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. Nothing has afforded such harrowing and conclusive evidence of man’s inhumanity to man as has this agelong struggle. It has meant the rack and the stake, banishment and bondage, the Bastille and the Tower, the mines of Siberia and the dungeons of the Doges. With refinement of torture that have taxed the cruel ingenuity of man, it has claimed as its unhappy victims in every age and every race, the prince and the peasant, the noble and the nobody, the king and the subject, the savage and the saint.

Still crime persisted.\footnote{Guy H. Thompson, Missouri Crime Survey, 1926, 12 A.B.A.J., 626, 632.}

\^ Important Note: This is a very preliminary draft, reflecting certain unresolved and undisclosed disagreements between the two authors and subject to complete and unequivocal disclaimer by both. We warn you only once that Lord Nagafen \textbf{WILL STRIKE YOU DEAD} if you so much as think about citing this or using this as an account of what we think. Additionally, the authors expressly reserve the right to seek redress against any such offenders by the well-established common law procedures of torture, ordeal, and trial by combat.

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INTRODUCTION

The Bone Crusher mace was worth about $225. The guy who fenced it for the thief claims he didn’t do anything wrong. Sure, he did sell the stolen mace. Yes, he did know that the mace was stolen. In fact he knew that the thief had lined him up to handle the transaction a day before he acquired the contraband. It admittedly this whole thing looked a lot like a crime and fencing of contraband, and surely the victim had really tried to prevent the theft in much the same way that other victims try to prevent other property crimes. And admittedly the perpetrator and the fence hoped to make some real money off the victim the same way they might make money from any other petty burglary.

But this theft occurred in a world full of dragons and magicians in pointy hats, where swords and wands and armor are as commonplace as pocketbooks and SUVs, and where—most importantly—thieving is an accepted social practice. (We assume the reader knows the particular type of world we’re talking about.) So this wasn’t really a crime—or was it?

Taking by stealth and without consent an object worth US$225 clearly falls within the definition of theft. And, of course, fencing stolen property is

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2 According to Julian’s latest figures the exchange rate between the currency of Ultima Online and the US dollar is US$14.94 per 1 million Britannian gold pieces, http://www.juliandibbell.com/playmoney/2003_10_01_playmoney_archive.html#106685602044647675 (visited 10/31/03). This makes a 15 million gold piece object worth US$224.10.

3 [Big string cite to State of Play conference papers…]

4 See Model Penal Code § 223.2 (1) (“A person is guilty of theft if he unlawfully takes, or exercises unlawful control over, movable property of another with purpose to deprive him thereof.”).
equally criminal. There’s no exception in the Model Penal code that exempts Britannia from its scope. But the fence has presumed that the Model Penal Code does not regulate social actions in Britannia because there, unlike in the real world, this kind of “crime” is fun—as are murder and mayhem. In fact, the thrill of stealing and being robbed is part of the reason people go to Britannia. Perhaps just as importantly, the government of Britannia has not made any steps to prohibit theft by forbidding it in a EULA (a software end-user license agreement). If anything, the legal “code” of the environment makes theft a legitimate option.

So was fencing the Bone Crusher a virtual crime? Maybe. It certainly looked like a crime, so much depends both on what one means by the word “virtual.” According to The American Heritage Collegiate Dictionary, virtual things “Exist[] or result[] in essence or effect, though not in actual fact, form, or name.” Therefore, a virtual thing is to some degree “unreal,” while at the same time an effective equivalent of the thing it aspires to be. In some ways, the world virtual is synonymous with the word artificial, except with the additional connotation of being very close to real. So, according to the dictionary, virtual crimes are essentially and effectively crimes, but aren’t crimes in fact—whatever that might mean.

But “virtual” has a second meaning today—it is used to describe things that involve technology, but nonetheless meet the definition of the modified term.

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5 Model Penal Code § 223.6 (“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.”).

6 Lawrence Lessig, CODE AND OTHER LAWS OF CYBERSPACE (1999) (discussing how code regulates behaviors in cyberspatial environments); [Cite to Dungeons and Dreamers chapter with Garriott].
Communities that use e-mail have been described as “virtual communities,” online booksellers are called “virtual bookstores,” and an alarm clock program for a computer has been called “virtual alarm clock.” All of these “virtual” things arguably fit within their respective definitions “in actual fact, form, or name,” and thus fail to comport with the dictionary definition.

And there’s a third meaning. “Virtual” is commonly used to describe things that fall far short of the terms they modify yet use technology to evoke the thing described. “Virtual reality,” the promise of a fully immersive and realistic computer-generated object or environment, has been largely a fiction. Marketers commonly hawk goods with fictional promise of the “virtual”. For instance, a handheld game might be marketed as a “virtual pet,” and an annoying animation of a paper clip might be described as a “virtual assistant.” Neither approach verisimilitude to a real dog, cat, goldfish, or assistant. Thus, virtual things that involve technology are often not “in essence or effect” the term they modify.

7 Howard Rheingold, The Virtual Community 359 (lamenting, in a new chapter included in a later edition, 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”).


9 See, e.g., <http://www.pcworld.com/downloads/file_description/0,fid,6949,00.asp> (“This handy systems software is a virtual alarm clock for your PC.”).

10 Susan W. Brenner, Is There Such a Thing as "Virtual Crime?", 4 Cal. Crim. Law Rev. 1 at ¶11 (“Cyberspace is a domain that exists along with but apart from the physical world. It is a shared conceptual reality, a ‘virtual world,’ not a shared physical reality.”); Mark Ward, Does virtual crime need real justice?, BBC NEWS, September 29, 2003, available at <http://news.bbc.co.uk/go/prl/l/1/hi/technology/3138456.stm>

11 The Matrix is perhaps the best recent example of the idea, although the popularization of virtual reality seemed to reach its heyday in the mid-1990’s. For instance, 1995 was the year of the short-lived television series VR.5 and the premiere of the film Virtuosity, starring Russell Crowe as a virtual reality villain.
In light of these three potential meanings, the word virtual is virtually meaningless. But like the marketers we criticize, we are fond of this virtually meaningless adjective and have picked it to adorn our title space for the second time, in part because it allows us to be vaguely suggestive of all sorts of behavior at once. “Virtual crime” suggests both real crime within “virtual” environments as well as “virtual” crime that is not crime in fact. And, as the fencing dilemma described above suggests, there can be difficulties in drawing a clear line between the two.

If we’re talking about virtual crimes as merely representations of crime, we should note that these are not normally forbidden in our society—in fact, they make up much of prime time television. Even socially interactive, performative representations of mass murder occur every day—both on the computer monitors of those playing Grand Theft Auto and in community theatres presenting Hamlet.

We should digress briefly on that point: Certainly, one could make the case that mere enactments of violent criminal behavior (in Hamlet and GTA) are not related to real crime. However, while representative enactments of crime may not be socially harmful in themselves, they do not occupy a completely separate sphere from the performance of the actual physical criminal violence in real space. The exact relationship between interactive criminal representations and real criminal activity, is unclear and has been the subject of numerous expensive and apparently inconclusive studies. One might argue that representations of

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12 Marie-Laure Ryan puts it better. See Marie-Laure Ryan, Cyberspace, Virtuality, and the Text in CYBERSPACE TEXTUALITY: COMPUTER TECHNOLOGY AND LITERARY THEORY 78, 88 (“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.”).

13 **cite to Lastowka & Hunter

14 cite.
violence cause violence (which seems unlikely), that representations of violence
desensitize their viewers to violence (which seems more likely), or merely that
violent interactive games present a narrative depiction of violence that shapes
social understanding of the meaning of violence in society (which seems beyond
serious doubt).\footnote{15}

But whatever one concludes, it is clearly within the scope of the
conventional (if possibly erroneous) wisdom that representative performances of
criminal violence may have some role in teaching those engaged in those
representations something about “real” criminal violence. We say this simply
because the conventional wisdom seems to easily embrace the corollary premise
that when children play Milton Bradley’s \textit{Chutes and Ladders},\footnote{16} they learn that
eating their vegetables is a good thing to do. (And \textit{Chutes and Ladders} isn’t
really too far removed from Bertolt Brecht’s notion that society might be
reformed through theatre.\footnote{17}) So if representation has a potentially positive

\footnote{15} See Alex Wilson, \textit{Games censors ’too uptight’}, News.com.au, 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, \textit{Games don’t kill people -- do they?}, Salon.com, June 21, 1999 available at <http://www.salon.com/tech/feature/1999/06/21/game_violence>; Kevin W. Saunders, \textit{Regulating Youth Access to Violent Video Games: Three Responses to First Amendment Concerns}, Michigan State-DCL Law Review, p. 51, 2003 http://ssrn.com/abstract=443140

\footnote{16} Bluebooking question: How do you cite to Chutes and Ladders?

\footnote{17} Probably need a footnote here.
socially transformative and educational power, we must also “learn” something from *Grand Theft Auto*.^{18}

Of course, in the United States, when one talks about such representations of crimes as socially instructive or malignant, one is squarely within the territory of the First Amendment, which (quite properly) protects computer games as instances of core authorial speech.^{19} However, as Martha Stewart has realized recently, the First Amendment does provide carte blanche protection for engaging in speech to anyone about anything—and as certain members of the 1919 White Sox demonstrated to the world, one can’t escape from an unwelcome criminal prosecution by simply declaring that doing something ethically fishy for money in a game isn’t a cause for any serious social fuss.^{20}

Hence, even if we recognize that society has certain interests in protecting free speech and maintaining the separateness of gamespaces, the criminal law and legislatures may not be prevented from applying criminal law to the conduct that occurs in online games. This is especially true when neither free speech interests nor the integrity of a game seem to pose hurdles to the imposition of criminal liability. The fencing example above does not, at first blush, seem to have much to do at all with protecting either speech or games—after all, the Bone Crusher

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^{18} As everyone should know by now, Grand Theft Auto is one of the best-selling and most controversial solo play games in the country. Within GTA, one can benefit from having sex with a prostitute, then killing the prostitute to get the money back. See Lev Grossman, *Busjacking for Grownups*, TIME, Nov. 4, 2002


^{20} Certain players who were on the 1919 White Sox team, including the revered “Shoeless Joe Jackson,” threw the 1919 series and were subject to a criminal prosecution. See William A. Cook, *The 1919 World Series: What Really Happened?* (2001).
market is a market for real-world money, and that money looks real enough on a
Paypal account, and a lot of the community (and therefore the designers by proxy)
might hold the opinion that this kind of stealing and fencing activity is socially
detrimental.

Some antisocial behaviors in game worlds have already invoked the
punitive powers of the states on the far side of the Pacific. Consider, e.g., the
story of the Japanese hacker who hacked into the [Lineage?] account of one user,
sold her virtual house and pocketed the real world money from the transaction. Though the behavior occurred online, there was no question in the minds of the victim, prosecutor or judge that these actions were criminal in the real world.

Real world criminal prosecutions based on criminal behavior in online
games are possible in reality, and not just reality of the virtual stripe. So we ask
in this article what on earth—and on Rubi-Ka, and Norrath, and Britain—should
be the social response to virtual crimes. We endeavor to understand both what
crime might be within virtual worlds and to articulate an understanding of the
relationship between real-world criminal prohibitions and virtual-world attempts
to control socially forbidden behaviors.

Understanding the different values of the real world society and virtual
communities is an important issue in attempting to sort out the issue of what
constitutes virtual crime. In *Ultima Online*, for instance, virtual thieves practice

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22  We note that we are not the first to attempt such an investigation. Susan W. Brenner, *Is There Such a Thing as "Virtual Crime?"*, 4 Cal. Crim. Law Rev. 1. Brenner’s article focuses largely on another contribution by Julian Dibbell, the tale of the “rape in cyberspace” perpetrated by Mr. Bungle in LambdaMOO. Orin Kerr has also written about the conflict between “virtual reality” and reality in the application of criminal law. See Orin Kerr, *The Problem of Perspective*, 91 GEO. L. J. ____ (2003).
the art of being a thief in the same way they practice virtual blacksmithing or magic. Because thievery is part of the coded architecture of the fence’s world, he presumes that thievery must be “legal,” i.e., within the “rules” of the game environment. Of course, the reason one might presume that everything that is possible in virtual worlds must be legal is that the game of Ultima Online is a game played on a computer—and, in some ways, this makes all the difference.

Computer games are unlike most games because most games impose rules—and this turns out to be an important thing for the purposes of law. When one plays football, baseball, or ultimate Frisbee, one must learn a complicated rule system that guides both actions and outcomes—an in-game legal system if you will, that guides, constrains, and rewards behaviors. One cannot cross the line of scrimmage before the football is snapped without receiving a punitive sanction and only an idiot batter would disregard the rules of baseball that instruct whether a pitch is a ball or a strike and a ball is hit foul or fair. While one could, in theory, start running bases from the third rather than the first, no one seems to do this.

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23 [Cite to Dungeons & Dreamers again.]

24 Compliance with game rules, however, does not always guarantee legality. For instance, if a pitcher kills a batter with a “beanball,” the in-game practice of beaning would probably not constitute a legal defense that killing people with baseballs is just something that pitchers do pursuant to the rules of the game. We’re using “beaning” here (as opposed to “pitching inside”) to denote as intentional, not accidental or reckless, injury to the batter. One of the best know cases of beaning involved Ray Chapman, who died on August 16, 1920, playing for the Cleveland Indians, when he was hit in the head with a fastball thrown by Carl Mays. Chapman was crowding the plate at the time, just as many contemporary batters do. However, beaning is both less accepted and less dangerous today than it was in the early 20th century. Current “knockdown rules” in baseball seem to make “beaning” a questionable practice under the rules and the protective gear worn by batters reduces the potential for serious harm.

25 The rules of these games are written down, though they are rarely learned that way. Instead player learn the rules socially.
Computer games are inherently different because they are creatures of software. While the interface must be learned (A=left, S=right), there are no “rules” in the sense of the quasi-legal behavior regulations that govern football and baseball. No referees exist to officiate close calls. In fact, one cannot break the rules of Pong and Pac-Man because the only rules are coded restrictions on game capabilities. One cannot “cheat” at a solo game without manipulating the code of the game. Technological alterations are violations of what can be identified as the single primary “rule” of computer games—that players do not “win” games by severing their Gordian knots.

The relative absence of any laws within virtual worlds as social games makes them quite different than other games—if indeed, one can even characterize virtual worlds as games. Game theorists have observed how social game spaces are meaningfully protected and isolated from social controls that operate in the extra-game world. To some extent, the law recognizes games as separate jurisdictions as well. For instance, torts committed during the course of football games are not constrained only by the conventional laws of negligence, but take into account the laws of football as well. As the Tenth Circuit noted in Hackbart v. Cincinnati Bengals, Inc., 601 F.2d 516 (10th Cir. 1979), “subjecting another to unreasonable risk of harm, the essence of negligence, is inherent in the game of football…” Thus, the Tenth Circuit has recognized that the game world of professional football is fundamentally at odds with the social goals of tort law—and that law, not football, is what needs to adapt.

However, the law does not leave game spaces entirely to their own devices. The Tenth Circuit noted that there were limits to the degree to which football distorted the normal analysis of tort liability: “[I]t is highly questionable

26 Huzinga, HOMO LUDENS.
whether a professional football player consents or submits to injuries caused by conduct not within the rules...” The United States Supreme Court, much to the consternation of Justice Scalia, has also seen fit to intrude upon game spaces and their rules, but only in a way that respected the “essence” of a game. In *PGA Tour, Inc. v. Martin*, 532 U.S. 661 (2001), the Supreme Court determined Casey Martin’s should be permitted to use a golf-cart to drive between the holes pursuant to the Americans with Disabilities Act.\textsuperscript{27} To be more precise, 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.”\textsuperscript{28} Hence, because the walking rule was not an essential rule of golf, the ADA required the golf cart accommodation for Casey Martin.

As noted above, most virtual worlds do not have the benefit of a formalized Rules of Britannia that can be the subject of the Supreme Court’s deference. It is unclear, in any case, who would promulgate such rules. After all, in the *PGA Tour* case, it was clear that the Supreme Court was not willing to defer to the PGA's interpretation of its own rules of golf—hence it is unclear whether a rules of virtual worlds promulgated by game designers would be recognized as essential either. If the in-game laws of virtual worlds are important to the imposition of conventional law on these spaces, as we have argued previously,

\textsuperscript{27} 532 U.S. 661 (2001) (citations omitted).

\textsuperscript{28} 532 U.S. 661 (2001) (citations omitted).

Justice Scalia seemed outraged at this intrusion of law upon the pristine sphere of game rules: “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...” *Id.* at ___.

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then these virtual laws will need to be discovered before one can make sense of the nature of “virtual crime.”

We will structure the remainder of this paper to explore the concept of virtual crime, both in terms of in-game crime policed by in-game “law” and in terms of the application of external criminal law to gamespaces. In Part I we examine the nature of crimes that occur wholly within a virtual world. That is, we look at the social actions that take place within the virtual world which are understood as “criminal” by their communities and are the subject of “legal” responses by the community and designers of the world. We ask initially what amounts to criminality within these worlds, and go on to consider the mechanisms by which the various in-world regulators—that is, the game developers and owners, as well as the gaming communities—seek to regulate actions that are criminal within the world.

In Part II we step outside the game space and focus on activity that may or may not be criminal according to the communities of the virtual world, but which we believe could be recognized as truly (extrinsically) criminal. Here we see some of the difficulties that are emerging in the real-world regulation of these worlds. In some cases, the criminal activity is easy to classify and to control, such as where virtual worlds are used as the loci for hacking or credit card fraud. However, other examples—including “gold duping”, “exploits”, and others—demonstrate how the differences between community norms in virtual and real worlds will create regulatory dilemmas and force courts and legislators to engage in significant policy deliberations.
I. VIRTUAL CRIMES

“A … crime is and always has been a part of the protective armor of society,—a means of shielding itself against the disturbance by a few of what the majority have come to accept as a proper norm of conduct.”

As we indicated at the introduction, it is foolish to take our real world expectations of crime and label things that occur within these worlds as “virtual crime.” If the label “criminal” is attached to behavior that is contrary to community norms, then it is necessary to recognize that there are, at least, two different communities involved here. The expectations of the real world community is very different from the virtual world community for many reasons, but not least because of the different implications of the same sort of actions in the real world and in the virtual. Stabbing an avatar with a virtual sword has very different outcomes—as well as very different motivations—from the same action in the real world.

Hence we cannot take our real world understanding of crime and simply map them onto the virtual worlds. Instead we propose that we seek first to identify the virtual community expectations and norms, and from this identify what amounts to virtual crime within the world. In order to do this we begin in the next section by asking why virtual crime might exist at all within these worlds. We go on then to consider a definition of these virtual crimes, and then examine the regulatory responses possible for these crimes. We conclude by inquiring into the relationship between crimes and fun.

A. Crime and Grief

Crime, or at least anti-social behavior, has always been a characteristic of virtual worlds. You might think that in worlds where anything is possible, the incentives for criminal activity would disappear. But antisocial behavior is just as prevalent in virtual worlds as it is elsewhere. Julian Dibbell’s report of the infamous “rape in cyberspace” is perhaps the most well-known example of antisocial behavior. Pre-dating Dibbell’s reported rape was MUD PKing (Player-Killing) which, at the very least, was a representation of criminal behavior as well as an activity that some individuals found annoying and distressing in some circumstances. More recently, in the early beta-testing days of There, an avatar threw up a “For Sale” sign outside the front of a house that he didn’t own and collected some serious ThereBucks—a clear example of virtual fraud.

Anti-social behavior occurs within virtual worlds for similar reasons as in the real world: some people are virtual sociopaths and find amusement in this sort of behavior, some people have different interests from the majority which results in anti-social behavior, and some just want to make (virtual) money and discover that the easiest way is to rip others off. Indeed, Mr. Bungle claimed his activities were something of a role-play experiment—essentially arguing that his virtual sadism was no worse than a public performance of Titus Andronicus. Whatever the reason behind these actions, it is clear that virtual worlds are not

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30 **cite
31 **cite to Lastowka & Hunter
32 ***Source was Will Harvey, There founder.
33 **definition in MUD-DEV FAQ
34 Cite.
utopias. Anti-social behaviors are present in any virtual world—many have suggested that the potential for easy anonymity within virtual worlds makes anti-social behaviors more likely.35

The question for the authors is whether such anti-social behavior within virtual worlds can or should be considered “criminal.”36 One might claim, of course, that the sorts of behavior recounted here are not properly conceived of as “crimes” at all—yet they seem to be the sort of anti-social activities that someone should proscribe. If one simply looks at community reactions, it seems clear that in most hack-and-slash worlds, stealing and looting are consistent with social expectations. However, in There, avatar murder and looting are presumable a violation of social norms—and this norm is likely derivative of the fact that avatar murder is impossible in There without fundamentally breaking There’s code.37

Across the range of virtual worlds, the behavior that seems the greatest source of annoyance for both developers and participants is an activity called “griefing,” which we suggest is the only category of activity across game environment that captures what we might be talking about when we talk about purely virtual crime.38 Griefing is essentially the equivalent of Disorderly Conduct within virtual society, and consists of all behaviors which are perpetuated within virtual society merely with the express intent bring sadistic pleasure to the perpetrator though the suffering and emotional distress of others. Cf. MODEL

35 Cite.

36 Susan W. Brenner, Is There Such a Thing as "Virtual Crime?", 4 Cal. Crim. Law Rev. 1 at ___. (summarize conclusions).

37 Regulatory enforcement by the developer is a topic which we take up in section B, infra. The observation remains, however, that if it were possible to PK in There then it would be against the community expectations and therefore a crime.

38 Cite to grieving literature.
PENAL CODE § 250.2 (“A person is guilty of disorderly conduct if, with purpose to cause public inconvenience, annoyance or alarm, or recklessly creating a risk thereof, he: (a) engages in fighting or threatening, or in violent or tumultuous behavior; or (b) makes unreasonable noise or offensively coarse utterance gesture or display, or addresses abusive language to any person present; or (c) creates a hazardous or physically offensive condition by any act which serves no legitimate purpose of the actor.).

Mr. Bungle’s actions would clearly fall within the ambit of this definition. Obviously the fit between Disorderly Conduct and griefing isn’t precise, but both accord protection to society against those who act publicly to provoke consternation and distress “that serves no legitimate purpose.” Defining all virtual crime as “griefing” and all “griefing” as crime might be subject to a number of criticisms, but it also leads to a number of useful results.

Let us deal initially with the benefits. First, it provides some basis for discussing the concept of crime within these worlds and across these worlds. If, as we believe, these worlds will become increasingly important as social spaces for the next generations then we need some basis for concluding whether given actions are criminal by the standards of the community. It also avoids the inevitable downplaying of conduct that is labeled “griefing”. To the external observer who is unaware of what griefing entails or means for the participants of the world, the term “griefing” is essentially meaningless. Characterizing behavior as criminal makes it easy to comprehend the seriousness of the behavior to the participants.

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39 See Lastowka and Hunter, ***.
Finally, viewing griefing as virtually criminal provides the basis for assessing the appropriateness of the punishment provided within the virtual environment. It is commonly accepted that the punishment must fit the crime. Banishment from a world may appear arbitrary and unacceptably harsh to outsiders if the conduct complained of is only “griefing” or harassment. Understanding this behavior as criminal casts the connection between the crime and the punishment in more direct terms.

Of course, this is not the whole story, and it is easy to identify concerns with defining crime in this way. First, one might say that this strips the concept of “crime” of all meaning, if simple griefing amounts to a crime. But consider the real world with its differing expectations of crime within different societies. Drug use in some places is criminal and not in others: possession of small amounts of marijuana in the US is illegal whereas it’s not in the Netherlands, sale of alcohol is illegal in some countries applying Islamic Sharia law, and not in the US. Infidelity is a crime in some societies, and a hobby in others. It is nonsensical therefore to apply the definition of what amounts to a crime across societal boundaries. The same seems to us to be true for virtual crimes.

Second, many may think that griefing and crime is so different that to label one the other is a simple category mistake. But again this seems to be simply applying one’s intuitive sense of what is criminal in one’s own society, and failing to accept that other societies have different criteria for the construction of criminality.

Third, there is the problem of what we mean by community in this context. Virtual world societies are different from real world societies because the former are artificially constituted by the rules of the developers. At the highest level, the developers choose the nature of the physical world such as the physics
of the world, the look of the world, the name of it, etc; but equally they make decisions about the nature of social relationships, political organizations, and legal mechanisms. For example, as we’ve documented elsewhere, most worlds have a property system, but few of them have democratic political systems or well-established legal institutions. There are some examples of emergent systems of behavior and community within these worlds—the most obvious being the creation of guilds in most worlds—but bottom-up development of social order is rare. Rules of behavior are usually laid down in terms of use by the developer and adopted by the community out of necessity. This is not really a problem however for a theory of criminality that relies on community expectation as a ground. There is no reason why the developer’s acceptable use policy cannot be part of the community expectations of what amounts to a crime.

Of course, the actor who is enforcing the punishment (and the nature of the punishment) is different in the virtual worlds from the real worlds. It is the developer who punishes the transgressors, not any kind of community-constituted tribunal or officer. And further, it is the developer who concludes whether a given user has transgressed the community boundaries. But again, this doesn’t seem to make much difference. Whether it is a god-wizard or community-evolved tribunal providing punishment the salient detail is that there is a mechanism for

40 Lastowka and Hunter, ***

41 A recent exception to this is A Tale in the Desert www.atitd.com (visited 10/24/03).

42 Eg Taylor, Jakobsson, etc

43 See e.g. There.com’s acceptable behavior guidelines, available at http://www.there.com/behavior.html (visited 10/29/03). These rules of behavior include prohibitions on pornographic and obscene discussions, on the repeated posting of the same message in order to disrupt other people’s discussion, and upon harassment, defamation, abuse or threats. The penalty is account suspension.

44 As to the latter, the best example is probably the posses in End of the Line, ***.
the imposition of punitive sanctions. The identity of the entity defining the crime and providing the punishment may have political implications within the world—that is, the community may eventually disagree that the crime should be defined by the developer, or that is should be subject to the punishment that the developer has specified—but this does not affect the fundamental basis presented here for treating the community expectations as the basis for assessments of criminality.

Finally, James Grimmelman has objected that this definition “short-circuits the idea of a victimless crime.”\(^{45}\) He argues that behavior which bad for the world as a whole will not be considered a crime. There are a number of responses to this: first, it is hard to conceive of victimless crime in virtual worlds, since the typical real world candidates (prostitution, drug taking, suicide) don’t seem to have any correlates in-world. Second, it’s equally difficult to conceive of a crime against the entire game that would not also affect the individuals within the world, albeit perhaps only to a small degree.

There are various types of behavior that are against the interests of game developers, for example the “duping” of the currency, the creation of forged accounts or hacking into the world database. As we discuss in the next Part these sorts of behavior will usually have an effect in the real world and would be actionable there. However this leaves the possibility of behavior that occurs against the developer, which has no real world criminal effect, and which does not amount to grieving any individual player. Should we consider this sort of behavior—gold duping, say—as a crime? We suggest not, for two simple reasons. First, it is going to be forbidden by the game developer either by EULA or code\(^{46}\) and so as a pragmatic matter does not require categorization as a crime.

\(^{45}\) See comments by Grimmelman on TerraNova blog entry, available at http://terranova.blogs.com/terra_nova/2003/10/virtual_crime_1.html (visited 10/30/03)

\(^{46}\) On which topic see section **infra.**
But more important for the theoretical position advanced here, it is makes no sense to characterize behavior against the game or against the developer as criminal.

The conclusion, we believe, is that it is possible to generate a simple definition for in-world criminal activity, and the definition of griefing as crime best captures the understanding of the participants in virtual worlds. Understanding virtual crime in this way leads to an interesting series of questions. For example, is the community happy with the developers making the decision to punish the criminals? Imagine the situation where, in a real-world (representative, democratic, Westminster) system, there was a punishment for sodomy or drug-taking or something else that was out-of-step with current community views. Punishment of offenders takes place by the appropriately constituted members of the executive, but the community is unhappy about this. We would expect political agitation on the part of those who disagreed with the law, and in time would expect changes to occur. We don't have this within virtual worlds as, in almost every world one examines, there is no mechanism for community involvement in governance or decision-making.

We have made the point elsewhere that we are likely to see community demand for input in these sorts of decisions.\footnote{Lastowka and Hunter ***.} It seems plausible to believe that these demands may coalesce around the issue of crime and punishment, since the concepts are very loaded and at the core of any developer community. If developers start punishing for in-world "crimes" then they need a fairly strong basis for doing so. If we don't have a theory of what is crime within these worlds, then this sort of behavior appears arbitrary. If we do have a theory of what amounts to crime within the world, then there will be pressure to have community
involvement in the definition of crime, and possibly in the execution of the punishment. Either way, it appears that developers will be caught in the middle of community expectations.

**B. Criminal Codes and Anti-Criminal Coding**

Whether one considers griefing as criminal, or just bad behavior, it is obvious that there have been regulatory responses to anti-social behavior, and this can be seen as the same as crime control. The response of the world’s designers is to institute what we would think of as law in the real world, but which in virtual worlds involves technological solutions, or social conventions, or a combination of both. The first attempt to solve the player-killer problem in *Ultima Online* was to institute a technological reputation system.\textsuperscript{48} Player’s names were initially displayed in blue, but would become redder each time they killed another player.\textsuperscript{49} Other worlds adopted different approaches. For example, in one MUD, the whole community would enforce norms against player-killing. Known PKers would have their names posted on a board, and posses would be deputized to hunt down and kill them.\textsuperscript{50}

Worlds differ in their approach, and within a world, each type of dispute handled differently. Sexual harassment is particularly noticeable for avatars presenting as female (whether or not their user is female in real life). Given the overwhelmingly male, and overwhelmingly young, demographic for the role playing games this is hardly a surprise, though it is unwelcome. While

\textsuperscript{48} Kolbert, New Yorker **

\textsuperscript{49} id.

\textsuperscript{50} End of the Line.
harassment is typically against the end-user license agreement and is grounds for getting the user booted from the system, it is notoriously hard to police.

One view of this is that criminal law enforcement will emerge from communities even if there is only a limited government. That is, some suggest that these worlds prove in microcosm the Hayekian premise that societies will function best with only minimal government involvement, such as the guarantee of property interests. Robert Shapiro, the undersecretary of commerce in the Clinton administration, wrote about the political lessons we can learn from *Everquest*, and waxed lyrical over its “small government is good government” possibilities: “In *Everquest*… a powerful government appears only briefly at the start, in the iron rule that everyone starts out with roughly equal assets. Then it retreats and lets economic nature take its course.” He was particularly struck by the relationship between property and equality, and concluded that this virtual world can teach the real world: “This may provide the most important lesson of all from the EverQuest experiment: Real equality can obviate much of a democratic government’s intervention in a modern economy…If EverQuest is any guide, the liberal dream of genuine equality would usher in the conservative vision of truly limited government.”

But virtual worlds don’t necessarily obey the verities of real world political systems, any more than they necessarily obey the laws of physics. If the world’s designers don’t like the activities of their inhabitants then they can simply change the world to render the actions impossible. In *There*, for example, some users discovered that they could drive their dunebuggy into groups of chatting avatars. No avatar was injured, since the code of *There* makes injuries impossible. But users whose avatars had been scattered to the four winds by
dunebuggy drivers were understandably irate. Rather than rely on social norms and democratic agreement, the designers at *There* just added the “forcefield” button. With your forcefield turned on, the disruptive dunebuggy-driving bowler just bounces off you. If Congress could legislate this, road laws would be unnecessary. So perhaps we can modify Shapiro’s conclusion to read that virtual worlds prove that small government is possible as long as you can program away problems like death, bowling and, presumably, taxes.

This seems plausible, but even in virtual worlds not all socially-undesirable behavior can be designed away as easily. The *Ultima Online* scarlet lettering of player-killers looked at first to be a neat solution. However, in order to encourage posses and the removal of player-killers the designers coded the system so that avatars that attacked known player-killers were rewarded with more virtuous blue names. Socially desirable behavior should, the theory went, be rewarded, and even the most egregious player-killer should be allowed to redeem himself. The almost-inevitable response on the part of the player-killers was to pair up, each one attacking the other, eventually turning both avatars’ names a blameless blue. They were then free to wander back to the local waterhole, and suggest to an unsuspecting newbie that a little adventuring in a quiet locale might be mutually advantageous. In the end the reputation system was seen to be so flawed that the designers gave up, and simply created PvP shards where player-killing was allowed and warned new players to avoid these areas at all costs if they didn’t want to die. The similarity to the response of governments in real world ghettoes was, presumably, not lost on the designers.

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51 Will Harvey interview with authors.

52 Kolbert, *New Yorker* ***

53 **cite
It is clear then that virtual world regulatory response follows Lessig’s modalities of regulation, with a particular emphasis on code and normative responses to criminal activity. Thus, developers will typically code out criminal activity, as in the case of *There* where PKing is simply not within the realms of the possible. Moreover, community norms are often supplemented with code-based solutions. The reputation system of Ultima Online is an example of code being used to assist norms against PvP, effectively producing a legal system that removes the majority of the criminal (ie non-consensual) PKing while still allowing for PvP to exist in limited arenas.

Computer code would therefore appear to be all-powerful in virtual worlds: if you don’t like behavior you simply program it away. But code alone cannot be a panacea for all virtual crime. Virtual communities often force certain choices that make code-solutions impossible. Designers of hack-and-slash worlds can’t banish death completely, because dealing out death and destruction is, at one level, the whole point of the game. So they have to create ugly work-arounds, like player-versus-player zones, or reputation systems.

And even these only work within limited contexts. As the avatar-bowling example demonstrates player-on-player harassment (usually called ‘griefing’) can take many forms other than murder. There are so many ways to annoy and offend other avatars that offensive behavior is impossible to capture in a simple algorithm, and cannot be policed by code alone. For instance, language is so versatile that, if one allows avatars the freedom to speak with each other—a game feature that participants overwhelmingly require—designers find themselves unable to code out the possibility of verbal abuse. This is a lesson that other online sources are only now coming to terms with: creatively misspelled

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profanity, and classic double entendres render technological filtering largely futile. Online chatrooms and email systems are searching for code-based fixes for the wave on wave of electronic come-ons for p-rn-gr-phy, ‘m4k3 m0n3y f45t’ schemes, and p*n*s enl*rgem*nt treatments. There is a lesson here that virtual worlds could have taught them some time ago: for these sorts of problems code won’t work.

The alternative regulatory modalities have, of course, been tried. Designers have applied real world legal solutions, such as license agreements, to the crime problem. Players are required to agree to terms of use that include obligations that they will not bother other players, and engage in harassment or griefing. These terms are so widely drafted and so draconian that they provide essentially unfettered discretion for designers to boot identified criminals from the virtual world. But designers simply don’t have the resources to monitor thousands of interactions and conversations, or to investigate all complaints of wrongdoing. Policing the world creates a social tax in any event, driving up the cost of subscriptions. It is possible of course that designers might see the role of policing as sufficiently important to spend time and money on the problem. But, unlike the real world, this decision is solely a cost-benefit analysis: will the costs of policing be less than the costs of losing customers as a result of the crime? Political decisions within these worlds are, therefore, as economically efficient as one could imagine.

C. Crime Is Not Fun

The conclusion from the above discussions seems to be twofold. First crime exists within these worlds and cannot be ignored for the long-term survival of the world. It is not going to go away of its own accord. Secondly, current regulatory solutions are insufficient for a number of reasons: code cannot remove
all criminal activity, and other regulatory modalities are generally under the control of the developers.

In an earlier paper we argued that crime was a necessary part of most virtual worlds, and certainly of competitive gaming environments like *Dark Age of Camelot* or *Lineage*.\textsuperscript{55} We suggested that scarcity, danger, and struggle are features, not bugs of these sorts of worlds. Programmers could have easily created virtual worlds where every avatar had the option of obtaining every available power. We concluded that it would be wrong to think of crime as an unfortunate byproduct of virtual societies. Instead, crime is an extension of many of the same freedoms that make these worlds so appealing to their inhabitants.

We were talking then about the external view of what amounts to crime, e.g. representations of stealing, maiming, and killing. Under the approach advanced above, these are not properly thought of as crimes, from the perspective of the participant within the world. Griefing is different. It is a crime that requires effective regulatory approaches, which are not provided in any world we have hitherto examined.

Code doesn’t appear to be close to a complete solution, nor, apparently, is the selective enforcement of EULAs via GameMasters or other developer representatives. The only regulatory approach not attempted by developers appears to be the most obvious: involve the community-members in the specification and enforcement of crimes. This avoids the costs to developers of providing dispute resolution mechanisms, and provides the extraordinary opportunity of having users pay monthly fees to provide dispute resolution

\textsuperscript{55} Hunter and Lastowka, ***
services for them. It also solves the concern raised above about the political risks inherent in control over the definition of crimes.

II. BLEEDING EDGES

[Note: The following section is very rough and we’re obviously already well past our 15-page conference draft... See supra first ♠♠♠♠ note]

“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.”

Though we have been hitherto focused on the question of criminality internal to the virtual world, there is of course the question of whether in-world behavior can give rise to criminal liability in the real world. The answer to this is, of course, “yes”. As for other types of behavior that occurs in other parts of cyberspace, online actions regularly have effects in the real world. Cracking into a virtual world database and copying data or erasing someone’s avatar is no different from cracking into Amazon’s database and doing much the same thing. Convincing someone to part with their credit card details by spoofing the avatar of a gamemaster is little different from collecting the same information by spoofed email or IP addresses.

Thus, many of the cybercrime lessons we have learnt over the last 10 years will apply without amendment to the databases, computers, and networks

57 **cites
that make up the technical infrastructure of the virtual worlds. However, virtual worlds do present a unique type of real world criminal challenge since they mimic (or are) property and currency systems that are orthogonal to the real world but where exchanges between the virtual and real are possible and simple. Thus, as Ted Castronova famously explains one can calculate a real-world hourly wage for work in virtual worlds, and one can compute an exchange rate. As Julian Dibbell has documented, the trade in assets from just one game, *Ultima Online*, is currently running around US $3.5m per annum. And as we have argued elsewhere, these virtual assets almost certainly amount to property for the purposes of the US legal system.

Criminal activity involving virtual property and virtual currency was a foregone conclusion as soon as the property and currency became sufficiently valuable in the real world. Recent reports back up the prediction. A Japanese man hacked into another person’s virtual world account, sold her virtual house, and pocketed the proceeds. In South Korea, a 22 year old student named Choi and an accomplice manipulated a virtual world server and made off with 1.5 billion won, or approximately US $1.2 million. While in other reports from Korea, gangs of youths rampage across servers, looting and pillaging other

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58 Castronova, etc*

59 http://www.juliandibbell.com/playmoney/2003_10_01_playmoney_archive.html#106685 602044647675 (visited 10/31/03)

60 Lastowka and Hunter ***

61 **cite

62 See http://times.hankooki.com/lpage/nation/200308/kt2003080718330611980.htm and http://news.zdnet.co.uk/internet/security/0,39020375,39115585,00.htm (visited 10/31/03)
people’s virtual property, and selling it off in the real world.\textsuperscript{63} And in Indiana, a known author fenced a stolen magic mace and bragged about it on his blog.\textsuperscript{64}

Though there are many criminal laws which we could look to apply to these examples, we will divide the remainder of this part into looking at three representative examples and their applicable laws, to give an idea of the connection between the real world and virtual crime. The sections that follow look at criminal computer trespass laws, property offenses, and an example of an interesting dilemma posed by the disconnection between the real world and the virtual.

\textbf{A. Cracking}

On July 30, 2003 in Law Vegas, US District Court Chief Judge Philip M Pro heard the case of the \textit{United States v. J.B. Weasel}.\textsuperscript{65} Mr Weasel stood accused of attacking the servers of Getta Entertainment who maintain the virtual world \textit{GettaLife}. \textit{GettaLife} is a global, multi-player adventure game where players assume the role of a self-created avatar, traveling through the game’s virtual world, fighting monsters and searching for treasures.\textsuperscript{66} Mr Weasel was alleged to have been involved in a dispute with Mr Brian Martin, over Mr Martin’s use of an exploit to improve his standing in the game. Mr Weasel was accused of directing a person who controlled an avatar called “Terron” to hack into Mr Martin’s

\textsuperscript{63} \url{http://www.forbes.com/forbes/2003/0721/092_print.html} (visited 10/31/03).

\textsuperscript{64} \url{http://www.juliandibbell.com/playmoney/2003_08_01_playmoney_archive.html#106019981622479993} (visited 10/31/03)

\textsuperscript{65} \url{http://www.blackhat.com/html/bh-usa-03/bh-usa-03-schedule.html} (visited 10/31/03)

\textsuperscript{66} \url{http://www.hackercourt.org/presentations/HC03/FUD_NEWS.html} (visited 10/31/03)
account in *GettaLife*, strip him of his virtual assets (especially his prized “Staff of Viagra”) and leave his avatar naked and defenseless in the game.68

The case was in fact a fiction. It was written as a moot for the 2003 “BlackHat Conference” of network and computer security specialists.69 However the so-called “Hacker Court” moot is good example of the application of the federal criminal computer trespass law, the Computer Fraud and Abuse Act,70 to questionable activity within virtual worlds. Section 1030 of the Act requires three main elements to be made out:72 first that the defendant intentionally accessed a computer, second that the access was without authorization or exceeded the defendant’s authorization, and third that damage of more than $5000 was caused.73

Though the “jury” returned no verdict as result of insufficient facts on the relationship between Weasel and Terron, it clearly concluded that the value of the

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67 http://www.juliandibbell.com/playmoney/2003_08_01_playmoney_archive.html#106435 327975833639 (visited 10/31/03)

68 http://www.hackercourt.org/presentations/HC03/FUD_NEWS.html (visited 10/31/03)

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71 Computer Fraud and Abuse Act of 1986, 18 USCA § 1030 (1996) [Hereinafter “CFAA”].

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

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virtual assets was sufficient to sustain a criminal proceeding. The defense argued that the items removed were not property for the purposes of the Act. As Ted Castronova, an expert witness in the case 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 haggles real values and thus, in principle, it deserves the full attention of policy and law.”

The judge agreed. It would appear that the criminal computer trespass actions are a likely first step in the real world criminalization of in-world behavior.

**B. Property Offenses**

Alternatively, we might ignore the special requirements of computer trespass statutes and look to common law rules proscribing offenses against property. These laws—theft, malicious damage, etc—exist in all common law jurisdictions and are much the same in each one. Though, of course, they differ in their terms and effect, the one similarity they share is that the victim’s property must be affected, tampered with, or stolen. For this to be applicable, then of course we must be talking about a cognizable property interest.

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74 See Edward Castronova’s account of the outcome, http://business.fullerton.edu/ecastronova/archive.htm (visited 10/31/03).

75 http://business.fullerton.edu/ecastronova/archive.htm
For reasons we have advanced elsewhere, and given the experience of the Hacker Court trial, it seems likely that the abstraction of a user’s virtual house or sword is going to be a real world crime. We think it likely that these items will be accorded the status of property in criminal proceedings. Of course the defendant may be able to claim that the property is not owned by the victim but by the developer, as a consequence of EULAs that deem all property to be the developers. The clever attorney for the defendant can then go on to claim that the developer has actually lost nothing, because of course the developer could conjure the property back into existence if it chose.

Whatever the outcome of a trial defended in such a way, it seems (to us, at least) likely that real world property crimes can be established based on the unlawful transfer of virtual assets. More interesting is the question of “hacks”, “exploits”, and “dupes”. Though the details of these sorts of activities are too arcane to trouble us here, they all involve some kind of manipulation of the game server to benefit a canny player. A quintessential example is a “gold dupe” where a player is able to generate a duplicate gold piece by exploiting a bug in the server code.\footnote{76} If one has sufficient game accounts and machines exploiting this sort of dupe, it is possible to create so much gold that it devalues the in-world currency.\footnote{77} Of course, it also generates a lot of real world dollars before the exchange rate falls off the cliff.

The interesting thing about this example is that it doesn’t fit very well into property offenses, even though the individual currency “pieces” might be

\footnote{76} cite to definition, and to examples – PlayMoney has some, Stratics has others.

considered property. There were early attempts to apply property law to currency, but it is a bad fit. Property law assumes uniqueness, whereas currency assumes fungibility. The common law adapted to the rise in currency by modifying property offenses: obtaining property by deception became obtaining a financial advantage by deception.

The problem, here is that the in-world currencies are generally not intended to be exchangeable for real world currencies. Some virtual worlds forbid dealing with any type of property in their worlds: Sony Online Entertainment, for example, have a deal with eBay to forbid auctions of EverQuest property. Many allow the trading only under sufferance, and it is usually formally forbidden in the EULA. As a result, it is going to be hard for a game developer to claim that a gold dupe affects its property or financial interests, since the EULA spells out that there is no property or currency interest in these imaginary entities. This is, at best, an awkward position for the developers to argue from. At worst it seems to remove them from the protection of real world criminal law.

Finally, consider an example of the difficulties raised by the relationship between the real world and the virtual worlds. Recall the example given above, where an otherwise law abiding trader fenced a Bone Crusher mace which he knew to have been “stolen” in Ultima Online. He had a moment of ethical disquiet, but since stealing is one of the skills in UO he determined that there

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**What was that comment in TerraNova to the same effect. Was it Dave Rickey?**

**authority.**

See Introduction, supra.

http://www.juliandibbell.com/playmoney/2003_08_01_playmoney_archive.html#106019981622479993 (visited 10/31/03)
was no legal or ethical concern. He has subsequently justified this position using the analogy that his actions were like bluffing in poker. Bluffing is a legal move within the game, and so gaining money by bluffing (or by stealing items in UO) is just part of the deal. If you don’t like it, you shouldn’t be playing the game.

However, remember those Korean gangs rampaging through Lineage? It is within the rules of the game to hack and slash and rape and pillage. Yet the Korean courts and our intuitive sense of right and wrong seem to suggest that this is something criminal—real world criminal—going on here. Are the fence’s actions criminal? Are the Korean gangs? Well, maybe not in the virtual world. But perhaps in the real world…

We will investigate these ideas in the presentation of the paper, and make some wild claims here later.

**CONCLUSIONS**

At this stage in this draft we offer no conclusions at all.

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