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VIRTUAL CRIMES

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*Ever since creation's peaceful dawn was startled by the death cry of the murdered Abel and Jehovah placed his mark upon Cain and set him forth a 'fugitive and a vagabond,' cursed from the earth that had opened its mouth to receive his brother's blood from his hand, there has been a never-ending conflict between those who make the laws and those who break them.*¹

In a recent article, we explored the emerging social phenomenon of virtual worlds and the legal issues raised by these environments.² We focused upon two primary questions. First, we asked

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1. Guy H. Thompson, *Missouri Crime Survey*, 12 A.B.A. J. 626, 632 (1926).

2. Dan Hunter & F. Gregory Lastowka, *The Laws of the Virtual Worlds*, 92 CAL. L. REV. 1 (2004) [hereinafter *Laws of Virtual Worlds*].

For other commentary on legal aspects of virtual worlds, see, e.g., Jack Balkin, *Virtual Liberty: Freedom to Design and Freedom to Play in Virtual Worlds*, VA. L. REV. (forthcoming 2005), available at http://www.yale.edu/lawweb/jbalkin/articles/virtual_liberty1.pdf; Dan Hunter & F. Gregory Lastowka, *To Kill an Avatar*, LEGAL AFFAIRS, July/August 2003, at 21-24 [hereinafter *To Kill an Avatar*]; Ren Reynolds, *Hands Off MY Avatar! Issues with Claims of Virtual Property and Identity*, at <http://www.ren-reynolds.com/downloads/HandsOffMYavatar.htm> (last visited July 5, 2004); Daniel Miller, *Determining Ownership in Virtual Worlds: Copyright and License Agreements*, 22 REV. LITIG. 435 (2003); Molly Stephens, *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 (2002); LAWRENCE LESSIG, CODE AND OTHER LAWS OF CYBERSPACE 11-13, 74-78 (1999) [hereinafter CODE AND OTHER LAWS OF CYBERSPACE]; LAWRENCE LESSIG, *Court and Constitution: Post Constitutionalism*, 94 MICH. L. REV. 1422, 1442-45 (1996) [hereinafter *Post Constitutionalism*]; Jennifer L. Mnookin, *Virtual(y) Law: The Emergence of Law in LambdaMOO*, J. COMPUTER-MEDIATED COMM., Vol. 2, No. 1 (1996), available at <http://www.ascusc.org/jcmc/vol2/issue1/lambda.html>.

whether the virtual items and properties currently being bought and sold by residents of virtual worlds should be regarded as property in a legal sense.³ We concluded that no obvious reason exists prohibiting the recognition of legal interests in intangible virtual properties. Second, we explored the question of whether the current technocratic, corporate and anarchic governance systems in virtual worlds should be problematic from the standpoint of democratic governance.⁴ We concluded that due to the unique nature of the virtual spaces and the unusual and varied conventions that govern interpersonal actions within these spaces, the governance of virtual worlds is a very complicated question and would be better left to internal and market-driven forces.⁵

In this Essay, we will look at a third issue that is largely derivative of the two issues previously explored. Private property systems inevitably present the potential for social conflict by granting private ownership rights that can be infringed by trespass and conversion. In this Essay, we will explore the issue of non-consensual appropriation and destruction of virtual properties, and ask whether these behaviors might be seen as truly criminal. We will conclude that such conflicts will generally not give rise to criminal liability, but that some activities involving the exploitation of game software for financial gain may give rise to criminal liability under computer trespass statutes.

I. DEFINING "VIRTUAL CRIME"

Initially, we would like to emphasize our wariness of the general concept of a "virtual crime." One of the first and most well-known "virtual crimes" was the "rape in cyberspace" reported by journalist and author Julian Dibbell.⁶ The "rape" that took place in

3. *Laws of Virtual Worlds*, *supra* note 2, at 29-50.

4. *Id.* at 51-71.

5. Jack Balkin disagrees with us on this point. See Balkin, *supra* note 2, at 2 ("Precisely because virtual worlds are fast becoming important parts of people's lives, and because they are likely to be used for more and more purposes in the future, legal regulation of virtual worlds is inevitable."). Cf. Tim Wu, *Application-Centered Internet Analysis*, 85 VA. L. REV. 1163, 1199-1202 (1999) ("[T]alk of a thick Cyberspace sovereignty is really convincing only when talking about MUDs, videogames, or other exercises of fantasy . . .").

6. Julian Dibbell, *A Rape in Cyberspace*, VILLAGE VOICE, Vol. XXXVIII, No. 51 (December 21, 1993). For a comprehensive, thoughtful, and entertaining account of the

the LambdaMOO MUD⁷ was essentially a real-time non-consensual textual description of the rape of an online community member to other community members. The surface appearance of the “rape” was the display, on the computer monitors of several community members, of graphic and offensive textual sentences. The “rapist,” Mr. Bungle, was the typist of those descriptions. As commentators have noted, Mr. Bungle’s acts were insufficient to form a basis for criminal prosecution.⁸

Many legal scholars have referenced Dibbell’s report,⁹ including Susan Brenner, who wrote an article asking whether there could be such a thing as a “virtual crime”, and referred to the Bungle incident as a “true” virtual crime.¹⁰ Brenner concluded that virtual crimes, if they could be described as crimes at all, would need to have all the elements of real crimes, and thus were not really a meaningfully new variety of criminal activity.¹¹ Orin Kerr recently gave a similar skeptical appraisal of the Bungle incident, disagreeing with Lawrence Lessig’s suggestion that there could be a valuable “link” between actual rape and the LambdaMOO “rape in cyberspace.”¹² Kerr has said that such a link is “tenuous at best: It is the link between a brutal rape and a fictional story of a brutal rape. Surely the difference is more striking than any similarity.”¹³

LambdaMOO MUD, see JULIAN DIBBELL, *MY TINY LIFE: CRIME AND PASSION IN A VIRTUAL WORLD* (1999) [hereinafter *MY TINY LIFE*].

7. MUDs are text-based virtual worlds. For exemplary historical accounts of MUDs, see RICHARD BARTLE, *DESIGNING VIRTUAL WORLDS* 3-21 (2003); see also *MY TINY LIFE*, *supra* note 6, at 51-65; *Laws of Virtual Worlds*, *supra* note 2, at 14-21.

8. Susan W. Brenner, *Is There Such a Thing as “Virtual Crime?”*, 4 CAL. CRIM. L. REV. 1, ¶105-111 (2001), available at <http://www.boalt.org/CCLR/v4/v4brenner.pdf>; Orin S. Kerr, *The Problem of Perspective in Internet Law*, 91 GEO. L.J. 357, 372-73 n.66 (2003). It should be noted that Dibbell himself was profoundly ambivalent about the import of the Bungle incident at the time it occurred. He wrote, “I was fascinated by the concept of virtual rape, but I was even more so by the notion that anyone could take it altogether seriously.” See *MY TINY LIFE*, *supra* note 6, at 21.

9. See, e.g., Kerr, *supra* note 8; Jerry Kang, *Cyber-Race*, 113 HARV. L. REV. 1130, 1161 n.126 (2000); Wu, *supra* note 5, at 1196-97 n.86; *CODE AND OTHER LAWS OF CYBERSPACE*, *supra* note 2, at 11-13, 74-78; *Post Constitutionalism*, *supra* note 2, at 1442-45; John Perry Barlow, *Edited Comments Concerning Differentiating Action and Expression in a Virtual World*, 1994 ANN. SURV. AM. L. 451 (1994).

10. Brenner, *supra* note 8, at ¶101.

11. *Id.* at ¶¶124, 129.

12. Kerr, *supra* note 8 (criticizing Lessig’s comments in *CODE AND OTHER LAWS OF CYBERSPACE*, *supra* note 2, at 74-78).

13. *Id.*

Obviously, part of the problem with the very notion of “virtual crime” lies in the word “virtual” itself, which has become increasingly devoid of meaning. In some cases, “virtual” is used to refer to things that are practically the same in effect as the term modified, and in other cases it simply refers to representations of things “[c]reated, simulated, or carried on by means of a computer or computer network.”¹⁴ This latter definition gained its popularity in the 1990’s, when the word “virtual” became almost as much a buzzword for technophiles and marketers as “low carb” is today. “Virtual” was used to describe almost all things that involved technology — especially Internet technology. Popular media embraced “virtual reality.”¹⁵ Internet-dependent communities were described as “virtual communities,”¹⁶ online booksellers were called “virtual bookstores,”¹⁷ and programs that mimicked the functions of appliances were called, e.g., “virtual alarm clocks.”¹⁸ Handheld games were called “virtual pets,” and an annoying animation of a paper clip that came with Microsoft Office software was called a “virtual assistant.” As Marie Laure-Ryan has observed, this widening of the term “virtual” threatens to render it virtually meaningless.¹⁹

The term “virtual crime” can be just as meaningless as the term “virtual pet” if it refers to all computer-generated simulations of crime. Realistic digital simulations of mass murder occur every day

14. AM. HERITAGE DICTIONARY 1922 (4th ed. 2000).

15. The popular ‘90’s examples are far too numerous to list. In 1995, for instance, a short-lived television series VR5 (virtual reality 5) premiered, as did the film *Virtuosity*, starring Russell Crowe as a “virtual reality villain.” The idea of interactive and computer-generated representational environments, however, was around long before the 1990’s. See, e.g., VERNOR VINCE, TRUE NAMES (1981).

16. HOWARD RHEINGOLD, THE VIRTUAL COMMUNITY (Harper Collins Reprint ed. 1994). Rheingold lamented, in a later edition of the book, that if he had originally used the term “online social networks” instead of “virtual communities,” he could have “saved us all a decade of debate.” *Id.* at 394.

17. See, e.g., *Trail Stories Virtual Bookstore*, at <http://www.trailstories.com/virtual> books (last visited July 5, 2004).

18. See, e.g., *PC World.com — Easy Alarm Clock*, at http://www.pcworld.com/downloads/file_description/0,fid,6949,00.asp (last visited Aug. 31, 2004) (“This handy systems software is a virtual alarm clock for your PC.”).

19. *Law of Virtual Worlds*, *supra* note 2, at 7 n.17; Marie-Laure Ryan, *Cyberspace, Virtuality, and the Text*, in CYBERSPACE TEXTUALITY: COMPUTER TECHNOLOGY AND LITERARY THEORY 78, 88 (1999) (“This metonymic transfer of ‘virtual’ to describe all computer-mediated activities and all aspects of electronic culture threatens a weakening, or loss, of semantic substance.”).

on the computer monitors of those playing Grand Theft Auto III²⁰ and on home entertainment centers displaying DVDs of *Hamlet*.²¹ Such “virtual crimes” are the subject of policy debate because they trouble many legislators and cultural commentators.²² However, the representations of villainy that occur in interactive games are generally understood as speech and nothing more, and thus are within the scope of constitutional free speech protections.²³ Like Kerr says, these activities are essentially stories.²⁴

20. *Grand Theft Auto* is one of the best-selling and most controversial solo play games in the country. Within *GTA*, one can benefit (in the game’s terms) from paying to have sex with a prostitute, then killing the prostitute to get the money back. See Lev Grossman, *Busjacking for Grownups*, TIME, Nov. 4, 2002, at 19.

21. WILLIAM SHAKESPEARE, *HAMLET*, Act 5, Scene 2 (“O proud death, what feast is toward in thine eternal cell, that thou so many princes at a shot so bloodily hast struck?”).

22. See Alex Wilson, *Games Censors ‘too uptight’*, at www.news.com.au/common/story_page/0,4057,7340635%5E15306,00.html (Sept. 22, 2003) (quoting New Zealand’s game “censor” as saying, “some of the games do have video clips in them now and some of the games do have a linear narrative structure . . . There is a goal you have to achieve by killing people basically — for kids I don’t think that’s great.”); Greg Costikyan, *Games Don’t Kill people — Do They?*, at http://www.salon.com/tech/feature/1999/06/21/game_violence (June 21, 1999); Kevin W. Saunders, *Regulating Youth Access to Violent Video Games: Three Responses to First Amendment Concerns*, __ MSU-DCL L. REV. 51 (2003), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=443140.

23. See *Interactive Digital Software Ass’n v. St. Louis County*, 329 F.3d 954 (8th Cir. 2003). We should note that not everyone agrees on this point. See, e.g., Saunders, *supra* note 22.

24. We must note that virtual worlds cannot be equated with stories as stories are traditionally defined. There is an ongoing ludology/narratology debate (perhaps something of a disciplinary turf struggle) among computer game critics as to whether computer games are constructively analyzed as narratives or a separate ludic form of activity. Virtual worlds are generally discussed only at the margins of this debate because some game theorists place MUDs and virtual worlds outside the realm of “games” entirely.

For exemplary accounts of the salient differences between games, texts, and virtual worlds, see BARTLE, *supra* note 7, at 598-607 (summarizing academic investigations of virtual worlds from perspectives of literary theory, role-playing game theory, and drama theory); NOAH WARDRIP-FRUIIN & PAT HARRIGAN, *FIRST PERSON* (2003); Paul McInnes, *Designing Massively Multiplayer Games for Narrative Investment*, in *MASSIVELY MULTIPLAYER GAME DEVELOPMENT* 80-89 (2003); TORILL ELVIRA MORTENSEN, *PLEASURES OF THE PLAYER: FLOW AND CONTROL IN ONLINE GAMES* 9-28 (2003); Celia Pearce, *Narrative in Games*, in *GAME ON* 112-19 (2002); Lisbeth Klastrup, *A Virtual World Aesthetics: Theorising Multi-User Textuality*, available at www.it-c.dk/people/klastrup/airpapfinalver.pdf (last visited Sept. 7, 2004); MARIE-LAURE RYAN, *NARRATIVE AS VIRTUAL REALITY* 311-12 (2001) (discussing the nature of MOOs); JANET H. MURRAY, *HAMLET ON THE HOLODECK: THE FUTURE OF NARRATIVE IN CYBERSPACE* 123-25 (1997) (characterizing MUDs as “par-

A narrower definition of virtual crimes might equate “virtual crimes” with “cybercrimes,” defining cybercrimes as “crimes committed against a computer or by means of a computer.”²⁵ Obviously, computers (like bookstores, alarm clocks, and paper clips) can be utilized in the furtherance of criminal conduct, and there are many state and federal statutes that expressly criminalize certain types of conduct involving computer networks.²⁶ But, these crimes are real crimes with real consequences. In this case, there is a risk of conflating the actual with the virtual because doing so makes “virtual” computer crimes seem *less* serious than real crimes. Virtual copyright infringers spend jail time in *real* penitentiaries.²⁷

But, there is still a proper place for the term “virtual crime.” A Japanese man recently hacked into another person’s virtual world account, sold her virtual house to another player for real cash, and pocketed the proceeds.²⁸ This type of activity might be described as a virtual crime because it refers to crimes that “exist or result in essence or effect, though not in actual fact, form, or name.”²⁹ This is the older sense of the modifier “virtual,” and would include those crimes that somehow evoke and approach the effect and essence of real crime, but are not considered crimes.³⁰ To us, this seems to be the exact nature of “virtually criminal” activities, such as the “rape in cyberspace,” that occur within the context of virtual worlds and are decried by participants. Such “crimes” may cause real psychological, social, and financial harms to their victims,³¹ and they may

ticipatory theory”); ESPEN J. AARSETH, *CYBERTEXT — PERSPECTIVES ON ERGODIC LITERATURE* (1997); SHERRY TURKLE, *LIFE ON THE SCREEN* (Simon & Schuster Reprint ed. 1997) (1995).

25. Brenner, *supra* note 8, at ¶125-27.

26. The Department of Justice has a division dedicated to prosecuting crimes facilitated by computers and the Internet: The Computer Crime and Intellectual Property Section (CCIPS). See United States Dept. of Justice, at <http://www.cybercrime.gov/crimes.html> (last visited Sept. 7, 2004).

27. See generally Eric Goldman, *Warez Trading and Criminal Copyright Infringement*, 51 J. COPYRIGHT SOC’Y U.S.A. 395 (2004).

28. Posting of Michael, Michael@NoSpam.slashdot.org, to <http://www.slashdot.org> (Feb. 14, 2003), at <http://www.slashdot.org/articles/03/02/14/0523248.shtml?tid=127>.

29. AM. HERITAGE COLLEGIATE DICTIONARY 1922 (3d ed. 2000).

30. Cf. Brenner, *supra* note 8, at ¶125-127 (“virtual crimes” constitute an emergent form of “virtual world misconduct” that may warrant “an entirely new kind of criminal liability.”).

31. Kang, *supra* note 9.

grossly transgress reasonable and sensible civic expectations of behavior, but they are not activities that tend to fall within the scope of existing criminal prohibitions due, in part, to the unique nature of virtual spaces.

As Lawrence Lessig noted several years ago, many people are spending more time in virtual worlds and “it is slowly becoming impossible to ignore these places of cyberspace.”³² Moreover, it is slowly becoming impossible to ignore the fact that virtual crimes are occurring.³³ We can therefore expect virtual crimes to be an increasing cause of concern for the communities engaging in the design and experience of virtual worlds.

II. THE BONE CRUSHER DILEMMA

Julian Dibbell doesn't look much like a fencer of stolen goods. He looks a lot like a technology writer with a striking resemblance to a slightly shopworn Mark Harmon, but during 2003, Dibbell took a career turn to become a professional trader of virtual goods within the world of Britannia — the virtual world environment of the game *Ultima Online*.³⁴ With the help of his tiny avatar,³⁵ Mr.

32. *Post Constitutionalism*, *supra* note 2, at 1443.

33. *Cf.* Mark Ward, *Does Virtual Crime Need Real Justice?*, BBC NEWS, Sept. 29, 2003, available at <http://news.bbc.co.uk/go/pr/fr/-/1/hi/technology/3138456.stm> (reporting on growing incidence of criminal and quasi-criminal activities within virtual worlds).

34. Daniel Terdiman, *But Will IRS Accept Virtual Cash?*, WIRED NEWS, Mar. 24, 2004, available at <http://www.wired.com/news/games/0,2101,62738,00.html>; Daniel Terdiman, *Virtual Trader Barely Misses Goal*, WIRED NEWS, Apr. 16, 2004, available at <http://www.wired.com/news/games/0,2101,63083,00.html>; Aleks Krotoski, *Real Profits From Play Money*, THE GUARDIAN, Apr. 15, 2004, available at <http://www.guardian.co.uk/online/story/0,3605,1191678,00.html>.

As we explained in our previous article, *Ultima Online* is a computer game owned by the Electronic Arts company. *Laws of Virtual Worlds*, *supra* note 2, at 27. *Ultima Online*, however, is not a typical computer game where one or a handful of players compete against each other using handheld game controllers. It is a massively multiplayer online role-playing game (“MMORPG”), which can only be run on networked personal computers. Britannia is rendered on a computer screen as a medieval setting where players exist and interact through the mediation of avatar representations. The game has fairly complex control mechanics and the interface can take some time to understand. But the most significant difference between *Ultima Online* and other games is that *Ultima Online* is a persistent “virtual world” (Britannia) in which participants interact with tens of thousands of other players while pursuing individual goals within a shared representational space. *See generally* *Laws of Virtual Worlds*, *supra* note 2, at 1-27; Wu, *supra* note 5, at 1163, 1199 n.93 (discussing *Ultima Online* generally); Miller, *supra* note 2, at 435 (discussing the *Ultima Online* EULA).

Dibbell traded virtual currency and chattels that he acquired within the virtual world of Ultima Online for U.S. dollars via PayPal. The scope of his operations and ambitions were modest in comparison to other virtual goods traders.³⁶ However, he did make thousands of real dollars in profit in the course of his last few months.³⁷

Like other virtual worlds, Ultima Online lacks a specific quantifiable “win/lose” outcome, making it arguably a place more than a game.³⁸ In other words, the precise goals of Ultima Online are not completely clear, and one does not ever “lose” the game unless the player stops paying a monthly subscription fee. Most players, however, do have clear goals in virtual worlds, and the clearly predominant goal is to seek the empowerment of their avatars.³⁹ Players overcome challenges and obstacles set out by the game designers, and in the course of that play they obtain power and wealth for their avatars. Within virtual worlds like Britannia, one can depend on the general rule that if an avatar has “lived” in a virtual world for a longer time, it will be more powerful and wealthy (virtually speaking) than the avatar of a new player.⁴⁰ Longer investments in the

35. The use of the term “avatar” to describe a digital representative agent within a virtual world is of relatively recent origin. See AM. HERITAGE DICTIONARY (4th ed. 2000) (defining an avatar as “1. The incarnation of a Hindu deity, especially Vishnu, in human or animal form. 2. An embodiment, as of a quality or concept; an archetype: the very avatar of cunning. 3. A temporary manifestation or aspect of a continuing entity: occultism in its present avatar.”).

36. See Julian Dibbell, *The Unreal Estate Boom*, WIRED, Jan. 2003, at 106, available at <http://www.wired.com/wired/archive/11.01/gaming.html>.

37. Julian Dibbell, *Play Money*, at <http://www.juliandibbell.com/playmoney/> (Apr. 19, 2004).

38. *Laws of Virtual Worlds*, *supra* note 2, at 28; Jesper Juul, *The Game, the Player, the World: Looking for a Heart of Gameness*, in LEVEL UP: DIGITAL GAMES RESEARCH CONFERENCE PROCEEDINGS 30-45 (Marinka Copier & Joost Raessens eds. 2003); BARTLE, *supra* note 7, at 473-76.

39. Goals vary among players however, and some players seem primarily interested in socializing with others or exploring the features and environment of the game. For taxonomies of player-types, see BARTLE, *supra* note 7, at 128-141 (providing typologies of player behavior and motivation); Mikael Jakobsson & TL Taylor, *The Sopranos Meets EverQuest: Social Networking in Massively Multiplayer Online Games*, FINEART FORUM, Vol. 17, No. 8 (Aug. 2003), available at http://www.fineartforum.org/Backissues/Vol_17/faf_v17_n08/reviews/jakobsson.html (describing “power gamers” as a further typology of player).

40. New players are often referred to, derisively, as “n00bs.” See Edward Castrovna, *Virtual Worlds: A First-Hand Account of Market and Society on the Cyberian Frontier*,

labor of avatar existence lead fairly inevitably to greater powers for the avatar.⁴¹

The acquired power, in the form of virtual property, can be transferred to other avatars in the form of gifts or mutual beneficial economic exchanges.⁴² The economy of Britannia and other virtual worlds intersects significantly with our own, and is currently running around \$3.5 million per annum.⁴³ And, as Ted Castronova has explained, one can readily calculate a real world hourly wage for player activities in virtual worlds as well as exchange rates for various virtual currencies.⁴⁴ So, given the overlap of the virtual economy of Britannia and our economy, one might well ask the question: Should virtual property crimes be recognized as real property crimes?

It is a common occurrence in virtual worlds that some avatars will surreptitiously make off with the valuable possessions of other avatars.⁴⁵ Such “stolen” possessions may then be in turn offered for sale to other avatars in exchange for U.S. dollars. The sale of virtual assets generally violates the license agreements of games, but we might additionally ask whether, if the items were procured by theft, the sale constitutes the sale of stolen property in violation of the criminal law. Indeed, this was precisely the moral conundrum that Dibbell found himself in when his avatar was offered an opportu-

CESifo Working Paper No. 618, *available at* <http://papers.ssrn.com/abstract=294828> (last visited Mar. 2, 2003).

41. Insofar as this game mechanic predominates, Ultima Online is part of the standard “Adventure” genre of computer games, which originated with the game ADVENT designed by Will Crowther and Don Woods in the 1970’s. *See Laws of Virtual Worlds*, *supra* note 2, at 14-21; DAVID MYERS, *THE NATURE OF COMPUTER GAMES* 15-17 (2003).

42. The Ultima Online Playguide, for instance, recognizes that avatars may give gifts, but emphasizes in a section on “Social Etiquette” that begging for gifts is an impolite behavior. *See* Ultima Online Renaissance Playguide, at 7 (“When starting out, do not ask other players for gold or items. If you are short of gold, we recommend asking people how they earned gold when they were starting out. It is always okay to ask for help, it is not okay to ask for handouts.”).

43. Dibbell, *supra* note 37, at http://www.juliandibbell.com/playmoney/2003_10_01_playmoney_archive.html#106685602044647675.

44. *See* Castronova, *supra* note 40.

45. *See* BRAD KING & JOHN BORLAND, *DUNGEONS AND DREAMERS* 160-62 (2003) (describing a theft in Ultima Online).

nity to “fence” a stolen virtual weapon, a “Bone Crusher mace,” for real money.⁴⁶

At first glance, the fencing of the Bone Crusher for U.S. dollars would seem to fall within the literal text of criminal statutes in many states. The Model Penal Code states “a person is guilty of theft if he purposely receives, retains, or disposes of movable property of another knowing that it has been stolen, or believing that it has probably been stolen, unless the property is received, retained, or disposed with purpose to restore it to the owner.”⁴⁷ There is no general exemption to the statutory provisions for thefts that take place in virtual worlds.⁴⁸

Of course, while the language of the Model Penal Code may seem clear, one faces an interpretive difficulty in applying such statutory language to a realm constituted solely of images. René Magritte noted this problem at the heart of language by writing next to a representation of a pipe: “Ceci N’est Pas Une Pipe.” (“This is not a pipe.”)⁴⁹ Similarly, the Bone Crusher mace is not a mace, but just the representation of a medieval weapon on a per-

46. See Dibbell, *supra* note 37, at http://www.juliandibbell.com/playmoney/2003_08_01_playmoney_archive.html#106019981622479993.

So there I was, stuck between a dirty deal and a quick 5 million gp profit. I’d been stolen from in the game before, and I knew how much it hurt. Players can use hiding and thieving skills to slip into your house right under your nose and walk away with everything they can carry. It’s not just impoverishing, it’s humiliating, and I wasn’t eager to be part of any such business . . . I shrugged and laughed — and quickly closed the deal . . . Yeah, I was pretty pleased with myself. But since then the amusement has faded, and . . . ambivalence remains.

47. MODEL PENAL CODE § 223.6 (1962).

48. While arguments for cyberspace jurisdictional exceptionalism were made in the past, they are not often made today. Compare David R. Johnson & David Post, *Law and Borders — The Rise of Law in Cyberspace*, 48 STAN. L. REV. 1367, 1367-75 (1996), with Jack Goldsmith, *Against Cyberanarchy*, 65 U. CHI. L. REV. 1199, 1199-1200 (1998). David Post has recently revisited the jurisdictional debate in David G. Post, *Against “Against Cyberanarchy,”* 17 BERKELEY TECH. L.J. 1365 (2002).

49. RENÉ MAGRITTE, *THE TREACHERY OF IMAGES* (1929). See also Gonzalo Frasca, *Simulation 101: Simulation versus Representation*, at <http://www.jacaranda.org/frasca/weblog/articles/sim1/simulation101.html> (2002). A representation of the Magritte representation can be found at <http://ccat.sas.upenn.edu/george/magritte/pipe.jpg> (last visited Feb. 17, 2004). In virtual worlds, the conflation of signifier with signified extends personal identity as well — often people speak of their avatars in the first person rather than in terms of separate representations or agents. *Laws of Virtual Worlds*, *supra* note 2, at 64-65.

sonal computer.⁵⁰ One might conclude, due to the representational medium, that the theft of the Bone Crusher was simply a representation of theft, not a true theft intended to fall within the ambit of the Model Penal Code.⁵¹ Indeed, one might reasonably predict that since Ultima Online is commonly understood to be a computer game, the gut reaction of state and federal prosecutors would be to view the legal status of thefts that take place in Ultima Online as similar to the gruesome murder of PacMan at the hands of Inky, Blinky, Winky, or Clyde.⁵²

We think this gut reaction is a good thing for virtual worlds. Conflating PacMan with Ultima Online, as many skeptics seem inclined to do, would leave the social problems of virtual worlds in the hands of the communities that understand those problems. External legal regulation would be kept at bay, but not out of respect for virtual communities as John Perry Barlow once advocated.⁵³ Instead, a healthy *disrespect* for virtual communities would shield them from outside interference. The result, however, would still be the same.

We have doubts, however. The economic spillover effects of virtual crimes may lead some victims to petition real world courts for more extensive involvement, as has already occurred in Asia.⁵⁴ Virtual chattels like Bone Crushers are currently being created, traded, and socially valued in ways that are generally compatible with traditional theories of property.⁵⁵ The money that Julian Dibbell made from fencing the stolen representation was perfectly real.

50. See generally *Laws of Virtual Worlds*, *supra* note 2.

51. Along these skeptical lines, see Barlow, *supra* note 9.

52. On the deep meaning of PacMan, see generally D.B. WEISS, *LUCKY WANDER BOY* 6-8 (2003).

53. Barlow is well-known for penning "A Declaration of the Independence of Cyberspace," which begins:

Governments of the Industrial World, you weary giants of flesh and steel, I come from Cyberspace, the new home of the Mind. On behalf of the future, I ask you of the past to leave us alone. You are not welcome among us.

You have no sovereignty where we gather.

The full text of the Declaration is available online at http://www.eff.org/pub/Publications/John_Perry_Barlow/barlow_0296.declaration.

54. *Laws of Virtual Worlds*, *supra* note 2, at 71. The spillover effects are generally why Professor Balkin disagrees with our prior prediction that virtual worlds will be subject to regulation primarily by internal and market-driven forces. See Balkin, *supra* note 2.

55. *Laws of Virtual Worlds*, *supra* note 2, at 49.

So, if real cash is paid for representations, and if (as we have previously argued⁵⁶) there seems to be no strong case for denying virtual objects the status of property, it is predictable that someday a victim of a serious virtual crime will make the case that the words “property,” “owner,” and “stolen” in the Model Penal Code encompass “chattels” like Bone Crusher maces.

The intangibility of the representation in such a case may not be a significant stumbling block to the application of criminal law. The Ninth Circuit recently concluded that the deceitful conversion of an Internet domain name is actionable in California.⁵⁷ Domain names, like Bone Crushers, are often viewed as being property interests by their owners, but are essentially nothing more than representations. The idea that a domain name is a property interest may seem like a social fiction.⁵⁸ But, if a domain name can indeed be “stolen,” then perhaps it follows logically that a Bone Crusher mace — a similar artifact at the intersection of software, databases, and networks — should be equally capable of being “stolen.”⁵⁹ If the occurrence looks like theft of property, is socially perceived as theft of property, and has the economic impact of theft of property, then Judge Kozinski’s common sense summary of the issue would seem to apply: “the common law does not stand idle while people [unlawfully dispose of] the property of others.”⁶⁰

III. THE LAWS OF GAME RULES

But we are skeptical that Julian Dibbell could be prosecuted for fencing stolen property. In our view, his ability to escape a punitive fine or jail term has little to do with the intangibility of the Bone Crusher representation. Instead, we believe his primary defense to a charge of theft would be that Ultima Online is styled as a game where Bone Crusher maces are designed to be stolen. In

56. *Id.* at 40.

57. *See Kremen v. Cohen*, 337 F.3d 1024, 1030 (9th Cir. 2003) (“Like a share of corporate stock or a plot of land, a domain name is a well-defined interest . . .”). Within Ultima Online, a Bone Crusher mace is also a well-defined interest.

58. Dan Hunter, *Cyberspace as Place and the Tragedy of Digital Anticommons*, 91 CAL. L. REV. 439 (2003).

59. *Laws of Virtual Worlds*, *supra* note 2, at 44-50 (investigating the issue of virtual property rights through Lockean, utilitarian, and Hegelian perspectives).

60. *See Kremen*, 337 F.3d at 1036.

other words, within the Ultima Online setting, Bone Crusher maces have a property status similar to the status of basketballs on a basketball court in the physical world.

Like basketballs, Bone Crushers have clear value in the context of the game. This value is appropriated by others when basketballs are “stolen.” We refer to this activity as “stealing”— the same word we use to describe criminal conversion or theft — and the loss of a basketball game can have serious emotional and financial consequences for a player.⁶¹ However, no player would dream of responding to basketball “theft” by petitioning the legal system for a remedy. Instead, the available self-help remedy must be perfected consistent with the rules of the game, which prohibit state intervention in disputes over ball ownership. The norms of game play supercede the standard rules of society, and the magic circle will only be broken if a player violates the game rules.⁶² A violation of game rules will result in a stoppage of play and a penalty of some sort, for example, the return of the basketball back to the prior owner.⁶³

While this game/non-game distinction is perfectly clear, it has social implications that can be fairly radical and perhaps normatively problematic. For instance, intentionally killing someone by throwing a rock at his head would almost certainly result in an indictment for criminal murder. For most of us, there is an intuition that a person should spend a substantial amount of time in jail for that type of activity. By comparison, however, what is our reaction to a pitcher that kills a batter by throwing a “beanball” or a player that seriously injures another participant in a game of hockey?⁶⁴

61. BRIAN SUTTON SMITH, *THE AMBIGUITY OF PLAY* (2001).

62. See JOHAN HUIZINGA, *HOMO LUDENS* 13 (1955) (stating that play “proceeds within its own proper boundaries of time and space according to fixed rules and in an orderly manner.”).

63. There are some real world limits to the potential of game players to cause harm to each other. For studies of the intersection of violence and game rules, see Stanley A. Grazis, *Liability of Participant in Team Athletic Competition for Injury to or Death of Another Participant*, 55 A.L.R. 5th 529 (1998) (explaining various legal standards and sampling cases).

64. See Jeff Yates & William Gillespie, *The Problem Of Sports Violence And The Criminal Prosecution Solution*, 12 CORNELL J. L. & PUB. POL’Y 145 (2002); see William Hecher, *The Criminal Law and Violence in Sports*, 19 CRIM. L.Q. 425, 437 n.63 (1977); see W.R. Habeeb, *Liability for Injury to or Death of Participant in Game or Contest*, 7 A.L.R.2d 704 (2003).

One of the best known “beaning” cases involved Ray Chapman of the Cleveland Indians, who died on August 16, 1920, when he was hit in the head with a fastball thrown by Carl Mays. The circumstances indicate that Mays intentionally hurled a potentially lethal projectile at Chapman’s skull. However, despite an abundance of witnesses, Mays was never criminally charged.

Analogously, civil torts committed during the course of games are not only determined simply by the laws of negligence, but also take into account game rules. As the Tenth Circuit noted in *Hackbart v. Cincinnati Bengals, Inc.*,⁶⁵ “subjecting another to unreasonable risk of harm, the essence of negligence, is inherent in the game of football.”⁶⁶ Thus, the Tenth Circuit has recognized that the game world of professional football is fundamentally at odds with the social imperatives of tort law — yet law, not football, gives way in this conflict. Where the game rules prohibit certain conduct, however, the law of tort will resume its rightful place. As the Tenth Circuit made clear: “[I]t is highly questionable whether a professional football player consents or submits to injuries caused by conduct *not within the rules*.”⁶⁷

Even the United States Supreme Court has seen fit to pursue the proper interpretation of game rules in deciding how to apply congressionally enacted statutes. In *PGA Tour, Inc. v. Martin*,⁶⁸ the Supreme Court looked to the rules of golf to determine if Casey Martin should be permitted to use a golf cart to drive between golf holes pursuant to the Americans with Disabilities Act (“ADA”).⁶⁹ The Court stated that the “walking rule that is contained in [PGA’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.”⁷⁰ Hence, Justice Stevens stated, because the walking rule was not an essential rule of golf, the ADA required the accommodation of the golf cart for Casey Martin. This implies, of course, that if the walking rule were essential to golf, no accommodation would have been required.

65. 601 F.2d 516 (10th Cir. 1979).

66. *Id.* at 520.

67. *Id.* (emphasis added).

68. 532 U.S. 661 (2001).

69. *Id.* at 666.

70. *Id.* at 685.

Justice Scalia seemed rather incensed at this intrusion of Congressional statutes upon the sphere of private game rules. He asked: “Why cannot the PGA TOUR, if it wishes, promote a new game, with distinctive rules (much as the American League promotes a game of baseball in which the pitcher’s turn at the plate can be taken by a “designated hitter”)? If members of the public do not like the new rules . . . they can withdraw their patronage. But the rules are the rules. They are (as in all games) entirely arbitrary.”⁷¹ The majority’s opinion in the *Martin* case, as well as Scalia’s dissent, both demonstrate the give and take that appears to occur when game rules are asked to give way to legal regulation. In essence, the law recognizes and respects the separate social orderings created by game rules, and gives that ordering substantial leeway.

If it is true that potential criminal prosecutions may be defused by the rules of baseball and negligence bows to football, perhaps virtual crime prosecutions will be equally unlikely due to the rules of computer games. After all, the societal stakes of computer games are much lower — players do not place their physical safety at risk by playing *Ultima Online*. The harms suffered by victims within virtual worlds is generally only an emotional and social discomfort and, to some extent, a putative financial harm where players have the right to trade virtual properties.⁷²

If the rules of virtual worlds indeed can play an important part in determining whether Julian Dibbell’s fencing of the *Bone Crusher* was a virtual crime, it is clearly important to ascertain the rules which govern the game of *Ultima Online*. As we explain below, however, the rules of most virtual worlds are difficult to analogize to the rules of more traditional games.

IV. THE LAWLESSNESS OF COMPUTER GAMES

Computer games are inherently different than real space games, in that they are creatures of software. Software creates the

71. *Id.* at 699-700.

72. As stated below, this right does not generally obtain. See Miller, *supra* note 2, at 435; Stephens, *supra* note 2; T.L. Taylor, ‘*Whose Game Is This Anyway?*’: *Negotiating Corporate Ownership in a Virtual World*, in *COMPUTER GAMES AND DIGITAL CULTURES — CONFERENCE PROCEEDINGS 222* (2002).

physics of computer games, gives meaning to game components, and enables player behaviors. One might argue, therefore, that the software code of a game constitutes the “rules” (if any) of the game. By contrast, physical space games such as football, baseball, and basketball, are all governed by external and legalistic rule systems that guide both actions and outcomes. These external rule systems constrain the actions of players and game items.

In the physical game of football, one cannot cross the line of scrimmage before the ball is snapped because doing so will result in a stoppage of play and a punitive sanction. Likewise, in baseball, a batter cannot run the bases after hitting a foul ball because this is impermissible pursuant to the rules of baseball. These player-internalized rules can be analogized to legal rules and norms. One does not walk into a stranger’s home because laws and norms prospectively limit otherwise possible physical actions by the internalized threat of resulting formal and social sanctions.

When software rules constrain player actions, on the other hand, the player has no volitional capacity to undertake impermissible actions. While a game program’s *interface* must be learned (A=left, S=right), a game like *Space Invaders* cannot be explained in a series of prohibitions and entitlements similar to the rules governing football, baseball, or *solitaire*.⁷³ Certainly, players adapt their behavior to avoid losses, but no possible potential actions are prohibited by the coded rules of *Space Invaders*. Likewise, referees are not needed when two people play *Combat* on an Atari 2600 because the game code fulfills that function.⁷⁴ Therefore, “cheating” at *Space Invaders* is impossible without modifying the game’s code, which serves as its rule set. The prohibition against code-breaking is thus the primary rule of computer games — players are not permitted to win games by severing the game designer’s Gordian knots. This reliance on software as a rules-base is perhaps the most significant difference between computer games and physical games.

73. MYERS, *supra* note 41, at 23-29.

74. See Nick Montfort, *Combat in Context*, Presentation at the Form, Culture, and Videogame Conference held at Princeton University (Mar. 6, 2004).

Virtual worlds, to some extent, are just a massively social implementation of traditional genres of computer games.⁷⁵ They depend primarily on coded rule sets because, like Space Invaders, they *are* coded rule sets.⁷⁶ The software code of Britannia is what makes the theft of Bone Crusher maces possible, and therefore putatively “legal” as all actions are legal when playing traditionally lawless computer games.⁷⁷ But unlike traditional computer games, virtual worlds do not rely exclusively on software for their rule systems.⁷⁸ Instead, unlike most other computer games, virtual worlds are accompanied by explicit textual rule sets that are drafted by lawyers and game designers, and designed (at least in part) to curtail anti-social behaviors. These non-software rules of virtual worlds are often expressed in standard End-User License Agreements (“EULA”). Players may be additionally required to assent to the Terms of Service, Rules of Play, and other varieties of contractual agreements.

For instance, in Ultima Online, the written code endorses the game’s software code by explicitly granting players what appears to be permission to steal from other players. While code-enabled harassment is expressly forbidden by the Ultima Online rules, there is a particular carve-out that clearly removes the theft of another player’s virtual property from the scope of harassment. As the policy reads:

75. MYERS, *supra* note 41, at 46.

76. *To Kill an Avatar*, *supra* note 2, at 23.

77. CODE AND OTHER LAWS OF CYBERSPACE, *supra* note 2 (discussing how software regulates behaviors in cyberspatial environments); KING & BORLAND, *supra* note 45, at 160-62 (explaining designer Richard Garriott’s initial consternation with an unrepentant thief in Ultima Online. The thief explained to Garriott that he stole because the Ultima Online code endorsed the presence of thieves and the game play option of thievery).

78. To the extent possible, designers attempt to optimize code-driven solutions to social problems. See KING & BORLAND, *supra* note 45, at 152 (describing the history of efforts to combat anti-social behavior through code); Chip Morningstar & F. Randall Farmer, *The Lessons of Lucasfilm’s Habitat*, in CYBERSPACE: FIRST STEPS (1991). Some game designers, such as Raph Koster, aspire to solve the problems of virtual crime through the intentional design of democratic mechanisms enabling player self-governance. See, e.g., Artie Rogers, *City-State Governments — Their Roles in Online Communities*, in MASSIVELY MULTIPLAYER GAME DEVELOPMENT 464-76 (2003). For a cautionary tale about such efforts, see PAVEL CURTIS, HOW LAMBDA MOO CAME TO EXIST AND WHAT IT DID TO GET BACK AT ME, in HIGH WIRED: ON THE DESIGN, USE, AND THEORY OF EDUCATIONAL MOOS (1998); See also *Laws of Virtual Worlds*, *supra* note 2, at 57-59.

[A]nything considered a valid play style in Ultima Online is not considered harassment. In other words, player killing and *thievery . . . is not considered harassment*. By valid, we mean that there are gamer mechanics created around these *play styles . . . such as . . . the thieving skill*, bounty systems, murder counts, the existence of guards, etc. Ultima Online is a role-playing game that encourages various play styles, and *players should seek ways of protecting themselves against these play styles through game mechanics . . .*⁷⁹

So, according to both the software code of the game and the contractual agreement to which one must assent in order to play Ultima Online, thievery is simply a “play style.” One’s redress for being victimized by a thief is to resort to game mechanics.⁸⁰ If stealing Bone Crusher maces is indeed a permissible activity pursuant to both the software and the contractual provisions in Ultima Online, it would seem that the theft of a Bone Crusher mace could not possibly constitute an unlawful conversion. Likewise, even though there is no common law doctrine that exempts in-game property thefts from the scope of criminal law, it seems highly unlikely that virtual property “crimes” that are entirely consistent with software and contractual game rules would be criminally prosecuted.⁸¹

We should add that the software licenses provide an additional reason for removing inter-avatar theft from the scope of property crimes. Most virtual world EULAs insist that the intangible artifacts in the game are the properties of the game company and never “owned” by players. Bone Crushers therefore never leave the exclusive possession of Electronic Arts, because they never leave Britannia. Because the game owners are not deprived at any time of their property, arguably game properties can never be “stolen” pursuant to the language of the Model Penal Code.

We do not wish to be overly sanguine about this conclusion, which seems to neatly eviscerate the notion of player property rights in virtual worlds. There is some theoretical potential for the legal recognition of player entitlements to virtual property and to

79. See *Ultima Online Support: Harassment Policy and Reporting*, at http://support.uo.com/gm_9.html (emphasis added) (last visited Sept. 9, 2004).

80. KING & BORLAND, *supra* note 45, at 160-62.

81. Habeeb, *supra* note 64; Yates & Gillespie, *supra* note 64.

the legal prohibition of virtual property crimes. In the *PGA Tour* case discussed above, for instance, the PGA was essentially a game owner, and it had expressly promulgated the rules of a competition that forbid Casey Martin to use a golf cart. Yet, the Supreme Court did not defer to the PGA's rules of golf when they conflicted with the needs of a disabled player.

Courts and legislators may conceivably refuse to defer to the private orderings created by contract and software. But we cannot, at this point, predict under what circumstances legislatures and courts will be willing to depart from the current default rule of nearly absolute wizardocracy.⁸² As we explain in the next section, we predict that the issue of virtual property crime will have legal teeth if game owners, rather than the game players, are the ones to raise the issue.

V. "REAL" VIRTUAL CRIMES

By concentrating the legal control of virtual property in the hands of the game owners and designers, we essentially disarm the issue of virtual crimes committed by avatars against other avatars. However, we do not defuse the issue of virtual property and crime entirely, but simply modify the focus of the inquiry from a myriad of avatar-players to a handful of corporate persons that create, own, and administer virtual worlds.

Game owners are not eager to recognize the legal existence of virtual property. Historically, they have been hostile toward player-run markets for virtual property and viewed the "sale" of virtual property by players as a form of cheating.⁸³ It is not unusual for game companies to ban the accounts of individuals who engage in the business of virtual goods trading. Analogies are drawn to meritocracies in sports, where transferring rights to achievement by payment is seen as reprehensible behavior. When athletes throw games, they risk disgrace and even criminal charges.⁸⁴

82. For some constructive thoughts on the potential flashpoints, see Balkin, *supra* note 2.

83. *Law of Virtual Worlds*, *supra* note 2, at 59.

84. Certain players who were on the 1919 White Sox team, including the revered "Shoeless Joe Jackson," threw the 1919 World Series and were subject to a criminal prosecution. They were acquitted, however. See WILLIAM A. COOK, *THE 1919 WORLD SERIES: WHAT REALLY HAPPENED?* (2001).

But Ultima Online is not a typical game. Virtual world designers generally design with the intent that players will trade virtual properties and currencies.⁸⁵ Indeed, a brisk social trade in virtual properties is generally a specific goal of virtual world designers, who see it as a sign of a healthy virtual economy and an enjoyable game.⁸⁶ It is not the practice of exchange that game owners find distressing, but instead they lament the intrusion of external economic forces on what they feel should be an independently ordered sphere of game play. In other words, while all virtual world developers strive to create the illusion of property ownership and a vibrant economy, many wish to keep player ownership, as a legal matter, strictly an illusion, not a reality.⁸⁷

While arguably a game designer does not need a legitimate reason to take this stance, several legitimate reasons do, in fact, exist. For instance, many players support bans on out-of-game trading because they feel that trading virtual property for real money is unethical and violates the spirit of the game.⁸⁸ External property markets also create incentives for harmful entrepreneurial activities — for instance, players sometimes complain that resources in games are difficult to obtain because commercially-motivated exploiters have cornered the market. Arguments might also be made that

85. BARTLE, *supra* note 7, at 297-312 (providing “Tips for a Successful Virtual Economy”); Zachary Booth Simpson, *The In-game Economics of Ultima Online* (presented at Computer Game Developer’s Conference, San Jose, CA, Mar. 2000), available at <http://www.mine-control.com/zack/ueecon/ueecon.html>.

86. See, e.g., Paul D. Sage, *Player Housing — My House Is Your House*, in MASSIVELY MULTIPLAYER GAME DEVELOPMENT 421-26 (2003) (stating that player ownership of virtual homes is one of the most exhilarating experiences in the game and has the beneficial effect of being “a means of commerce”); Evan Schneyer & Justin Nash, *Virtual Economies: An In-Depth Look at the Virtual World of Final Fantasy XI: Online* (2004), available at <http://lgst.wharton.upenn.edu/hunterd/VirtualEconomies.pdf> (describing the effects on gameplay of various economic fluctuations).

87. Not all virtual world owners are hostile to the concept of player-owned virtual properties. For less property-hostile approaches to virtual world design, see, e.g., Cory R. Ondrejka, *Living on the Edge: Digital Worlds Which Embrace the Real World*, (June 5, 2004), available at <http://ssrn.com/abstract=555661>; Cory R. Ondrejka, *Escaping the Gilded Cage: User Created Content and Building the Metaverse*, 49 N.Y.L. SCH. L. REV. 81 (2004); Betsy Book, *These Bodies Are FREE, So Get One NOW!: Advertising and Branding in Social Virtual Worlds* (April 2004), available at <http://ssrn.com/abstract=536422>.

88. See Edward Castronova, *The Right to Play*, available at <http://www.nyls.edu/docs/castronova.pdf> (Oct. 2003). Not all companies are hostile to the concept of player ownership of virtual property, however.

markets for virtual property permit entrepreneurs to free-ride on the game owner's investments while destabilizing their control over virtual economies.

However, while these are all legitimate concerns, game owners may find that the cloud of virtual property might have a slight silver lining. Virtual world owners have long faced difficulties in policing the security of their system against exploiters.⁸⁹ Combining sophisticated code exploits with virtual property markets can be big business. In South Korea, a twenty-two-year-old student named Choi and an accomplice manipulated a virtual world server and made off with 1.5 billion won, or approximately \$1.2 million.⁹⁰ In the United States, the federal Computer Fraud and Abuse Act ("CFAA")⁹¹ would seem to apply to such activities. A criminal violation of Section 1030 requires three main elements to be made out.⁹² First, the defendant must have intentionally accessed a computer. Second, the access must have been without authorization or exceeding the scope of the defendant's authorization. In the case of most security breaches, these two facts can be established. The third requirement of the CFAA, however, is that the damaging resulting from the unauthorized access must be over \$5000.⁹³

On July 30, 2003 in Law Vegas, U.S. District Court Chief Judge Philip M. Pro heard the case *United States v. J.B. Weasel*.⁹⁴ Mr. Weasel stood accused of violating the CFAA by attacking the servers of

89. BARTLE, *supra* note 7, at 108-114 (explaining the general issues of virtual world security systems); MORNINGSTAR & FARMER, *supra* note 77 (explaining difficult decisions stemming from player exploits of programming loopholes).

90. See Byun Duk-kun, *Police Say Game Sites Hotbed of Cyber Crime*, THE KOREA TIMES, Aug. 7, 2003, available at <http://times.hankooki.com/lpage/nation/200308/kt2003080718330611980.htm>; See also Cyber Graeme Wearden, *Criminals Target Online*, at <http://news.zdnet.co.uk/internet/security/0,39020375,39115585,00.htm> (Aug. 8, 2003).

91. COMPUTER FRAUD AND ABUSE ACT, 18 U.S.C. § 1030 (1996).

92. There are many sub-sections to the section which provide for special cases involving, e.g., unauthorized access of government computer systems (18 U.S.C. §1030(a)(1)) or information from federal government agencies (18 U.S.C. §1030(a)(2)(B)), or unauthorized access to obtain credit card information or credit reports (18 U.S.C. §1030(a)(2)(A)). However, the three basic elements remain the same.

93. 18 U.S.C. § 1030(a)(5).

94. *Virtual Becomes Real*, at <http://www.blackhat.com/html/bh-usa-03/bh-usa-03-schedule.html> (July 30, 2003).

Getta Entertainment who maintain the virtual world GettaLife.⁹⁵ Mr. Weasel was accused of directing a person who controlled an avatar called "Terron" to hack into Mr. Martin's account in GettaLife, strip him of his virtual assets (especially his prized "Staff of Viagra")⁹⁶ and leave his avatar naked and defenseless in the game.⁹⁷

The case, as you hopefully have ascertained, was entirely fictional. ("Get a Life" is a common epithet cast at those who frequent virtual worlds.⁹⁸) The moot was conducted at the 2003 "BlackHat Conference" of network and computer security specialists.⁹⁹ The interesting point to note from the standpoint of virtual property was that the jury agreed with the prosecution's arguments that the virtual property at issue had real value. Edward Castronova, an expert witness for the prosecution, has reported:

Defense counsel Jennifer Granick mounted a strong counter-argument, namely that we might, as a society, decide that it is just too difficult to classify game-related damages as real, just as we shy away from taking cases of lost sexual favors to court, even though there clearly are damages. This powerful argument suggests that losses in something we agree to call a 'game' should also be free from legal oversight, even though, in fact, the distinction between game and life is arbitrary. In the end, jury and audience disagreed with this cultural stratagem, preferring instead Prosecutor Richard Salgado's argument that human activity in the allegedly virtual space is not virtual at all. It is real activity and has real values and thus, in principle, it deserves the full attention of policy and law.¹⁰⁰

If such a finding actually obtains in a real courtroom, it would obviously be an initial step toward the legal recognition of virtual prop-

95. Cy Berfud, *Cyber-Thugs Mug Gamer*, at http://www.hackercourt.org/presentations/HC03/FUD_NEWS.html (last visited July 6, 2004).

96. Julian Dibbell, *Black Hat Verdict*, at http://www.juliandibbell.com/playmoney/2003_08_01_playmoney_archive.html#106435327975833639 (Aug. 6, 2003).

97. Berfud, *supra* note 95.

98. MY TINY LIFE, *supra* note 6, at 302.

99. See *BlackHat USA 2003: Las Vegas* (July 30-31, 2003), available at <http://blackhat.com/html/bh-usa-03-index.html>.

100. Edward Castronova, *Report on Black Hat Moot Court*, available at <http://business.fullerton.edu/ecastronova/archive.htm> (last visited July 6, 2004).

erty. The parties who could possibly benefit from such an argument would be game owners victimized by commercial exploiters. A quintessential example would be a “gold dupe” where a player would, though exploiting flaws in the game code, generate duplicate currency. If a player has sufficient game accounts and machines exploiting this sort of dupe, it is possible to create so much excess gold that the virtual currency is devalued within the game. Of course, for the exploiter, a dupe can generate a substantial number of real world dollars before the exchange rate falls off the cliff.

Dupes and exploits obviously don’t make sense as “theft” offenses, even though they involve the sale or appropriation of currency that is legally considered the property of the game owners. The better analogy is obviously counterfeiting because dupers and exploiters are in the business of illegitimately *creating* value, not destroying existing value. But the creation of surplus currencies can destroy functioning economies. In certain cases, broken game economics can create frustration and dissatisfaction, and lead players to terminate game subscriptions.¹⁰¹ Thus, even if the analogy to virtual “theft” of virtual currency is not appropriate, game owners who are victims of commercial exploiters can point to real economic harms created by the unauthorized access and sale of virtual currencies. These harms may, in turn, give rise to criminal prosecutions for property crimes via computer trespass statutes.

VI. CONCLUSION

As we have demonstrated, the problem of virtual crime, like all legal issues that arise in the setting of virtual worlds, is exceedingly complicated. Only time will tell if one day, an ambitious prosecutor will decide to indict the next Mr. Bungle, and assert thereby that virtual worlds are meaningfully different than their video games ancestors.

101. The faulty economy of Ultima Online was part of a litany of complaints that triggered a lawsuit by players against the company for releasing a defective product. The suit was ultimately settled in 1999. Regarding the history of the Ultima Online economy, see Zachary Booth Thompson, *The In-game Economics of Ultima Online* (presented at Computer Game Developer’s Conference, San Jose, CA, Mar. 2000), available at <http://www.mine-control.com/zack/uoecon/uoecon.html> (describing the problems created by bugs in the Ultima Online economy).

If such a prosecution should occur, we will follow the view of Richard Bartle, the co-author of the virtual ur-world MUD1: "My only concern here is that laws may be drawn up prematurely, without proper consultation with those who 'get' virtual worlds, and we could be stuck with something unsuitable or unworkable as a consequence."¹⁰²

As the Honorable Loretta A. Preska has noted, "Judges and legislators faced with adapting existing legal standards to the novel environment of cyberspace struggle with terms and concepts that the average American five-year-old tosses about with breezy familiarity."¹⁰³ Judge Preska continued in a footnote:

I recall in this respect a particularly confusing item of testimony elicited at the evidentiary hearing. Ms. Kovacs, plaintiffs' expert witness with respect to the Internet, testified that on one occasion while she was in a MUD (a Multi-User Dungeon), a malefactor sent his 'virtual dog' on her because she had trespassed on his domain. Fortunately, the other inhabitants of the MUD came to her rescue, vehemently protesting the unfriendliness of the virtual canine attack. Relieved as I was that the story had a happy ending, I must admit that it afforded me a window into an entirely unknown world.¹⁰⁴

Judge Preska's comments were admirably honest. Some degree of confusion and category mistake seem inevitable if traditional criminal law is applied to behaviors in virtual worlds. Ironically, the best avenue for the preservation of the benefits of virtual worlds may be in policing virtual crimes without outside assistance, just as the LambdaMOO community did. If real-life prosecutors come knocking, players and designers may be best advised not to let them peer in the virtual windows.

102. BARTLE, *supra* note 7, at 621.

103. American Libraries Ass'n v. Pataki, 969 F. Supp. 160, 161 (S.D.N.Y. 1997).

104. *Id.* at 161 n.1.