

Framing Virtual Law

Peter Edelmann

University of British Columbia
peter@lexludi.ca

ABSTRACT

Building on the work of games theorists and virtual world designers, this paper proposes a framework for understanding the real-virtual dichotomy in terms of a series of five frames or layers which interact simultaneously in creating the phenomena associated with virtual worlds. At the outermost edges of the model are the two poles commonly referred to as real and virtual. The interface consists of the input/output and communication mechanisms through which the virtual world participant connects to the virtual world system. This could include, among other things, a screen and keyboard, network architecture and relevant software. The system is a rule-based structure which controls and manages input and output streams in relation to activity in the virtual world. The instantiation consists of the discourse produced or permitted by the system layer. Depending on the world in question, the instantiation could take the form of simple text, or some combination of text with graphics or audio. Finally, the virtual frame is the fully immersed world as it would be experienced by a fictional character who is not aware they live in a fictional world.

Applying the model to the legal aspects of virtual worlds allows issues which have been explored by a number of authors to be placed in a more coherent context. The laws of the actual world, and in particular recourse to courts and sanctions of the actual world can be understood in the context of that frame. The interface layer subsumes a number of issues specific to cyberspace law, but more importantly is the level at which the virtual world participant and the owner enter into the contractual agreement or EULA which will define much of the power dynamics in the other frames. At the system level, programming code operates in a regulatory capacity by making certain types of behaviour possible or impossible within the virtual world. The instantiation level is interesting in two capacities. First, the ownership of the images or text which form the discourse is an active area of contention between various stakeholders. Secondly, the instantiation is the frame in which the discourse which gives rise to and maintains the magic circle around the virtual world is uttered. Finally, within the virtual frame, a nomos is developed and maintained by both formal and informal means. In-world justice systems and political structures are common, arising even without intervention by the owners, possibly even challenging their control over the world.

Although this paper will only provide a cursory overview of a large number of legal issues related to virtual worlds, it is not the goal to explore any one aspect in depth. In effect, many of the areas touched on have been explored with significant insight by others, and it is to be hoped that work of similar quality will continue in the future. The goal of this exercise is to provide a framework within which existing and future work can be situated, and will hopefully assist others in identifying relevant aspects of their chosen areas of study. While law is the focus of this paper, the model is equally applicable to a number of other aspects of virtual worlds, ranging from geography and economics to identity and literary theory.

Keywords

Virtual Worlds, Law, Cyberspace

Proceedings of DiGRA 2005 Conference: Changing Views – Worlds in Play.

© 2005 This work is licensed under the Creative Commons Attribution-ShareAlike License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-sa/2.0/ca/>.

Introduction

The past few years have seen increasing interest in virtual worlds on the part of legal scholars, and while theorists have taken a variety of approaches to the normative aspects of virtual worlds, two trends are apparent. On the one hand, there are the legal scholars and developers whose focus is on the application and significance of the laws of the actual world to the virtual world, including in areas such as constitutional rights and freedoms [1,2], property [3], corporate charters [4], contracts [5] and criminality [6,7,8]. On the other hand are the researchers and designers whose primary focus is on the normative orders within the virtual worlds themselves, with concerns including the structure of virtual justice systems [9,10,11], technological hierarchies [12,13] and the relationship to external normative orders [10,14,15]. This is not to say that the two trends are incompatible, and in fact many of the writers cited above have put their minds to the oscillation between the actual and the virtual which was highlighted over a decade ago by Julian Dibbell in his widely read account of virtual rape [16]. As the analysis in this paper will demonstrate, however, many of the aspects of law related to virtual worlds are not usefully subsumed under a simple “real-virtual” dichotomy, regardless of the extent to which the dichotomy is problematized through the recognition of its complexities or oscillations. This paper proposes an analytical model which provides a framework within which phenomena related to virtual worlds can be more usefully distinguished. While the framework does not, in and of itself, resolve the complex problems related to the convergence of multiple normative orders in virtual worlds, it is hoped that it will provide a tool with which such issues can be discussed and studied in a clearer and more coherent fashion.

Analytical framework

Ludologists such as Huizinga conceptualize games as occurring within a magic circle which separates them from the normal rules of real life. Attempts to define a single magic circle with respect to virtual worlds have been unsatisfactory, at least in part because participants disagree about where to trace the outer limits of the circle. Building on the work of games theorists and virtual world designers, five frames or layers which interact simultaneously in creating the phenomena associated with virtual worlds can be usefully distinguished.

Actual
Interface
System
Instantiation
Virtual

At the outermost edges of the model are the two poles commonly referred to as real and virtual. In this paper, we will follow the terminology employed by Pierre Lévy [17] and Marie Laure Ryan [18] in referring to the actual rather than the real, since much of what occurs in the other frames of our model is as real as the participant's “real-life” surroundings. The interface consists of the input/output and communication mechanisms through which the virtual world participant connects to the virtual world system. This could include, among other things, a screen and keyboard, network architecture and relevant software. The system is a rule-based structure which controls and manages input and output streams in relation to activity in the virtual world. The instantiation consists of the discourse produced or permitted by the system layer. Depending on the world in question, the instantiation could take the form of simple text, or some combination of text with graphics or audio. Finally, the virtual frame is the fully immersed world as it would be experienced by a fictional character who is not aware they live in a fictional world. The virtual frame is thus the level at which dragons or interstellar travel may be a part of everyday reality, while references to final exams or phone bills have no relevance whatsoever.

There are multiple sources of inspiration for the approach proposed here, ranging from virtual world design to sociology. The application of frame-based analysis has been extensively developed in the work of Erving Goffman, who highlights the multiple frames in which we are constantly engaged in the course of everyday social interaction. Goffman's work illustrates two important issues about the subject at hand: first, that oscillation between multiple frames is not unique to virtual worlds, and second, that it is possible for participants to act in multiple frames simultaneously without suffering cognitive dissonance. An important distinguishing feature of virtual worlds, however, is that not all the interaction takes place IRL ("in real life"). The work of literary theorists such as Marie-Laure Ryan is of great assistance in exploring the relationship between the fictional world projected by a text and the actual world within which the reader is situated as she reads the text. A virtual world, by definition [19], is the result of the production of signs in a context which maintains the coherence of the fictional frame. As Ryan points out, this is precisely what the creators of fictional worlds do in other media, such as the novel.

The four-layer model proposed by Aarseth in his 1997 *Cybertext* for understanding the functioning of role-playing cybertexts reflects several of the features of the framework proposed here, placing primary emphasis on the system layer. This is consistent with a general trend among ludologists to focus on the mechanics of digital games, often downplaying the importance of more discursive elements. The cybertext, for Aarseth, is primarily an interaction between the user and the system rather than between the participant and the virtual world, and his model thus provides a useful approach to understanding the mechanics of cybertexts, focusing on the physical production and manipulation of signs. However, without placing the system within the context of its role in shaping the discursive practices which instantiate the world and in mediating the feedback loop connecting actual world participants to the virtual frame, one is left with the impression that the system is an end in itself. While the system level may well be the primary focus for a certain subset of participants (hard-core gamers come to mind), the possibility of immersing oneself in the virtual frame cannot be discounted as a significant source of attraction to virtual worlds. The architecture of MUD servers, as described by designers such as Bartle [20], Koster [21] and Evans [22], also provides useful groundwork for the frames surrounding the system layer of our model. While there are a large number of implementations of MUD server architecture, Koster and Bartle identify four conceptual layers which must be integrated into any virtual world server, ranging from the most basic input-output functions of the driver to higher-level sign production of the instantiation. Although the model presented here does not follow these existing models exactly, it is telling that the same structures have been distinguished by others in a variety of disciplines. While it would be helpful to explore existing work further, the goal of the present paper is to explore the model as it applies to the legal aspects of virtual worlds, a subject to which we will now turn our attention.

Actual world

Five rough-looking men stepped out of a black sedan and burst into the Seoul PC café where Paek Jung Yul hangs out with Strong People Blood Pledge, his clan of online gamers. "Is the wizard here?" demanded one of the toughs, asking for the player who killed his character in an online game called *Lineage*. The "wizard" was there, alright, and he was feeling bold. He boasted that he had offed the gangman's virtual character just for the fun of it. Bad idea. The roughnecks dragged the 21-year-old into the urinal and pummeled him until he was covered with real-world bruises. [23]

According to Levander, the authorities even use the term "off-line PK" to describe the practice described in the passage above. Even on the North American *Lineage* servers, a semi-regular message appears in player's chat windows reminding them that combat, "like your sword and armour" should stay in the game. According the National Police Agency in Seoul, of the 40,000 cybercrimes committed in Korea in 2003, 22,000 of them were related to online games [24]. Recently in Shanghai, a man killed another virtual world participant following a dispute [25].

Both the hardware of virtual world clients and servers, as well as the wetware (physical bodies) of the participants are generally located within the territorial jurisdiction of one or more of the legal systems of the actual world. There has been a great deal of discussion over the past few years about the extent to which the laws of the actual world ought to be applied to activities in the virtual frame, in particular with respect to property and deviance, two areas we will explore in greater detail below. There is no question that a vast array of activities associated with virtual worlds are currently regulated and protected by laws of the actual world, ranging from the corporate charters and employment contracts of the companies and designers who create virtual worlds, to the rights of participants not to be physically assaulted while sitting at their computers. In other areas, it is not as clear the extent to which the laws of the actual world ought to apply to the activities related to a virtual world. For example, the laws pertaining to gambling, taxation, sexual harassment or a number of what Jack Balkin calls “communication torts” are somewhat more complicated to understand in the virtual environment, and there is some discussion of the ways in which they might be applied by the courts of the actual world. This brings us to the primary defining characteristic of the laws of the actual world from the perspective of our analytical model: recourse and enforcement in the actual world, either through the courts or other regulatory mechanisms.

Interface

The interface is the physical medium used by participants to interact with the system layer, which includes a number of levels ranging from the screen and keyboard to software clients and network protocol stacks. At the outer edge of the interface are the physical input-output devices such as the screen, speakers and keyboard which allow the participant to transmit information to and receive information from the system. The connection to the network presents an interesting threshold from a legal perspective, placing us in the murky and rapidly evolving realm of cyberspace law. While it is beyond the scope of this paper to explore the plethora of legal issues related to cyberspace, suffice to say that it has been an increasingly fertile area for both study and litigation, a trend which will undoubtedly continue into the foreseeable future. The network itself can be broken down into multiple layers, from the higher level software applications like the client to the physical wires, routers and switches which actually carry the electrons between the participant's machine and the server. The OSI model defines a number of intervening layers which allow for the efficient encoding and transmission of data from the client to the server and back in a feedback loop potentially spanning thousands of kilometers. In an approach analogous to our own, Craig McTaggart has proposed employing the OSI reference model as a template to assist legal theorists and jurists in making more coherent distinctions between the different levels at which cyberspace law operates [26]. While McTaggart's model could be fruitfully applied to virtual world interfaces, for the moment we will not undertake a detailed analysis of the all the sublayers within this frame, but rather content ourselves with highlighting their importance before focussing on one of the aspects of the interface which will have the most far-ranging implications in the other frames: the EULA.

The End User Licence Agreement (EULA) is a contract of adhesion [27] which participants in most commercial virtual worlds must accept before being permitted to connect to the system layer, and ultimately the virtual world itself. The EULA, along with the Terms of Service (TOS), will generally purport to set out the respective rights and responsibilities of the virtual world's owners and participants. While the details of EULAs would provide a very fruitful area for further research, one of the most significant aspects is the right of the game managers to ban participants for certain types of behaviour. Through the EULA, participants will also generally agree to waive their rights to certain recourses in the courts of the actual world, while at the same time providing a basis for the owners to pursue remedies in those courts for breaches of the

normative order established within the remaining layers of our model. The EULA thus provides a contractual and conceptual portal which simultaneously attempts to shield virtual world managers from the laws of the actual world, while providing additional strength and legitimacy to the internal normative order. One could see the EULA evolving into a kind of social contract or constitution for the virtual world which would bind the sovereign, and enshrine a set of rights for players/avatars. In effect, the idea of a bill of rights for players has already been proposed in Raph Koster's "Declaration of the Rights of Players" which includes such things as freedom of speech and assembly, non-discrimination, due process and a right to privacy [28]. While the Declaration is an interesting discussion piece, however, it should be noted that Sony Online Entertainment, for which Koster is Chief Creative Officer, still exhibits a marked preference for a more traditional contract of adhesion. This is perhaps not surprising given the power dynamics in play, as fundamentally it is the owner of the virtual world who decides whether or not a participant will be allowed to access the server. Banishment is a very real and common sanction in the privatized public spaces of 21st century cyberspace, and there is little or no recourse available to the involuntary exiles. University of Michigan linguist and cyberspace theorist Peter Ludlow had his avatar Urizenus banned from *The Sims Online* because of investigative reporting in an out-of-world website called the *Alphaville Herald*. The power relationship established at the interface level can thus have wide-ranging implications for behaviour within the other frames of our model, in this case creating potentially chilling effects on speech deemed threatening to the interests of the virtual world owners in the actual world.

System

In the initial plan of Habitat, avatars could snatch items from each other and run away with them. The Habitat community did not like this feature and complained. The god/wizards of Habitat responded by coding away the possibility of theft. Likewise, the avatars in Habitat could originally kill each other. Again, many users complained. The programmers responded by limiting avatar murder to the uncivilized borderlands of Habitat's environment. [29]

The system and instantiation layers reflect to a large extent the distinction made by Lawrence Lessig between code and law[30]. Code is essentially regulation through infrastructure, which, for example, has been an integral part of urban planning for a long time. Rather than use the law to set speed limits, urban planners have learned to build features into the cityscape which control the amount, speed and flow of traffic. Drivers who are intent on driving quickly will simply be so frustrated by the tight turns, speed bumps and roundabouts in residential areas that they will stick to the main thoroughfares, regardless of the legal speed limit in the residential area. Regulation and control of the virtual world at the system level is thus what Lessig would refer to as code. The rules are physically built into the system, meaning detection and enforcement are not really issues because the very structure of the virtual world makes the prohibited conduct impossible. The ability to kill other players or steal their virtual belongings is commonly regulated in this way. Law, on the other hand, acts at the level of the instantiation, or at that of the virtual world itself, by proposing certain rules of conduct or guidelines which may or may not be enforced. The code may support these types of rule-based systems by providing for sanctions at the system level (such as toading), or at the interface level (such as banning). The ability to regulate the social environment of a virtual world through changes in code is made clear by Daniel Pargman with respect to his observation of the administration of *SvenskMUD*:

What makes muds and other social virtual environments unique is the tight coupling between the technical and social system – an effect of the fact that a mud in use is a social system within an artifact. The artifact effectively determines both the possibilities and the constraints of the micro-society in question. A central problem at every SvenskMud-meeting I have attended is how to gently tweak the system technically so that the desired social effects appear. [15]

In fact, one of the most difficult lessons for the wizards of LambdaMOO was that the distinction

between purely technical decisions and social decisions was impossible to make in a virtual world whose very physical structure was a function of the technical decisions of the programmers [31]. The wizards attempted to transfer their power over the infrastructure to the residents of the virtual frame. The petition and ballot system in LambdaMOO provides an excellent illustration of the ways in which legislators can use infrastructure towards regulatory ends. The relationship between code and law is thus not one of two watertight compartments, but in effect is much more interactive and interdependent.

The system layer, while being an effective tool for certain types of regulation, is not sufficient to establish and maintain the complex normative orders of virtual communities. The effective regulation of a virtual world is only achieved through a delicate and dynamic interplay of rules and code. An attempt by Paul Schwarz [11] to develop a system of morality which could be implemented into computer-based virtual worlds illustrates the difficulties of quantifying actions on an automated moral scale. While a human referee can assess the context of a given action, building a model which rewards players for actions in accord with their avatar's moral code proves to be a challenging endeavour. Regulation purely through code sets the regulator up for an extended game of "find the bug" : just as the operators of virtual worlds can use code to control behaviour in the world, so can players take advantage of errors or loopholes in the codebase to gain advantages. In effect, the search for such "exploits" is a common pursuit in many worlds, and the operators find themselves in a constant game of catch-up to keep exploits from destabilizing the world. A single serious gold dupe (ability to illicitly multiply a resource) can be enough to destabilize a in-world economy. The judicious use of rules thus becomes essential to be able to justify intervention in cases of abuse of the code. There are also aspects of the virtual world that simply cannot be regulated by code because the complexity would simply be overwhelming. In an attempt to maintain a family atmosphere, many games have integrated filter software to eliminate profanity before it even reaches the screens of minors. However, the task of filtering phrases such as "|= |_|C|< U @55H0|_E" is notoriously difficult for programmers[8]. While worlds such as *Toontown* have chosen to only allow participants to communicate with phrases in a preset menu, most worlds employ referees or game managers to regulate these kinds of behaviour in the instantiation or virtual frames.

Instantiation

There are two aspects of the instantiation level which are of interest in the current context. First, the instantiation consists of the signifiers whose signified constitute the virtual world. Ownership of intellectual property for in-world creations is one of the major points of contention between the owners and the players in virtual worlds, particularly in the social worlds which depend on users to create much of the content in the world. The original text-based MUDs were for the most part run on surplus time scavenged from university mainframes, and not only the content, but the server codebases were freely shared between virtual worlds, which were run by a few individuals as a hobby. Although there were commercial MUDs, it was really with the advent of the graphic MMORPGs that we have seen the issue of intellectual property take centre stage in the struggle for power in the virtual landscape. For example, in one highly commercialized social world called *There*, players must find ways to obtain Therebucks™ (the virtual currency) in order to maintain their virtual selves and obtain property or services. One of the most common virtual businesses is the design of virtual clothing which is sold to other players in exchange for Therebucks™. The contract of adhesion between the owners of *There* and the players upon registration is very clear on the status of intellectual property in the world: There inc. purports to own everything, including player-created content. This can be contrasted with the owners of *Second Life*, who allow players to keep the rights to the virtual content they create in the world. Yet Linden Labs, the company which owns *Second Life*, will maintain control not only of the

servers on which the world runs, but more importantly of the codebase for the graphics engines and other software needed to connect to the world and keep it running. Thus, even when we see a willingness to give up some control over content, the infrastructure remains firmly in the company's hands. Much like any other medium, the core narratives in virtual worlds are also often proprietary, particularly in the so-called licensed worlds like *Star Wars Galaxies*. While this dynamic may be less problematic in a non interactive medium like film, in an interactive medium in which large numbers of people spend significant amounts of time, the ownership of the central fiction, as well as any user-contributed content, will become a significant issue.

Secondly, the instantiation deals with what narratologists would call extra-diegetic discourse, which is to say utterances which are not, in and of themselves, part of the virtual frame, in the way that dialogue between characters would be. The establishment and maintenance of the magic circle is one of the key elements in the formation of a frame within which play can occur. The structured rules of a game assist somewhat in fostering the emergence of a magic circle, but it also requires implicit and explicit cooperation between participants within a meta-frame outside the game. In his "A Theory of Play and Fantasy." [32], Gregory Bateson discusses the cognitive frames surrounding play, and the kinds of metacommunication that players engage in to establish and maintain the validity of the magic circle. In examining animal behaviour during play, Bateson identifies three types of communications: messages which are mood signs, messages which simulate mood signs (for example, during play), and finally messages which distinguish between the other two types. According to Bateson, the third type of message consists of metacommunication which draws a frame around play, much as the frame around a painting establishes the limits of a conceptual realm, within which different rules of perception and interpretation apply. The ability to make reference to the frame of the magic circle is a key element in games since it will play a significant role in the systemic cooperation essential to creating the necessary conditions for gameplay. This approach to understanding the establishment of the magic circle corresponds closely to the types of "out of character" metacommunication identified by Goffman as an integral part in the maintenance of coherent identities across frames. Within the instantiation layer of our model fall utterances which have a source external to the virtual frame, but give rise both to the normative order within it as well as maintaining the coherence of the magic circle around it. In our discussion of discourse, we have indicated the relationship between the structure of the system layer and the discourse from which the virtual world arises. The system layer defines the types of discourse which can be instantiated, and the actors who may make such utterances. Without the discourse, however, the physical rules of the system layer do not acquire the meaningful context which is essential to the participant's experience of the virtual frame.

Virtual

We inhabit a nomos -- a normative universe. We constantly create and maintain a world of right and wrong, of lawful and unlawful, of valid and void. The student of law may come to identify the normative world with the professional paraphernalia of social control. The rules and principles of justice, the formal institutions of the law, and the conventions of a social order are, indeed, important to that world; they are, however, but a small part of the normative universe that ought to claim our attention. No set of legal institutions or prescriptions exists apart from the narratives that locate it and give it meaning. For every constitution there is an epic, for each decalogue a scripture. Once understood in the context of the narratives that give it meaning, law becomes not merely a system of rules to be observed, but a world in which we live. [33]

Each virtual world has an underlying fictional universe based on a more or less elaborate narrative structure, often based on a theme or established cultural narrative such as *Star Wars* or Tolkien's Middle Earth. A community will form around this theme, and develop a set of practices consistent with the underlying narrative structure of the world. The individuals in the community

define their avatars in relation to the narrative, developing an identity tied to the virtual world's *nomos*. The enforcement and alteration of the normative order within the virtual world must be undertaken in a way consistent with the narrative universe. While different worlds have chosen to deal with this dilemma in a variety of ways, there is a clear consensus on the fact that any regulatory undertakings within the gameworld must be integrated into the base narrative. “Toading” is a perfect example of this phenomenon – the punishment is clearly situated within the medieval fantasy realm, and the regulatory action is thus framed in terms coherent to the primary narrative. While this might not seem to be a major limitation on the regulatory powers of the virtual sovereign, in practice the need to maintain narrative coherence can be a major constraint. One of the most fundamental constraints is the inability to “go back in time”. Because the worlds are persistent and there are constantly players logged on, any attempt to retroactively regulate behaviour would be potentially disastrous for narrative coherence. While in theory the operators could shut down the machine and turn back to a prior saved version of the game, it would only be undertaken in the most extreme situation – for example where the very existence of the world in question was threatened. Even in such cases, while the members of the community might see the action as a fundamental violation of the basic narrative, the *nomos* would find a way to integrate the event. However, a virtual community will only tolerate so much disruption of its core narratives before the community starts to fall apart and members leave.

In most worlds, the players enforce the *nomos* amongst themselves, insisting that other players remain in character or adhere to the normative order of the game. Interestingly enough, certain violations of the normative order of the fictional universe are actually part of the underlying narrative and are considered acceptable behaviour on the part of the player, even if the avatar will be severely punished if apprehended. PKing is a good example of this phenomenon, as it has simply been made physically impossible in many worlds – an example of the coding approach to regulation. Other worlds, such as *End of the Line*, have left the possibility for player killing in the code, but the player community has organized its own in-game sanctions involving a system of bounties which are placed on player killers. The player killers, although they are violating the normative order of the fictional world are thus still part of the underlying narrative, which includes bandits and unsavoury characters. The structure of the legal system in a virtual world could thus be in any form imaginable, from the most repressive tyranny to virtual anarchy. In some worlds, such as *LambdaMOO* or *A Tale in the Desert*, there will be sophisticated virtual legal systems in which laws are written, codified and enforced using tools available in the virtual frame. In other worlds, more informal norms develop among the participants, both across the population and within its various subcultures.

We can therefore see the multiple layers of *nomos* operating on the actions in the virtual world, with the constant potential for an action perceived in one frame by the actor being understood by another participant in a different frame. Many worlds have seen the development of guilds, clans and mafias which, much like in the real world, are subcultures with a set of norms unto themselves, even though they are situated within a larger *nomos*. In *The Sims Online*, an organization which called itself the Sims Shadow Government (SSG)[34] stepped in to fill a void left by the owners of the world (Maxis) who chose not to deal with what many players saw as problematic behaviour. There has been some speculation as to the actual power wielded by SSG, even in relation to Maxis, since it would appear that the SSG may have been capable of seriously disrupting or even shutting down the virtual world [35]. Similar power dynamics exist with the guilds or clans in other worlds, and in-world protests against the owners or designers are not uncommon when players are dissatisfied with the effects of management decisions on the in-world *nomos*. In *Everquest*, the warrior clan threatened to block access to one of the main portals

to the world if their grievances were not addressed – forcing the world managers to negotiate with them[36]. In *World of Warcraft*, a significant number of accounts were terminated after an in-world protest. In Korea, such disputes and protests can involve thousands of demonstrators and are reported on in the broadsheets of the actual world [23].

Conclusion

Although this paper has only provided the most cursory overview of a large number of legal issues related to virtual worlds, it was not the goal to explore any one aspect in depth. In effect, many of the areas touched on have been explored with significant insight by others, and it is to be hoped that work of similar quality will continue in the future. The goal of this exercise was to provide a framework within which existing and future work can be situated, and will hopefully assist others in identifying relevant aspects of their chosen areas of study. Finally, while law has been the focus of this paper, the model is equally applicable to a number of other aspects of virtual worlds, ranging from geography and economics to identity and literary theory, some of which I am currently exploring in my doctoral dissertation, and I would appreciate any comments or feedback.

REFERENCES

1. Balkin, Jack. "Law and Liberty in Virtual Worlds." (2004) 49:1 New York Law School Law Review.
2. Jenkins, Peter. "The Virtual World as a Company Town - Freedom of Speech in Massively Multiple Online Role Playing Games." (2004) 8:1 Journal of Internet Law. <<http://ssrn.com/abstract=565181>>.
3. Lastowka, Gregory and Dan Hunter. "The Laws of the Virtual Worlds." (2004) California Law Review. <<http://papers.ssrn.com/abstract=402860>>.
4. Castranova, Edward. "The Right to Play." (2004) 49:1 New York Law School Law Review. <<http://www.nyls.edu/pdfs/castranova.pdf>>.
5. Burke, Timothy. "Play of State: Sovereignty and Governance in MMOGs." (August 2004). <<http://www.swarthmore.edu/SocSci/tburke1/The%20MMOG%20State.pdf>>.
6. Williams, Matthew. "Virtually Criminal: Discourse, Deviance and Anxiety Within Virtual Communities." (2000) 14:1 International Review of Technology and Computer Law 95-104.
7. Brenner, Susan. "Is there Such a Thing as 'Virtual Crime'?" (2001) 4 Californai Criminal Law Review 101. <<http://www.boalt.org/CCLR/v4/v4brenner.pdf>>.
8. Lastowka, Gregory and Dan Hunter. "Virtual Crime" State of Play Conference (New York Law School: 2003).
9. Mnookin, Jennifer. "Virtual(ly) Law: The Emergence of Law in LambdaMOO." (1997) 2:1 Journal of Computer-Mediated Communication. <<http://shum.cc.huji.ac.il/jcmc/vol2/issue1/lambda.html>>.
10. Sanderson, Derek. "Online Justice Systems." (March 2000) Gamasutra. <http://www.gamasutra.com/features/20000321/sanderson_pfv.htm>.
11. Schwarz, Paul. "Morality in Massively Multi-Player Online Role-Playing Games." (April 2000). <<http://www.mud.co.uk/dvw/moralityinmmorpgs.html>>.
12. Whitlock, Troy. "Technological Hierarchy in MOO." (1994). <<http://www.actlab.utexas.edu/~smack/papers/TechHier.txt>>.
13. Reid, Elisabeth. "Hierarchy and Power: Social Control in Cyberspace." in Peter Kollock and Marc Smith, eds. Communities in Cyberspace (New York: Routledge, 1999).
14. MacKinnon, Richard. "Punishing the Persona: Correctional Strategies for the Virtual Offender." (1996). <<http://www.actlab.utexas.edu/~spartan/punish.txt>>.
15. Pargman, Daniel. Code Begets Community: On Social and Technical Aspects of Managing a Virtual Community. (PhD. Diss., Linkoping University: 2000).
16. Dibbell, Julian. "A Rape in Cyberspace or How an Evil Clown, a Haitian Trickster Spirit, Two Wizards, and a Cast of Dozens Turned a Database Into a Society." (December 21st,1993) The Village Voice 36-42. <<ftp://parcftp.xerox.com/pub/MOO/papers/VillageVoice.txt>>.
17. Qu'est ce que le virtuel? (Paris: La Découverte, 1998).
18. Ryan, Marie-Laure. Possible Worlds, Artificial Intelligence and Narrative Theory (Indianapolis:

Indiana UP, 1991).

19. Discussing a definition of virtual worlds is not the focus of this paper, and for present purposes, the definition proposed by Lisbeth Klastrup is sufficient: “a persistent online representation, which contains the possibility of synchronous interaction between users and between user and world within the framework of a space designed as a navigable universe.” PhD Thesis (IT University of Copenhagen, 2003). <<http://www.itu.dk/people/klastrup/Klastrupthesis.pdf>>.
20. Bartle, Richard. Designing Virtual Worlds. (Indianapolis: New Riders, 2004).
21. Koster, Raph. “Overall MUD Architecture.” (2000). <<http://www.legendmud.org/raph/gaming/book/6b.htm>>.
22. Evans, Scott. "Building Blocks of Text-Based Virtual Environments." BA Thesis, University of Virginia, 1993. 18/10/98 <<http://lucien.sims.berkeley.edu/MOO/TechnicalReport.ps>>.
23. Levander, Michelle. “Where Does the Fantasy End?” (2001) 157:22 Time Magazine. <http://www.time.com/time/interactive/entertainment/gangs_np.html>.
24. Duk-kun, Byun. “Police Say Game Sites Bed of Cyber Crime.” (August 7th, 2003) The Korea Times. <<http://times.hankooki.com/lpage/nation/200308/kt2003080718330611980.htm>>.
25. Li and Xiaoyang. China Daily News 2005.
26. McTaggart, Craig. “A layered Approach to Internet Legal Analysis.” (2003) 48:4 Mcgill Law Journal 571.
27. Standardized contract form offered to consumers of goods and services on essentially “take it or leave it” basis without affording consumer realistic opportunity to bargain and under such conditions that consumer cannot obtain desired product or services except by acquiescing in form contract. [*Black's Law Dictionary*, 6th Edition, 1990].
28. <<http://www.legendmud.org/raph/gaming/playerrights.html>>.
29. Dibbell, Julian. My Tiny Life. (New York: Owl Books, 1998).
30. Lessig, Lawrence. Code and other laws of Cyberspace. (New York: Basic Books, 2000).
31. Curtis, Pavel. "Not Just a Game: How LambdaMOO Came to Exist and What It Did to Get Back at Me." in Cynthia Haynes and Jan Rune Holmevik. Highwired: On the Design, Use, and Theory of Educational MOOs. (Ann Arbor: Michigan UP, 1998) 25-44.
32. Bateson, Gregory. “A Theory of Play and Fantasy.” (1955) 2 Psychiatric Research Reports 39-51.
33. Cover, Robert. “Nomos and Narrative.” (1983) 97 Harvard Law Review 4.
34. <<http://www.simshadow.com/>>.
35. Although, as Grimmelman points out, there is some question about the current power wielded by the SSG. Grimmelman, James. “Virtual Worlds as Comparative Law.” (2004) 49:1 New York Law School Law Review.
36. <<http://www.thesteelwarrior.org/forum/perpage=1&display= &pagenumber=1>>.