

Sarah K. Peterson. My Kingdom for a (Digital) Horse: Perceptions of Virtual Property Rights in *Second Life*. A Master's Paper for the M.S. in I.S. degree. April, 2008. 48 pages. Advisor: Catherine Blake

Massively Multiplayer Online Games (MMOGs), such as *World of Warcraft* and *Second Life*, create virtual worlds in which players build relationships, establish communities, and win, create, or purchase property. As MMOGs have evolved, their virtual economies have developed into major financial forces, and intellectual property rights have become an increasingly pressing issue. In the academic literature, the intellectual property rights of MMOG players have been widely discussed from legal, economic, and philosophical perspectives. However, no research has yet been done on players' attitudes toward copyright problems in virtual worlds. As a means to investigate these attitudes, this research looks at 880 posts in nine threads on the *Second Life* community forums. For the most part, the intellectual property topics addressed in the academic literature are not those that concern the players posting on the *Second Life* forums.

Headings:

Copyright

Copyright / Internet

Digital Millennium Copyright Act

Multi-user Virtual Environments

Second Life (Game)

MY KINGDOM FOR A (DIGITAL) HORSE: PERCEPTIONS OF VIRTUAL
PROPERTY RIGHTS IN SECOND LIFE

by
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Introduction

In March of 2005, Shanghai resident Qiu Chengwei stabbed Zhu Caoyuan to death after Zhu sold a sword that Qiu had lent to him. Qiu had gone to the police to report the sword as stolen, but they refused to take the case because the sword was not real property by law; it only existed in the online game *Legend of Mir 3* (Finlayson 2005). The above story is an extreme example of current issues surrounding virtual property ownership in Massively Multiplayer Online Games (MMOGs). These issues are becoming increasingly important as more people become enmeshed in these virtual worlds and as what happens in the virtual world starts to have greater consequences in the real one.

Currently, the most popular MMOGs are fantasy-based role-playing games such as *World of Warcraft* and *Everquest*. These games are descendants of older pen-and-paper games like *Dungeons and Dragons*, computer-based text games known as MUDs (Multi-User Dungeons, Domains, or Dimensions) or MUSHs (Multi-User Shared Hacks, Habitats, Holodecks, or Hallucinations), and single-player console or PC games (Kent 2003). With the commercialization of the internet in the mid-1990s, such games went online and attracted a large number of dedicated players. In these games, players are represented by virtual versions of themselves called avatars. Players customize their avatars, and, depending on the game, may gather weapons and armor or build a summer home on their own virtual island. Avatars and the items they collect or create may be considered the player's property inside the game. Because the value of virtual property

comes not from its physical manifestation, but rather from the creative expression, legal aspects of virtual property are generally considered to fall under intellectual property law.

Recently, MMOGs that are decidedly different from fantasy Role-Playing Games (RPGs) have been emerging. These games, such as the *Sims Online*, *Second Life*, and *There*, do not depend on characters inspired by J.R.R. Tolkien or on quests, goals, and levels. Rather, they more closely resemble the real world and involve players who control the relatively ordinary lives of pixilated characters. One game of this kind that has recently garnered attention from the media and researchers is Linden Lab's *Second Life*. Players in *Second Life* create almost all of the in-game content, and, unlike the developers of fantasy-based games, Linden Lab grants players intellectual property rights to their in-game creations. Players can buy and sell virtual t-shirts, cars, and even land using Linden dollars, which have an exchange rate to US dollars.

Players' creative and commercial energies have flourished under *Second Life*'s intellectual property policy, but at least two major areas of contention have emerged. In 2006, Pennsylvania lawyer Marc Bragg filed suit against Linden Lab after he was locked out of his account and lost access to 8,000 dollars of his virtual real estate and currency (Craig 2006). Inside *Second Life*, players participate in an auction system to purchase blank land, which amounts to server space, from Linden Lab. Players can then erect whatever they want on their land, and many players make money in the game by reselling built-up real estate. Bragg found a way to purchase land before it went on sale at auction and, for his ingenuity, he was expelled from the game (Craig 2006). Despite Linden Lab's relatively liberal view on intellectual property rights, the company reserves the right in *Second Life*'s Terms of Service (ToS) to terminate a player's account at any time, stating,

"all data on Linden Lab's servers are subject to deletion, alteration or transfer" and "in the event that Linden Lab suspends or terminates your Account or this Agreement, you understand and agree that you shall receive no refund or exchange for...any content or data associated with your Account." (Linden Lab 2007b). Such statements inevitably raise questions: if players' rights to their in-game property end when they leave or are forced from the game and if Linden Lab has any obligation to remunerate players when they are expelled from *Second Life*. Bragg's lawsuit is as of yet unresolved.

Another *Second Life* copyright issue has arisen that affects many more players than problems involving expulsion. LibSecondLife, an organization that specializes in distributing third-party, open-source software usable within *Second Life*, developed a program called CopyBot, which was originally designed for legitimate purposes and asked permission before copying (Granick 2006). However, the code was hacked so that content could be copied without the knowledge of the original creator (Terdiman 2006). The altered program caused uproar in the *Second Life* community, and players demanded that Linden Lab enforce their intellectual property rights.

Linden Lab has responded to players' complaints in several ways. First, they reminded all participants that the web is inherently an unstable environment for copyright protection (Linden Lab, 2006 November 14). They initially encouraged players to report infringement via the regular abuse report system, but then asked that players file claims under the Digital Millennium Copyright Act (DMCA). According to DMCA procedure, Linden Lab will take down any content claimed to be a copyright violation and repost the content if a legitimate rebuttal is received. If the original complainant wishes to continue, they then have to go through the court system. By implementing the DMCA in this way,

Linden Lab is positioning itself as an Internet Service Provider (ISP). Under the DMCA, ISPs are not held responsible for hosting infringing content as long as they follow the above procedures (Linden Lab 2007a).

Another measure that Linden Lab has taken to try to assuage the copyright fears of the player community is to declare the use of CopyBot a Terms of Service violation (Linden Lab, 2006 November 16). This position justifies taking measures against potential infringers using the software, up to and including terminating their accounts; however, it also precludes legitimate use of the software. Linden Lab has also considered attaching metadata to virtual creations to allow players to determine when and by whom an item was first made (Linden Lab, 2006 November 13).

Legal and philosophical scholars as well as journalists have weighed in on the meaning of virtual property. The current literature examines how current copyright laws might apply to virtual worlds, but little has been said about the degree to which virtual world inhabitants understand the implications of these laws or if they approve of how such laws are being enforced. Before starting a game, most players quickly agree to a EULA (End-User License Agreement) without reading it or comprehending how this agreement affects their rights inside the game. This study explores how players in *Second Life* perceive their in-game intellectual property rights. The goal is to bring the voices of players into the continuing discussion on property rights in virtual worlds, especially since players, rather than designers, are increasingly providing content.

Related Work

A variety of frameworks have emerged to study online games. In this section I introduce *Second Life*, which is the focus of this paper. Then I describe studies involving other MMOGs and review articles that explore economic, philosophical, and legal perspectives on virtual property.

Second Life

After working as the Chief Technological Officer for RealNetworks, Philip Rosedale started Linden Lab in 1999 out of San Francisco, CA (Linden Research 2008). His goal was to "create a revolutionary new form of shared experience, where individuals jointly inhabit a 3D landscape and build the world around them" (Linden Research 2008). The first commercially available version of *Second Life* came out in 2003, and later that year, Linden Lab announced that they would be granting players intellectual property rights to their in-game creations (Kosak 2003). Figure 1 shows my avatar inside *Second Life*.



Figure 1: My avatar in *Second Life*

Other games

Table 1 presents a summary of the MMOGs discussed here and their different characteristics.

Table 1: Some MMOGs and their characteristics

Name	Developer	Year introduced (in the US)	Primarily fantasy based?	Majority of content user-created?	Players have intellectual property rights?
Ultima Online	Electronic Arts	1997	Yes	No	No
Everquest	Sony	1999	Yes	No	No
Sims Online	Electronic Arts	2002	No	No	No
Second Life	Linden Lab	2003	No	Yes	Yes
Star Wars Galaxies	LucasArts, Sony	2003	Yes	No	No
There	Makena Technologies	2003	No	Yes	Yes
World of Warcraft	Blizzard Entertainment	2004	Yes	No	No

The study of modern, electronic, web-based games builds on earlier work that investigated the impact of play in human affairs. Huizinga's book, *Homo Ludens* (1938), is considered the first serious work on this topic. In his article, "The Playful and the Serious: An approximation to Huizinga's *Homo Ludens*", Rodriguez provides a theoretical overview of how Huizinga's work can be applied to serious game design, which seeks to bring gaming into the realms of education and work (Rodriguez 2006). The transition of MMOGs from recreation into the serious realms of work and business has raised the issues of copyright and virtual property.

As MMOGs have evolved and grown more popular, researchers have become increasingly interested in investigating these virtual worlds. The most popular method for empirical studies has involved the evolution of "virtual ethnography", a variation on

traditional ethnographic methods that involves "a significant amount of time spent online in the research setting, observing, participating and taking field notes" (Brown 2004). Another popular method has been online surveys, completed by respondents who are recruited through game-related forums and web pages or inside the games themselves. An example of a large survey of this type is Project Massive, an extended study investigating the structure of player groups called guilds inside MMORPGs (Seay 2004).

Most studies of MMOGs have examined the social aspects of these games and how gaming has affected the real lives of dedicated players. Project Massive investigates issues of online game addiction in their paper, "Self-regulation and Problematic Use of Online Gaming" (Seay 2007). Brown and Bell from the Department of Computing Science at the University of Glasgow explore how players develop their own social conventions around a game's structure (Brown 2004). The group of Ducheneaut, Yee, Nickell, and Moore at the Palo Alto Research Center and the Virtual Human Interaction Lab study how players make up for the lack of physical cues in virtual interactions (Moore 2007), what social interaction patterns in *World of Warcraft* might mean for the future of online gaming (Ducheneaut 2006), and how the structure of a game like *Star Wars Galaxies* can affect player-to-player interactions (Ducheneaut 2004).

In "Building an MMO with mass appeal: A look at gameplay in World of Warcraft", Ducheneaut et al. use an automated program called a bot inside *World of Warcraft* to gather a large amount of descriptive data about players and their characters. The purpose of this research is to provide concrete data for game designers, thus the authors use "metrics that reflect the players' gaming experience" (Ducheneaut 2006), such as playing time, distribution of chosen races and classes, and time spent in different

locations in the game. Although not directly related to virtual property or legal regulation in MMOGs, this study represents one of the few large-scale, longitudinal studies of a virtual world, taking into account more than "220,000 World of Warcraft characters...studied over 8 months" (Ducheneaut 2006).

"Living a virtual life: Social dynamics of online gaming" by Kolo and Baur looks at players of another MMOG, *Ultima Online*. The authors collect data using an online survey method and by conducting a network analysis on guild lists (guilds are formal organizations inside many MMOGs). They investigate social structures and gameplay strategies involved in *Ultima Online*, as well as gathering some basic descriptive information about who players are and how long and often they play (Kolo 2004). This study emphasizes social regulation in virtual worlds, which may come to play a significant role in enforcement of copyright rules.

In "Does WoW change everything?: How a PvP server, multinational player base, and surveillance mod scene caused me pause", Taylor compares gameplay in *World of Warcraft* and *Everquest* in terms of social regulation (Taylor 2006). Taylor's main method of investigation is a virtual ethnography, composed of records of his personal experiences and notes on interactions he has witnessed. These notes include in-game conversations that he quotes extensively in the article. Taylor also conducts interviews with high-level players, although he is not explicit about his methods. The parts of Taylor's article that are most relevant to virtual property discuss the interaction of the game technology with social regulation. The future of regulating virtual property may very well involve a combination of technological methods (such as virtual watermarks or brands) and social parameters enforced by the players themselves.

"WoW is the New MUD: Social gaming from text to video" is an examination of the connections between new graphics-heavy MMOGs such as *World of Warcraft* and older, text-based role-playing games known as MUDs (Mortensen 2006). In this article, Mortensen discusses the history of MMOGs and examines how games created by software developers differ from games created by players, as the early MUDs were. To make her arguments, she relies on a method of virtual ethnography similar to those mentioned above, using her own experiences and observations as well as interviews with both MUD and WoW players (Mortensen 2006). The main component of Mortensen's study that relates to the discussion on virtual property is the idea of aspects of the game that "encourage or suppress different aspects of human behavior" (Mortensen 2006), as social regulation is likely to play a large role in how property rights are established and regulated in MMOGs. Mortensen's paper looks at player-created MUDs, which may be more similar in gameplay structure to *Second Life* than fantasy-based, developer-created MMOGs like *World of Warcraft*.

In contrast to the fantasy-based role-playing games such as *World of Warcraft*, *Everquest*, and *Ultima Online*, there has been little work done on open-ended, reality-based games such as *Second Life* and *There*. Empirical studies have tended to examine either basic social aspects of MMOGs, such as guild formation and in-game social norm development, or demographic information about players and their characters. As games like *Second Life* expand and gain in popularity and as the problems of intellectual property rights in the digital world continue to evolve, it is likely that more studies will be done in these areas.

Economic, legal, and philosophical perspectives

Unlike game studies in general, the discussion of virtual property and copyright in MMOGs has involved almost no empirical research. Articles that have investigated this particular topic come almost exclusively from the legal or philosophical field. However, the first real foray into the field of virtual property was made by an economist.

In 2001, Castronova, a professor at the Department of Economics at Cal State Fullerton, used data involving the game *Everquest* to estimate that the virtual world of the game, Norrath, had a higher Gross National Product (GNP) than either China or India (Castronova 2001). He estimated the worth of items in the game by looking at how much players were willing to pay in the "black market" for virtual goods. Players of *Everquest* were buying and selling virtual items, virtual currency, and even high level characters through auction sites such as eBay. This black market trade in virtual property has been one of the traditional battlegrounds for intellectual property issues in MMOGs, with most developers claiming that they own all intellectual property in the games (Sandoval 2000). By tying the virtual world of MMOGs to the real world through economics, Castronova made a strong argument for how online games could have very real effects outside of their own worlds. The identification of how virtual goods could be traded for real money also emphasized that virtual property and copyright would become one of the main issues involved in the collision between virtual worlds and real world laws.

Glushko explores problems involving virtual property in "Tales of the virtual city: Governing property disputes in virtual worlds" (Glushko 2007). He notes that "virtual worlds have developed into a serious economic force" and proclaims his conviction that End-User License Agreements (EULAs) and Terms of Service (ToS) agreements are

insufficient to govern the economic consequences of virtual worlds (Glushko 2007). Many of the arguments regarding virtual property have centered on the language and legal standing of the EULA. Before a player can enter a MMOG, he or she is required to agree to the EULA, which states the developer's rules for use of the game software and for play in the game. Most of these EULAs assert that all intellectual property in the game belongs to the game developer, even that produced by the players. For example, the EULA for Blizzard's *World of Warcraft* says, "All title, ownership rights and intellectual property rights in and to the Game and all copies thereof...are owned or licensed by Blizzard" (from *World of Warcraft* EULA, as cited in Glushko 2007). Currently, the legal standing of EULAs is unclear, but courts have generally upheld them as "enforceable against the players of the software" (Glushko 2007). Using several examples of property disputes that have arisen in different online worlds, Glushko argues that ultimately EULAs will fail as a method to govern virtual property. He views EULAs as fundamentally unfair to the players of MMOGs, in that they are clearly written with only the developer's best interests at heart. Glushko includes in his examples the case of Mark Bragg, who is suing the developers of *Second Life* because he lost his virtual property when he was expelled from the game (Glushko 2007).

In "The laws of virtual worlds", Lastowka and Hunter consider how rules born in virtual worlds interact with laws that apply in the real world (Lastowka 2004). They provide three reasons for the significance of real-world laws in the virtual world:

- 1) virtual worlds are attracting an ever-increasing population of participants who believe that the social interactions that occur within these environments are important, 2) the real and the virtual overlap from an economic perspective, and 3) they [virtual worlds] provide a parallel alternative to existing legal systems, where new forms of social regulation can be explored (Lastowka 2004).

A large portion of the article discusses the similarities and differences between real property and virtual property, explaining traditional legal views of property as a set of rights (such as exclusivity of use and transferability) and how such rights can or cannot be mapped to property in MMOGs. Virtual property rights are most often envisioned as analogous to intellectual property rights, since both involve ownership of an entity beyond the physical. Lastowka and Hunter recognize virtual property rights as one of the most significant legal issues in MMOGs, since it is these rights that most clearly bleed over into the real world.

In their article, Lastowka and Hunter also explore the idea of avatar rights and whether democratic governance might ever be a possibility in MMOGs. As some MMOGs move away from fantasy-based play and toward more real-world contexts, this question of virtual world governance becomes more pertinent. In the case of *Second Life*, the developers (Linden Lab) have suggested that players may eventually regulate their own copyright systems within their particular sections of the game. However, Linden Lab also retains the right to expel a player from the game at any time without restitution for virtual property, thus straddling the fence between a player-regulated environment and one controlled by a god-like game developer.

Mathias Klang's article, "Avatar: From deity to corporate property" is an exploration of the issue of digital property with a concentration on the avatar (Klang 2004). In his article, Klang gives an extended description of the avatar and the importance the avatar comes to have for players of MMOGs. He describes how high-level avatars have come to be sold on auction sites like eBay and how game developers have attempted to stop this kind of trade through EULAs. Like Glushko, Klang argues

that EULAs do not fairly represent the rights of players and that they are inadequate for regulating property rights inside MMOGs. Players of MMOGs often assert that the time and creativity they put into developing and performing with their avatars grants them some rights to these avatars as property.

In "Napster's Second Life?: The regulatory challenges of virtual worlds", Mayer-Schönberger and Crowley explore possible means by which real world legislatures might attempt to regulate virtual worlds (Mayer-Schönberger 2006). First, they examine how rule-making and enforcement currently operate in MMOGs and specifically highlight how the movement of games from developer-created content to user-created content makes a games' rule structure a means of attracting and keeping players. *Second Life*, for example, has offered intellectual property rights to its players as a way of attracting new players, and, thus, new content. The challenge for MMOG developers is to determine what kind of regulatory structures will attract the most players and how these rules can then be enforced. Thus, Mayer-Schönberger and Crowley see economic concerns as the main motivating factors for game developers to invoke the rule systems they currently use. The authors also conclude that outside regulation by real-world governments will become increasingly difficult as MMOGs grow and spread. After all, a legislature in the United States will have a hard time regulating a game that is stored on a server in Korea. The authors predict that any attempt at extensive regulation might cause MMOG players to flee to peer-to-peer (P2P) systems, much like those currently used to download pirated music, movies, and other media. A game on such a system would be much more difficult to regulate than the current MMOGs, since there would not be a single company behind

it. Eventually, MMOGs could exist in "an unregulable space that is both everywhere and nowhere" (Mayer-Schönberger 2006).

The problems regarding virtual property in MMOGs reflect growing issues in two areas of debate. Virtual property is part of the larger argument going on of how to protect intellectual property in the digital era, when data is so easily copied and transferred. Virtual property is also on the forefront of discussions involving the increasing importance of virtual worlds in our daily lives and how these virtual worlds will interact with the real one. The articles summarized here study both virtual worlds in general and the growing legal, moral, and economic debates surrounding virtual property and copyright protection.

What is lacking in the existing literature is a reflection of how the average player understands their intellectual property rights inside MMOGs. This study will attempt to begin to fill that gap by examining an existing venue for discussion among players of *Second Life*. Unlike most MMOGs, *Second Life* grants intellectual property rights to its players, and thus, has become the focus of much formal and informal discussion about how virtual property systems should work.

Method

Before beginning this study, I received from the UNC-Chapel Hill IRB a determination that this research did not constitute human subjects research and did not require further IRB approval.

In order to examine players' opinions of their intellectual property rights in MMOGs, I investigated the *Second Life* forums using a content analysis based on

grounded theory (Gasser 1967). The *Second Life* forums are an official outlet provided by Linden Lab for players to ask for technical assistance, post classified ads, and discuss issues related to the world. Because there has been no previous empirical research on MMOG players' views of virtual property, I choose to analyze available records; the exploratory information gathered in this way could inform later studies involving survey or interview methods.

Like most internet forums, the *Second Life* forums consist of threads made up of posts. One user will make an initial post; other players might then respond to this post, creating a thread. For this study, I initially examined nine threads and then conducted a deeper analysis of three of those threads. To sample the desired population for this study, which would consist of all threads related to intellectual property in the *Second Life* forums, I first searched the forums with the search tool built in to the forum program. The terms I searched under were, "intellectual property", "copyright", and "DMCA". The simple search mechanism returns the latest two-hundred threads containing the query terms. To avoid a time-related bias in the returned threads, I used the advanced search function to instead return the terms according to relevancy. This method returned the two-hundred most relevant threads for each term, according to the relevancy algorithm of the forum program. To sample from the six-hundred threads returned across search terms, I selected three hits for each term, for a total of nine threads to analyze. To select from the threads found under each term, I numbered the threads from one to two hundred, and then choose three using the random integer generator at random.org, which uses atmospheric noise to create its random number lists (<http://www.random.org/integers>). If the thread had already been chosen, either under the current search term or a previous

one, I disregarded that thread and selected the next one. If the thread was started by a Linden, who is an official representative of Linden Lab, then I also threw out that thread and moved to the next one. Upon looking at the threads, it was clear that some of them were not relevant to the study and had been returned because one of the search terms was used incidentally or in another context. These threads were discarded and replaced with the next thread.

The data collection instrument for the initial assessment of the threads is shown in Figure 2 and includes: the search term, the thread label, the thread number, the thread name, the number of posts, the date of the original post, the name of the player who began the thread, the thread summary, and notable quotations. The search term refers to which of the three terms returned the thread. The thread label is used to identify each thread throughout the rest of this paper. It consists of a code for the search term under which the thread was found (CR for "copyright", DM for "DMCA", and IP for "intellectual property") and a number one to three. The thread number is the one given to the thread for the random selection. The thread name is the title given by the player who starts the thread. The next three columns note the number of posts in the thread, the beginning date of the thread, and the avatar name of the user who started the thread. For the sake of anonymity, the avatar names are not included in the final paper, but I recorded them in order to track what is being said by each person. The thread summary gives an idea of what is being discussed in the thread, and I recorded quotations that highlight the issues brought forth in the thread.

	A	B	C	D	E	F	G	H	I
1	Search Term	Thread Label	Thread Number	Thread Name	Number of Posts	Date of Original Post	Name of First Player	Thread summary	Quotes
2									
3									
4									
5									
6									
7									

Figure 2: Data collection instrument for the initial assessment

After assessing all the threads, I chose one thread from each search term that contained particularly interesting copyright discussions. For these three threads, I performed a more intense analysis of the posts. Using the thread tools function in the *Second Life* forums, I copied the printable version of the threads into Microsoft Word. I added comments to significant statements in the posts with the track changes utility available in Word. I made multiple comments on a post if the writer is making multiple different points. For some posts, I included no comments because the writer says nothing substantial, e.g. the writer is merely responding to another post with a thank you or is slinging insults. Sometimes the responses are little more than "That's just silly." (*Second Life* forums).

Since I was unsure what topics were being discussed in the *Second Life* forums, I reserved categorizing the commented statements until after I looked at the initial nine threads and analyzed the three chosen threads. This approach of having the categories evolve from the posts comes from Glaser and Strauss's grounded theory (Glaser 1967). I reproduced the comments in an excel spreadsheet, recording the forum thread, the number of the comment in the thread, the number of the post in which the comment appears, and the name of the player who made the comment. Along with this data, I placed each comment in a category and then summarized the commented statement in the last column. The form for this part of the study is shown in Figure 3. For the final

analysis, I considered any category containing more than five percent of the total commented statements as a major category and those with less than five percent as a minor category.

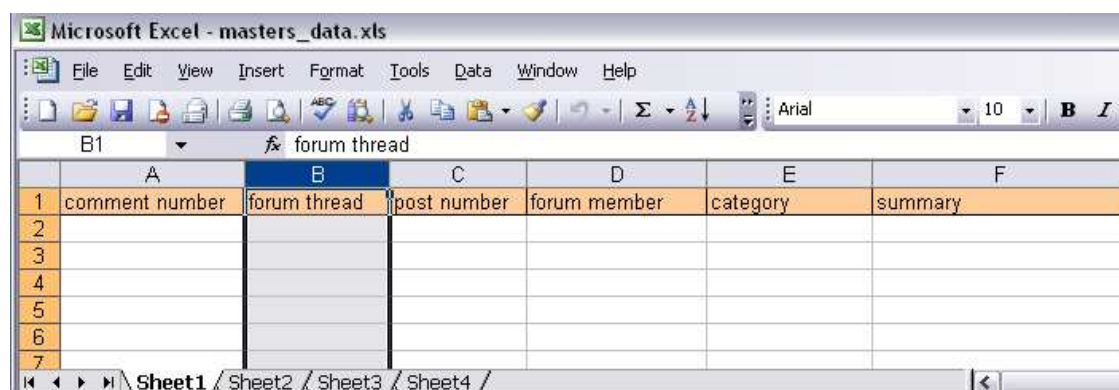


Figure 3: Data collection instrument for detailed analysis

Results

Overall, the nine sampled forum threads contain 880 posts. 376 posts constitute the three threads that are involved in the detailed analysis. Table 2 shows the label, name, and number of posts for each thread. The threads used in the detailed analysis are highlighted in blue.

Table 2: Labels, names, and number of posts for each thread

Label	Name	Number of posts
CR-1	Linden Lab and reverse engineering	158
CR-2	Discussion: Prim Mirror Script Now Available	67
CR-3	Copycats in the SL Fashion Business	63
DM-1	General Linux Politics	14
DM-2	BEWARE OF SALES FOR [edited]	27
DM-3	Copyright abuse in SL	203
IP-1	It's supposed to be free damnit!!	113
IP-2	Secondlife Sellers Guild	148
IP-3	Copyright – Omg How Dare You!!!!	87

Initial analysis

The initial nine threads cover a wide variety of topics, even though they are all related to intellectual property. Thread IP-2 proposes a *Second Life* sellers guild, a labor group that would seek to strengthen the power of creators by banding together. The major complaint of the player who starts the thread is that Linden Lab has not sufficiently enforced the intellectual property rights they have granted to players. The methods the guild plans to use are similar to some real-life labor methods, including "peaceful protests through shop/sim closings, sit downs and picketing" (*Second Life* forums). Many respondents to the post, however, question whether such tactics would be as effective in the virtual world as they can be in the real one.

Thread IP-3 consists of a player complaining that her virtual club has been copied by an unscrupulous infringer (*Second Life* forums). While many of the respondents are sympathetic to her claims, some say that the supposedly copied club is not similar enough to the original to constitute infringement. Thread DM-2 is also a complaint from a creator, who declares that another user has stolen some of her textures (*Second Life* forums). Textures are used to create the surfaces of objects in *Second Life*, and they are often taken from sources outside of the game, such as photographs and paint programs. Textures are some of the most difficult works to protect in terms of intellectual property inside *Second Life*. Also, since so many of the textures are taken from outside sources, it is often unclear if they can be considered original work.

Three of the threads explore technical issues that can reflect on intellectual property rights. Thread CR-1 involves the work of the group LibSecondLife (*Second Life* forums). LibSecondLife creates third party scripts for *Second Life* by reverse engineering

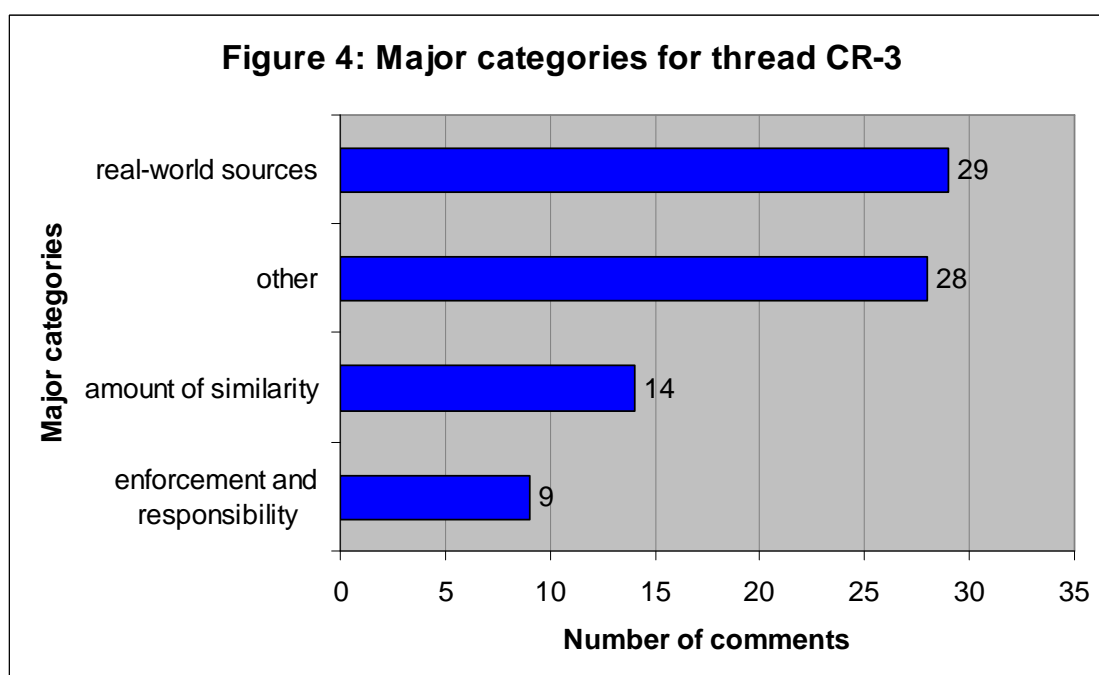
certain aspects of the game software (*Second Life* has only recently switched to being open source). At the time the thread was started in July 2006, the *Second Life* ToS did not allow reverse engineering, but Linden Lab still supported LibSecondLife. Many posts on this thread highlight this contradiction and worry that LibSecondLife's activities could eventually lead to rampant copyright infringement. In fact, only four months after this thread was begun, CopyBot, one of LibSecondLife's scripts, was modified by another party so that it could be used for rampant, unauthorized copying (Terdiman 2006).

In thread CR-2, a player introduces a prim mirror script (*Second Life* forums). Prims are the basic building shapes used to create all the items in *Second Life*, and this script would allow a user to easily create a mirror image of a prim that has been shaped into an object. The stated purpose of this script is to help creators make symmetrical articles, such as pairs of shoes; however, many of the respondents worry that the script could easily become a new method for infringing on others' work. The last thread involving technological issues, thread DM-1, is a discussion of *Second Life*'s potential future as a general-purpose, open-source platform, similar to the early web browsers (*Second Life* forums). If *Second Life* does eventually become a way to access the entire internet, such an event could have wide-reaching implications for digital copyright issues.

Detailed analysis

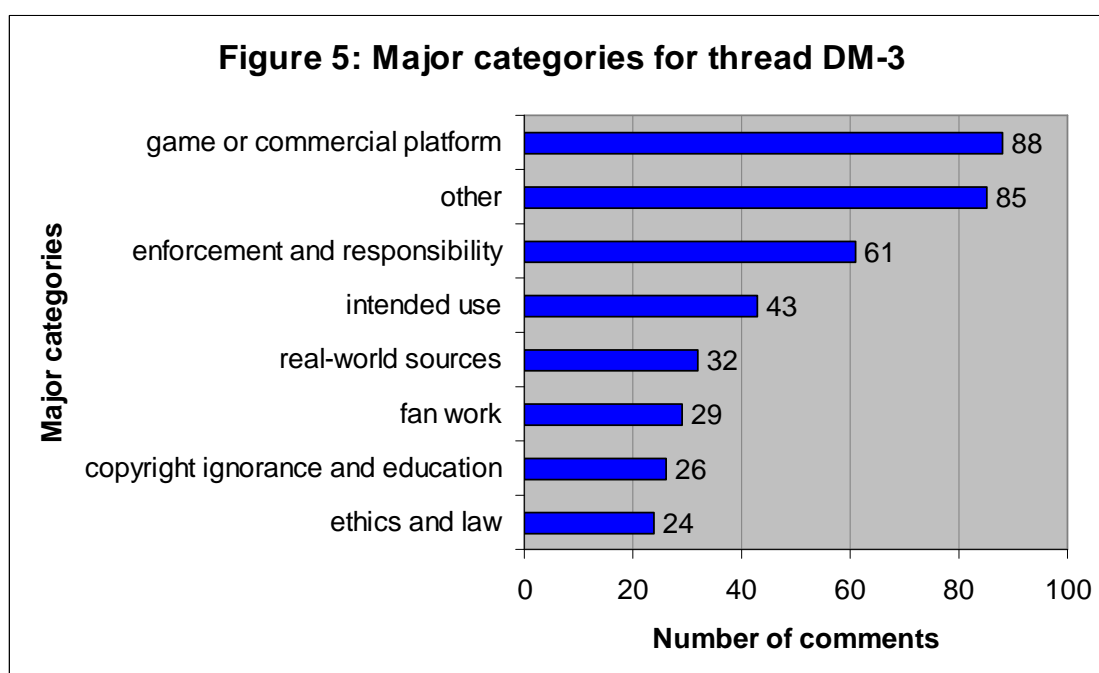
Threads CR-3, DM-3, and IP-1 received a detailed analysis. Since I assumed that posts contained in the same thread would be related, I examined the posts in each thread separately.

Thread CR-3 includes 63 posts, eleven of which have no substantial content related to copyright. 36 different players wrote the posts. I commented on 80 statements in the thread; the comments fall into 15 different categories. Three of the categories contain over four comments, and I thus consider them major categories. The major categories and the number of comments in each are shown in Figure 4.



Of the 80 commented statements, 29 of them have to do with real-world sources. This category refers to in-game objects that have a source in the real world or are from a virtual source outside of *Second Life* (i.e. from another place on the Internet). 14 statements deal with the amount of similarity between objects. These statements include discussions of derivative works and of how similar function might lead to similar items. The enforcement and responsibility category involves nine statements that have to do with who should be held accountable for copyright infringement and how intellectual property rights should be enforced in *Second Life*.

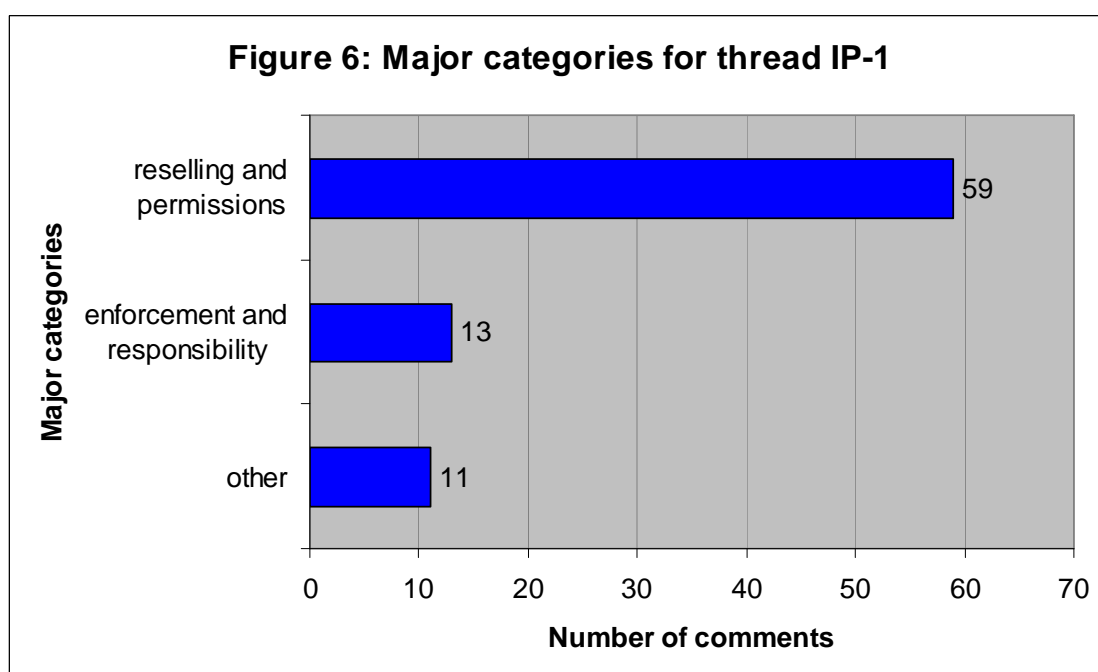
Thread DM-3 contains 203 posts; 23 of the posts have no statements on which I commented. The thread involves 47 different players. I commented on 411 statements that I then grouped into 29 different categories. Seven of these categories include more than 21 commented statements, which makes them major categories. The major categories and the number of statements in each are presented in Figure 5.



88 statements in this thread discuss the degree to which *Second Life* is a game or a commercial platform and if Linden dollars are real money. 61 statements fall into the enforcement and responsibility category described above. Another category from this thread, which contains 43 statements, involves intended use. In these statements, players discuss the commercial use of copyrighted materials versus what might be considered fair use. The real-world sources category is explained above; 32 statements in this thread are part of that category. 29 statements refer to fan work, which takes elements from established fiction and puts them into other situations created by fans. The ignorance and

education category, which includes 26 statements, deals with the need for copyright education in *Second Life* and the amount of ignorance about intellectual property law that is present in the game and on the forums. 24 statements have to do with ethics and law. This category includes debates on the degree to which intellectual property is a moral or legal issue.

Thread IP-1 consists of 113 posts, 43 of which have no substantial content in terms of copyright. 26 distinct players contribute to the thread. I made 129 comments that fall into nine different categories. Two of the categories have more than seven commented statements, which qualifies them as major categories. The major categories and the number of commented statements in each are shown in Figure 6.



59 of the statements in the thread refer to reselling and the permissions system. Whenever an object is made in *Second Life*, the creator can set the permissions on it, which determines whether that item can be copied, transferred, or modified. Players who

receive that object afterwards can then set more restrictive permissions on it. Players on the forum debate if the permissions system should be altered to allow original creators more control over how their works are used. 13 statements in this thread deal with the enforcement and responsibility category described above.

Discussion

What follows is a discussion of the major categories involved in the detailed analysis. Two of the major categories are intended use and amount of similarity. Almost all the players agree that the intent of the person using copyrighted material makes a difference on the degree of the infringement, specifically that if someone makes money from another person's work, then the infringement is much worse than if no profit is made. The amount of similarity category explores how original a work has to be in order to fall under copyright protection. For two objects to serve the same function, they must exhibit a certain amount of similarity, or, "something about form follows function," as a forum member says (Copycats in SL fashion business). Thus, if two people both make a simple pair of black pants, this similarity is not generally considered a copyright problem.

Ethics and law

When *Second Life* players mention intellectual property inside the game's forums, they often discuss the ethical implications of copyright infringement as well as the legal dimensions. Indeed, many of the players seem more concerned about plagiarism than copyright. Plagiarism is the passing off of someone else's work as one's own and is a moral issue within a creative community. Copyright is a set of laws established by

governments to protect creative works and to allow creators to reap financial rewards from those works. Most forum members state that *Second Life* players have a moral obligation beyond the law to respect creators' rights. Of the 24 statements in thread DM-3, only one asserts that unauthorized copying of another's creative work is purely a legal problem and not an ethical issue that has to be dealt with through societal standards (*Second Life* forums).

As described above, thread IP-3 was started by a user who accuses another player of copying her club. This thread began a fury of debate over whether the new club was indeed an example of copyright infringement and, if so, what the ramifications of that infringement should be. A virtual club is a popular build in *Second Life*, providing a space for players to gather, listen to music, and show off their scripted dance moves. The new club was not made through a process of automatic copying, but was apparently built by looking at the original club and then creating the new one from scratch. Respondents to the post were unclear about whether this potential infringement would be illegal or not, but most agreed that it was immoral to profit off another's creativity in such a fashion. One user summed up the majority position with the following statement: "Yes, you have shown that you are within your legal rights to copy the club. However, there is a whole other issue that seems to have gone over your head. It is called the moral issue. You have the ability to do it, you believe you have the right to do it. But *should* you do it?" (*Second Life* forums).

Second Life players may have more concern for ethical as opposed to legal ramifications because legal consequences seem unlikely at present. Forum members point out that intellectual property infringement has been rampant since the birth of *Second Life*

and very little has been done about it on a comprehensive scale. Also, the amounts of money involved in *Second Life* transactions are usually so minimal as to make copyright lawsuits laughable. When discussing the morality of selling reproductions of commercial artwork, one user says, "while a lawsuit isn't likely because of the tiny tiny wee amounts of money involved, I think it's still pretty low of somebody to scan an artbook and turn bootleg images into profits in SL" (*Second Life* forums). Although the law is unlikely to catch up with such infringement any time soon, this player and many others state that moral considerations should stop someone from using another's work to make a profit.

While moral considerations are of great interest on the *Second Life* forums, the current academic literature on digital property rights mostly examines how current copyright laws might be applied to virtual worlds. However, the ethical issues being talked about on the forums stem from philosophical arguments that are frequently referenced in existing academic articles. These arguments concern the source of property rights and whether these rights should be applied to virtual property. The most popular of these arguments are extensions of Locke's labor theory of property and Hegel's idea that property is connected to personal identity.

According to John Locke, a person who has added significant value to a property through their labor has a claim to that property (Klang 2004). This idea is very similar to the arguments made by players of MMOGs like *WoW* and *Everquest* when asserting their right to sell their avatars and the in-game items they have earned. While game developers argue that they are responsible for all the code that brings about the games' objects, avatars, and environments, players contend that they add a significant amount of value to the games through their play. After all, a large part of the entertainment value of MMOGs

comes from interaction with other players and the unique stories participants build around their characters. Some players argue that what they have added to the game through their time and effort should give them a certain amount of ownership in their virtual selves and their digital property, including the right to sell either.

Although players of *Second Life* are granted intellectual property rights by Linden Lab, this fact is not the basis for most arguments on the forums regarding why it is wrong to copy others' creations. Many players on the forums say that unauthorized copying, especially from other *Second Life* players, is inherently wrong because the original creator put their time and labor into the object. One forum member chastises another on the "blatantly disrespectful approach [she is] taking to the creative output of others" (*Second Life* forums). In fact, the digital creations in games like *Second Life* might be the purest example of adding value through labor since the objects do not exist in any form before the creator imbues them with a representation and a meaning. Indeed, without player-creators, *Second Life* would be little more than an endless expanse of tan digital "land", and the contribution of players to the fabric of *Second Life* is one of the main reasons given by Linden Lab representatives for granting players intellectual property rights (Ondrejka 2004).

Hegel argues that private property should be protected because of the personal connection between a person and that which they possess (Westbrook 2006). MMOG players use a similar idea to make the case for ownership of virtual property, especially their avatars. Players are often deeply invested in the virtual characters they create, and *Second Life* creators extend this investment to the in-world objects they build, desiring to protect the integrity of their work for reasons beyond legal and financial implications.

Thus, many forum members say that it is immoral to feed off the personality and creativity of others by copying their designs. Creativity could be considered the most important asset in *Second Life*, as it is the basis for the building of in-world objects and ostensibly what most people are selling in the virtual world.

Enforcement and responsibility

Whether the *Second Life* community is concerned about the law or the ethics of intellectual property, there is a question about who has the right and who has the duty to enforce copyright within the game. Some players state that members of the community should be responsible for policing copyright infringement, since the job is too large for a single copyright owner or even the developers of the game. However, others say that this kind of community enforcement can lead to harassment and false copyright claims. Frivolous allegations are especially troublesome when someone goes to an open forum to call someone an infringer without proof. Most *Second Life* players decry this practice and prefer that third party complainants talk to the probable copyright holder first instead of going to the forums or complaining to Linden Lab.

Most of the conversation on the forums regarding responsibility for copyright enforcement deals with whose duty is it to be concerned about copyright in the process of creating an object. Almost all the forum players state that it is the responsibility of the person creating the item to make sure they are not infringing on someone else's intellectual property rights. They believe that it is up to the creator to make a good faith effort to determine if something is in the public domain or to verify what the copyright holder desires to be done with their material. Admonishing another creator, a forum

member asserts, "It's for you to find out that something ISN'T copyright before you start selling it" (*Second Life* forums). One particularly vocal user on the forums stated that she would use possibly copyrighted materials until the point when the copyright holder tells her to stop. Her reasoning is that one cannot know the desires of copyright holders until they make them known. In fact, the original creators may even enjoy the fact that someone else is building on their work and making it available in a different format. As this forum member says, the copyright holder has to show "Ownership and desire. Ownership of the rights and desire to have the item removed or controlled by another body within SL" (*Second Life* forums). This idea, however, is by far the minority opinion.

On the official *Second Life* blog, Linden Lab's representatives have explored their ideas for enforcing copyright in the future of the virtual world. Eventually, Linden Lab wants to attach metadata automatically to items and then allow players to decide in their own communities how to enforce intellectual property rights (Linden Blog, 2006 November 13 and 2006 November 14). Linden Lab believes that an open copyright system such as Creative Commons might be appropriate for some communities while a more restrictive copyright system might work for others. What is unclear about Linden Lab's enforcement ideas is what would happen when a *Second Life* user wants to cross from a zone with one type of copyright protection to an area with another form of protection. This dilemma is similar to the problems that occur when copyrighted materials move from the country of origin to another country with a different intellectual property system.

Reselling and the permissions system

Currently, the main way for a creator to enforce copyright decisions in *Second Life* is through the permissions system. The topic of *Second Life*'s permissions system and the reselling of in-game objects dominates one of the threads I selected for detailed analysis; it is also mentioned in the other two threads, although not often enough to be considered a major category. When a player creates an object in *Second Life*, they also imbue it with certain properties, determined by the permissions. These permissions include the options to set an object as no-modify, no-transfer, or no-copy. No-modify means that the object cannot be changed after it has been transferred from the previous owner. No-transfer signifies that the object cannot be given to anyone else once it has been received from the previous owner. An object that is set to no-copy cannot be copied by the current owner. When someone obtains an object, they can add more restrictions to it, but than cannot take away restrictions. For example, if an item came to a user set as no-copy but with transfer and modify allowed, they could make it no-modify before giving it to another user, but they could not change the no-copy permission.

Second Life players often use the permissions system to try to mimic the way that property works in the real world. One problem frequently encountered in the permissions systems involves how to allow consumers free use of their property without risking piracy and mass copyright infringement. These conflicts revolve around the reselling or redistribution of virtual objects.

Players who want to resell items they have legitimately purchased may find themselves running into trouble with *Second Life*'s permissions system. For example, a player goes into one of *Second Life*'s many virtual malls and purchases a digital skirt with

pre-programmed swing. She likes it and wears it for a while, then decides she is tired of it and needs a few Linden dollars to purchase the latest pair of digital sandals. If the skirt is set as no-transfer, there is no way for her to get rid of it without simply deleting it from her inventory. In the real world, we expect to be able to sell or give away our possessions after we are done with them. This idea is known as the First Sale Doctrine and is codified in the U.S. copyright statute (U.S. Copyright Office).

There is a struggle on the forums between those who would like consumers to have as much freedom as possible with their digital property and those who want creators to have more control over their virtual work. In thread IP-1 the player who began the thread is concerned that the items she is giving away for free are being sold by other players. Since she makes her freebies capable of being copied in order to distribute them, there is nothing to stop other players from changing the items to no-copy and selling them. The originator of the thread and a few supporters agree that the permissions setting of the original creator should be respected. One of these forum members states, "if something was meant to be copied by the creator, that should be the final say in the matter" (*Second Life* forums). However, most of the forum members maintain that consumers should be allowed more freedom with the objects they receive or purchase. Comparing the rights one has with real-world objects to those available in *Second Life*, one player says, "You may give away the book. You may burn the book. You may sell the book. The law supports all of those 'fair' uses, despite my wishes as the book's 'content creator'. By giving creators a DRM option which abrogates that right, it becomes unfairly biased towards creators, and thus, is a bad thing" (*Second Life* forums).

As suggested by the quotation above, the dissatisfaction that players sometimes have with restrictions on their virtual property is similar to the problems that consumers have run into with Digital Rights Management (DRM) on digital media. For example, unlike a physical book, a digital book cannot be transferred without actually loaning out the reader on which it resides. The other objection many potential consumers have to making items permanently capable of being copied is that they would then be forced into distributing them. If an object is set to allow copying, any person can go "shopping" by right-clicking on that item. According to one forum member, "Our objections, most of us anyway, are to the very principle of an objects creator forcing players of a product to make it available for copying" (*Second Life* forums).

A great deal of discussion goes on in the *Second Life* forums regarding players who resell or redistribute objects as a business method. Second-hand sellers in the virtual world can develop a bad reputation because it is sometimes difficult to keep track of the original creator of an item in an environment where objects can be so easily and perfectly copied. Many creators and consumers in *Second Life* have run across distributors who are selling freebies. The original creators of these items often complain about this phenomenon since they wanted the items to be gifts to the community and feel that new players are being scammed into buying objects they could obtain for free. Others argue that once you release an object into *Second Life* with the permissions set so that it can be copied, you have no right to complain about how that object is then used or sold.

Real-world sources

When copyright is a topic of discussion in the *Second Life* forums, players observe that not only are players copying from each other, they are also taking much of their material from the real world. In fact, a few forum members remark that "IF they remove Every object, or texture that is being used, or sold by someone other than the rightful Coptright [sic] owner, SL would become a Very bare place" (*Second Life* forums). Understandably, players want to recreate their real life in the virtual world. Inevitably, these real-world models include brand-name products, recognizable images, and copyrighted properties. Several forum members note the hypocrisy of *Second Life* players who complain when players steal from each other, but then break copyright law by bringing protected works from the real world into the virtual one. Some common examples of intellectual property infringement in *Second Life* include Nike swooshes on virtual t-shirts and Coca-Cola vending machines. As a possible justification for this type of infringement, some players argue that large companies would be glad for the free advertisement. As one forum member comments, "If I became the CEO of Coke - I would LOVE to see Coke logos plastered all over SL" (*Second Life* forums). Players are trying to make the virtual world reflect their real life as accurately as possible, trademarked logos and all.

A major issue that emerges regarding the use of real-world, copyrighted materials in *Second Life* concerns the copying of fashion designs. Virtual clothes are some of the most popular items to sell in the game. While drawings and photographs of real-world clothing designs can be copyrighted and the brand-names are usually trademarked, clothing itself is not capable of being copyrighted. This fact allows knock-offs of high-

end fashion designs to proliferate in the real world. According to this logic, *Second Life* players are probably not doing anything illegal by looking at a piece of clothing and reproducing it in the virtual world. However, many of the clothes in *Second Life* are made through the process of photo sourcing, which involves using an actual photograph to make the virtual clothing. This process is more likely to be viewed as copyright infringement since the photographs themselves are copyrighted material.

Whether or not players are using the actual fashion photographs, the copying of real-life clothing leads to at least one potential problem in the *Second Life* community. When *Second Life* players see two very similar dresses, they may believe that one creator has copied another, when in fact they have both taken their design from the same real-world source. One forum member recognizes this prospect and states, "One possibility is that the outfit was originally photo sourced from the web by both designers. That is to say, one designer didn't copy the other, rather both found the same design on the web and brought it into the game" (*Second Life* forums). Thus, an overzealous player on the lookout for infringement might mistakenly accuse one of the creators. While some players think that *Second Life* creators who use real-life fashion designs are not exhibiting sufficient creativity, others compliment the creators on the ability to translate a fashion design from the real world to pixels.

Another intellectual property problem that frequently surfaces in *Second Life* is the reproduction and sale of copyrighted art. Several examples of this practice are mentioned on the forums, with descriptions and explanations that might raise different amounts of copyright fervor. Some players have taken copyrighted works of art, reproduced them digitally (usually through scanning), and then sold the reproductions in

the equivalent of digital frames. Most forum players view this behavior as questionable at best, especially since the selling of artwork in the virtual world might be a legitimate way for the original artist to make money. This argument is usually made independently of whether the artist actually does sell their work in-world. At least one user is concerned that in the art world, "SL is getting the reputation as being a den of thieves who have no respect for anyone's copyright" (*Second Life* forums). Some even see *Second Life* becoming the equivalent of a virtual China in terms of bootleg media (*Second Life* forums).

Another user describes recreating their bedroom digitally in their *Second Life* house. The user continues, "If I have an Ansel Adams print in my room, are you saying that I can not scan it, and then use it to make an SL representaiton [sic] of my room, complete with Ansel Adams print? If not, why not? My print. My room" (*Second Life* forums). Most members on the forums feel that if the user owns the Ansel Adams print they have a right to use it in this way. However, if the user is not careful about how they set the permissions on the reproduced art, it could easily be copied off the wall of their bedroom. This example proves the need to balance the right of the consumer to use the items he or she owns and the right of the copyright holder to avoid infringement.

Sometimes intellectual property theft from the real world is much more blatant, such as in cases where *Second Life* players bring media from the real world directly into the virtual one. Thread IP-3 includes a long discussion of the music being pumped into *Second Life* clubs. This practice could clearly be considered infringement of the copyright holder's right to control public performances of their work. One forum member asks, "if either club pays proper royalties to ASCAP/BMI/etc. for the music they play in

their clubs including submitting the complete time logged playlist and patron count that such agencies typically require for public performance of music under their licensing?" (*Second Life* forums). The implication is that most *Second Life* clubs do not in fact take the trouble to track payment for presenting copyrighted work. Players also stream videos into *Second Life* and at least one forum member states that "the guys that sell/rent the movies I dont think that is kosher either its probably their home dvd they purchased and streamed onto a server and are renting out the stream to us in SL" (*Second Life* forums).

Fan work

In thread DM-3 *Second Life* players discuss what can be considered fan work inside the virtual world. Fan art, fan fiction, or tributes are materials that take the original characters or universes from works of fiction and put them into other contexts created by a fan. Although this kind of fan work may be technically illegal, many copyright holders will allow a certain amount of it. It is also not looked upon as unethical by most members of the fan community.

One popular form of fan work in the real world is the creation of costumes, e.g. *Star Wars* fans who build storm trooper outfits to wear to conventions. U.S. copyright law grants the copyright holder the exclusive right to produce derivative work, so technically these fan tributes could be considered illegal. However, many franchises such as *Star Wars* and *Star Trek* have chosen to turn a blind eye to such fan activity as it usually helps their business rather than hinder it. Rabid fan participation is a large part of what keeps these series popular over long stretches of time, and most creators do not want to alienate their main fan base by sending a bunch of lawsuits or cease & desist

letters their way. Some authors have been known to disapprove of any type of fan work and have doggedly gone after its creators, but most will only shut down operations that are making a substantial amount of money off of their intellectual property. Most forum members agree that "If you make a Star Wars Storm Trooper outfit and wear it around town there is no copyright violation. If you sell the outfit in a store (or lots and lots of them) then you are immoral and illegal again" (*Second Life* forums).

In *Second Life*, fan costumes translate into avatar outfits that make the wearer appear as a storm trooper, a Vulcan, or a hobbit. Some *Second Life* players argue that these avatar costumes are merely a form of tribute work and thus will likely be ignored by copyright holders similar to the way fan costumes are in the real world. Others *Second Life* players worry that the digital nature of the fan work will make a significant difference. As one user remarks, Storm Troopers are "trademarked for the purpose of being included in a computer game, and making one on SL could count under that" (*Second Life* forums). Since these avatars are being created in a digital world, they could potentially come into direct competition with other digital forms of the characters, such as those portrayed in *Star Wars*'s own MMOG, *Star Wars Galaxies*. If a player decides he does not like *Star Wars Galaxies*, but still likes the idea of playing Darth Vader, he can move to the *Second Life* server and create a *Star Wars* game of his own inside *Second Life*. Such a creation would seem like a much greater threat to LucasArts's ability to profit off of their intellectual property than a single fan costume made for a convention. Also, a digital avatar outfit can be reproduced much more easily than a real-life outfit. This fact makes players much more likely to distribute and sell these objects than they would be in the real world.

The discussion of fan work in the academic literature on MMOGs has little to do with the concerns that are expressed in the forums. The academic literature tends to concentrate on fan fiction that is posted on websites outside of the actual game (Taylor 2006). The idea of creating fan work inside of a game is not widely explored, possibly because most of the literature does not look at MMOGs that have the kind of creation power available in *Second Life*.

Game or commercial platform

Many of the arguments surrounding copyright in the forums have to do with whether *Second Life* is primarily a game or a commercial platform. Some players contend that *Second Life* is a game like most other MMOGs and that the transactions that take place in the world are merely play. As an example of this type of thinking, one player asserts, "it still functions primarily as a game for most players. What we do in it is entirely for our own personal pleasure with each other, and not to make a profit in the marketplace using someone else's creative labor" (*Second Life* forums). Other players disagree and believe that *Second Life* is the vanguard of a new type of platform for interfacing with the internet and will some day serve the same function as a web browser. They argue that the sales that take place in *Second Life* are business transactions in every way that matters.

Much of the discussion about whether *Second Life* is a game or a commercial platform centers around whether Linden dollars (the in-game currency) can be considered "real" in any sense of the word. Players who see *Second Life* as a game view Linden dollars as game tokens or a game score that have no real world value. A player who feels

this way states, "all you have are these swirling 'game tokens' that bounce around in game, following 'game rules'...." (*Second Life* forums). However, Linden dollars do have an exchange rate to US dollars, so that real money can be put in and taken out of the game. In fact, some people have made a great deal of money out the game (Hof 2006). Forum members who believe that Linden dollars are real money argue, "There are people selling copyrighted items with premeditated intent to cash out their L\$ into US\$" (*Second Life* forums). Some players take a middle road in this discussion and contend that the individual player makes the decision on whether *Second Life* is a game based on whether or not they trade in their Linden dollars for real dollars. As one user says, "You also mention intent... and I agree that intent means something. If I 'sell' to you, somethign [sic] I have in game... with no intent to try to convert to \$\$\$... that it is just a role play for me... then that might make a difference" (*Second Life* forums). Linden Lab's official position is that "Second Life 'currency' is a limited license right available for purchase or free distribution at Linden Lab's discretion, and is not redeemable for monetary value from Linden Lab" (Linden Lab 2007b).

For the purpose of copyright law, this point is mostly moot. No one has to make any money off a work for a copyright violation to have taken place, although financial gain does come into play when considering fair use. Financial gain from copyrighted work also becomes important when considering the amount of damages awarded to a copyright holder in a court case. But some *Second Life* players feel that if no actual money changes hands, the moral implications of infringement are significantly less.

Copyright ignorance and education

A topic of frequent discussion on the *Second Life* forums is the lack of adequate copyright education among the community. Forum posts frequently contain misstatements or misunderstandings on the nature of copyright law and the DMCA, which is the default copyright enforcement mechanism for *Second Life* (Linden Lab 2007a). These mistakes are usually quickly corrected by other forum members (although sometimes they are also incorrect), often times quoting parts of the copyright law or Linden Lab's ToS.

Many members on the forums wish that Linden Lab would require more copyright understanding upon entering the world. Like most other Americans, *Second Life* players can be confused about what exactly constitutes copyright infringement, especially in an arena as unprecedented in copyright law as a completely digital world. Most players would like clearer rules concerning virtual property, perhaps something akin to Creative Commons Licenses, with easy to understand statements that make it clear what rights the creator is willing to forfeit to the community and which they wish to keep. One forum member writes "I think someone should put together some info on copyright and what you can and can not do, in plain english. " (*Second Life* forums).

Summary and Conclusions

As virtual worlds become less about simple entertainment and more about social networks and commerce, studying and understanding them becomes increasingly important. It is critical to know what average players think about their property rights in MMOGs, because their views on the topic shape how much they are willing to invest in

virtual worlds. More and more people are moving a significant part of their lives into these games: opening businesses, establishing relationships, and going to lectures, concerts, or business meetings. Some predict that we will eventually experience the entire internet via a virtual online world (Castronova 2005). Established, real-world businesses are also becoming more interested in using MMOGs as a platform for marketing and selling products. Undoubtedly, these businesses will not risk losing their profits if they suddenly find themselves cut off from their virtual products.

Previous literature on intellectual property rights in MMOGs has approached the topic from a legal or philosophical standpoint, often with the writers examining how current copyright principles can be applied to virtual worlds. No academic research has yet been done on players' attitudes toward copyright issues in MMOGs. This study attempts to capture some of the opinions of *Second Life* players toward their intellectual property rights in the game. The method involves a grounded-theory content analysis of the *Second Life* community forums that uses copyright-related search terms to find relevant discussion threads. *Second Life* is nearly unique in that it grants its players intellectual property rights to their virtual creations, which allows players to sell their creations inside the game and make real money from this virtual world.

The concerns expressed by *Second Life* players seem to have little to do with the themes that stem from the legal, philosophical, and economic literature on virtual property. Generally, *Second Life* players are discussing the practical issues that affect their everyday gameplay. Thus, rather than concentrating on the legal details that tend to dominate the academic literature, they examine the moral perspectives that they want to enforce in their community and how they can enforce them. Players struggle with

whether they are playing a game or doing business and how this difference changes the meaning of copyright infringement. They are concerned that bringing in copyrighted properties from the real world will invite the wrath of outside entities and ruin the insular world of the game. They question whether creators and publishers' laissez-faire attitude toward fan work will translate into the digital world. Many players recognize that the situation of virtual worlds is unique, that copyright law is complicated, and that they are often left without clear guidelines about what is acceptable use.

The purpose of this study is to start bringing everyday MMOG players into the discussion on virtual property, an issue that will increasingly affect them as they begin to create more and more of the virtual world. The research presented here shows that the issues that most concern *Second Life* players are often not those subjects that are discussed in the academic literature.

Bibliography

- Brown, B. and Bell, M. (2004). CSCW at play: 'There' as a collaborative virtual environment. *CSCW'04, CHI Letters*, 6(3), 350-359. Retrieved October 27, 2007 from: <http://www.marekbell.com/publications/playcscw.pdf>
- Castronova, E. (2001). Virtual worlds: A first-hand account of market and society on the cyberian frontier. *CESifo Working Papers Series* No. 618. Retrieved September 21, 2007, from: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=294828
- Craig, K. (2006 May 18). Second Life land deal goes sour. *Wired*. Retrieved December 3, 2007 from: <http://www.wired.com/gaming/virtualworlds/news/2006/05/70909>
- Ducheneaut, N. and Moore, R.J. (2004). The social side of gaming: A study of interaction patterns in a massively multiplayer online game. *CSCW'04, CHI Letters*, 6(3), 360-369.
- Ducheneaut, N., Yee, N., Nickel, E., and Moore, R.J. (2006). "Alone together?" Exploring the social dynamics of massively multiplayer online games. *CHI 2006 Proceedings, Games and Performances*, 407-416.
- Ducheneaut, N., Yee, N., Nickell, E., and Moore, R. J. (2006). Building an MMO with mass appeal: A look at gameplay in World of Warcraft. *Games and Culture*, 1(4), 281-317. Retrieved September 21, 2007, from: <http://gac.sagepub.com/cgi/content/abstract/1/4/281>
- Finlayson, A. (2005 March 30). Online gamer killed for selling virtual weapon. *Sydney Morning Herald*. Retrieved September 23, 2007, from: <http://www.smh.com.au/news/World/Online-gamer-killed-for-selling-virtual-weapon/2005/03/30/1111862440188.html>
- Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Chicago: Aldine Pub. Co.
- Granick, J. (2006 November 20). Second Life will save copyright. *Wired*. Retrieved September 24, 2007, from: <http://www.wired.com/gaming/virtualworlds/commentary/circuitcourt/2006/11/72143?currentPage=1>
- Glushko, B. (2007). Tales of the (virtual) city: Governing property disputes in virtual worlds. *Berkeley Technology Law Journal*, 22, 507-53.

- Hof, R. (2006 November 26). Second Life's First Millionaire. *The Tech Beat, BusinessWeek*. Retrieved April 3, 2008, from: http://www.businessweek.com/the_thread/techbeat/archives/2006/11/second_lifes_fi.htm
- Kent, S. L. (2003). Alternate reality: The history of massively multiplayer online games. *GameSpy*. Retrieved September 23, 2007, from: <http://archive.gamespy.com/amdmmog/week1/>
- Klang, M. (2004). Avatar: From deity to corporate property, A philosophical inquiry into digital property in online games. *Information, Communication & Society*, 7(3), 389-402.
- Kolo, C. and Baur, T. (2004). Living a virtual life: Social dynamics of online gaming. *Game Studies, the international journal of computer game research*, 4(1). Retrieved September 22, 2007, from: <http://www.gamestudies.org/0401/kolo/>
- Kosak, D. (2003). The future of massively multiplayer gaming. *GameSpy*. Retrieved December 4, 2007 from: <http://archive.gamespy.com/amdmmog/week8/index.shtml>.
- Lastowka, F. G., & Hunter, D. (2004). The laws of the virtual worlds. *California Law Review*, 92(1), 3-73.
- Linden Lab. (2006 November 13). Copyrights and content creation in Second Life. Message posted to Official Linden Blog. Retrieved December 4, 2007 from: <http://blog.secondlife.com/2006/11/13/copyrights-and-content-creation-in-second-life/>
- Linden Lab. (2006 November 14). Use of CopyBot and similar tools a ToS violation. Message posted to Official Linden Blog. Retrieved December 4, 2007 from: <http://blog.secondlife.com/2006/11/14/use-of-copybot-and-similar-tools-a-tos-violation/>
- Linden Lab. (2007a). DMCA: Digital Millennium Copyright Act. *Second Life* website. Retrieved December 4, 2007 from: <http://www.secondlife.com/corporate/dmca.php>
- Linden Lab. (2007b). Second Life Terms of Service. *Second Life* website. Retrieved December 5, 2007 from: <http://secondlife.com/corporate/tos.php>
- Linden Research. (2008). About Linden Lab, the company. Linden Lab website. Retrieved March 30, 2008 from: <http://lindenlab.com/about>
- Mayer-Schönberger, V. and Crowley, J. (2006). Napster's Second Life?: The regulatory challenges of virtual worlds. *Northwestern University Law Review*, 100(4), 1775-1826.
- Moore, R. J., Ducheneaut, N., and Nickell, E. (2007). Doing virtually nothing: awareness and accountability in massively multiplayer online worlds. *Computer Supported Cooperative Work*, 16, 265-305.

- Mortensen, T. E. (2006). WoW is the new MUD: Social gaming from text to video. *Games and Culture*, 1(4), 397-413. Retrieved September 22, 2007 from: <http://gac.sagepub.com/cgi/content/abstract/1/4/397>
- Ondrejka, C. R. (2004). Escaping the gilded cage: User created content and building the metaverse. *New York Law School Law Review*, 49(1), 81-101.
- Rodriguez, H. (2006). The playful and the serious: An approximation to Huizinga's *Homo Ludens*. *Game Studies*, 6(1). Retrieved October 26, 2007 from: <http://gamestudies.org/0601/articles/rodrigues>
- Sandoval, G. (2000 April 10). Sony to ban sale of online characters from its popular gaming sites. *CNET News.com*. Retrieved September 23, 2007, from: http://news.com.com/Sony+to+ban+sale+of+online+characters+from+its+popular+gaming+sites/2100-1017_3-239052.html
- Seay, A. F. Jerome, W. J., Lee, K. S., and Kraut, R. E. (2004). Project Massive: A study of online gaming communities. *CHI 2004 Proceedings*, 1421-1424.
- Seay, A. F. and Kraut, R. E. (2007). Project Massive: Self-regulation and problematic use of online gaming. *CHI 2007 Proceedings*, 829-838.
- Second Life forums. <http://forums.secondlife.com/>
- Taylor, T. L. (2006). Does WoW change everything?: How a PvP server, multinational player base, and surveillance mod scene caused me pause. *Games and Culture*, 1(4), 318-337. Retrieved September 22, 2007 from: <http://gac.sagepub.com/cgi/content/abstract/1/4/318>
- Terdiman, D. (2006 November 15). 'Second Life' faces threat to its virtual economy. *CNET News.com*. Retrieved December 4, 2007 from: http://news.com.com/2100-1043_3-6135699.html
- U.S. Copyright Office. §109. Limitations on exclusive rights: Effect of transfer of particular copy or phonorecord. *Copyright Law of the United States of America and Related Laws Contained in Title 17 of the United States Code*. Circular 92. Retrieved March 30, 2008 from: <http://www.copyright.gov/title17/92chap1.html#101>
- Westbrook, T. J. (2006). Owned: finding a place for virtual world property rights. *Michigan State Law Review*, 1, 779-812.