets,¹⁴¹ and every day thousands of pieces of

139. See Dibbell, *supra* note 13.

140. 2 WILLIAM BLACKSTONE, COMMENTARIES *2.

141. See Jessica Mulligan, *Biting The Hand #21: Pre-GDC Rants and Scandals*, Skotos, Mar. 19, 2002, at http://www.skotos.net/articles/BTH_21.shtml (last visited Aug. 9, 2003).

virtual property are transferred in the real world for real dollars.¹⁴² Having established the existence of property in the virtual world in Parts II.A and II.B, we turn in Parts II.C and II.D to the issue of whether real-world property systems should recognize these interests. Our goal here is to ask whether a claim of property in this context is justified. We close the discussion of virtual property rights in Part II.E with a discussion of the proper allocation of these rights in the real and virtual worlds.

We begin by focusing on the similarities and differences between property in the virtual and real worlds, and find that, from a descriptive perspective, there is little to distinguish virtual-world property from real-world property. In keeping with our overall thesis, we conclude that we cannot simply ignore the property interests because they are not “real.”

A. *The Existence of Property in Virtual Worlds*

Central to the operation of most modern virtual worlds is a property system, with all of the familiar real-world features of exclusive ownership, persistence of rights, transfer under conditions of agreement and duress, and a currency system to support trade. In Blazing Falls, for example, an avatar can purchase a basic plot of land for around ten thousand simoleons (the currency of *The Sims Online*). Building a truly appealing home requires one to purchase walls, windows, and perhaps an Olympic-sized swimming pool, all of which cost serious simoleons. Alternatively, one can buy a completed mansion, built by property speculators who, like their real-world counterparts, buy prime land early, throw up an anodyne house that appeals to a broad range of would-be owners, and sell it off.¹⁴³

Property in today’s virtual worlds is not confined to virtual reality. In Blazing Falls, everything your avatar will need costs money: not only will you have to furnish your avatar’s house with couches, beds, a toilet, and maybe a pizza oven, but all of the objects and chattels in your place are subject to wear and tear. If you want to keep attracting guests, you will have to refresh the buffet, unblock the toilet, and fix the broken weight-lifting machine. All of these services have a price.

Perhaps the most striking feature of the property systems of the virtual worlds is how closely they mirror the real world, or at least the subset known as the Western capitalist economy. No virtual world, not even a community-conscious, social MUD like *LambdaMOO*, has an entirely communal property system. Private property is the default. Entrepreneurs and tycoons feel right at home here. The timeworn metaphor of property as a bundle of rights, chiefly the rights to use, exclude, and transfer, applies to

142. See CASTRONOVA, *supra* note 12, at 31.

143. See Planet Modz Gaming Network, at <http://www.planetmodz.com/index.php/sites/s> (last visited Oct. 8, 2003).

virtual chattels as well.¹⁴⁴ In Britannia or Norrath you, and only you, can use or sell your battleaxe. And you can certainly exclude anyone else from using your leather pants at the same time as you—which is, perhaps, a good thing.

Slightly different approaches are adopted in each game when it comes to virtual realty. For example, real property in Blazing Falls can be relatively expensive. A plot of land costs about the amount that an avatar receives when she is first created—and furnishing a new home complete with sofas, beds, and garden gnome-making machines can really add up.¹⁴⁵ The best way to make money to pay for all of this is to attract guests to your online home, since your avatar receives bonus income from the central government based on the number of people who come to your place and how long they stay. This creates a market incentive to open your home at all hours and obtain the maximum number of unknown visitors. To do this alone, however, you would need to be logged into Blazing Falls 24/7, attending to house repairs and guest desires. Since this is clearly impossible, avatar roommates are needed to share house chores, repair broken computers, and buy the house an improved oven. As a result, the vast majority of houses in *The Sims Online* represent a type of limited commons ownership regime, with property interests spread among multiple housemates.¹⁴⁶

While this might seem at odds with the vision of Blazing Falls as capitalist utopia, this preponderance of limited commons property arrangements also mirrors the real world. As Robert Ellickson notes, the majority of Americans live in limited commons property households, typically family homes.¹⁴⁷ However, the Blazing Falls communal property system has emerged for different reasons—hardly any of us in real life have roommates just so that we can stay open all hours and party like it's 1999.¹⁴⁸

The treatment of public and private spaces also varies among different virtual worlds.¹⁴⁹ Looking at the map of Blazing Falls, one may need a

144. See A.M. Honoré, *Ownership*, in OXFORD ESSAYS IN JURISPRUDENCE 107, 108-10 (A.G. Guest ed., 1961) (defining liberal view of ownership as the right to use, exclude, and transfer, and noting that some rights, such as rights to possess or manage, can be subsumed within these categories). See also JEREMY WALDRON, *THE RIGHT TO PRIVATE PROPERTY* 49-50 (1988) (agreeing with Honoré, with minor qualifications).

145. Will Wright, lead designer of *The Sims Online*, decided that building lawn gnomes should be one way for avatars in *The Sims Online* to make money. See generally *The Sims Online*, at <http://www.eagames.com/official/thesimsonline/home/index.jsp> (last visited Aug. 9, 2003).

146. Carol M. Rose, *The Several Futures of Property: Of Cyberspace and Folk Tales, Emission Trades and Ecosystems*, 83 MINN. L. REV. 129 (1998). Dagan and Heller term this a "liberal commons property" regime. See Hanoch Dagan & Michael A. Heller, *The Liberal Commons*, 110 YALE L.J. 549, 616 (2001).

147. Robert C. Ellickson, *Property in Land*, 102 YALE L.J. 1315, 1394-95 (1993).

148. See PRINCE, 1999, on 1999 (Warner Bros. 1982).

149. It also contrasts with the application of such concepts in the real world, where there are clear distinctions between common, public, private, and regulatory property. See Bruce Yandle & Andrew P.

second or two to recognize that there are no roads, parks, or playgrounds—there is no public space at all. Perhaps such places are not really necessary there. After all, one can teleport directly into homes, and, due to the financial incentive system, the vast majority of these are the equivalent of an open-all-hours fraternity party. In *Dark Age of Camelot* and *EverQuest*, on the other hand, all of the land is nominally public, and avatars don't own title to virtual realty at all. Still, there are certainly places where less powerful avatars are effectively denied entry. Visiting Norrath's visually stunning astral "Planes of Power," for instance, is beyond the ability of most of the game's avatars. The arduous processes involved in reaching and surviving in these environments effectively make them exclusive clubs for the high-level avatar jet set.¹⁵⁰

Ultima Online's Britannia provides an interesting admixture of public and private ownership. Though custom castle-building is one of the game's selling points, there are vast wastelands in Britannia where one cannot build a home, and orcs, ogres, and dragons roam free.¹⁵¹ There.com's *There* is likewise a mix of public and private spaces. Though most spaces are public, there are also plans to allow avatars to build their own homes for a fee and rent virtual spaces for dune-buggy parties with a private guest list.¹⁵²

The real property systems within all of these worlds mostly conform to the norms of modern private property systems, with free alienation of property, transfers based on the local currency, and so forth. Even in the Tolkienesque worlds, the Middle Earth trappings are largely superficial from a cultural perspective. A medieval veneer is present in the castles decorated with tapestries and crossed halberds, and in the circa-1500 weaponry and armor. Considering how most property rights are structured, a California millionaire would feel right at home.¹⁵³

The transfer of virtual chattels also occurs in very familiar ways.¹⁵⁴ If your avatar wants to sell her invulnerable chainmail armor, she is free to do so.¹⁵⁵ If she wants to seek multiple in-game buyers, there are well-known markets within each world where she might peddle her goods: places like the Bazaar, or the East Commons Tunnel and Greater Faydark in Norrath,

Morriss, *The Technologies of Property Rights: Choice Among Alternative Solutions to Tragedies of the Commons*, 28 *ECOLOGY L.Q.* 123 (2001).

150. Jeremy Conrad, *EverQuest: Planes of Power Review*, Internet Games Network, at <http://pc.ign.com/articles/376/376138p1.html> (Nov. 1, 2002).

151. See Jere Lindell, *Tutorial to New Players of ULTIMA ONLINE v. 1.3*, at <http://cheathappens.com/text/uonlinefaq.zip.txt> (last updated Nov. 21, 2001).

152. See *Frequently Asked Questions*, There.com, at <http://www.there.com/faq.html> (last visited July 26, 2003).

153. Fish steaks, for example, are one of the staple food groups on *Ultima Online*.

154. See Molly Stephens, Note, *Sales of In-Game Assets: An Illustration of the Continuing Failure of Intellectual Property Law to Protect Digital-Content Creators*, 80 *TEX. L. REV.* 1513, 1515 (2002).

155. See *id.*

or Subway in Dereth.¹⁵⁶ And if your avatar dies, others can strip the armor from her lifeless body and make it their own.¹⁵⁷

The emergence of traditional property systems and market-based approaches is a somewhat surprising aspect of virtual worlds, which, in other ways, depart from the familiar. In a Demsetzian world, there is no need for property to exist, and we might anticipate that participants would invent a variety of schemes to structure their legal relationships and obligations.¹⁵⁸ Nonetheless, virtual worlds cleave to familiar real-world expectations of property systems. This may be as a consequence of resource scarcity. No modern virtual world allows for unlimited resource creation, so the laws of economics operate much as they do in the real world.¹⁵⁹ Property interests, it seems, emerge as a result of this scarcity.

Alternatively, we might look to the creators of these systems. The current crop of virtual worlds is the brainchild of large, property-owning corporations, typically based in the United States.¹⁶⁰ One hardly expects these organizations to be boosters for communal, socialist, or communist property-holding systems. More importantly, perhaps, these commercial products must attract large numbers of paying customers to be profitable. This means mirroring the features of real-world systems that make sense to twenty-first-century participants. This effort to give the people what they want can be seen at many levels of the environment. For instance, there are no serfs in the Tolkienesque worlds. Who would want to risk a business model on the assumption that individuals will pay \$9.95 a month to be a feudal vassal?¹⁶¹

156. See Dibbell, *supra* note 13. These virtual markets change regularly, and by the time one is identified in print it is probably out of date. Letters to the editor in a subsequent edition of *WIRED* excoriated Dibbell for identifying Greater Faydark as a trade center, since, of course, the best markets were to be found in Nexus on Norrath's moon, Luclin, and in the Bazaar. See Dave Brogden, *Lessons in Geekonomics*, *WIRED*, March 2003, at 26.

157. Other virtual worlds have specific norms/laws regulating corpse looting. For example, LegendMUD, a text-based virtual world set in three different eras, only allows looting among characters in clans. See *What Is Considered Cheating*, LegendMUD, at <http://www.legendmud.org/firstpagecontents.html> (last visited July 26, 2003) (link on "Helpful Indices," then "Guide for New Players," then "What is Considered Cheating") ("Looting player corpses is also considered against the rules, UNLESS you and the player whose corpse you are looting are BOTH clanned. In the case of clanned characters stealing from clanned players' corpses, the 'legality' of it is up to the clans involved.").

158. Harold Demsetz, *Toward a Theory of Property Rights*, 57 *AMER. ECON. REV.* 347 (1967).

159. See CASTRONOVA, *supra* note 12, at 14-17.

160. T.L. Taylor, *'Whose Game Is This Anyway?': Negotiating Corporate Ownership in a Virtual World*, in *COMPUTER GAMES AND DIGITAL CULTURES—CONFERENCE PROCEEDINGS 222* (Frans Mäyrä ed., 2002).

161. This may be a U.S.-specific cultural observation. Serfdom is, to some extent, the model for one of the most successful virtual worlds today, *Lineage's Aden*. In this predominately South Korean virtual world, avatars are divided into castes of leaders and their followers. Once one chooses to be a follower, one can never be a leader. Adopting a permanent subservient role within a virtual world is apparently acceptable to South Koreans, whereas in Western worlds, designers assume that every

Even virtual worlds that lacked market systems when launched have had to develop them to remain commercially viable. Blazing Falls, for instance, began as an exception to the free market rule, and people generally found it unpleasant for this reason. One purchased chattels from something like a central government agency that refused to negotiate on price. A pizza stall would cost you 25,000 simoleons, take it or leave it, *tovarich*.¹⁶² However, like countries of the former communist bloc, *The Sims Online* understood what its citizens wanted and declared that it would be an economy in transition—free alienability of property would come soon. By the time of this Article's publication, this market reality will have arrived. Given that vast numbers of people have designed and built objects for *The Sims*,¹⁶³ the precursor to *The Sims Online*, the real-world market for such objects essentially demanded the institution of a virtual market in Blazing Falls.¹⁶⁴

Even in situations where scarcity is not built into the system and where participants are free to invent their own structure of legal obligations, property expectations play a large role. In non-scarce worlds such as *LambdaMOO*, where anyone was free to create new objects in a costless manner, property disputes emerged, albeit in ways that are different from environments where scarcity is built in.¹⁶⁵

It may be that, in the West at least, we are simply incapable of imagining a new world without property. In order to understand this, we next consider the ways in which early social MUDs dealt with property issues in virtual-world environments that were intended to be open, community-minded, and enjoyed by all.

B. Early Conceptions of Virtual Property

Property rights in early leveling MUDs, like Trubshaw and Bartle's *MUDI*, were essentially rights in the avatar alone. There were some in-game markets for objects, but these were mostly gift economies. For example, a more advanced player might sometimes give a newer player a helmet and armor in exchange for a favor. While early social MUDs, with

avatar aspires to be king. See J.C. Herz, *The Bandwidth Capital of the World*, WIRED, Aug. 2002, http://www.wired.com/wired/archive/10.08/korea_pr.html (last visited Aug. 9, 2003).

162. This and other aspects of daily life in Blazing Falls are drawn from the authors' own experiences playing *The Sims Online*.

163. See, e.g., 8th Deadly Sim, at <http://www.8thdeadlysim.com/> (last visited Aug. 9, 2003) (including adult content such as skins of porn stars); FileShack, at <http://www.fileshack.com/browse.x?cat=613> (last visited Aug. 9, 2003) (including skins of real-world people such as Britney Spears, Bruce Lee, and Christina Aguilera).

164. Chris Trottier, lead designer for *The Sims Online*, anticipated this development. See *MMORPG.net Interview With Chris Trottier*, MMORPG Network, at <http://mmorpg.net/article.php?a=1004&p=2> (last visited July 26, 2003) (explaining that user-created content is not in the first alpha of TSO, but "[o]nce we get support for this, these will be available for in-game shop owners to buy wholesale and price for the secondary consumer").

165. See *infra* Part II.B.

their focus on object and room creation, spawned a host of new properties and potential markets, public and commons property was their prototypical form of ownership.¹⁶⁶

For instance, in *LambdaMOO*, if I made a particularly interesting bonker—an object that forces another avatar to say “oif” or do something when bonked on the head with it¹⁶⁷—the normal practice was to let others copy it freely. Nor would I mind if you created a newer, better bonker by improving on my code. Not only would your appropriation of my code cost me nothing, but my *LambdaMOO* reputation would be dramatically enhanced if hundreds of avatars used my code to bonk the unsuspecting. This sharing ethos had an element of pragmatism. Even if someone really wanted to sell bonkers, the challenge of establishing a functioning market for properly licensed bonkers was probably not worth the candle.¹⁶⁸

However, even within the community-minded *LambdaMOO*, the concepts of “property” and “ownership” in virtual assets surfaced almost immediately. For instance, in the earliest stages of *LambdaMOO*, a dispute arose over who owned the air-space over privately owned territories, which became an important issue for the navigation of virtual aircraft.¹⁶⁹ Property disputes also arose over whether certain popular rooms and objects were private or public, whether it was possible to bequeath personal objects to another when one’s avatar died, and exactly how much data space a participant could use for building new rooms and objects.¹⁷⁰ This last conflict was resolved only by making property an explicit part of the system and creating an official governance mechanism to recognize and allocate it. The new virtual-titles office was called the Architecture Review Board, and it imposed a “quota system” where additions to the *LambdaMOO* database above a certain limit would require official approval.¹⁷¹

Lawrence Lessig has described one MUD property dispute in which Martha Jones and Dank engaged in a nasty and protracted battle over Martha’s poisonous flowers and Dank’s dog.¹⁷² Both the flowers and the dog were—like the adjoining “properties” that Martha and Dank inhabited—nothing more than programmed objects in the database. Dank, however, was genuinely angered when his “dog” was killed by eating a

166. See HESS, *supra* note 96, at 67 (noting that various features of *LambdaMOO*’s objects are owned in common).

167. See JargonFile, at <http://www.jargon.net/jargonfile/b/bonkoif.html> (last visited Aug. 9, 2003); HESS, *supra* note 96, at 146.

168. Even building a functioning market in valuable property, like disk-space quota, was initially beyond the governance structures of *LambdaMOO*. See DIBBELL, *supra* note 19, at 163, 167-69.

169. The case was *Margeaux v. Yib*. See Philip Giordano, *Invoking Law as a Basis for Identity in Cyberspace*, 1998 STAN. TECH. L. REV. 1, ¶ 64, n.169 (1998). See also Mnookin, *supra* note 40.

170. See Mnookin, *supra* note 40; see also DIBBELL, *supra* note 19, at 163-67 (discussing disk-space quotas and the governance mechanism introduced to deal with this).

171. DIBBELL, *supra* note 19, at 163-69.

172. See LAWRENCE LESSIG, *CODE AND OTHER LAWS OF CYBERSPACE* 9-13 (1999).

poisonous “petal” from one of Martha’s “flowers” that had ended up on Dank’s property. For her part, Martha was indignant: there was no reason for the dog to have “died,” as Dank could have programmed a hardier dog that was immune to Martha’s virtual poison. Both parties invested in the dispute the kind of passion and righteous indignation usually reserved for real-world, across-the-fence, property disputes.¹⁷³

It is revealing of the psychology of virtual worlds, and particularly of virtual property, that the property interests felt real to the parties in the arguments mentioned above. That is, none of the disputes simply dissipated with a realization that the whole enterprise was “just a game.”¹⁷⁴ This is not surprising; researchers in behavioral economics have found that people tend to become personally invested in objects that they perceive as belonging to them.¹⁷⁵ The “endowment effect” is a persistent cognitive bias causing people to overvalue assets that they have acquired in relation to those that others own.¹⁷⁶ In one experiment at Cornell, students in one group were given Cornell coffee mugs and assigned the role of sellers, while other students were assigned the role of buyers. Students who were sellers assigned the mugs much higher values than the buyers did and were loath to part with their merchandise, even at prices that were significantly higher than the stated value of the mugs.¹⁷⁷

One doesn’t need to witness many arguments between two-year-olds over the ownership of a toy neither of them really need—“Mine!” “No, mine!”—to understand the primal appeal of ownership in our society.¹⁷⁸ This same ownership urge is present when property is intangible. Consider how seriously some people take the protection of “their ideas,” even in contexts where those ideas cannot be protected using the laws of intellectual property.¹⁷⁹ As the early MUD disputes illustrate, the instinct to assert

173. *Id.* at 12-13.

174. For a discussion of the use of this “just a game” device, see Elizabeth M. Reid, *Text-Based Virtual Realities: Identity and the Cyborg Body*, in *HIGH NOON ON THE ELECTRONIC FRONTIER: CONCEPTUAL ISSUES IN CYBERSPACE* 327 (Peter Ludlow ed., 1996) [hereinafter Reid, *Cyborg Body*]. Much the same issue emerged during the notorious “rape in cyberspace.” See DIBBELL, *supra* note 19, at 11-30. For similar events occurring in JennyMUSH, a different MUD, see Elizabeth Reid, *Hierarchy and Power—Social Control in Cyberspace*, in *COMMUNITIES IN CYBERSPACE* 107, 115-16 (Marc A. Smith & Peter Kollock eds., 1999). For a discussion of the psychology of human rights in virtual worlds, see *infra* Part III.

175. See generally Richard Thaler, *Towards a Positive Theory of Consumer Choice*, 1 J. ECON. BEHAV. & ORG. 39 (1980) (describing the endowment effect and role in consumer choice).

176. For a comprehensive review of the Cornell study and other experiments confirming the endowment effect, see Daniel Kahneman, Jack L. Knetsch & Richard H. Thaler, *Experimental Tests of the Endowment Effect and the Coase Theorem*, 98 J. POL. ECON. 1325 (1990).

177. *Id.*

178. Both authors wish to note their indebtedness to their children for this observation. See also RICHARD PIPES, *PROPERTY AND FREEDOM* 65-86 (1999) (recounting the possessiveness trait in animals, children, and hunter-gatherer societies).

179. See *infra* Part II.C.1.

ownership over what we believe is “ours” is deeply rooted in Western society. It does not dissipate in virtual worlds.

In virtual worlds, such instincts assert themselves in conflicts about who owns these assets and who can claim their value. Is the owner of a virtual world’s physical server also the owner of virtual castles created on that server, or does the castle belong to the person who spent years of her life building it brick by virtual brick?¹⁸⁰ Such disputes have been the subject of real-world litigation and posturing.¹⁸¹ And this potential for conflict over virtual properties will inevitably increase. Forthcoming virtual worlds like *There* and *Second Life*, which incorporate direct market-exchange mechanisms, allow participants to purchase virtual objects. If my avatar agrees to pay \$10 for a pair of virtual pants, it sounds a lot like a real-world contract. But wait a second—what exactly did my avatar just purchase? Under the Uniform Commercial Code (UCC), if I discover a pixelated rip or some bad stitching, can I return the pants for a refund?

Participants in virtual worlds clearly see their creations as property. The question is whether real-world law will acknowledge these expectations. In the next three sections, we consider how a legally tenable theory of virtual property might develop. We discuss the features of virtual possessions that set them apart from real-world property, and we explore whether utilitarian, Lockean, and personality-based justifications for legal property rights might apply in the virtual context. We then go on to explore the ways in which virtual property disputes might play out.

C. *The Descriptive Account of Virtual Property*

If you want to own a castle in Britannia, home of *Ultima Online*, there are two ways to do it. The first way involves spending about 40,000 gold coins and receiving a small house property deed, which is essentially a building permit.¹⁸² You then spend the time and effort necessary to build up enough online wealth to afford the materials to build a modest wood hut. To do this, you could try killing monsters with your weapons, but obtaining wealth through such heroic pursuits is risky and the rewards are uncertain. If you’re really serious about getting virtual gold pieces, a smarter way to proceed is by being a blacksmith. This means sitting in front of the

180. Two student notes have investigated this question. Molly Stephens argues that avatar owners are currently the legal owners of their virtual assets, but that current intellectual property law fails to protect them adequately. See Stephens, *supra* note 154, at 1513-14 (concluding that, because of the limitations of intellectual property law, “creators of digital content must turn to contractual or technological measures to protect their intellectual property”). Daniel Miller is more equivocal. He investigates the application of various aspects of copyright law to the question of ownership and speculates about whether the existence of end-user license agreements might make the debate moot. See Miller, *supra* note 132.

181. See Stephens, *supra* note 154, at 1516; Mulligan, *supra* note 141.

182. See Dibbell, *supra* note 13, at 110.

computer clicking on iron ore deposits, carting them back to a forge, and knocking out breastplate after breastplate.¹⁸³ If you do this for days on end, you will eventually accumulate enough of the local currency to afford to build your hut, or perhaps, if you are extraordinarily committed, a castle. Of course, in addition to the “click-slavery” of toiling over a virtually red-hot forge, you will need to pay real money—between ten and thirteen U.S. dollars—month after month for *Ultima Online*’s subscription charge.

This method assumes that the best way of obtaining something is going to the place where it is made and then building it yourself. By analogy, consider the choice faced by an American in search of an Indonesian mask or South African Zulu basket. True, she could travel to those places, study the art of making masks and baskets, and after years of toil produce her heart’s desire with her own hands. Most people would regard this as insanity. Why not just buy one on eBay?

It took almost no time for this realization to dawn in virtual worlds. And so, just as a real-life buyer might use U.S. dollars to purchase the foreign product from the native seller, exchange mechanisms have sprung up in virtual worlds. Foreign exchanges in currency and direct investment operate constantly between the virtual worlds of Britannia, Rubi-Ka, Blazing Falls, and Norrath, on the one hand, and real-world bank accounts in the United States, Canada, Australia, and Korea, on the other.¹⁸⁴ The mechanics of it are simple. Possessing some valuable asset in the virtual world (say, a million simoleons or a level fifty avatar), I list it for sale in the section of eBay devoted to such auctions.¹⁸⁵ The auction winner uses eBay payment mechanisms (Visa, Mastercard, PayPal) to transfer the agreed price in the real world.¹⁸⁶ I then agree with the auction winner on a meeting place in the virtual world, and when we meet there I hand over the in-world property.¹⁸⁷

This practice is so common that one can now establish reliable U.S. dollar prices for various virtual-world properties. *Ultima Online* products range from \$5 for a pair of sandals, through \$150 for spiffy battle-axes, to \$750 for an impressive fortresses bound to make you the envy of the community.¹⁸⁸ In *The Sims Online*, the most popular asset for sale on eBay is currency; one million simoleons will set you back about \$180.¹⁸⁹

The amount of trade is so vast that it is possible to analyze the economies of virtual worlds in the same way that we analyze real-world national

183. *See id.*

184. *See id.* at 109-11; CASTRONOVA, *supra* note 12, at 2-5.

185. *See* eBay Listings, Internet Games, *supra* note 13. *See also* Dibbell, *supra* note 13, at 109; Stephens, *supra* note 154, at 1516.

186. Stephens, *supra* note 154, at 1516.

187. *Id.*

188. Dibbell, *supra* note 13, at 108.

189. *See* eBay Listings, Internet Games, *supra* note 13.

national economies. Edward Castronova has done exactly this for Norrath, the virtual world in *EverQuest*.¹⁹⁰ He found some remarkable economic results. The economy of Norrath as a whole is slightly larger than that of Bulgaria.¹⁹¹ The effective hourly wage was \$3.42 per hour, a figure significantly higher than the hourly wage of workers in India or China.¹⁹² Trade occurs regularly between Norrath and the United States, and foreign exchange between the Norrathian currency and the U.S. dollar is highly liquid, as a result. The value of one Norrathian platinum piece is greater than the Japanese yen or the Italian lira.¹⁹³

Virtual economies have created real-world opportunities to cash in. Some denizens of virtual worlds buy virtual property at low rates from those who have no idea what the item is worth, then resell it on eBay for real-world profit.¹⁹⁴ Some make a six-figure U.S. dollar income this way,¹⁹⁵ and one or two individuals may make even more.¹⁹⁶ Moreover, the possibility of arbitrage creates incentives for indirect employment. If the effective hourly wage is greater in Norrath than in the real world, then surely it should be possible to extract this differential? Of course, it is. A fly-by-night operation called Blacksnow Interactive set up a “point-and-click sweatshop” in Tijuana, where the hourly wage is considerably less than \$3.42.¹⁹⁷ The company paid unskilled Mexican laborers to play *Dark Age of Camelot* around the clock, then sold the virtual assets they created.¹⁹⁸ When Mythic Interactive, the owners of *Dark Age*, cracked down on this practice, claiming intellectual property infringements, Blacksnow sued on the basis that Mythic was engaging in unfair business practices.¹⁹⁹ Blacksnow’s lawyer threw down the gauntlet:

What it comes down to is, does a . . . player have rights to his time, or does Mythic own that player’s time? It is unfair of Mythic to stop those who wish to sell their items, currency or even their own accounts, which were created with their own time.²⁰⁰

190. CASTRONOVA, *supra* note 12.

191. *Id.* at 33.

192. *Id.*

193. *Id.*

194. Dibbell, *supra* note 13, at 108-11.

195. *Id.*

196. See Julian Dibbell, Audio Lecture on Virtual World Economies, Stanford Law School, at http://cyberlaw.stanford.edu/events/archives/cis_fellow_julian_dibbell.shtml (last visited Aug. 9, 2003).

197. Dibbell, *supra* note 13, at 110.

198. *Id.*

199. *Id.*; see also Press Release, Blacksnow Interactive Sues Mythic (DAOC) in Federal Court for MMORPG Player’s Rights, at <http://www.kanga.nu/archives/MUD-Dev-L/2002Q1/msg00362.php> (last visited Aug. 9, 2003).

200. *Id.*

Though the plaintiff dropped the case when its other legal problems forced a hasty retreat,²⁰¹ the issues it raised remain. Virtual “property” has real-world value. Does that mean it is really property? The remainder of this section is devoted to a consideration of ways that virtual property might be descriptively different from real-world property. The two most obvious differences—that virtual property is intangible and that virtual property is evanescent—are examined below.

1. *Metaphysical Problems*

Any consideration of virtual property interests in virtual assets needs to begin with the peculiar characteristics of virtual assets. After all, the broadswords, chairs, and castles of Britannia are simply entries in a database resident on a server that permits a participant’s computer monitor to display images already present within the software.²⁰² If Electronic Arts, the corporate owner of *The Sims Online*, turns off its servers—or just engages in a periodic database wipe—every piece of virtual property in Blazing Falls immediately disappears.²⁰³ In other words, despite its name, there is no there *There*. One might assume that something so intangible can’t be property at all because property, after all, should be something real.

Yet the development of Western property law and property systems over the last 200 years has been characterized by a shift from the tangible to the intangible. In the distant past, property interests were indeed tied directly to the land or chattel.²⁰⁴ This was reflected in the rituals of land transfer, which typically involved physically handing over some soil from the plot. Leases had to be transferred for some physical object or amount, even if it were only a peppercorn.²⁰⁵

However, while today’s real property interests may be *associated* with a tangible thing, the estates or interests themselves are commonly understood as intangible. We are now blasé about this idea. We might call a piece of land our own, but what we mean is that we own a freehold estate, or a leasehold, or an easement interest. The common law property system

201. See Dibbell, *supra* note 13, at 110. See also Dibbell, *supra* note 196.

202. See Stephens, *supra* note 154, at 1518 (“For example, multiple players may possess an iron sword. Only one copy of the software code that defines the appearance of an iron sword exists in the server memory, and the location of that code in the memory has an address When a player loses an iron sword, the server program simply deletes its address from the list of assets associated with that player’s character . . .”).

203. Database wipes are common during the beta phase of the development of any virtual world.

204. See WILLIAM B. SCOTT, *IN PURSUIT OF HAPPINESS: AMERICAN CONCEPTIONS OF PROPERTY FROM THE SEVENTEENTH TO THE TWENTIETH CENTURY* (1977).

205. Nominal rents, especially during the feudal era, were often characterized as a “peppercorn rent,” a peppercorn being the smallest-value item that one could transfer. See BLACK’S LAW DICTIONARY 1022 (5th ed. 1968).

of England and America has recognized these real but wholly intangible interests for hundreds of years.

Furthermore, while realty and personalty may still touch upon physical objects, intellectual property rights have, from their inception, been invoked to protect intangible interests. Copyrights and patents may obtain only upon tangible fixation or invention, but the property rights encompassed are not rights in the physical evidence of their existence. Trade secrets involve absolutely no requirement of fixation or physical existence.²⁰⁶ The secret ingredient in Coca-Cola²⁰⁷ may never be written down, but the intellectual property system protects the subject matter nonetheless.²⁰⁸ These recognized interests in turn give rise to a vast number of subsidiary intangible interests, including mortgages,²⁰⁹ limited period licenses,²¹⁰ assignments, and so forth.²¹¹

Outside of legislatively recognized intellectual property rights, legal scholars have noted how markets in intangible properties have been conjured into existence through the simple expedient of declaring a saleable interest. Jessica Litman has documented the emergence of inchoate property interests, such as Hollywood's recognition of rights in subjects' true-life stories.²¹² There is no legal intellectual property interest in life stories,²¹³ but significant parts of the movie industry are built around the informal recognition of these interests as property. Recognition of these illusory property interests is vital, as they are used as collateral to obtain financing.²¹⁴ Other scholars have suggested that a new type of property

206. See, e.g., Robert K. Hur, *Takings, Trade Secrets, and Tobacco: Mountain or Molehill*, 53 STAN. L. REV. 447, 469-70 (2000).

207. By the way, it's nutmeg. See Google search for "coke, nutmeg, secret," at <http://www.google.com/search?q=coke+nutmeg+secret> (last visited Aug. 5, 2003).

208. *Coca-Cola Bottling Co. v. Coca-Cola Co.*, 107 F.R.D. 288, 289 (D. Del. 1985) ("The complete formula for Coca-Cola is one of the best-kept trade secrets in the world.")

209. See, e.g., Lorin Brennan, *Financing Intellectual Property Under Revised Article 9: National and International Conflicts*, 23 HASTINGS COMM. & ENT. L.J. 313 (2001) (examining the financial instruments possible by using intellectual property as an underlying asset).

210. See, e.g., Nicole Chu, Note, *Bowie Bonds: A Key to Unlocking the Wealth of Intellectual Property*, 21 HASTINGS COMM. & ENT. L.J. 469 (1999) (discussing David Bowie's time-delimited securitization of his back catalogue).

211. Novel divisions of property are constantly being created. The GNU General Public License allows for open source development of code, while reserving copyright to the creator. See GNU General Public License, at <http://www.gnu.org/copyleft/gpl.html> (last visited Aug. 9, 2003). Creative Commons is popularizing forms of "open source" licenses for non-software products, which reserve a minimal number of rights to the author and allow broader public access. See *Licenses Explained*, Creative Commons, at <http://creativecommons.org/learn/licenses/> (last visited Aug. 9, 2003).

212. Jessica Litman, *Information Privacy/Information Property*, 52 STAN. L. REV. 1283, 1293-94 (2000).

213. See, e.g., *Seale v. Gramercy Pictures*, 964 F. Supp. 918, 929-31 (E.D. Pa. 1997) (dismissing Bobby Seale's right of publicity claims stemming from an unauthorized television depiction).

214. Litman, *supra* note 212, at 1293-94. See also William J. Murphy, *Proposal for a Centralized and Integrated Registry for Security Interests in Intellectual Property*, 41 IDEA 297 (2002) (discussing the different securities possible with intellectual property).

might exist in people's personal, private data, and might be pressed into service to protect privacy.²¹⁵ As scholars like Margaret Radin, Jerome Reichman, and James Boyle demonstrate, new property interests are generated by new cultural objects such as data,²¹⁶ ova,²¹⁷ and cell lines,²¹⁸ as soon as they become commercially valuable. Property regimes involving completely intangible subject matter and interests, therefore, are legion, making the intangibility problem of virtual property really no problem at all.²¹⁹

2. Temporal Problems

Another obvious objection to understanding virtual property as property might be its temporal restrictions. Participants in competitive or social virtual worlds typically spend about twenty hours per week within them.²²⁰ If they fail to pay their monthly fee, they can't participate in the virtual world at all. We might assume that this evanescence works against recognition of property.

In the real world, however, many forms of property have temporal restrictions. Consider leaseholds, which involve temporal limitations on an otherwise unfettered use of property.²²¹ Other temporally delimited interests include rights to occupy a hotel room for short periods and time-limited riparian or mineral-use leases. In our early property system, an important interest was the usufruct, an immutable but nontransferable package of land rights that terminated on the death of the usufruct's owner.²²² However, usufructs can exist for significantly shorter periods than the

215. See, e.g., ALAN F. WESTIN, *PRIVACY AND FREEDOM* 324-25 (1967) (suggesting that we might protect information privacy by using property protection with tort liability); Jerry Kang, *Information Privacy in Cyberspace Transactions*, 50 *STAN. L. REV.* 1193, 1246-94 (1998) (arguing for information privacy as a commodity subject to default rules); Pamela Samuelson, *A New Kind of Privacy? Regulating Uses of Personal Data in the Global Information Economy*, 87 *CALIF. L. REV.* 751, 769-73 (1999) (noting benefits of a market in personal information); *Developments in the Law: The Law of Cyberspace*, 112 *HARV. L. REV.* 1574, 1644-48 (1999) (arguing for property in personal information through code, not law). *But see* Litman, *supra* note 212, at 1290-1302 (arguing against propertizing information as inimical to constitutional protections and incapable of providing the modern data privacy protections aimed for); ELLEN ALDERMAN & CAROLINE KENNEDY, *THE RIGHT TO PRIVACY* 329 (1995) (arguing that personal information ownership is inconsistent with the First Amendment).

216. J.H. Reichman & Jonathan A. Franklin, *Privately Legislated Intellectual Property Rights: Reconciling Freedom of Contract with Public Good Uses of Information*, 147 *U. PA. L. REV.* 875 (1999).

217. See Margaret Jane Radin, *Cloning and Commodification*, 53 *HASTINGS L.J.* 1123, 1124 (2002) (noting how biological entities have now become propertized); see generally MARGARET JANE RADIN, *CONTESTED COMMODITIES* (1996).

218. See generally JAMES BOYLE, *SHAMANS, SOFTWARE AND SPLEENS: LAW AND THE CONSTRUCTION OF THE INFORMATION SOCIETY* (1996).

219. As noted earlier, another commentator has concluded that rights in avatar properties do exist, and that the current problem is that they are possessed by avatars. See Stephens, *supra* note 154.

220. Axelsson & Rcgan, *supra* note 130; Nick Yee, *The Norrathian Scrolls: A Study of Everquest* (Version 2.5 2001), at 12, at <http://www.nickyee.com/report.pdf> (last visited Aug. 9, 2003).

221. Ellickson, *supra* note 147, at 1372-73.

222. *Id.* at 1367-68.

entire length of the owner's life: a towel spread on a beach for the day is considered a usufruct.²²³ In intellectual property systems, time also plays an important role. Patents and copyrights, in theory, expire after a set period of years.²²⁴ Trademarks can be abandoned over time if they are not used in the marketplace. The time limitations inherent in virtual property are hardly different from those other temporally limited interests that we see in real, personal, and intellectual property systems.

The objections to virtual property on the basis that it is intangible or impermanent are descriptively implausible. Our property system cheerfully accommodates these characteristics, in one form or another, in various types of property interests. There appears to be no plausible descriptive objection to granting property interests in virtual assets. If, then, the problem with granting virtual property rights is not in a descriptive disjunction between virtual- and real-world property, perhaps the concern rests with our normative justifications for the grant of property.

D. *The Normative Account of Virtual Property*

The previous descriptive account suggests that virtual property is no less reasonable a concept than other types of intangible, temporary property interests. This is helpful, but insufficient. In the last few centuries, entire fields of study have explored the justifications for the existence of various property rights. We, therefore, must consider these normative accounts of property to determine where the justification for virtual property stands in relation to established forms of property.

There are as many normative accounts of property as there are property theorists, but we will confine ourselves to the three main accounts: the utilitarian theory of Bentham and his economist-acolytes, the labor-desert theory of Locke, and the personality theories that stem from Hegel. These accounts differ in significant ways and often lead to different conclusions about whether a given activity or transaction is appropriately characterized as property. Nonetheless, all three theories support a qualified conclusion that virtual entities claimed as property are property in reality.

223. *Id.*

224. U.S. CONST. art. I, § 8, cl. 8. ("The Congress shall have Power . . . [t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries"). Recent concerns over copyright term extensions go to the question of the constitutional limitations generated by the phrase "for limited Times." See, e.g., Kevin D. Galbraith, *Forever on the Installment Plan? An Examination of the Constitutional History of the Copyright Clause and Whether the Copyright Term Extension Act of 1998 Squares with the Founders' Intent*, 12 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 1119 (2002); Lawrence B. Solum, *Congress's Power to Promote the Progress of Science: Eldred v. Ashcroft*, 35 LOY. L.A. L. REV. 1 (2002).

1. *Utilitarian Theories of Virtual Property*

An action then may be said to be conformable to the principle of utility . . . when the tendency it has to augment the happiness of the community is greater than any it has to diminish it.

—Jeremy Bentham²²⁵

Jeremy Bentham's "felicific calculus" and the utilitarianism that flows from it²²⁶ have become the dominant justification for the creation of private property. The utilitarian baseline principle of seeking the greatest good for the greatest number²²⁷ provides the basis for the modern application of economics to almost every human endeavor.²²⁸ It has also spawned theories of justice predicated on social welfarist conceptions of utility, rather than on immanent or deontological precepts of the good.²²⁹ Property law invokes utilitarianism to give warrant to private property generally and to provide a relatively simple bright-line policy. Thus, we should grant private property interests if doing so would increase overall utility, which is to say, social welfare.²³⁰

The literature on the granting of interests in tangible property is replete with utilitarian accounts. The "tragedy of the commons" is, for example, a utilitarian conception.²³¹ Intellectual property is no different. The Constitution says that Congress may protect patents and copyright "[t]o promote the Progress of Science and useful Arts,"²³² and this justification is, of course, utilitarian.²³³ The economic emphasis in current American intellectual property is equally utilitarian at heart. Scholars who debate

225. JEREMY BENTHAM, AN INTRODUCTION TO THE PRINCIPLES OF MORALS AND LEGISLATION 12-13 (J.H. Burns & H.L.A. Hart eds., Athlone Press 1970) (1789).

226. *Id.* at 38-41.

227. *Id.* at 12-13.

228. See, e.g., RICHARD A. POSNER, FRONTIERS OF LEGAL THEORY 95-141 (2001).

229. See generally LOUIS KAPLOW & STEVEN SHAVELL, FAIRNESS VERSUS WELFARE (2002) (arguing that public policy and the social weal will be best served by a welfarist view of justice, rather than deontological alternatives).

230. See POSNER, *supra* note 228, at 95-141.

231. Garrett Hardin is usually credited with the "discovery" of the tragedy. See Garrett Hardin, *The Tragedy of the Commons*, 162 SCI. 1243, 1244-45 (1968) (demonstrating that a common resource will be prone to overuse because the value of the property will be sought by all and no one has a right to preclude others' use). However, Scott Gordon and Anthony Scott had independently made the observation a decade earlier but lacked Hardin's remarkable turn of phrase. See H. Scott Gordon, *The Economic Theory of a Common-Property Resource: The Fishery*, 62 J. POL. ECON. 124, 134 (1954) (using fishery as an example of the tragedy of the commons phenomenon); Anthony Scott, *The Fishery: The Objectives of Sole Ownership*, 63 J. POL. ECON. 116-24 (1955) (exploring the same phenomenon).

232. U.S. CONST. art. 1, § 8, cl. 8.

233. See Linda R. Cohen & Roger G. Noll, *Intellectual Property, Antitrust and the New Economy*, 62 U. PITT. L. REV. 453, 461 (2001) (noting the relationship between the aims of the clause and utilitarianism).

whether intellectual property grants are too broad²³⁴ or too narrow²³⁵ for the public interest are using the felicific calculus as their normative ground. Even the Supreme Court has invoked utilitarianism in deciding intellectual property cases dealing with copyright²³⁶ and with patent.²³⁷

What, then, is the utilitarian justification for real-world property rights in the virtual world? For most of the assets in question, their creation is presumably of little concern to society. Unlike, say, a ground-breaking novel or new building, the creation of a new avatar or virtual breastplate is of little obvious value to the outside world. However, as is clear from the amount of real-world time and money invested in the virtual property, individuals place a very high value on the virtual objects they create. From the utilitarian perspective, a societal good is composed simply of aggregate individual goods. Since millions of people labor to create objects of value in virtual worlds, there are utilitarian grounds for granting property rights based on the value of the transactions to individual users.²³⁸ Even on this narrow view of the social utility of avatars and virtual assets, utilitarianism provides adequate justification for considering these artifacts property. Indeed, virtual property might be analogized to patents, the majority of which, overwhelming evidence shows, are worthless to society.²³⁹

There are two obvious objections to the grant of property rights in virtual worlds based on utilitarianism. The first stems from the application of the theory in intellectual property law. Utilitarianism may provide the necessary warrant for providing, say, exclusive rights to authors, but this is not an unfettered warrant. We place limitations upon these rights, granting them only for discrete periods, for certain subject matters or purposes, and so on. This is, however, not so much an objection to the assertion of property rights in virtual property as an indication that we might place limitations of time, subject matter, or scope on virtual property rights as well.

A second objection is that granting property interests to certain virtual-world users reduces the welfare of other virtual-world participants and virtual-world owners, and thus reduces the utility to society. As a result,

234. See Mark A. Lemley, *The Modern Lanham Act and the Death of Common Sense*, 108 YALE L.J. 1687, 1688-89 (1999) (arguing that current trademark rights are greater than is justifiable from an economic point of view).

235. See William M. Landes & Richard A. Posner, *Trademark Law: An Economic Perspective*, 30 J.L. & ECON. 265, 265-66 (1987) (arguing that grants of trademark rights are economically appropriate and efficient).

236. See, e.g., *New York Times Co. v. Tasini*, 533 U.S. 483, 495 (2001); *Mazer v. Stein*, 347 U.S. 201, 219 (1954).

237. *Precision Instrument Mfg. Co. v. Auto. Maint. Mach. Co.*, 324 U.S. 806, 816 (1945).

238. See CASTRONOVA, *supra* note 12, at 10 ("If we take the economist's view . . . and see [the users'] behavior as rational choice, we must conclude that VWs offer something that is perhaps a bit more than entertainment to which the players have become addicted.").

239. See John R. Allison et al., *Valuable Patents* (U.C. Berkeley Public Law Research Paper No. 133, 2003), at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=426020 (last visited Aug. 9, 2003). Mark A. Lemley, *Rational Ignorance at the Patent Office*, 95 NW. U. L. REV. 1495, 1501 (2001).

this argument goes, we should reject virtual property rights on utilitarian grounds. However, this objection is misplaced: we are using the utility function to provide a justification for the creation of property interests, not for the allocation of those interests. Let us bracket the allocation issue for the moment and return to it after considering the effect of the other property theories.²⁴⁰

2. Lockean Theories of Virtual Property

[I]n the beginning all the world was America . . .

—John Locke²⁴¹

It is fitting, or perhaps amusing, to consider Locke's theory of property as it might apply to the virtual worlds. Locke's conception of property stemmed in part from his belief in an America of boundless, endless land. It is hardly surprising that his view of property can be pressed into service in this new, seemingly boundless environment called cyberspace, as it has been applied in similar arenas such as domain names²⁴² or, more generally, in the limitless, largely nonrival, arena of intellectual property.²⁴³

Locke's central property thesis is that "[w]hatsoever [man] removes out of the state that nature hath provided and left it in, he hath mixed his labor with, and joined to it something that is his own, and thereby makes it his property."²⁴⁴ Locke's property theory is a theory of desert from labor; that is, the person who expended labor to render the "thing in nature" into valuable form deserves to reap its value.²⁴⁵ The application of work and the expenditure of effort, at least in the protean world that was Locke's "America," justify the allocation of property interests.

Players and avatars, therefore, might have a property claim in their virtual-world assets based on the Lockean labor-desert theory. Clearly, the assets in question emerge from the time and effort of the players. Though one might claim that playing a game isn't labor, the case is hardly clear in a world where professional athletes are paid fortunes to play games. And as anyone who has slaved over a virtual forge will tell you, creating

240. See *infra* Part II.E.

241. JOHN LOCKE, TREATISE OF CIVIL GOVERNMENT AND A LETTER CONCERNING TOLERATION 32 (Charles L. Sherman ed., D. Appleton-Century Co. 1979) (1689).

242. *Kremen v. Cohen*, No. 01-15899 (9th Cir. July 25, 2003); Anaupam Chander, *The New, New Property*, 81 TEX. L. REV. 715 (2003).

243. For just one of dozens of examples, see PAUL GOLDSTEIN, COPYRIGHT'S HIGHWAY: FROM GUTENBERG TO THE CELESTIAL JUKEBOX 11 (1994) ("Bubbling beneath all [intellectual property] . . . is the intuition that people should be able to hold on to the value of what they create, to reap where they have sown.").

244. JOHN LOCKE, SECOND TREATISE OF GOVERNMENT § 27, at 17 (Thomas P. Peardon ed., 1952) (1690).

245. See STEPHEN R. MUNZER, A THEORY OF PROPERTY (1990) (explaining Locke in terms of desert from labor); MARGARET JANE RADIN, REINTERPRETING PROPERTY 105-06 (1993) (calling this theory the "Lockean labor-desert theory").

virtual-world property can involve at least as much tedium as any real-world work.²⁴⁶

All is not settled for our Locke-invoking avatar, however. Robert Nozick best summarized the standard objection made to Locke's vision: "If I own a can of tomato juice and spill it into the sea so that its molecules mingle . . . do I thereby come to own the sea?"²⁴⁷ The corporate owners of the virtual world might similarly argue that a player in their world could not claim property in any aspect of the virtual world, since his or her playing actions are little more than releasing tomato juice.²⁴⁸

Two standard defenses to this objection apply here. The first defense notes that Locke's theory only grants property where the "labour makes the far greatest part of the value of [the asset]."²⁴⁹ If the tomato juice made up the greatest part of the value of the sea, then we might think differently about granting maritime property rights to the tomato-juice polluter. Within the virtual-world context, one could conclude that the player cannot claim property interests in the entire world but might legitimately claim them in some smaller part—the virtual castle, sword, or breastplate—in which his or her labor makes up the greatest part of the value.

The second defense to the Nozickian objection is that any property claim in the sea (or any other common resource) applies only to the extent of the so-called Lockean Proviso. That is, the property claim can only occur to the point at which the property interest leaves "enough and as good" in common for others.²⁵⁰ In contrast to physical resources such as the sea, the provision of property interests in virtual worlds does not reduce other

246. In fact, the virtual work performed by users may closely mirror their real-world occupations. Take this account of one user's virtual toils:

Stolle had had to come up with the money for the deed. To get the money, he had to sell his old house. To get that house in the first place, he had to spend hours crafting virtual swords and plate mail to sell to a steady clientele of about three dozen fellow players. To attract and keep that clientele, he had to bring [his avatar's] blacksmithing skills up to Grandmaster. To reach that level, Stolle spent six months doing nothing but smithing: He clicked on hillsides to mine ore, headed to a forge to click the ore into ingots, clicked again to turn the ingots into weapons and armor, and then headed back to the hills to start all over again, each time raising [his avatar's] skill level some tiny fraction of a percentage point . . .

Take a moment now to pause, step back, and consider just what was going on here: Every day, month after month, a man was coming home from a full day of bone-jarringly repetitive work with hammer and nails to put in a full night of finger-numbingly repetitive work with "hammer" and "anvil"—and paying \$9.95 per month for the privilege. Ask Stolle to make sense of this, and he has a ready answer: "Well, it's not work if you enjoy it."

Dibbell, *supra* note 13, at 110.

247. ROBERT NOZICK, *ANARCHY, STATE, AND UTOPIA* 175 (1974).

248. Given the amount of bloodshed involved in competitive worlds, this is perhaps a more apposite metaphor than even Nozick might have imagined.

249. LOCKE, *supra* note 241, at 28.

250. JOHN LOCKE, *A Letter Concerning Toleration*, in *GREAT BOOKS OF THE WESTERN WORLD* 1, 32 (Robert Maynard Hutchins ed., 1952). See also Wendy J. Gordon, *A Property Right in Self-Expression: Equality and Individualism in the Natural Law of Intellectual Property*, 102 *YALE L.J.* 1533, 1565-66 (1993).

property interests, since the world is essentially limitless.²⁵¹ As a result, the Nozickian objection fails.

3. *Personality Theories of Virtual Property*

[In Hegel's view], property was an extension of personality. Ownership expanded the natural sphere of freedom for the individual beyond his body to part of the material world.

—Thomas Grey²⁵²

Hegel's conception of property as an extension of personality²⁵³ has been adopted and extended by a number of modern theorists.²⁵⁴ In essence, these theorists argue that property rights are related—either as necessary conditions for, or as connected to—human rights such as liberty, identity, and privacy.²⁵⁵ A simple example is the property interest one has in a wedding ring or a house: rather than being merely property interests, these objects and rights are deeply connected to one's sense of self. As a result, even absent any other normative justification for having property rights in these objects, the theory of personality would weigh in favor of recognizing property rights, in order for the self to be realized or other human needs secured.²⁵⁶

This theory plays out in the virtual world in a particularly interesting way. First, it draws no distinction between the accumulation of real-world chattels or land and its virtual analogs. That is, to the extent that personality theory justifies private property in land or goods, it justifies property in virtual land or goods. The theory is predicated on the effect of the property interest on human needs like liberty and identity, and these are presumably not different just because the property at issue is virtual. More importantly, when it comes to avatars, personality theory would seem to be strongly in favor of granting property rights. It is well documented that people feel connected to their avatar, not as a thing but as a projection of their self.²⁵⁷

251. We are not suggesting that any particular party should be granted ownership of virtual property, but simply noting that, *in itself*, the creation of a property right in virtual objects does not infringe on the ability of others to possess virtual objects.

252. Thomas C. Grey, *The Disintegration of Property*, in 22 NOMOS 69, 74 (J. Roland Pennock & John W. Chapman eds., 1980).

253. See GEORG WILHELM FRIEDRICH HEGEL, *HEGEL'S PHILOSOPHY OF RIGHT* (T.M. Knox trans., 1967) (1821).

254. See, e.g., Margaret Jane Radin, *Property and Personhood*, 34 STAN. L. REV. 957 (1982); WALDRON, *supra* note 144, at 343-89.

255. Indeed, the theory can be used to advance a normative argument not only for the existence of property but also for the distribution of property. See WALDRON, *supra* note 144, at 343, 370-89.

256. The application of the personality theory to nonmeaningful, fungible objects is unnecessary to consider here. In essence these objects must be tied to some other personal right for the property right to be justified. See *id.* at 295-310. The simplified special case discussed here is sufficient for our purposes.

257. See *infra* Part III.C.

As we shall discuss in more detail in Part III, the concept of the cyborg—the mechanical extension of one’s persona—is widely accepted.²⁵⁸ One need only be attacked once in any first-person shooter game to realize how one projects a sense of self onto an avatar. Indeed, some users identify more with their online personas than their real ones.²⁵⁹ If, as personality theory would have it, property might be justified by reference to the effect on the self, it would seem that there is a normative basis for claiming property in virtual realty, virtual chattels, and, a fortiori, avatars.

Some might argue that a theory granting property rights in avatars based on the degree to which their creators identify with them does not justify broad alienability.²⁶⁰ However, we assume alienability for wedding rings or even nonessential body parts. Of course, there are exceptions to the rule of alienability, even in tangible objects. We do not consider it appropriate even to consider that babies might be property; some believe that Richard Posner “wrote himself off” the Supreme Court²⁶¹ by arguing that a property-dependent and market-based solution to the “baby allocation problem” was better than the current adoption process.²⁶² However, our reluctance to consider human life the subject of property law is presumably a special case that does not apply to computer representations of people, no matter how lifelike the avatars might be.

The three main normative theories of property, then, all provide strong normative grounds for recognizing that property rights should inhere in virtual assets, whether chattels, realty, or avatars. Depending on the theory one adopts, the limitations on rights in virtual property may be uncertain. Nonetheless, our conclusion is that there seems to be no reason under traditional theories of property to exclude virtual properties from legal protection.²⁶³ Further, based on the earlier discussion, we can conclude that there is no descriptive disconnection between our real-world property system and virtual assets. From both descriptive and normative positions, owners of virtual assets do, or should, possess property rights.

258. *See id.*

259. CASTRONOVA, *supra* note 12, at 22-24. *See also infra* Part III.C (discussing the nature of the cyborg).

260. *See, e.g.,* Ren Reynolds, Abstract, *IPR, Ownership and Freedom in Virtual Worlds*, at <http://www.ren-reynolds.com/downloads/RReynolds-IPR-CRIC-2003.doc> (last visited Aug. 2, 2003) (arguing that the identification between avatars and their users justifies a Kantian exclusion to Lockean property theory).

261. *See, e.g.,* Robert S. Boynton, *Sounding Off*, WASH. POST, Jan. 20, 2002, at Book World.

262. *See* RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* § 5.4, at 139-43 (3d ed. 1986); Elisabeth M. Landes & Richard A. Posner, *The Economics of the Baby Shortage*, 7 J. LEGAL STUD. 323 (1978); Richard A. Posner, *The Regulation of the Market in Adoptions*, 67 B.U. L. REV. 59 (1987).

263. We do acknowledge that, from the standpoint of an expressive theory of legal property, one might hesitate and consider the social signaling function of expanding the notion of property. *See* Jane B. Barron, *The Expressive Transparency of Property*, 102 COLUM. L. REV. 208 (2002). The expressive function of virtual property, however, is beyond the scope of our paper.

The more difficult question, perhaps, is not whether these rights should exist, but how they might be allocated. In the next section, we consider the sorts of questions about virtual property ownership that are certain to arise in the near future.

E. Ownership of Virtual Property

The Blacksnow Interactive case²⁶⁴ was the first dispute over virtual property to make it to the real-world court system, but it is unlikely to be the last. Disagreements between the corporate-wizards and the player-avatars are seemingly inevitable. In each of the leveling worlds, one of two scenarios has developed: either a flourishing real-world trade in virtual assets²⁶⁵ or heavy-handed attempts to quash these trades.²⁶⁶ Sony outlawed all trade in *EverQuest* assets, but the prohibition has been relatively ineffective and has simply resulted in virtual-asset auctions moving away from eBay and onto auction sites less easily cowed by corporate demands.

If we accept the property analysis given above, immediate questions arise. Do actions like Sony's deny participants some property interest? If so, how might such disputes in virtual property best be resolved? The answers to these questions are not obvious. They depend on a number of factors, including the very nature of the virtual world, the legal superstructure surrounding it, and the terms upon which players enter the world. For instance, in *LambdaMOO* and other textual MUDs, the ethos is one of sharing and community, and property disputes seem capable of resolution within the confines of the virtual world.²⁶⁷ Within the corporate worlds, however, the resolution is less likely to be as tidy. Though property rights may exist in virtual assets, the allocation of those rights will depend largely on the End-User License Agreements (EULAs) that mark out the terms of access to the world.²⁶⁸ Since the EULAs are written by the corporate owners, their terms inevitably grant all rights to the owner of the world.²⁶⁹ Though this practice would seem to make the resolution of property disputes simple—the world-owners get everything and the subscribers get nothing—virtual worlds will increasingly challenge the strength of EULA-based property demarcations. We will likely see courts rejecting EULAs to the extent that they place excessive restrictions on the economic interests of users.²⁷⁰ And since there is already so much money and property at stake in these worlds—and there will be significantly more in the future—we can

264. Mulligan, *supra* note 141.

265. See eBay Listings, Internet Games, *supra* note 13.

266. CASTRONOVA, *supra* note 12, at 3.

267. Mnookin, *supra* note 40 (discussing the *LambdaMOO* petition system).

268. See Miller, *supra* note 132, at 469-70; Stephens, *supra* note 154, at 1534.

269. See Miller, *supra* note 132, at 469-70.

270. See, e.g., *Specht v. Netscape Communications Corp.*, 150 F. Supp. 2d 585, 595 (S.D.N.Y. 2001).

expect a large number of lawsuits rooted in these property-rights disputes. Users will likely raise arguments that attempt to circumvent or attack EULA restrictions.²⁷¹ As we live out more of our lives in these worlds, any simple resolution of the property rights issues will become more difficult.

III

THE RIGHTS OF WIZARDS AND CYBORGS

Therefore, this document holds the following truths to be self-evident: That avatars are the manifestation of actual people in an online medium, and that their utterances, actions, thoughts, and emotions should be considered to be as valid as the utterances, actions, thoughts, and emotions of people in any other forum, venue, location, or space.

—Raph Koster²⁷²

In the last Part, we argued that property rights may conceivably inhere in the intangible assets of virtual worlds. Because such assets may be sold for real-world cash, it is entirely foreseeable that we have come to regard them as property. Still, the rapid emergence of virtual property rights raises another question: if traditional conceptions of property are so easily transposed into the virtual realm, might other real-world legal rights also be obtained within these environments?

Claims to additional rights in virtual worlds are commonly made, if not always by those trained in legal argument. On discussion boards for virtual-world participants, users frequently invoke rights to free speech, avatar bodily integrity, privacy, and anonymity. Some argue that avatars should possess a political voice capable of shaping their virtual worlds.²⁷³ Such claims are no more surprising than the development of virtual property rights.²⁷⁴ Just as new residents bring with them expectations about property, they bring expectations of other human and constitutional rights. For instance, residents of virtual worlds commonly complain of sexual harassment when their avatars are propositioned by others and involuntarily grabbed or kissed.²⁷⁵ Some complain of assault by offensive and violent

271. So far, most courts have been skeptical of such arguments. See *DeJohn v. The .TV Corp. Int'l*, 245 F. Supp. 2d 913 (C.D. Ill. 2003); *Forrest v. Verizon Communications, Inc.*, 805 A.2d 1007 (D.C. 2002); *I.Lan Sys. v. Netscout Serv. Level Corp.*, 183 F. Supp. 2d 328 (D. Mass. 2002).

272. Raph Koster, *A Declaration of the Rights of Avatars*, at <http://www.legendmud.org/raph/gaming/playerrights.html> (last visited Aug. 9, 2003) [hereinafter *Koster, Declaration*]. The Declaration was initially posted on a discussion list for game designers and sparked a heated debate. See Posting of Raph Koster, rkoster@austin.rr.com, to mud-dev@kanga.nu (Apr. 16, 2000), at <http://www.kanga.nu/archives/MUD-Dev-L/2000Q2/msg00281.php> (last visited Aug. 9, 2003).

273. See, e.g., Posting of Ralph Koster, *supra* note 272 (excerpting from and linking to subsequent discussions); Seth Schiesel, *Voyager to a Strange Planet*, N.Y. TIMES, June 12, 2003, at G1 (discussing a protest march within Rubi-Ka to bring attention to the plight of neglected Mcta-Physicists).

274. See *supra* Part II.A and II.B.

275. Reid, *Cyborg Body*, *supra* note 174, at 333-34.

avatar touching. By contrast, the perpetrators sometimes claim that what others call sexual harassment and violence is simply an exercise of free speech rights within the virtual world.²⁷⁶

Communities respond to perceived violations of perceived rights through a variety of in-world mechanisms. Virtual communities may decide to turn offenders into toads,²⁷⁷ form constabularies to hunt down and kill those who dare to kill others,²⁷⁸ or employ elaborate dispute resolution mechanisms calling for extensive community deliberation and voting.²⁷⁹ Given the level of passion with which participants use online mechanisms to police their rights and enforce community norms, it seems likely that such discussions will eventually spill over into the real world. Someone, somewhere, will soon file a lawsuit in a real court alleging the infringement of avatar rights.²⁸⁰

Participants in virtual settings frequently debate whether formal "avatar rights" should exist. Two years ago, Raph Koster, a well-known game-design guru and virtual-world theorist,²⁸¹ publicly initiated a thought experiment that he called the Declaration of the Rights of Avatars. Modeled after the French Declaration of the Rights of Man of 1789 and the United States Bill of Rights,²⁸² it opens:

When a time comes that new modes and venues exist for communities, and said modes are different enough from the existing ones that question arises as to the applicability of past

276. If an avatar you had never met before grabbed and kissed your avatar, how would you react? See Murray Whyte, *Want to Get a Life? SIM People Have Several*, TORONTO STAR, Nov. 20, 2002, at A1:

"I went into one of the houses and within 10 minutes I was kissed by another Sim. And I don't even know why or how . . . I spent many hours trying to get these two Sims to get together and have a relationship. And to be in the world and be kissed by someone I never met was completely a digression from what I was used to experiencing in the game. And it struck me at that moment that *The Sims Online* is in fact a fundamental digression from the core philosophy of the game, precisely because it's not a simulation any more."

277. DIBBELL, *supra* note 19, at 18.

278. Elizabeth Kolbert, *Pimps and Dragons: How an Online World Survived a Social Breakdown*, NEW YORKER, May 28, 2001, at 88; Morningstar & Farmer, *supra* note 119, at 194.

279. Mnookin, *supra* note 40.

280. One reason people care so much about rights in virtual worlds is that, for many participants, virtual lives are psychologically (and sometimes fiscally) important. During the course of his economic investigation of Norrath, Edward Castronova discovered that at least 12,000 individuals actually called Norrath their true home, considering their real-world existence simply a means of sustaining existence in Norrath. CASTRONOVA, *supra* note 12, at 2. Presumably, these individuals are among the 2% or so of *EverQuest* players who spend more than sixty hours a week pursuing their virtual lives. Yee, *supra* note 220. We might believe this kind of commitment to living within virtual spaces amounts to addiction or delusion, but there are also more positive accounts of this kind of deep involvement with virtual spaces. See TURKLE, *supra* note 66, at 186-92.

281. See Nick Wadhams, *Online Games Increasingly a Place for Protest, Social Activism*, CNEWS TECH NEWS, Feb. 7, 2003, at <http://cnews.canoe.ca/CNEWS/TechNews/2003/02/07/22446-ap.html> (last visited Aug. 9, 2003).

282. Declaration of the Rights of Man and the Citizen (Aug. 1789), available at www.hrcr.org/docs/frenchdec.html (last visited Aug. 9, 2003); U.S. CONST. amends. I-X.

custom and law; and when said venues have become a forum for interaction and society for the general public regardless of the intent of the creators of said venue; and at a time when said communities and spaces are rising in popularity and are now widely exploited for commercial gain; it behooves those involved in said communities and venues to affirm and declare the inalienable rights of the members of said communities. Therefore, herein have been set forth those rights which are inalienable rights of the inhabitants of virtual spaces of all sorts, in their form henceforth referred to as avatars²⁸³

The set of “rights” that Koster theorizes would be completely unobjectionable if it were a declaration of rights of real persons in a real-world society. Indeed, Koster’s Declaration states that the foremost right of avatars is “to be treated as people and not as disembodied, meaningless, soulless puppets”²⁸⁴—hardly a debatable point when applied to real people. Yet even Koster is somewhat tentative in proposing these rights—rights which, from the standpoint of those who create and maintain virtual worlds, may seem almost heretical.²⁸⁵

In this Part, we examine Koster’s experimental notion of avatar rights.²⁸⁶ In particular, we discuss two key issues that will need to be confronted if law is applied in the context of virtual worlds. The first is something we describe as the “wizard problem.” Enforcing putative avatar rights is in tension with the property and authorship interests of those who create and maintain virtual worlds. As we explain, even when these owners are not wholly adverse to democratic governance within the virtual spaces they maintain, their exclusive ability to exert absolute control over these environments hopelessly complicates attempts to map traditional notions of democratic governance onto these settings.

A second, related problem is the “cyborg problem,” the problem of determining exactly what avatar rights are as opposed to rights of human participants. In exploring this question, we note that cyborg rights are so important to many virtual-world participants that in-game practices, norms, and laws have evolved to regulate and enforce them. The challenge,

283. Koster, Declaration, *supra* note 272, pmbl.

284. *Id.* at art. 2

285. As Koster notes in his essay:

But there’s also some other folks who think that this exercise is plain dangerous. As an example, let me take a co-worker of mine to whom I showed an early draft. He pointed out that virtual world servers run on somebody’s hardware. And that most declarations of rights give rights over personal property. By declaring that avatars have rights, we’re abrogating that administrator’s right to personal property.

Id.

286. By “avatar rights” we mean rights that inhere in the individual owner of the avatar and that are generally understood as including human and constitutional rights. However, since this investigation is in the nature of a thought experiment, these rights might also include democratic rights, rights of governance, etc.

therefore, is not in recognizing that cyborg rights are recognized *within* virtual worlds. This is clearly the case. The problem is determining what effect (if any) asserted cyborg rights might have outside a virtual world's limited jurisdiction.

Finally, we look to the relationship between the avatar and the community it inhabits. We ask whether a virtual community can provide its own internal regulatory mechanisms or whether real-world law will inevitably trump the virtual community's will. We conclude that, from the standpoint of policy, the best approach to the regulation of virtual worlds would be cautious. Virtual environments are *sui generis*—they pose both difficult legal conundrums and unknown societal opportunities. The legal understanding of rights within virtual worlds, therefore, will be more successful if it progresses largely independent of interference with real-world legal systems, which are designed to address the problems peculiar to the physical, nonrepresentational world. Still, given the increasing social importance of virtual worlds, we are skeptical that the divisions between real and virtual law will be long maintained.

A. *Wizards*

O man, who art thou that repliest against God? Shall the thing formed say to him that formed *it*, Why hast thou made me thus? Hath not the potter power over the clay, of the same lump to make one vessel unto honour, and another unto dishonour?

—Romans 9:20-21²⁸⁷

The author-owners of virtual spaces are often called “wizards” by the participants in those environments, a term that hearkens back to the pinnacle of the *MUDI* social hierarchy and Tolkien's Gandalf.²⁸⁸ While the wizards of MUDs are usually the owners and programmers of the MUD server and their circle of friends, the wizards of contemporary virtual worlds are usually multinational corporations such as Microsoft, Sony, and Electronic Arts.

The wizards of virtual worlds often manifest themselves within the environment. A wizard's avatar may take many forms or no form at all. In Trubshaw and Bartle's *MUDI*, the wizards walked the Land just like any other avatar. Indeed, becoming a wizard was the pinnacle of achievement within *MUDI*. In Brittania, the lead designer, Richard Garriot, appeared as the monarch Lord British and was reportedly once assassinated by one of his subjects when he forgot to make himself invulnerable.²⁸⁹ In Blazing

287. *Romans* 9:20-21 (King James).

288. Mnookin, *supra* note 40. The term “gods” is often used as well.

289. Kolbert, *supra* note 278, at 90 (“Lord British wears a silver crown and a gray tunic with a silver serpent emblazoned on the chest.”); George Jones, GameSpy and AMD—Exploring the Future of

Falls, the lead designer, Will Wright, has reportedly appeared in the homes of Blazing Falls as an avatar named Alan Greenspan.²⁹⁰ Yet such flashy divine incarnation is not a uniform practice among wizards. For instance, the system administrators who control the daily grind of Blazing Falls have fashioned themselves as Municipal Observation and Management Incorporated (MOMI), a nebulous organization without a virtual address or visible representative within the community. According to *The Sims Online* Terms of Service, it is an offense punishable by avatar death (that is, account termination) for a citizen of Blazing Falls to impersonate an officer of MOMI.²⁹¹

As one can imagine, the virtual subjects of MOMI, Lord British, and other wizards (and wizardly conglomerates) often accuse the wizards of being dictatorial and arbitrary, an accusation that the wizards often do not refute.²⁹² No one elected the wizards of Norrath, Britannia, or Rubi-Ka, and it may seem odd even to think of Sony or Microsoft granting subscribers the right to elect the government of their virtual worlds. Yet there have actually been several attempts to institute virtual democracy, most notably in *LambdaMOO*. *LambdaMOO* and other social MUDs were often labors of love without admission fees or business plans. The wizards of these small-scale worlds generally had little interest in (or money for) hiring lawyers to draft licensing agreements to defend the scope of their power. To the contrary, many early social MUDs partook in the ideals of cyberspace utopianism.²⁹³ It was not uncommon to hear claims that MUDs and other future virtual spaces might lead to new and possibly superior cyberspace governance systems.²⁹⁴

Yet despite these idealistic hopes, virtual democracy was not simple in practice. *LambdaMOO* was not a California commune—it was a computer program resident on a Palo Alto server—and this created the wizard problem. *LambdaMOO*'s world was a work of authorship resident on a box full of circuits, and Pavel Curtis had the power and the right as the box's

Massively Multiplayer Online Gaming, Week 2: The Pioneers, Sept. 26, 2003, at <http://www.gamespy.com/amdmmog/week2/>.

290. Levine, *supra* note 9.

291. Terms of Service, The Sims Online, at <http://www.eagames.com/official/thesimsonline/home/index.jsp> (last visited Aug. 1, 2003) (click link to Terms of Service at the bottom of the page). The current (revised) language states: "You may not impersonate another person (including celebrities), indicate that you are an EA.COM employee or a representative of EA.COM, or attempt to mislead users by indicating that you represent EA.com Inc. or any of EA.com's partners or affiliates."

292. Gordon Walton (his name in real life), the former titular head of MOMI, jokingly adopted the moniker "Tyrant." See Gordon "Tyrant" Walton, *What is the S.I.M.M.?*, at http://www.ea.com/eagames/official/thesimsonline/simm/simm_april02.jsp (last visited Aug. 9, 2003).

293. Mnookin, *supra* note 40 (discussing the myth of the "utopian possibility" in MUDs and cyberspace discussion generally).

294. *Id.*; see also John Perry Barlow, *A Declaration of the Independence of Cyberspace* (Feb. 8, 1996), at <http://www.eff.org/~barlow/Declaration-Final.html> (last visited Aug. 9, 2003); RHEINGOLD, *supra* note 77, 295-321 (discussing the possibility of electronic democracy).

owner to pull the plug at any time. Curtis also understood and controlled *LambdaMOO*'s code, which meant that he and the other four wizards who worked with him could quite literally reshape *LambdaMOO*'s heaven and earth, which was nothing more than a database of textual representations and codes rules that governed the objects within that represented space.²⁹⁵

Curtis held power not just over the world, but also over the shape of life within *LambdaMOO* by controlling the code of all avatars.²⁹⁶ If Curtis had so desired, that code could have been limiting. Curtis could have forced visitors to exist as simple mute objects like Al Alcorn's proto-avatar *Pong* paddles, capable of spatial movement and nothing else. Alternatively, Curtis could have authored avatars so that their only form of speech would have been to sing his praises and their only potential for action bowing in adoration. Instead, (perhaps realizing that these choices would not make *LambdaMOO* very popular) Curtis followed the traditional path of prior MUDs and granted *LambdaMOO* avatars what amounted to powers of free will and free movement. Normal avatars could not be wizards themselves, of course, for they lacked the trustworthiness (and perhaps the programming abilities) needed to hold the keys to *LambdaMOO*'s primary functions.²⁹⁷ Nevertheless, the wizards did allow avatars considerable powers within the MUD environment. Guests could fashion their avatar bodies as they pleased, travel freely through the grounds of the Mansion, build new places and new things, and, most importantly, speak their minds—even to the point of cursing and harassing the wizards who had enabled their existence.²⁹⁸

When new inhabitants arrived in substantial numbers, Curtis and the other wizards at first welcomed them, continuing to exercise their divine powers as benevolent overlords of the virtual world.²⁹⁹ They generally attempted to please their community by listening to requests, resolving the inevitable disputes, and punishing the wicked when they thought the wicked deserved punishing.³⁰⁰ But Curtis and the other wizards eventually

295. DIBBELL, *supra* note 19, at 202 (“[I]n the beginning, naturally, was the code. And naturally, the code was with Pavel.”).

296. *Id.* at 203.

297. Haakon (Pavel Curtis), *LambdaMOO Takes a New Direction* (Dec. 9, 1992), in HESS, *supra* note 96, app. C, <http://www.yibco.com/ygm/ygmpdf/AppendixC.pdf> (last visited July 24, 2003) (“[We] have to try to keep others from getting wizard bits since the functional integrity of the entire MOO is clearly at risk otherwise.”).

298. DIBBELL, *supra* note 19, at 205.

299. *Id.* at 204-06.

300. *Id.* This was the familiar model for the governance of virtual worlds—benevolent dictatorship by the wizards. For instance, *Habitat*, Lucasfilm's pioneering visual and commercial virtual world, preceded *LambdaMOO* by nearly a decade. The wizards of *Habitat* (who referred to themselves mythologically as the “Geek gods”) often re-coded their world to make the avatar populace happy. See Morningstar & Farmer, *supra* note 119. Initially, *Habitat* avatars could snatch items from each other and run away with them. The *Habitat* community did not like this feature and complained. The Geek gods responded by coding away the possibility of theft. *Id.* Likewise, the avatars in *Habitat* could

grew weary of resolving the disputes of squabbling avatars. To paraphrase Oscar Wilde on the problem of socialism, being a benevolent wizard simply took up too many evenings.³⁰¹ To some extent, Curtis and the other wizards found their own dictatorial authority inconsistent with their belief that MUDs like *LambdaMOO* should offer new and radical social potentials.³⁰² So the wizards of *LambdaMOO* famously and unilaterally engaged in a reverse coup d'état, and threw the governance of the world to its citizens. Pavel Curtis said in announcing his abdication of power:

I believe that there is no longer a place here for wizard mothers, guarding the nest and trying to discipline the chicks for their own good. It is time for the wizards to give up on the 'mother' role and to begin relating to this society as a group of adults with independent motivations and goals.

So, as the last social decision we make for you, and whether or not you independent adults wish it, the wizards are pulling out of the discipline/manners/arbitration business; we're handing the burden and freedom of that role to the society at large

. . . .

[The wizards] will become technicians who work for the society. [They and their social circle] will much more clearly become just another set of players in this community with no more power or moral authority than anyone else.³⁰³

Jennifer Mnookin and Julian Dibbell have previously described the elaborate governance system that emerged after the wizards' abdication.³⁰⁴ Still in existence today, it includes petitioning and voting processes with formalized opportunities for community deliberation.³⁰⁵ Yet the abdication was not as absolute as it may have seemed at first. While Curtis and the other wizards claimed originally that they would merely enforce the decisions of the community, they still held the power to implement the decisions of *LambdaMOO* into coded "law" and, therefore, still held substantial power. *LambdaMOO* society fully understood that the wizards, no matter what they claimed, were still wizards. They still could, if they

originally kill each other. Again, many users complained, and the programmers responded by limiting avatar murder to the uncivilized borderlands of *Habitat*'s environment. *Id.* This was not a sufficient answer for some, and players, lead by a real-life Orthodox priest, formed a virtual church congregation that required adherents to promote avatar nonviolence. *Id.*

301. For Wilde's statement (or his attributed statement), see Eben Moglen, *Anarchism Triumphant: Free Software and the Death of Copyright*, 4 FIRST MONDAY (1999), at http://firstmonday.org/issues/issue4_8/moglen/ (last visited Aug. 10, 2003).

302. See Pavel Curtis, *The Incredible Tale of LambdaMOO*, TECH IV, at <http://www.techiv.com/screensavers/showtell/story/0,24330,3388608,00.html> (last visited Aug. 9, 2003).

303. Haakon (Pavel Curtis), *supra* note 297.

304. DIBBELL, *supra* note 19; Mnookin, *supra* note 40.

305. The community is accessible at <telnet://lambda.moo.mud.org:8888> (last visited July 24, 2003).

wished, make themselves invisible, destroy the avatars of those who opposed them, and bend the laws of nature. As a result, *LambdaMOO* participants continued to demand miracles and to condemn the wizards for unmonitored use of their power over the society.

Curtis, like Shakespeare's King Lear, began to realize that attempting to cast aside power often creates conflicts far worse than the burdens of rule.³⁰⁶ As Curtis has explained:

Deep in its very structure, *LambdaMOO* depends on the wizards and on the owner of its machine. These are not and cannot be purely technical considerations. Social policy permeates nearly every aspect of *LambdaMOO*'s operations, and only the wizards can carry out those operations.

As a result, the wizards have been at every turn forced to make social decisions. Every time we made one, it seemed, someone took offense, someone believed that we had done the wrong thing, someone accused us of awful ulterior motives. It felt a bit like the laws of thermodynamics: you can't win, you can't even break even, and you can't get out of the game.³⁰⁷

As Curtis observed, the code of the *LambdaMOO* world was the law, and the law of the *LambdaMOO* world was code.³⁰⁸ So, despite Curtis's professed abdication of power, the wizards of *LambdaMOO* were still omnipotent, and they were still the shadow government. How could omnipotence ever comport with democracy?³⁰⁹ Curtis concluded that it could not. Having once professed to grant putative democracy to *LambdaMOO*, Curtis was forced to confess three-and-a-half years later that within the democracy of *LambdaMOO*, the wizards would not and could not fully submit to the will of the community. Curtis posted a message giving public notice that he was reintroducing the practice of "wizardsly fiat."³¹⁰

306. See Pavel Curtis, *Not Just a Game: How LambdaMOO Came to Exist and What It Did to Get Back at Me*, in HIGH WIRED: ON THE DESIGN, USE, AND THEORY OF EDUCATIONAL MOOS 25 (Cynthia Haynes & Jane Rune Holmevik eds., 2d ed. 2001) [hereinafter Curtis, *Not Just a Game*]. An excerpt is available online. Curtis, *supra* note 302.

307. Curtis, *Not Just a Game*, *supra* note 306, at 41.

308. See LESSIG, *supra* note 172, at 9-13 (discussing MUDs and asking, "What does it mean to live in a world where problems can be programmed away?").

309. DIBBELL, *supra* note 19, at 332 (identifying Curtis's archwizard status as "the great hard-wired conundrum of Lambda's democratic experiment and still the ultimate source, I can only assume, of all that is both interesting and maddening about MOOish politics").

310. Haakon (Pavel Curtis), *LambdaMOO Takes Another Direction* (May 16, 1996), in HESS, *supra* note 96, app. D, <http://www.yibco.com/ygm/ygmpdf/AppendixD.pdf> (last visited Aug. 9, 2003). Curtis wrote:

[The wizards] now acknowledge and accept that we have unavoidably made some social decisions over the past three years, [while exercising technical choices] and inform you that we hold ourselves free to do so henceforth . . . We also now acknowledge that any technical decision may have social implications; we will no longer attempt to justify every action we take.

Id.

Thus, even worlds that are conceived in liberty and are dedicated to the proposition that all avatars are created equal become, in time, testaments to the autocratic power of wizards. Of course, those worlds which begin as corporate creations are even more susceptible to these pressures.

B. Corporate Wizardry and Its Justifications

Unlike the creators of *LambdaMOO*, Microsoft and Sony have never professed to be building democratic cyberspace societies. With millions of dollars of venture capital at stake, the primary goal of today's virtual worlds is building cash flow. The wizards of Sony and Microsoft often ignore the claims of the rabble completely and impose EULAs that attempt to dismantle even the potential of virtual rights. The closest things to democratic participation in today's virtual worlds are independent game discussion boards,³¹¹ where all manner of criticism is aired. Even where such community-to-wizard feedback mechanisms exist, they hardly approach the sophistication of the *LambdaMOO* petition systems.³¹²

Still, are the wizardly dictatorships that characterize virtual worlds such a bad thing? Even if we could find a way to get around the problems revealed by the tale of *LambdaMOO*, we might well conclude that virtual democracy and avatar rights are not ideals worth pursuing. The reasons for this are many, but certainly include arguments that the worlds are built and maintained out of the funds of a private entity, or that democracy and these worlds are not good bedfellows.

First, as even Koster notes,³¹³ virtual worlds are entities that generally exist through the laborious creation and maintenance of private chattels. Substantial funds must be invested to create and maintain virtual worlds involving hundreds of thousands of participants.³¹⁴ The standard argument

311. There are thousands of boards, websites, and mailing lists for the *EverQuest* community and other popular virtual worlds. See, e.g., Everquest Main Board, IGN, at <http://vnboards.ign.com/board.asp?brd=5001> (last visited Aug. 9, 2003).

312. One of the most responsive commercial developers is Mythic Entertainment, creator of *Dark Age of Camelot*. It has designated an official Player Representative, a kind of ombudsman for the rights of players. Yet the representative seems skeptical of her function and has informed her constituency that "Games are not democracies . . . The only 'votes' are called dollars. If you aren't having fun, you shouldn't be playing." CASTRONOVA, *supra* note 8, at 32 (quoting Sanya Thomas). The political philosophy of most of today's virtual worlds can be captured by the marketing slogan of *EverQuest*: "You're in our world now." See *Everquest: World's #1 Massively MultiPlayer Online Game*, at <http://everquest.station.sony.com> (last visited Oct. 7, 2003).

313. See Koster, Declaration, *supra* note 272.

314. For many corporate wizards, the notion of having to defend against lawsuits based on infringed avatar rights is enough to make them consider getting out of the business. If the recognition of avatar rights and virtual property would actually create legal costs which would prevent the creation of new virtual worlds, then surely the wizards have a good argument to make that perhaps an anarchic virtual environment dominated by wizardly fiat is preferable to no environment at all. The well-known virtual-world design guru Gordon Walton recently made a top ten list of reasons not to create a virtual world—and legal issues came in as the second most important reason. See *Postcard from GDC 2003: Gordon Walton's "10 Reasons You Don't Want to Make a Massively Multiplayer Game,"* at

against avatar rights, therefore, is that wizards, by virtue of their private (and corporate) ownership of the computer equipment and substantial investments in creating the virtual world, should have a right to do exactly as they please.

For U.S. citizens, this claim may bring to mind the state action doctrine, which limits judicial enforcement of constitutional rights to cases in which the government—and not a private party—is the source of the harm.³¹⁵ The private creation of virtual spaces, therefore, may place any putative real-world “rights” of a constitutional nature³¹⁶ beyond the reach of a real-world judicial remedy. Paul Berman has examined state-action doctrine arguments as applied to Internet Service Providers (ISPs), asking whether AOL or other large ISPs could ever become the equivalent of a “company town,” in which the corporate owner assumes so many functions of the state that it is subject to the same constitutional constraints.³¹⁷ He concludes that the doctrine is exceedingly unlikely to apply to these sorts of cyberspace private actors, given that we don’t really “live” in cyberspace.³¹⁸

Yet Berman also observes that “whether America Online is public or private, there are certain values that we hold as a community, values that America Online may be threatening.”³¹⁹ In the real world, it doesn’t seem strange to suggest that Major League Baseball’s prohibition on racial epithets or a retailer’s refusal to stock music albums it deems offensive somehow implicates First Amendment values, even though we are clear that neither of these organizations is a state actor.³²⁰ It is not hard to imagine that we will see increasing agitation within virtual worlds in this same vein, in the form of attempts to apply the state action doctrine to virtual

http://www.gamasutra.com/gdc2003/features/20030306/olsen_01.htm (last visited Aug. 3, 2003). Walton’s first reason was that today’s virtual worlds can cost over \$100 million to build.

315. See *Lloyd Corp. v. Tanner*, 407 U.S. 551 (1972). For a more liberal application of the doctrine, see *Marsh v. Alabama*, 326 U.S. 501 (1946).

316. Of course, private “rights” in the nature of civil remedies for tortious conduct by wizards against avatars would survive the state action doctrine. It will surely be a bit complicated, however, to pin down the exact duties and standards of care that apply in virtual worlds, especially for those worlds that glorify violent conflict. See Hunter & Lastowka, *supra* note 41, at 24. Furthermore, certain rights included by Koster in his experimental Declaration, such as rights to free speech and association, would be difficult, if not impossible, to frame as issues of tort law.

317. Paul Schiff Berman, *Cyberspace and the State Action Debate: The Cultural Value of Applying Constitutional Norms to “Private” Regulation*, 71 U. COLO. L. REV. 1263, 1302-05 (2000).

318. Even Raph Koster has suggested that limiting free speech rights in virtual worlds is defensible on the basis of private property rights:

Somebody saying something in [Star Wars Galaxies] and being witnessed by somebody else can reflect not just on the game but on Lucasfilm and George Lucas . . . If someone started walking around in the San Diego Zoo screaming profanity or handing out Nazi leaflets, the park would remove them from the premises. We need to be able to do that also.

Wadhams, *supra* note 281 (quoting Koster).

319. Berman, *supra* note 317, at 1270.

320. *Id.* at 1302-03.

worlds,³²¹ even if these arguments are unlikely to succeed initially. For instance, if members of our society are uncomfortable with limitations upon speech in company towns³²² and shopping malls,³²³ how will we feel about speech limitations placed on entire (virtual) worlds?

A second argument against virtual democracy is that it unfairly narrows the playing field in what might be seen not just as a society, but as a form of art. Virtual worlds, in all their visual, textual, spatial, coded, and theatrical aspects, are clearly expressive works of authorship. The wizards, therefore, may have their own free speech arguments to assert against those who accuse them of censorship. Restricting the wizards of Sony and Microsoft to pleasant and uplifting stories of democratic governance would arguably be tantamount to prohibiting theaters from performing the often-grim plays written by Bertolt Brecht. The wizards, as private parties and speakers in their own right, arguably have the right—and perhaps even the obligation—to create and invite others into worlds that are not perfect. Arguments for the necessity of virtual democracy will inevitably lead to the complete absence of virtual worlds where suffering, injustice, and censorship can be explored.

Of course, one might agree that virtual worlds are works of authorship, yet also appreciate that the authorship in virtual worlds is of a collaborative nature. While the wizards set the stage of the world, the avatars are the improvisational actors. Legal arguments have been made that participant interaction in video games may constitute coauthorship of the virtual world that ultimately is represented.³²⁴ Indeed, the primary reason subscribers are drawn to virtual worlds is not for the backdrop of castles or condos, but for the social interaction with like-minded friends and enemies. People are, essentially, paying to amuse one another.

A third argument against virtual democracy is the availability of exit from these environments. This argument is the standard response of those who view virtual worlds as simply games: those who consider themselves oppressed by virtual wizards need to turn off their computers and “get a real life.”³²⁵ The exit argument also supports the arguments for a contract-based approach to virtual rights. Those who want to speak freely are free to subscribe to those worlds where free speech is permitted—those who

321. For the application of public forum analysis in cyberspace, see Hunter, *supra* note 31, at 488-94.

322. *Marsh v. Alabama*, 326 U.S. 501 (1946).

323. *Amalgamated Food Employees Union Local 590 v. Logan Valley Plaza, Inc.*, 391 U.S. 308 (1968); *cf. Hudson v. NLRB*, 424 U.S. 507 (1976); *Lloyd Corp. v. Tanner*, 407 U.S. 551 (1972).

324. *Williams Elecs., Inc. v. Artic Int'l, Inc.*, 685 F.2d 870, 874 (3d Cir. 1982) (“Defendant also apparently contends that . . . the player becomes a co-author of what appears on the screen.”).

325. DIBBELL, *supra* note 19, at 302; *cf. Jessica Mulligan, Biting the Hand #19: I OWn Y0o, d00d, Skotos*, at http://www.skotos.net/articles/BTH_19.shtml (last visited Aug. 10, 2003) (“If an online game doesn’t hold my attention for a week or two, I just stop playing.”).

prefer a more harmonious and sanitized society are free to congregate in those virtual locations that forbid dissenting voices.

This is a powerful argument, but it remains to be seen whether contract and exit work in practice. For many virtual-world participants who have already invested in these worlds, exit may not be a genuine choice. If one's social circle (which may include one's real-world family and friends) congregates exclusively within a given virtual world,³²⁶ the option of exile from the green and rolling hills of Norrath for the barren deserts of Tatooine may not seem like much of an option. Lives of cyborgs within particular virtual worlds are deeply meaningful to many of those who possess them.³²⁷ Is the option of virtual exit real if it entails giving up family, friends, property, society, and your very form?

As the above analysis suggests, from the perspective of the wizards, avatar rights and virtual democracy are complicated issues without simple solutions. If, in some instances, it may not be proper to grant the wizards of a virtual world absolute authority over all activities within that environment, we need to ask what exceptions one might make and what rights avatars might have vis-à-vis their wizards and vis-à-vis each other. To reach the proper societal response to attempts at virtual-world democracy and the assertion of avatar rights will be complicated, to say the least.³²⁸

Skeptics, however, will likely resist the very premise of avatar rights in the abstract. As we noted in our discussion of the real and the unreal, it is predictable that many will not understand why new rights should be necessary in virtual worlds. After all, real-world laws are sufficient to govern the activities of typists, moviegoers, readers, and actors. Just as there is no need to delve deeply into the law of the horse,³²⁹ perhaps there is no need to spend much effort on the rights of avatars, which can be

326. See T.L. Taylor & Mikael Jakobsson, *The Sopranos Meets EverQuest: Socialization Processes in Massively Multiuser Games*, at <http://hypertext.rmit.edu.au/dac/papers/Jakobsson.pdf> (last visited Oct. 8, 2003) (explaining how real-world family ties are employed to create virtual social advantages within *EverQuest*).

327. See LESSIG, *supra* note 172, at 11 ("There is real life in Avatar space."); DIBBELL, *supra* note 19, at 302-04.

328. One of the central problems in establishing any general proposition of virtual-world rights is that virtual worlds are far too plastic and varied to permit any enunciation of general principles. The right to life, for instance, is certainly a primary human right, but in violent virtual worlds, the wizards, in their role as designers, are required to make environments which are threatening to avatar health and safety. Indeed, the participants demand them to do so. There are also player versus player ("PvP") virtual worlds, where avatars delight in killing each other and destroying or absconding with each other's property. In light of the flexible nature of virtual environments, one might attempt to base a virtual rights system on an avatar's "reasonable expectations" of accepted behaviors. To the extent this would not be tautological, however, the result would be the existing system, in which the corporate wizards provide incoming avatars with a mandatory rights-limiting, end-user license agreement.

329. Frank H. Easterbrook, *Cyberspace and the Law of the Horse*, 1996 U. CHI. LEGAL F. 207 (arguing that a view of law that focuses exclusively on a specialized area, such as cyberspace, is doomed to be shallow and overlook underlying principles); cf. Lawrence Lessig, *The Law of the Horse: What Cyberlaw Might Teach*, 113 HARV. L. REV. 500, 502 (1999) ("[U]nlike Easterbrook, I

spend much effort on the rights of avatars, which can be skeptically recast as the rights of typists.³³⁰ In order to explain why participation in virtual worlds amounts to something more than typing, we need to shift our focus from wizards to cyborgs.

C. *Cyborgs*

Is it not monstrous that this player here, but in a fiction, in a dream of passion, could force his soul so to his own conceit that from her working all his visage waned, tears in his eyes, distraction in his aspect, a broken voice, and his whole function suiting with forms to his conceit? And all for nothing!

—William Shakespeare³³¹

Our goal in this section is to illuminate how social interactions within virtual worlds operate through avatars as cyborg entities that combine the controller and the representation into a single social unit. An avatar mask is the technological extension of a real-world controller that presents that individual to a virtual society. As a result, an avatar can provide a vehicle for its controller's desires for experimentation, self-expression, and social wish-fulfillment. However, the strong controller-avatar relationship can also serve as a conduit for humiliation and emotional confusion.

To understand this, it is important to note that avatars are not alive³³² and are regularly deleted in virtual worlds.³³³ In *LambdaMOO*, for example, locations have been specifically established to allow one's avatar to commit the ultimate act of abnegation with the preferred level of theatricality, from stepping off the edge of the world, to being blended into paste.³³⁴ When an avatar "dies" in this way or is otherwise abandoned by its controller, there is no criminal investigation. The avatar's data space and virtual possessions are simply "recycled."³³⁵

Yet while an avatar's owner may be perfectly comfortable with killing the avatar when she grows sick of it, she may feel genuine anger when a more powerful avatar decides to use her avatar for target practice.³³⁶ She may feel genuine humiliation when her avatar is involuntarily possessed by another in a "public" place and made to abuse itself sexually.³³⁷ In these

believe that there is an important general point that comes from thinking in particular about how law and cyberspace connect.").

330. Kerr, *supra* note 42, at 395-96.

331. WILLIAM SHAKESPEARE, *HAMLET, PRINCE OF DENMARK*, act 2, sc. 2 (Edward Hubler ed., Signet Classic 1963) (n.d.).

332. Avatars are, at one level, simply entries in a database. Stephens, *supra* note 154, at 1518.

333. See HESS, *supra* note 96, at 147, 170.

334. *Id.*

335. DIBBELL, *supra* note 19, at 328.

336. Kolbert, *supra* note 278.

337. DIBBELL, *supra* note 19, at 16.

cases, while the representation of the injury occurs on the screen to the avatar, the owner feels anger and humiliation because she has projected herself into an avatar body. This type of projection also occurs in literature—who has not actually felt herself in the shoes of her favorite detective, heroine, protagonist?—or in art or film, as in trompe l’oeil murals or motion-picture action sequences.³³⁸ The immersive world of video games further extends this process of projection by enabling one to manipulate the virtual environment and exist, in the company of others, within it.

In the absence of a better term, this type of projection can best be understood as a form of the cyborg.³³⁹ A cyborg is a mixture of human and machine. While the science-fiction concept of the cyborg originated with the physical combination of the human with technology,³⁴⁰ the notion of the cyborg is broad enough to include any technological extension of the self.³⁴¹ An avatar that operates within a virtual world is thus a cyborg, a persistent extension of the user within that world, allowing him or her to exist in that virtual place and communicate with others. Many users consider their avatars as much a part of them as they might a real-world prosthetic limb. Like an artificial limb, an avatar might be replaced or discarded and has no rights of its own. Yet when the user acts through the avatar, she speaks about this connection as *being* the avatar. This is fundamentally a different relationship from what is found with a cherished possession, such as a wedding ring. People do not speak of property, even cherished property, using the first person. By contrast, identification with the avatar is the norm—so much so that conversations in virtual worlds are often hard to parse. In *Blazing Falls*, for instance, you may meet avatars who invite “you” to come into their homes, sit down, get something to eat, or play a game of chess (addressing your avatar as “you” in all these instances). While your avatar is doing all this, your host’s next message may ask “you” where you’re from, how old you are, and whether you’re male or female—and here the questions are about “you” in real life. When later recounting virtual interactions to others, it is also customary to use the first person to describe the actions of one’s avatar. This confusion of real and virtual life is so common that various acronyms have been coined to assist explanations of how one’s avatar or real-world self is reacting at a given

338. See *supra* Part I.A.

339. The most memorable examples include the positive image of the six-million-dollar man from the 1970s television show—better, stronger, faster than the ordinary human—or the more negative conception of *Star Trek*’s Borg—soulless humanoids who have been involuntarily “assimilated” and outfitted with twitching mechanical parts networked into a collective intelligence.

340. See THE AMERICAN HERITAGE DICTIONARY OF THE ENGLISH LANGUAGE (4th ed. 2000) (defining a cyborg as a “human who has certain physiological processes aided or controlled by mechanical or electronic devices”).

341. See, e.g., DONNA J. HARRAWAY, SIMIANS, CYBORGS, AND WOMEN 149 (1991).

moment: IRL (“in real life”), IC (“in character”), OOC (“out of character”), and so on.³⁴²

As this sort of identity confusion illustrates, people rarely think of their avatars as something completely distinct from themselves. Instead, they often see their avatars as second skins that they inhabit. Unsurprisingly, many take advantage of the opportunity to engage in “identity tourism.” In the real world you are a twenty-three-year-old woman, but would you like to experiment with what it feels like to be a sixty-year-old man, or perhaps a nine-foot-tall, rainbow-colored dragon?³⁴³ In the real world you are an Asian American, but in your tiny life, why not see what it feels like to interact with others as an African American,³⁴⁴ or maybe a hive collective, or a Spivak?³⁴⁵ Virtual worlds are often like an elaborate masquerade ball, and as in most masquerades, the least popular mask is the one that you wear in real life.

The avatar masks, however, both conceal and embody real-world individuals who often use the ability to dissemble to achieve social objectives they consider important. In *LambdaMOO*, for instance, some individuals fashion their avatar masks to project standard stereotypes of sex appeal, perhaps attempting to tantalize others into virtual relationships: “Lirra is a short young woman with long blonde hair, an impish grin and a curvaceous figure. Her clear blue eyes sparkle as she looks back at you. She is wearing a short red skirt, a white t-shirt, black fishnet stockings, and black leather boots and jacket.”³⁴⁶ Of course, IRL, who knows what Lirra’s controller looks like?³⁴⁷ Other individuals attempt to impress others with avatars that project mysterious auras of power: “Darklighter [is dressed] . . . all in black with a cloak concealing him You can tell he is the sort of man who can see the strings that bind the universe together and mend them when they break.”³⁴⁸ Given the

342. TURKLE, *supra* note 66, at 186.

343. See, e.g., Amy S. Bruckman, *Gender Swapping on the Internet*, in HIGH NOON ON THE ELECTRONIC FRONTIER: CONCEPTUAL ISSUES IN CYBERSPACE 317 (Peter Ludlow ed., 1996); Philip Giordano, *Invoking Law as a Basis for Identity in Cyberspace*, 1998 STAN. TECH. L. REV. 1, ¶¶ 55-57 (1998) (describing examples of identity-swapping, and the construction of self in *LambdaMOO*); Mnookin, *supra* note 40 (“A dozen or so people are clustered in the kitchen of a sprawling house As a rainbow-colored dragon gives a disquisition to no one in particular on the advantages of foreign cars, a man with a stubbly beard whispers lascivious remarks to anyone who will listen.”).

344. Jerry Kang, *Cyber-Race*, 113 HARV. L. REV. 1130, 1134-36 (2000) (describing the experience of swapping race-roles and the importance of race-schemas in virtual worlds).

345. A Spivak is an ambiguously-gendered being, living only in *LambdaMOO*. See HESS, *supra* note 96, at 3 (identifying Michael Spivak as the inventor of Spivak-gendered pronouns).

346. Reid, *Cyborg Body*, *supra* note 174, at 329.

347. As Reid notes, Lirra can reveal her real-life somatype to you: “Lirra whispers, ‘my desc is pretty real, but I’m a bit plumper than that’ to you. Lirra whispers, ‘and maybe i don’t always wear such sexy clothes ;)’ to you.” *Id.* Of course, it is impossible to know whether this description is itself real.

348. *Id.* at 330.

chance to be anyone, who wouldn't want to be sexually attractive, powerful, and strangely mysterious?³⁴⁹

The process of avatar development usually begins with the selection of a physical or visual description, but it does not end there. As Elizabeth Reid has noted, participants "become emotionally involved in the virtual actions of their characters, and the line between virtual actions and actual desires can become blurred."³⁵⁰ For those who doubt that psychological immersion occurs in virtual worlds, the best riposte is virtual sexual activity, or "tinysex."³⁵¹ Tinysex is a popular activity in text-based social worlds like *LambdaMOO*, which has set aside an entire suite of rooms for tinysexual encounters.³⁵² In some MUDs, sexuality seems to permeate the entire environment.³⁵³ One study has revealed that even among players of *EverQuest*, which does not readily lend itself to sexual simulation, nearly half of participants who are female in real life have had virtual romantic relationships with *EverQuest* partners.³⁵⁴

Online relationships often have significant real-life effects on those who engage in them. There are, by now, numerous accounts of real-life marriages formed out of romantic encounters that were initiated online. Equally prevalent are tales of real-life relationships endangered or ruined by virtual betrayals.³⁵⁵ The most interesting cases have involved male avatars falling in love with (or having a tinysexual encounter with) a female avatar, only to discover that another male user controlled the female avatar.

349. Indeed, in leveling worlds, the pursuit of social prestige may explain some of the economics of virtual property. If social status within *EverQuest* is obtained by being a level sixty-five avatar with a powerful magical sword, it is not surprising that people will pay to obtain this status.

350. See Reid, *Cyborg Body*, *supra* note 174, at 340. Reid notes:

The very theme of the [FurryMUCK] MUD draws these [sexual] questions to the fore, for every character on Furry is inhuman, and most are anthropomorphised animals clad only in virtual fur. Cats and bears are legion, most of them sleek-furred and svelte or broad and brawny. The nature and culture of the body is the primary theme of FurryMUCK, and the ideal is animalistic allure There are few 'mysterious but powerful' mage-warriors on FurryMUCK, but many flashes of velvet-pelted thighs, glints of slitted pupils and touches of sharp-taloned paws.

Id. at 339. See also DIBBELL, *supra* note 19, at 125 (describing the author's existence as "Samantha").

351. TURKLE, *supra* note 66, at 210-32; see also DIBBELL, *supra* note 19, at 235-63. Oddly, the current economics of visual worlds are such that tinysex is not a primary selling point. It occurs, but virtual environments are ordinarily not designed to facilitate it. Because worlds cost millions of dollars to build and maintain and a significant percentage of the users of these systems are under the age of majority, the corporate owners of these games are usually wary of explicit sexual activity. See The Sims Online User Agreement, at <http://www.ea.com/eagames/official/thesimsonline/home/info.jsp> (last visited Aug. 9, 2003) ("Strong vulgar language, crude or explicit sexual references . . . are always inappropriate."). However, the economics are very different for textual virtual worlds, which are cheaper to build and maintain.

352. DIBBELL, *supra* note 19, at 235-63; HESS, *supra* note 96, at 32; TURKLE, *supra* note 66, at 210-32.

353. Reid, *Cyborg Body*, *supra* note 174, at 333, 338-41.

354. Yee, *supra* note 220, at 28-29 (finding that 41.9% of women surveyed had "role-played being in love with" another *EverQuest* character).

355. See, e.g., DIBBELL, *supra* note 19, at 235.

Those who build intimate relationships with gender-swapped avatars generally report feeling, at the very least, confused and disoriented at the revelation. The propriety of avatar gender-swapping, therefore, is hotly debated among virtual-world residents.³⁵⁶

For some male players of *EverQuest*, however, the choice of “presenting female,” as avatar gender-swapping is called, can be a strategic decision. Female avatars often receive more favorable treatment from other avatars, including free gifts and help from male avatars.³⁵⁷ On the other hand, presenting female may also lead to an eye-opening understanding of virtual sexual harassment.³⁵⁸ For some female users, the challenge of dealing with sexual harassment is reason enough to use male avatars. Others adopt different strategies, such as avatar self-help. For instance, one female player who was the subject of constant sexual harassment refused to abandon her real-life gender so that she could “pass” virtually without problems:

I am female. I choose to play female chars And people do harass you. . . . I stopped playing muds where playerkilling is not legal. . . . If they really start harassing you . . . killing them a few times tends to stop it short.³⁵⁹

As this quote demonstrates, when one’s virtual self is the involuntary recipient of sexual advances, the avatar’s controller almost always experiences real-life discomfort. The most well-known account of virtual sexual assault is Julian Dibbell’s re-telling of Mr. Bungle’s rape of Legba and Starsinger in *LambdaMOO*.³⁶⁰ The “rape” occurred when an avatar seized control of two female avatars and provided graphic textual depictions of their sexual self-mutilation. Of course, such “talk” is not rape.³⁶¹ Yet it was reportedly a traumatic experience for both Legba and Starsinger,³⁶² and some feminist scholars have used the incident as a prototypical example of sexual assault without physical contact.³⁶³

356. See Reid, *Cyborg Body*, *supra* note 174, at 332-33.

357. See CASTRONOVA, *supra* note 12, at 29-30.

358. *Id.*

359. Reid, *Cyborg Body*, *supra* note 174, at 336.

360. DIBBELL, *supra* note 19, at 11-30. The incident has been the subject of discussion in numerous law articles. See, e.g., Yochai Benkler, *Coase's Penguin, or, Linux and The Nature of the Firm*, 112 YALE L.J. 369, 439-40 (2002); Colin Folawn, *Neighborhood Watch: The Negation of Rights Caused by the Notice Requirement in Copyright Enforcement Under the Digital Millennium Copyright Act*, 26 SEATTLE UNIV. L. REV. 979, 980 n.9 (2003); Lee Kovarsky, *Tolls on the Information Superhighway: Entitlement Defaults for Clickstream Data*, 89 VA. L. REV. 1037, 1054 n.74 (2003); Viktor Mayer-Schönberger, *The Shape of Governance: Analyzing the World of Internet Regulation*, 43 VA. J. INT'L L. 605, 625 n.86 (2003).

361. Kerr, *supra* note 42, at 372.

362. DIBBELL, *supra* note 19, at 16.

363. See Julian Dibbell, *My Dinner With Catharine MacKinnon and Other Hazards of Theorizing Virtual Rape*, at <http://www.juliandibbell.com/texts/mydinner.html> (last visited Aug. 11, 2003).

Even if we accept avatars as cyborgs, it still is not clear that the law should respond by regulating these spaces. In the next section, we consider the cyberskeptical arguments against the recognition of cyborg rights. Ultimately, we disagree with the cyberskeptics. We agree that Mr. Bungle's virtual rape and other violations of the rights of avatars are not tantamount to real-world abuses. However, we argue that, given what appears to be the emergence of law within virtual communities, the development of cyborg rights within virtual-world social systems appears inevitable. We conclude that as virtual worlds continue to develop, cyborg rights will emerge through the efforts of virtual communities in ways we cannot fully anticipate.

D. *Cyborg Communities and Cyberskeptics*

In the early flowering of cyberlaw scholarship, scholars enthusiastically endorsed all manner of new possibilities for law. They suggested that we might recognize the primacy of social agreements of online communities, defer to these laws over those of national sovereigns,³⁶⁴ and establish virtual judges to decide cyberspace cases.³⁶⁵ They also proposed that, in these online communities, we might find a true opportunity for liberal democracy, direct democracy, and governance by consent.³⁶⁶ These

364. David R. Johnson & David Post, *Law and Borders—The Rise of Law in Cyberspace*, 48 STAN. L. REV. 1367, 1367-75 (1996) [hereinafter Johnson & Post, *Law and Borders*]. See also I. Trotter Hardy, *The Proper Legal Regime for 'Cyberspace,'* 55 U. PITT. L. REV. 993, 994, 1019-25 (1994) (contending that in the absence of some compelling social reason to the contrary, rules of conduct in cyberspace should be governed by self-help, custom, and contract of cyberspace participants, and arguing specifically in favor of recognizing a limited Law Merchant-like regulatory mechanism); David R. Johnson & David G. Post, *And How Shall the Net Be Governed? A Meditation on the Relative Virtues of Decentralized, Emergent Law*, in COORDINATING THE INTERNET (Brian Kahin & James H. Keller eds., 1997) (arguing for a decentralized system of Internet governance); David G. Post, *Governing Cyberspace*, 43 WAYNE L. REV. 155, 161 (1996) (arguing that cyberspace transactions occur in a virtual space); Joel R. Reidenberg, *Lex Informatica: The Formulation of Information Policy Rules Through Technology*, 76 TEX. L. REV. 553 (1998) (arguing for the *Lex Mercatoria*, applied to cyberspace as the "*Lex Informatica*").

365. The Virtual Magistrate was the first attempt at this sort of dispute resolution mechanism. See The Virtual Magistrate Project (Concept Paper, July 24, 1996), at <http://www.vmag.org/docs/concept.html> (last visited Aug. 11, 2003) (providing an initial outline of the goals and procedures of the project). Since then, many different approaches have been tried, some with notable success. See, e.g., Lucille M. Ponte, *The Michigan Cyber Court: A Bold Experiment in the Development of the First Public Virtual Courthouse*, 4 N.C. J. L. & TECH. 51 (2002); Victoria C. Crawford, Note, *A Proposal to Use Alternative Dispute Resolution as a Foundation to Build an Independent Global Cyberlaw Jurisdiction Using Business to Consumer Transactions as a Model*, 25 HASTINGS INT'L & COMP. L. REV. 383 (2002).

366. See, e.g., Johnson & Post, *Law and Borders*, *supra* note 364 (advocating the self-regulation of cyberspace as a jurisdiction independent of territorial sovereigns); Dick Morris, *Direct Democracy and the Internet*, 34 LOY. L.A. L. REV. 1033 (2001) (advocating direct democracy via Internet mechanisms). *But see* Neil Weinstock Netanel, *Cyberspace Self-Governance: A Skeptical View from Liberal Democratic Theory*, 88 CALIF. L. REV. 395 (1999) (arguing against the normative liberal argument of Johnson and Post); Paul M. Schwartz, *Vote.com and Internet Politics: A Comment on*

scholars envisioned cyberspace as a wholly different place where we could re-imagine our fundamental assumptions about how we might make law.³⁶⁷

This imaginative period didn't last long. Cyberskeptical scholars like Jack Goldsmith,³⁶⁸ Tim Wu,³⁶⁹ and Andrew Shapiro³⁷⁰ patiently explained that cyberspace actions and transactions do not occur in cyberspace, but in the real world, at your computer. Like police officers at the scene of a particularly interesting accident, they told us to move along; there was nothing to see here. Their cyberskeptical approach is now orthodoxy,³⁷¹ and it is certainly true that geographically-delimited nation-states have not abandoned their claims to regulate transactions that affect them.³⁷²

While there are clear parallels between the precyberskeptical ambitious thinking about "cyberspaces" as a separate jurisdiction and our claims here regarding the human rights inherent in virtual worlds, there are also differences. The historic failure of cyberspace to become an independent legal arena, as some had suggested it might, can be distinguished from emerging law within virtual worlds based upon the presence of legitimate communities within virtual worlds. The Internet, despite early predictions, never became an independent community. Websites and other prior technologies of cyberspace served as remarkable tools for communication, but they did not build truly independent and self-governing communities. By contrast, avatar existence and avatar community *only* occurs within virtual worlds, making the emergence of virtual law within those worlds much more likely.

Koster's Declaration sets out the assertion that virtual worlds are communities, stating that they provide "new modes and venues . . . for communities, and said modes are different enough from the existing ones

Dick Morris's Version of Internet Democracy, 34 LOY. L.A. L. REV. 1071 (2001) (raising problems with Morris's account of Internet direct democracy).

367. See Hunter, *supra* note 31, at 447-52 (examining history of the concept of "cyberspace as place").

368. Jack L. Goldsmith, *Against Cyberanarchy*, 65 U. CHI. L. REV. 1199, 1199-1200 (1998); see also Jack Goldsmith, *The Internet and the Abiding Significance of Territorial Sovereignty*, 5 IND. J. GLOB. LEG. STUD. 475, 479 (1998) (arguing that Internet activities are functionally identical to these non-Internet activities and may be regulated in the usual manner); Jack Goldsmith, *Unilateral Regulation of the Internet: A Modest Defense*, 11 EUROPEAN J. INT'L L. 135, 135-148 (2000) (same).

369. Timothy Wu, *Application-Centered Internet Analysis*, 85 VA. L. REV. 1163 (1999); Timothy S. Wu, Note, *Cyberspace Sovereignty?—The Internet and the International System*, 10 HARV. J.L. & TECH. 647 (1997); Timothy Wu, *When Law & the Internet First Met*, 2 GREEN BAG 2D 171 (2000).

370. ANDREW L. SHAPIRO, *THE CONTROL REVOLUTION: HOW THE INTERNET IS PUTTING PEOPLE IN CHARGE AND CHANGING THE WORLD WE KNOW* (1999) (arguing that the Net creates positive effects in society, but also some problems such as control, personalization, and so forth); Andrew L. Shapiro, *The Disappearance of Cyberspace and the Rise of Code*, 8 SETON HALL CONST. L.J. 703 (1998) (making similar arguments).

371. For a full discussion of the movement, see Hunter, *supra* note 31, at 447-52. The orthodoxy is being challenged in a number of ways. See *id.* at 452-57; David G. Post, *Against "Against Cyberanarchy,"* 17 BERKELEY TECH. L.J. 1365 (2002). However, it remains the received wisdom.

372. See Paul Schiff Berman, *The Globalization of Jurisdiction*, 151 U. PA. L. REV. 311 (2002).

that question arises as to the applicability of past custom and law”³⁷³ These new modes of community can be observed in today’s virtual worlds: these communities often have regular town meetings, subcultures, and even coded regulations that are enforced by cyborg participants. Each virtual world is a separate and independent community, generating its own conventions, norms, and rights, which new participants come to understand and abide by.³⁷⁴

Community self-policing of rights and legal expectations within virtual worlds has also arisen spontaneously. Avatars have reportedly formed virtual posses to hunt down infamous player-killers—subjecting them, à la Hammurabi’s Code, to the same kind of transgressive behavior they inflicted.³⁷⁵ The presence or absence of rights, the existence of a democratic or undemocratic governance system, and the presence or absence of hot-tubs expressly designed for tinysex are all items subject to debate and enforcement by virtual communities. In most instances, these concerns are resolved through in-world mechanisms. For instance, the community dealt with the Bungle rape through extensive deliberation and, in the end, one wizard took action based on those community deliberations.³⁷⁶ Mr. Bungle was “toaded” by a majority decision of the community—i.e., his avatar was replaced with a powerless and voiceless toad—and the victimized avatars and *LambdaMOO* society moved on.³⁷⁷

Historically, the rejection of separate legal rules for cyberspace seemed based in part on the absence of the recognition of any genuine community online. The best example of this is the early “amateur action” case of *United States v. Thomas*.³⁷⁸ The Thomases were online purveyors of porn who allowed access to their system from all over the United States. Under the still-prevailing *Miller* standard,³⁷⁹ the test for obscenity is a local, community-based one, and the question in *Thomas* was which community—and which community standard—applied to the Thomases’ porn? Was it the community standards of the physical place where the pornographic transmissions were received, or were the norms those of the “cyberspace community” in which the Thomases operated? Concluding that there was no such thing as a “community of cyberspace,” the Sixth Circuit held against the smut peddlers. Yet even those who criticize

373. Koster, Declaration, *supra* note 272, pmb1.

374. See Hunter & Lastowka, *supra* note 41.

375. See Anna DuVal Smith, *Problems of Conflict Management in Virtual Communities*, in COMMUNITIES IN CYBERSPACE 134, 147 (Marc A. Smith & Peter Kollock eds., 1999).

376. Community responses to sexual harassment are common in other virtual worlds as well. See Elizabeth Reid, *Hierarchy and Power—Social Control in Cyberspace*, in COMMUNITIES IN CYBERSPACE 115-16 (Marc A. Smith & Peter Kollock eds., 1999).

377. Actually, by the time of the Mr. Bungle incident, “toading” meant removal of the avatar altogether. Initially, toading involved turning the avatar into a toad. See DIBBELL, *supra* note 19, at 18.

378. 74 F.3d 701 (6th Cir. 1996).

379. See *Miller v. California*, 413 U.S. 15 (1973).

conventional claims to cyberspace community have reserved judgment on legal autonomy claims of MUDs, where assertions of community appear to be well-founded.³⁸⁰

Nonetheless, in urging courts to avoid recognizing virtual law, the cyberskeptics may have a point. Given the complexity of ascertaining a virtual world's emerging legal rules and balancing them with avatar rights and wizardly omnipotence, the prospect of real-world courts entertaining virtual disputes is in some ways not very appealing.³⁸¹ Perhaps, therefore, it would be best to require that the laws of the virtual worlds develop within their own jurisdiction. Perhaps, even if we accept that real lives, economic values, and substantial investments are at play within virtual worlds, the wiser course may be for courts to keep their distance.³⁸²

It is questionable, though, that courts will have much say in the matter, since some cyborg plaintiffs seem interested in pressing their claims in these courts. For instance, in June of 2001, a group of plaintiffs in South Korea filed a lawsuit alleging that the wizards of their world had unfairly deprived them of Giran castle, a virtual property they had stolen (fair and square) from another group of avatars. The wizards responded that, due to program errors, the siege of Giran had been illegitimate.³⁸³ The plaintiff's violent theft, therefore, had occurred in the absence of what might be termed virtual due process, leading the wizards of Aden to restore the virtual property rights to those that existed *ex ante*. Though the Giran Castle case, like the Blacksnow case, was apparently not resolved by a judge's ruling, the fact that a suit was filed suggests that courts will, in the near future, be confronting these claims.³⁸⁴ In the far future, as the world's communities increasingly begin to operate through avatar agents in

380. Shapiro, *supra* note 370, at 711 ("Sure, there are still some interfaces that stress the idea of being in a separate place (e.g., MUDs, chat rooms). They may even feel place-like.").

381. For instance, how should a real-world judge resolve the following (entirely conceivable) lawsuit filed over a virtual dispute? A twelve-year-old castle owner alleges that his giant avatar's virtual goose, which laid golden eggs (worth U.S. \$100 daily) was stolen by a virtual juvenile (and real-world adult) who climbed a giant beanstalk to get it. The plaintiff alleges trespass, invasion of privacy, and conversion. The defendant, in turn, counterclaims against the virtual world's wizards who made the goose in question capable of being stolen, and throws in an additional charge against a third party of fraud involving a virtual cow. Even given that the goose was clearly valuable property, the task of ferreting out the duties and faults in this hypothetical would probably exasperate a real-world judge.

382. This may seem like an unusual suggestion, but there appear to be some rare instances in which the law has seemingly declined to recognize market realities. *See, e.g.*, News Release, Internal Revenue Service, IR-98-56 (Sept. 9, 1998) (stating that the IRS rules do not require home-run baseballs returned to the player by their recipients to be taxed as gifts), available at www.irs.gov/pub/irs-news/ir-98-56.pdf.

383. *See* Posting of Dave Rickey, daver@mythicentertainment.com, to mud-dev@kanga.nu (June 22, 2001), at <http://www.kanga.nu/archives/MUD-Dev-L/2001Q2/msg01731.php>.

384. The Giran Castle lawsuit was apparently filed in 2001 and discussed on several websites, but there have been no subsequent reports regarding a resolution. *See id.* Other such lawsuits have surely been filed but not reported.

persistent virtual communities, courts will surely need to recognize cyborg rights in some form or another.

CONCLUSION

Many people live out large parts of their lives in virtual worlds, and soon many more will join them. The issues of property and cyborg rights are not going to go away.

Property interests will be the initial arena for the development of virtual-world law. This is the area of law in which most disputes will arise for some time to come, based upon actions of game owners³⁸⁵ as well as the filing of the Blacksnow and Castle Giran lawsuits. As we concluded in Part II, it seems clear that virtual assets can be characterized as property for the purposes of real-world law. The battles fought over virtual property will involve claims sounding in property, contract, unfair competition, and other familiar real-world areas. At least initially, these claims should not pose too many problems for courts. Traditional approaches will work.

However, this is likely to change over time. As people increasingly come to live and work in these worlds, the domination of legal property issues by EULAs and practices of “wizards fiat” may appear one-sided and unjust. If corporate wizards continue to assert complete ownership over virtual lives, cyborg inhabitants will bring their concerns to real-world courts to prevent certain fundamental rights from being contracted away.³⁸⁶ If constitutional speech protections extend to company towns like Chickasaw, Alabama,³⁸⁷ it seems likely that such rights will be asserted by, and eventually granted to those who live in virtual worlds.

When virtual-world lawsuits arise, as they inevitably will, it will not be a sufficient answer to say, “It’s just a game.” Nor can the wizards who create and maintain the worlds simply assert that they can do as they wish. The issues are more complex than that, and the users and community will need to have a say in the formation of the laws of virtual worlds. David Johnson and David Post once remarked that

[i]f the sysops and users who collectively inhabit and control a particular area of the Net want to establish special rules to govern conduct there, and if that rule set does not fundamentally impinge upon the vital interests of others who never visit this new space,

385. Stephens, *supra* note 154, at 1516-18.

386. Consider the privacy concerns that will arise when, say, the owners of a virtual world are capable of monitoring all of your virtual-world social interactions. You might not worry about some wizard watching you struggle to use a hoverboard in *There*, but it is a different matter if the same wizard is watching you engage in tinysex. What about a world where all of your social interactions with your family are monitored, including discussions about the arrangement for your mother’s funeral, your father’s coming out as transsexual, your brother’s drug habit?

387. See *Marsh v. Alabama*, 326 U.S. 501 (1946) (applying First Amendment rights to speech within a “company town”).

then the law of sovereigns in the physical world should defer to this new form of self-government.³⁸⁸

We believe that Johnson and Post's observation will, in the end, apply to virtual worlds. Courts will need to recognize that virtual worlds are jurisdictions separate from our own, with their own distinctive community norms, laws, and rights. While cyborg inhabitants will demand that these rights be recognized by real-world courts and virtual-world wizards, they will need to arrive at these rights themselves within the context of the virtual worlds. Whether or not the courts and the wizards recognize these rights, virtual communities will continue to assert them and attempt to enforce them. Virtual-world inhabitants will demand recognition of their cyborg lives and enforcement of their cyborg rights. If these attempts by cyborg communities to formulate the laws of virtual worlds go well, there may be no need for real-world courts to participate in this process. Instead, the residents of virtual worlds will live and love and law for themselves.

388. Johnson & Post, *Law and Borders*, *supra* note 364, at 1367-75.

