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CAVEAT CLOUDSTER: WHY TRADITIONAL COMMON AND CIVIL PROPERTY LAW SHOULD APPLY TO VIRTUAL PROPERTY AND HOW IT WILL CHANGE THE LEGAL REALITIES OF THE INTERNET[†]

Matthew Quadrini*

ABSTRACT

With the increasing trade in and production of virtual content (e-books, digital music, files stored in the cloud, etc.) and an ever growing use of virtual real estate (email accounts, online storefronts, URLs, etc.) in commercial transactions, the legal interest users hold in their virtual property will determine whether all have the power to prosper in this new, multi-billion-dollar virtual economy. In the cloud, service providers can grant or destroy scores of virtual property with the click of a button and without compensation—a power not even available to the Canadian government.

As it stands, the legal regime governing virtual property is economically and socially unviable. The extension of traditional property law principles to new types of virtual property would better protect the reasonable expectations of parties involved in these electronic transactions. This article defines virtual property and its legally relevant characteristics before turning to examine the licensed-but-not-sold contractual regime that governs virtual property today. It argues that virtual property more closely resembles physical property than intellectual property. In addition, it concludes that utilitarianism and personality theory justify the creation of a legal duty for service providers to protect the interests that users maintain in their virtual property. Lastly, the author suggests how the creation of property rights in virtual property might come about and offers a starting point for future debate as to the nature of the rights that ought to be recognized.

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1. INTRODUCTION

The rise of cloud computing¹ has been described as “the latest example of Schumpeterian creative destruction:² creating wealth for those who exploit it; and leading to the demise of those that don’t.”³ Over the last 15 years, the Internet has begun to digitize much of the human experience. This shift has revolutionized not only how we communicate, but also our economy and, in some cases, the reality in which we choose to live our lives. While the use of the Internet to communicate, to store information, and to generate wealth has grown exponentially over this period,⁴ the legal interest that users have in their virtual property will influence the ability for all to prosper in this new virtual economic space.

Although virtual property is designed to mimic physical property, the use of the licensed-but-not-sold sales model by service providers prevents users from obtaining or maintaining a property interest in the virtual property that they “purchase” or store in cyberspace. This raises interesting questions as to what happens to users’ virtual property upon the demise of a service provider. Technology writer Nicholas Carr aptly summarizes the dilemma:

Discontinued products and services are nothing new, of course, but what is new with the coming of the cloud is the discontinuation of services to which people have entrusted a lot of personal or otherwise important data—and in many cases devoted a lot of time to creating and organizing that data. As businesses ratchet up their use of cloud services, they’re going to struggle with similar problems, sometimes on a much greater scale. I don’t see any way around this—it’s the price we pay for the convenience of centralized apps and databases—but it’s

¹ In this paper, cloud computing refers to the delivery of on-demand computing resources to users by service providers via the Internet, which allows users to store, manage, purchase, and process data using the servers of that third-party service provider or one of its subcontractors: “What is cloud?”, online: IBM Canada <www.ibm.com/cloud-computing/ca/en/what-is-cloud-computing.html>.

² Schumpeterian creative destruction describes the process of “industrial mutation [...] that incessantly revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one.” See Joseph Schumpeter, *Capitalism, Socialism & Democracy* (New York: Routledge, 2003) at 83.

³ Joe McKendrick, “10 Quotes on Cloud Computing That Really Say it All”, *Forbes* (24 March 2013), online: <www.forbes.com/sites/joemckendrick/2013/03/24/10-quotes-on-cloud-computing-that-really-say-it-all/> (Quoting Joe Weinman, Senior VP at Telx and author of *Cloudonomics: The Business Value of Cloud Computing*).

⁴ Goran Čandrić, “How Much is Stored in the Cloud” (3 April 2013), online: GlobalDots <www.globaldots.com/how-much-is-stored-in-the-cloud/>.

worth keeping in mind that in the cloud we're all guinea pigs, and that means we're all dispensable. Caveat cloudster.⁵

Virtual property, unlike physical property, can only exist with the support of a series of computer servers owned and operated by third parties. These external requirements make the regulation of virtual property a clash between users who hold virtual property rights and service providers who operate the systems or create the back-end code upon which virtual property rests. Through the use of End User License Agreements (EULA) and Terms of Service (TOS), service providers harness contract and intellectual property law to leave users with little to no right in their virtual property and minimizing their own liability should their systems fail to operate.⁶ By employing the licensed-but-not-sold concept, these same agreements operate as a “shrewd attempt by [service providers] to... eliminate ownership and knock out the market for used digital goods before it has a chance to establish itself.”⁷

As these contracts of adhesion generally feature stringent arbitration clauses, consumers have limited opportunities to challenge these artificially created virtual property regimes in court. Exacerbating this problem is the fact that service providers promptly settle disputes where such arbitration clauses are rendered inoperable.⁸ Yet, despite these contracts being so clearly stacked in the service provider's favour, these disputes raise questions as to whether users can ever claim property rights in virtual properties, including those that they “purchase” through the licensed-but-not-sold model, and whether these transactions create an obligation for service providers to protect the resulting property interest.

The trade in virtual goods (driven by the cloud, the consumption of digital media, and social gaming) has seen exponential growth in the last decade, despite the unfavourable contracting conditions to which users have been subjected. Business spending on cloud-related technologies is projected to reach an

⁵ McKendrick, *supra* note 3 (quoting Nicholas Carr, author of *The Shallows*, *The Big Switch*, and *Does IT Matter?*).

⁶ “World of Warcraft Terms of Use” (22 August 2012), online: World of Warcraft <us.blizzard.com/en-us/company/legal/wow_tou.html>.

⁷ Matt Peckham, “ReDigi Lets You Resell Used Digital Music, But Is It Legal?”, *Time Tech* (26 June 2012), online: Time <techland.time.com/2012/06/26/redigi-lets-you-resell-used-digital-music-but-is-it-legal>.

⁸ Greg Lastowka, *Virtual Justice* (New Haven: Yale University Press, 2010) at 19.

estimated \$235.1 billion USD in 2017, triple the \$78.2 billion spent in 2011.⁹ In addition, the consumption of digital content, such as e-books, digital music, downloaded video games, and mobile applications, is higher than ever with more people now spending more time using digital media than offline media.¹⁰

Due to the limited number of large-scale shutdowns of service providers, consumer confidence has remained relatively unaffected even as vast amounts of virtual property have been destroyed. One of the few large-scale shutdowns of a service provider was that of Megaupload, a provider of online file storage and sharing that US authorities closed on January 19, 2012 for allegedly participating in copyright infringement. This left the virtual property of hundreds of thousands of users in limbo, and much of the data stored on the company's servers has already been deleted.¹¹ Legal claims by former Megaupload users, such as Kyle Goodwin, with respect to their lost files demonstrate the precariousness of virtual property and could set a precedent for future virtual property claims.¹²

Traditional positivist justifications for the recognition of property rights, as well as the nature of virtual property, justify the creation of property rights in virtual property that service providers would have an obligation to respect. This article examines how the Canadian common and civil law of property could treat the recognition of property rights in virtual property and how they could assist in defining the scope of the service provider's obligation to respect the user's property interest.

⁹ "Cloud Related Spending by Businesses to Triple from 2011 to 2017" (14 February 2014), online: IHS <press.ihs.com/press-release/design-supply-chain/cloud-related-spending-businesses-triple-2011-2017>.

¹⁰ Ozoda Muminova, "Digital overtakes offline media" (28 March 2013), *The Guardian Digital Media Trends* (blog), online: <www.theguardian.com/advertising/digital-media-trends-digital-overtakes-offline>.

¹¹ John Brodtkin, "Megaupload data wiped out in 'largest data massacre in Internet history'", *Wired* (20 June 2013), online: <www.wired.co.uk/news/archive/2013-06/20/dotcom-data-deletion>.

¹² Kyle Goodwin's intervention in *USA v Kim DotCom* will examine the nature of the property interest that users have in property they upload onto cloud storage, as well as the rights that these users have over third parties who lease their servers to service providers. *Megaupload* granted users licences comparable to other cloud storage service providers (exclusion of liability, no guarantee of service, etc.). The US government claims that, although users maintain copyright in their uploaded content, users do not retain an ownership interest in the property they upload. On the other hand, Goodwin asserts a property interest in his uploaded files, without going so far as to claim virtual property rights. See Cindy Cohn & Julie Samuels, "Megaupload and the Government's Attack on Cloud Computing", online: Electronic Frontier Foundation <www.eff.org/deeplinks/2012/10/governments-attack-cloud-computing>; Brief of Interested party Kyle Goodwin (30 March 2012), online: Electronic Frontier Foundation <www.eff.org/document/brief-interested-party-kyle-goodwin>; Richard Chirgwin, "Files aren't property, says US government", *The Register* (4 November 2012), online: <www.theregister.co.uk/2012/11/04/eff_feds_goodwin_megaupload>.

This article defines virtual property and its legally relevant characteristics in Part 2. It then examines the current regime governing virtual property, created by EULAs and TOS agreements, in Part 3 before arguing that virtual property more closely resembles physical property than intellectual property in Part 4. These characteristics should be reflected in the way that virtual property is regulated. In Part 5, the article demonstrates how utilitarianism and personality theory support the creation of an obligation for service providers to respect the property interest users have in their virtual property. Part 6 suggests how property rights in virtual property could come about. Finally, Parts 7 and 8 consider how the Canadian common and civil law could adapt to recognize user rights in virtual property, as well as the nature of the rights created.

With regard to the two latter claims, this article raises a series of legal issues that are likely to arise if and when property rights in virtual property are recognized. It offers modest suggestions as to how these rights might be enforced. It does not purport to establish an unequivocal legal basis for virtual property rights, but rather aims to identify a starting point for future debate.

2. WHAT IS VIRTUAL PROPERTY?

In discussing virtual property, the relevant unit of analysis is a line of computer code.¹³ When one claims to own an article of virtual property, one is in fact claiming ownership of a line of computer code. At its core, computer code is “the symbolic arrangement of data or instructions in a computer program or the set of such instructions.”¹⁴ This data exists as “quantities, characters, or symbols on which operations are performed by a computer, being stored and transmitted in the form of electrical signals and recorded on magnetic, optical, or

¹³ Susan Abramovitch & David Cummings, “Virtual Property, Real Law: The Regulation of Property in Video Games” (2007) 6 CJLT 73 at 75.

¹⁴ *Princeton WordNet Search*, *sub verbo* “computer code”, online: Princeton <wordnetweb.princeton.edu/perl/webwn>.

mechanical recording media.”¹⁵ Within cyberspace, code is essentially an infinite resource, which can be replicated at little or no cost.

2.1 The Three Characteristics of Virtual Property

Virtual property is distinguishable from traditional code sequences. Although both traditional code sequences and virtual property are computer code, the major distinctions between the two result from the physical hardware required to support the code and its corresponding capabilities. Professor Joshua Fairfield defines virtual property as having three legally relevant characteristics not shared with regular code: “virtual property is rivalrous, persistent, and interconnected code that mimics real world characteristics.”¹⁶ As numerous scholars in the civil law and common law traditions have accepted these three characteristics, they form the basic definition of virtual property for the purpose of this article.

2.1.1 Rivalrousness

Firstly, according to Fairfield, code must be rivalrous to constitute virtual property. The quality of rivalrousness requires that the code be designed to allow users to exclude others such that the user can retain sole possession.¹⁷ For example, an email account is rivalrous if only one individual can access the account, while the email address itself is a unique link to the particular account. However, code does not need to be unique in order to be rivalrous. Several users may individually own an identical code sequence to a virtual sword in an online game like World of Warcraft, just as two individuals can own identical cars in the real world. These code sequences may be identical, but each user is said to own a unique copy such that the user is the only holder of that particular code sequence and others may be excluded from using it. Rivalrousness is an essential

¹⁵ *The Oxford English Dictionary*, *sub verbo* “data”, online: Oxford Dictionaries <www.oxforddictionaries.com/definition/american_english/data>.

¹⁶ Joshua Fairfield, “Virtual Property” (2005) 85 BUL. Rev 1047 at 1053.

¹⁷ *Ibid* at 1054.

characteristic for the recognition of property rights in virtual property because property rights are exclusive.¹⁸

2.1.2 Persistence

Secondly, for code to constitute virtual property it must be persistent: “Persistence is the quality of an object having longevity. The [user’s] virtual shovel remains in existence in the virtual world, and it remains the property of that [user], even after he or she logs out of the virtual world.”¹⁹ Moreover, to be considered virtual property, the code must be accessible from more than one computer.²⁰ The property must exist in cyberspace and must continue to exist irrespective of the state of the device on which the user accessed it. Thus, an email account or a plot of virtual land in an online game would be considered persistent because it continues to exist after the user logs out of his or her account and is accessible when the user logs back in on a different computer. Persistence is an essential characteristic for the recognition of property rights in virtual property as property rights are perpetual.²¹

2.1.3 Interconnectedness

Finally, to constitute virtual property code must be interconnected with the world around it. Like physical property, virtual property does not exist in a vacuum.²² As such, virtual property must be experienced in the same way by different individuals and must be subject to the rules governing the technological space in which it operates, much like how physical property is subject to the laws of physics. Interconnectivity also presupposes “the capability to convey or transmit virtual objects among different users. It is what allows players to trade

¹⁸ Stéphane Gilker & Charles Lupien, “Le droit de propriété dans les mondes virtuels en droit civil québécois” in *Service de la formation continue: Développements récents en droit du divertissement*, vol 311 (Cowansville: Éditions Yvon Blais, 2009) 155 at 202.

¹⁹ Abramovitch & Cummings, *supra* note 13.

²⁰ Fairfield, *supra* note 16 at 1054.

²¹ Gilker & Lupien, *supra* note 18.

²² Fairfield, *supra* note 16 at 1054.

virtual goods either in a given virtual world or in the real world.”²³ Simply put, the interconnectivity of virtual property allows others to experience and share virtual property. A website’s URL is thus considered interconnected as “the value of a URL is not solely that the owner can control it; the value is that other people can connect to it and can experience it.”²⁴

2.2 Examples of Virtual Property

Virtual property exists in many different forms and places throughout cyberspace. However, studies discussing virtual property have generally focused on the virtual property amassed by individuals who play massively multiplayer online role-playing games (MMORPGs) such as Second Life, There.com, World of Warcraft, and Entropia Universe.²⁵ However, virtual property does not only concern gamers. If one accepts Fairfield’s definition of virtual property as rivalrous, persistent, and interconnected code that mimics real world characteristics, then virtual property touches many of our everyday online activities. Under this definition, virtual property can be classified into two broad categories: (i) virtual content and (ii) virtual real estate.

Virtual content is not limited to items bought within the game environments of MMORPGs, but also includes any other form of content or media hosted by a third-party service provider. This includes e-books, digital music, files stored in the cloud, emails, digital currency, and games.²⁶ Unlike virtual real estate, these lines of code are generally considered to be no less real than their physical counterparts, as the content (e.g. the melody of a song, the words of an email, the value of a currency, etc.) remains the same regardless of the media supporting it.²⁷ This digital content may reside on a personal hard drive; however, service providers often require or induce users to store their content on third-party servers or use third-party software by promising value-added services. When a

²³ Abramovitch & Cummings, *supra* note 13.

²⁴ Fairfield, *supra* note 16 at 1054.

²⁵ MMORPGs are games where users interact with a large number of other players using avatars as intermediaries in a virtual environment managed by a service provider. Players work together to accomplish tasks, using their avatars to collect items that enable them to complete tasks more efficiently.

²⁶ Fairfield, *supra* note 16 at 1055–8.

²⁷ Greg Lastowka & Dan Hunter, “The Laws of the Virtual World” (2004) 92:1 Cal L Rev 1 at 49.

user accesses digital content through a service provider, the code underpinning the content acquires virtual property status since it becomes both persistent and interconnected.

Virtual real estate, on the other hand, consists of subdivisions of cyberspace that generally have value because of the goodwill attached to them. Such properties include email addresses, bank accounts,²⁸ web pages, and URLs.²⁹ In addition to mimicking real world spaces, these subdivisions of cyberspace maintain the characteristics of rivalrousness, persistence, and interconnectedness. First, the user ultimately controls who has access and can exclude others from taking over the space.³⁰ Second, these spaces exist regardless of the state of the user's computer and can be accessed from any other computer. Finally, these spaces exist as "interconnected loci" within cyberspace and allow users to experience the virtual property that they contain.³¹

3. THE LEGAL REGIME GOVERNING VIRTUAL PROPERTY

The growth in digital media consumption has occurred despite EULAs and TOS agreements characterizing virtual property as intellectual property, which is subsequently licensed to users. These contracts of adhesion are designed to limit liability by licensing virtual property to users and stifling the creation of emergent property interests. However, users generally do not read these contracts and typically treat virtual property as though they have a property interest in the code.³² Many users invest large sums of money or place valuable electronic

²⁸ A bank account may be one of the earliest forms of virtual property: "The owner of an account has an exclusionary right over a nexus of electronic credits and debits located at that nexus. The bank account is persistent—even though the account balance is merely an entry, that entry remains in the bank if undisturbed. The bank account is interconnected—other people can send money to the account, and the owner of the account can authorize money to flow to other account holders" (Fairfield, *supra* note 16 at 1057).

²⁹ *Ibid* at 1055–8.

³⁰ *Ibid* at 1057.

³¹ *Ibid*.

³² In 2007, the grey market trade for virtual goods in World of Warcraft employed over 100,000 people in China and had a value between \$1.5 and \$2 billion USD. The game's producer has repeatedly attempted to crackdown on this grey market by shuttering the accounts of those users involved or by filing complaints with their financial institutions. See Wade Roush, "Live gamer Aims to Civilize the Gray Market for Virtual Goods", *Xconomy* (21 December 2012), online: <[www.xconomy.com/boston/2007/12/21/ live-](http://www.xconomy.com/boston/2007/12/21/live-)

content in these virtual environments, unaware of the risks of potentially imminent termination. Therefore, the question emerges as to whether the law should tolerate the use of “consensual agreements that prevent formation of property rights in the first instance any more than we tolerate other consensual restraints on alienation.”³³

3.1 Virtual Property as Governed by Intellectual Property Law and Contract

A combination of intellectual property law and contract law governs virtual property. The virtual environments within cyberspace consist of code that gives the space functionality and creates the graphical representations of virtual property. Copyright law is the main source of “protection for computer programs and other works in digital form.”³⁴ As a result, intellectual property law governs these representations, “[creating] a right to exclude on the part of the intellectual property holder that can be exercised to eliminate emergent virtual property rights.”³⁵ However, as computer code can only be used to control how the virtual world or service interacts with the user, service providers “use contract to govern what occurs supplementary to the workings of the virtual world.”³⁶ These contracts encompass “features of proper [use] and decorum that cannot be easily written into computer code,” allowing service providers to confirm the licensor-licensee relationship between themselves and the user.³⁷

gamer-aims-to-civilize-the-gray-market-for-virtual-goods>; Trung Bui, “Blizzard Cracks Down on ‘World of Warcraft’ Gold Farmers”, *Game Rant* (21 January 2011), online: <www.gamerant.com/blizzard-cracks-down-world-warcraft-gold-farmers-trung-63961>. See also Justin Slaughter, “Virtual Worlds: Between Contract and Property” (2008) [unpublished, archived at Yale Law School Legal Scholarship Repository] online: Yale <digitalcommons.law.yale.edu/student_papers/62> at 25 (footnote).

³³ Fairfield, *supra* note 16 at 1083–4.

³⁴ Barry Sookman, *Computer, Internet and Electronic Commerce Law* (Scarborough: Carswell, 2007) at 3-2.1.

³⁵ Fairfield, *supra* note 16 at 1082.

³⁶ Abramovitch & Cummings, *supra* note 13 at 76–7.

³⁷ *Ibid* at 76.

3.2 Recurring Themes in the Governance of Virtual Property through Intellectual Property and Contracts

Generally, the interest a user receives in virtual property takes the form of a revocable licence to use the virtual property.³⁸ For example, the terms of service for Amazon.com's Kindle e-book service frame the user-provider relationship as follows:

[T]he Content Provider grants you a non-exclusive right to view, use, and display such Kindle Content an unlimited number of times, solely on the Kindle...and solely for your personal, non-commercial use. *Kindle Content is licensed, not sold, to you by the Content Provider.*³⁹

Of course, companies take a variety of approaches to issuing accounts and virtual property licences. For instance, the virtual world Second Life grants users a limited licence to access virtual land, which it defines as a

...graphical representation of three-dimensional virtual world space. Linden Lab [Second Life's developer] may or may not charge fees for the right to acquire, transfer or access Virtual Land, and these fees may change at any time.

When you acquire Virtual Land, Linden Lab hereby *grants you a limited license ("Virtual Land License") [sic] to access and use features of the Service associated with the virtual unit(s) of space* corresponding to the identifiers of the Virtual Land within the Service as designated by Linden Lab.⁴⁰

In other cases, EULAs grant no interest to users in virtual property. For example, the terms and conditions for Apple Inc.'s iCloud service state that: "Nothing in this Agreement shall be construed to convey to you any interest, title, or license [sic] in an Apple ID, email address, domain name, iChat ID, or similar resource used by you in connection with the Service."⁴¹

While the nature of the interest conferred to users varies from service to service, service providers' use of licensing generally enables providers to maintain

³⁸ Slaughter, *supra* note 32 at 29.

³⁹ Amazon.com, *Kindle Store Terms of Use* (7 December 2012), online: <www.amazon.ca/gp/help/customer> [emphasis added].

⁴⁰ Linden Labs, *Linden Labs Terms of Service*, online: <www.lindenlab.com/tos> [emphasis added].

⁴¹ Apple, *iCloud Terms and Conditions* (17 September 2014), online: <<https://www.apple.com/legal/internet-services/icloud/en/terms.html>>.

control over the virtual property base code. Along with the rights granted under section 3 of the *Copyright Act*,⁴² service providers also use EULAs and TOS to effectively control the user's ability to alienate virtual property. These contracts prevent users from transferring, selling, or trading virtual property even after they have "purchased" it from service providers. Blizzard Entertainment, the developer of World of Warcraft, uses terms that are typical of the industry:

*Blizzard owns, has licensed, or otherwise has rights to all of the content that appears in the Game. [...] Blizzard does not recognize any purported transfers of virtual property executed outside of the Game, or the purported sale, gift or trade in the "real world" of anything that appears or originates in the Game. Accordingly, you may not sell in-game items or currency for "real" money, or exchange those items or currency for value outside of the Game.*⁴³

Such restraints on alienation are not limited to virtual worlds; they extend to other forms of virtual property such as e-books and cloud storage. The Kindle terms of use similarly state that:

Unless specifically indicated otherwise, *you may not sell, rent, lease, distribute, broadcast, sublicense, or otherwise assign any rights to the Kindle Content...* In addition, you may not bypass, modify, defeat, or circumvent security features that protect the Kindle Content.⁴⁴

Moreover, service providers use licensing agreements to limit the transfer of virtual property to the user's estate once the user dies, thereby depriving the user's estate of access to potentially valuable information stored in cyberspace. For instance, the terms and conditions for Apple's iCloud state:

You agree that your Account is non-transferable and that any rights to your Apple ID or Content within your Account terminate upon your death. *Upon receipt of a copy of a death certificate your Account may be terminated and all Content within your Account deleted.*⁴⁵

⁴² *Copyright Act*, RSC 1985, c C-46, s 3.

⁴³ Blizzard Entertainment, *World of Warcraft Terms of Use* (22 August 2012), online: Activision Blizzard, Inc <us.blizzard.com/en-us/company/legal/wow_tou.html> (last visited 26 June 2015) [emphasis added].

⁴⁴ Amazon.com, *supra* note 39 [emphasis added].

⁴⁵ Apple, *supra* note 41 [emphasis added].

Service providers also generally retain the right to terminate a user's account without cause. The Barnes and Noble Nook Store TOS state that:

Where reasonableness is required by applicable local laws, we may, upon notice to you, issue a warning, temporarily suspend, indefinitely suspend or *terminate your NOOK account* or your access to all or any part of the NOOK Service, NOOK Store, NOOK Store Content and/or your NOOK Library *for any reason in our sole discretion...*⁴⁶

The excerpts above demonstrate that EULAs and TOS agreements almost exclusively characterize virtual property as intellectual property, granting users a revocable licence to use the service and its content. These agreements impose strict penalties and give service providers broad power and discretion to protect their contractually characterized interests, leaving little to no flexibility for users.

4. INTELLECTUAL PROPERTY IS NOT APPROPRIATE FOR MAINTAINING RIGHTS IN VIRTUAL PROPERTY

While EULAs and TOS agreements characterize virtual property as intellectual property, its rivalrous nature makes such a characterization inappropriate. While the intellectual property and contract regime for virtual property has become a common industry standard, “virtual property rights are actually a very poor match for intellectual property law.”⁴⁷ Despite the Federal Court of Appeal's affirmation in *Apple Computer, Inc v Mackintosh Computers Ltd* that code falls within the definition of a “literary work” under section 2 of the *Copyright Act*,⁴⁸ it is generally recognized that “virtual property is somehow ‘different’” from intellectual property.⁴⁹

The differences between intellectual and virtual property stem from virtual property's rivalrous nature. While copyright “protects no particular object owned by a particular person; instead...[granting] a right to prevent the replication of a

⁴⁶ NOOK Media, *NOOK Store Terms of Service*, online: Barnes & Noble <www.barnesandnoble.com/include/nook_video_terms_of_use.asp> (last visited 26 June 2015) [emphasis added].

⁴⁷ Lastowka, *supra* note 8 at 168.

⁴⁸ *Apple Computer, Inc v Mackintosh Computers Ltd*, [1990] 2 SCR 209 at 215, 71 DLR (4th) 95.

⁴⁹ Fairfield, *supra* note 16 at 1050.

particular abstract information pattern (e.g. the sequence of words in a book),” virtual property is an interest in a particular piece of copyrighted code, which itself is the manifestation of the intellectual property interest and which is subject to “exclusive possession and market alienation.”⁵⁰

Code forming virtual property contains a complementary, yet separate interest from the intellectual property creating it. Fairfield explains:

We understand instinctually and logically that ownership of a thing is always separate from ownership of the intellectual property embedded in a thing. Ownership of a book is not ownership of the intellectual property of the novel that the author wrote. The book purchaser owns the physical book, nothing more. Ownership of a CD is not ownership of the intellectual property in the music. The music purchaser owns that copy of the music, nothing more.⁵¹

Using Fairfield’s analogy, it is possible to conclude that virtual property has a dualistic nature that allows both property and intellectual property interests to co-exist. For example, an author retains an intellectual property interest in the arrangement of the words that form the basis of an e-book, which is distinct from the property interest in the rivalrous code sequence forming the e-book that is subsequently purchased by, or licensed to, the user.⁵²

5. TRADITIONAL JUSTIFICATIONS FOR PROPERTY LAW SUPPORT THE RECOGNITION OF PROPERTY RIGHTS IN VIRTUAL PROPERTY

Notwithstanding the conclusion that virtual property more closely resembles physical property than intellectual property, the creation of a property interest in virtual property is an entirely positivist construct. As virtual property is intangible, it is difficult to unravel the various competing Lockean claims between service providers and users to form a universal theory of virtual property.⁵³ Nevertheless, it is possible to develop a uniform approach to virtual

⁵⁰ Lastowka, *supra* note 8 at 169.

⁵¹ Fairfield, *supra* note 16 at 1096.

⁵² *Ibid.*

⁵³ Steven Horowitz, “Competing Lockean Claims to Virtual Property” (2007) 20:2 Harv JL & Tech 443 at 454–5, 457. A Lockean claim is a traditional justification for the creation and protection of property rights, according to which property is used as a means to compensate an individual for the labour he exerts upon

property if one assumes a positivist perspective, which views the law of property as a larger series of “entitlements created by law.”⁵⁴ As Jeremy Bentham explained, “Property and law are born together, and die together. Before laws were made there was no property; take away laws and property ceases.”⁵⁵ In other words, property cannot be meaningfully understood apart from the rights that it confers on some while excluding others. Two philosophical justifications—utilitarianism and personality theory—best illustrate the economic and social implications of virtual property, as well as the need to recognize users’ property rights in it. Each theory is examined below.

5.1 A Utilitarian Justification for the Recognition of Property Rights in Virtual Property

From a utilitarian perspective, the allocation of private property interests is justified on the basis that it increases overall utility.⁵⁶ Utilitarianism adopts a “simple bright-line policy” to justify the creation of a private property interest.⁵⁷ As a result, “Jeremy Bentham’s ‘felicific calculus’ and the utilitarianism that flows from it have become the dominant justification for the creation of private property.”⁵⁸ To determine the net impact on utility, the question becomes “a matter of empirical fact”⁵⁹ by calculating the aggregate result of the positive and negative impacts of the property interest. Thus, a utility calculus must analyze the net impact of recognizing a particular interest, including the impacts on users, service providers, and society as a whole.

a thing in its natural state. Where the user must labour to produce property in a virtual world, it is difficult to distinguish the Lockean claims of the creator of the virtual environment (who laboured to create the environment in which the virtual property exists) and that of the user (who laboured in order to make the virtual environment produce the code sequence), as the contributions of both creator and user are at least partly responsible for the existence of the virtual property.

⁵⁴ Bruce Ziff, *Principles of Property Law*, 5th ed (Toronto: Carswell, 2010) at 2.

⁵⁵ Jeremy Bentham, *The Theory of Legislation*, vol 1 (Bristol: Thoemmes, 2004) at 113.

⁵⁶ *Ibid.*

⁵⁷ Lastowka & Hunter, *supra* note 27 at 44.

⁵⁸ *Ibid.*

⁵⁹ Theodore Westbrook, “Owned: Finding a Place for Virtual World Property Rights” (2006) Mich St L Rev 779 at 796.

Liberalizing the market for virtual property and granting users property rights in virtual property presents an opportunity to establish a new virtual economic space from which the whole of society can benefit. Today, despite the risks associated with owning virtual property (due to the lack of rights afforded to users in the content they “purchase”), the trade in virtual goods continues to grow. Still, the consumption of virtual content comes at great risk to consumers. As discussed above in Part 3.2, service providers generally only offer users licences in the content they “purchase.” As part of this arrangement, service providers reserve the right to cancel service at any time and without cause, destroying billions of virtual objects in the process. Moreover, through EULAs and TOS agreements, service providers limit how a user can use his or her virtual property within the limits prescribed by copyright law.

Granting users a property interest in virtual property would permit them to use virtual property as a means for transferring wealth. Doing so would validate not only the importance of the economy in virtual goods (and its attendant societal benefits), but also the efforts of those that have toiled in virtual economies. Although a lot of virtual property is of a recreational or personal nature, the net benefit to individuals as a result of granting users rights in their property is far from trivial:

...when viewed in light of the utilitarian notion that social good is equivalent to aggregated individual good. Clearly, with millions of people spending billions of hours per year within virtual worlds, the aggregated benefit to individuals could be colossal.⁶⁰

While each virtual object is of varying value to the outside world, “it is clear from the amount of real-world time and money invested in...virtual property [that] individuals place a very high value on the virtual objects they create”⁶¹ or purchase.

This was certainly true for Ai Jun and Xu Wenjun, two of the 7 million store managers who have used the Chinese e-commerce platform Taobao, which

⁶⁰ *Ibid.*

⁶¹ Lastowka & Hunter, *supra* note 27 at 45.

operates much like eBay.⁶² Ms. Jun and Mr. Wenjun's online stores had earned high consumer satisfaction ratings, increasing the web properties' values by boosting consumer confidence and maximizing sales.⁶³ In 2012, the shopkeepers died suddenly, prompting Taobao to shutter their accounts and delete their client lists, despite requests by their families to the contrary.⁶⁴ Jun and Wenjun's estates lost the valuable assets that the shopkeepers had spent countless hours creating.⁶⁵

Society has an interest in protecting user data stored in the cloud too. Society places great value in library books as a way of communicating knowledge, yet cloud computing has assumed a much greater role in the storage and transmission of information than a library ever could. A 2013 study by Nasuni, a cloud storage infrastructure service provider, concluded that over one exabyte⁶⁶ of data was stored in the cloud at that time, equal to one-fifth of all the information created from the dawn of civilization to 2003.⁶⁷ Without the recognition of property rights in virtual property, this enormous quantity of information is precariously placed. EULAs and TOS agreements allow profit-motivated service providers to maintain total control over this information, which frequently represents a user's livelihood, personal information, or patrimonial memory.

Furthermore, society stands to gain by applying the dispute resolution mechanisms it has developed for physical property to virtual goods. The law of property has developed a robust series of dispute resolution mechanisms to protect and allocate property interests. These mechanisms are well suited to virtual property, which closely mimics real-world property. As elaborated below, property law can effectively define the nature of a user's interest in virtual property and unlock access to legal remedies and dispute resolution mechanisms already available at law.

⁶² Zhou Wenting, "Taobao clears dust over divorcing clients", *China Daily* (27 July 2013), online: <www.chinadaily.com.cn/cndy/2013-07/27/content_16839702.htm>.

⁶³ Zhao Qian, "Virtual inheritance", *Global Times* (10 September 2012), online: <www.globaltimes.cn/content/732274.shtml>.

⁶⁴ Wenting, *supra* note 62.

⁶⁵ Taobao.com has since changed its policy regarding the transfer of store ownership due to demands by managers who share the management of stores with family members. See *ibid*.

⁶⁶ One exabyte is equivalent to one billion gigabytes.

⁶⁷ Čandrlić, *supra* note 4.

While recognizing property, as opposed to contractual, rights in virtual property will have a positive impact on users, service providers will bear the burden of respecting these new interests. Some programmers, including Richard Bartle, have suggested the burden will be great. Indeed, service providers will have greater obligations than those currently created by EULAs and TOS agreements.⁶⁸ However, the impact of legal reform will be tempered by the norms of each service.⁶⁹ Many of these obligations would have little or no impact on the operations of service providers who already incorporate user rights to vary extents in EULAs and TOS agreements. For example, requiring notice on termination of the service so that users can retrieve their information or allowing the estate of a deceased user to access the information contained in the user's email account may already be standard practice. However, an obligation to back up users' data or to prevent modifications to a service that would devalue users' virtual property interests could come at a greater cost.

Still, the recognition of property interests in virtual property is probably justifiable from a utilitarian perspective. As the cost to the service provider to protect a user's virtual property interest is essentially an economic one, it will ultimately be borne by the user himself. In fact, if service providers download this cost onto the user, then the user's decision to bear the cost will confirm the existence of a net benefit in the creation of a private property interest. The prospect of a net benefit is further supported by society's interest in the protection of information, as well as the opportunity that service providers have to spur new investment in new virtual property interests.

⁶⁸ Richard Bartle argues that, as a concept, virtual property transforms the role of a service provider into that of a "custodian" of property interests, rather than an owner. This will force service providers to ensure that virtual property retains its value and would put "severe—perhaps impossible—constraints on [designers]." See Richard Bartle, "Pitfalls of Virtual Property" (April 2004), online: The Themis Group <www.themis-group.com/uploads/Pitfalls%20of%20Virtual%20Property.pdf>.

⁶⁹ See Part 8.2, below.

5.2 A Personality Theory Justification for the Recognition of Property Rights in Virtual Property: The Social Importance of Virtual Property

In *Elements of the Philosophy of Right*, Georg Hegel claims that private property is essential for the moral development of the human person.⁷⁰ Hegel's personality theory posits that "to achieve proper self-development—to be a person—an individual needs some control over resources in the external environment."⁷¹ As Bruce Ziff explains:

Hegel saw property as a dominant factor in the transformation of people from abstract entities into moral and political beings distinct from others. A liberation, a transcendental shift, resulting from projecting one's will into an external object. Such an object having no end in itself, then becomes subservient to the will of the claimant.⁷²

Modern personhood theory generally distances itself from Hegel's view of "property as a *sine qua non* of human growth and individuality," focusing instead on how people regard the items they purchase as an outward expression of their identity or character.⁷³ When one loses his or her belongings—whether they be clothes, cars, homes, or personal homepages—the individual feels a sense of loss.⁷⁴ Ziff argues that our acquisitiveness as humans is a "natural disposition for such things as sustenance, self-defence, and self-worth" and therefore supports the "primordial need" for some form of property institution.⁷⁵

Most users have an attachment to virtual property that personality theorists would claim creates a property interest. The strength of this attachment varies with the degree of personality attached to the property.⁷⁶ Since virtual property mimics or replaces physical property, the personality theory link between an individual and his or her property is equally replicable in cyberspace.

⁷⁰ Georg Hegel, *Elements of the Philosophy of Right*, vol 1 translated by William Hastie (London: K Paul, Trench, Trübner & Company, 1891).

⁷¹ MJ Radin, "Property and Personhood" (1982) 34 Stan L Rev 957 at 957.

⁷² Ziff, *supra* note 54 at 30.

⁷³ *Ibid* at 30–1.

⁷⁴ *Ibid*.

⁷⁵ *Ibid* at 31.

⁷⁶ Westbrook, *supra* note 59 at 798.

In virtual worlds, an emotional connection exists between a user, the avatar he or she uses to explore the virtual environment, and the virtual property he or she purchases. Several cases have documented this phenomenon. In 2005, Qiu Chengwei, a player of the popular MMORPG Legend of Mir, killed Zhu Caoyuan after the latter had stolen Chengwei's Dragon Saber.⁷⁷ The Dragon Saber is a potent weapon that takes many hours of play to acquire, and was valued at \$1,000 USD or half the Chinese average annual income at the time.⁷⁸ Chengwei had lent the sword to Caoyuan, a trusted friend, who then sold it for real cash instead of giving it back.⁷⁹ When Chengwei reported the property stolen, the police were "of the opinion that the Dragon Saber...was not legal property" and refused to press charges. This drove Chengwei to take the law into his own hands, stabbing Caoyuan with a real knife.⁸⁰

To be sure, the personal interest in virtual property extends well beyond the realm of virtual worlds. For instance, service providers retain incredible powers over a user's virtual property. With the press of a button, service providers can grant or destroy innumerable amounts of virtual property, subverting the effort expended or value accumulated by the user. This power is without equal: "By analogy, the Bank of Canada, the Prime Minister, or the Queen of England, could neither decide to put an end to Canada nor dispossess you of your property without compensation."⁸¹

Service providers have dispossessed users of their virtual property on countless occasions in compliance with their EULAs and TOS agreements, inflicting significant economic and social losses upon users. For instance, in several cases the families of US soldiers who died during military operations were unable to access their loved ones' emails on Yahoo.com. Although these families asked Yahoo to preserve the accounts, the company denied their requests, citing privacy concerns, and confirmed its intention to delete the information following

⁷⁷ Lastowka, *supra* note 8 at 19–22.

⁷⁸ *Ibid.*

⁷⁹ *Ibid.*

⁸⁰ *Ibid.*

⁸¹ Paul Chênevert, "La propriété dans les univers virtuels: un droit réel ou un droit personnel?" (2011) 2:1 Bulletin de Droit Économique 29 at 33 [translated by author].

the 120-day grace period established by the TOS.⁸² While some families eventually succeeded in compelling Yahoo to turn over the information by court order, there are probably many more instances in which a user's valuable personal information, such as access codes and bills, were simply deleted without the knowledge of the user's estate.⁸³ The soldiers' email correspondence, like other forms of writing, was an outward expression of their personalities. Its destruction constitutes a loss, and personality theorists would argue that this justifies the recognition of a property interest in virtual property.

Moreover, by abstracting personality theory, if one examines the image of society and the dynamics of how this image is created by the "inventory of the images of the individuals who compose the society," then society as a whole arguably has an interest in recognizing property rights in virtual property.⁸⁴ Kenneth Boulding claims that "every public image begins in the mind of some single individual and only becomes public as it is transmitted and shared."⁸⁵ If the image of a society is the subjective knowledge transmitted from one generation to the next,⁸⁶ then the important volume of information stored by users on third-party servers forms an important portion of the "transcript of society," the preservation of which is invaluable to the establishment of a value system within it.⁸⁷ Thus the ability of the aggregate of this information to form the basis for societal self-development would, from a personality theory perspective, justify society exercising some control over the information resources in cyberspace through the recognition of property rights for the individual user in virtual property.

⁸² Ariana Cha, "After Death, a Struggle for Their Digital Memories", *The Washington Post* (3 February 2005), online: <www.washingtonpost.com/wp-dyn/articles/A58836-2005Feb2.html>.

⁸³ Olivia Truong, "Virtual Inheritance: Assigning More Virtual Property Rights" (2009) 21 *Syracuse Sci & Tech LR* 57 at 83.

⁸⁴ Kenneth Boulding, *The Image: Knowledge in Life and Society* (Ann Arbor: The University of Michigan Press, 1956) at 54.

⁸⁵ *Ibid* at 64.

⁸⁶ *Ibid* at 5–6.

⁸⁷ *Ibid* at 72–3.

6. RECOGNIZING USERS' PROPERTY RIGHTS IN VIRTUAL PROPERTY IS ALL BUT INEVITABLE

Existing law has become socially and economically unviable as a result of the growing importance of virtual property, coupled with the perception of permanence surrounding virtual environments. As the utilitarian and personality theory analyses above demonstrate, economic value and individual expression increasingly appear in the form of virtual property. The current juridical framework is problematic because service providers systematically prevent users from acquiring a property interest in virtual property, despite the fact that it often looks and feels just like physical property.⁸⁸ While limiting rights by contract is nothing new, the rights attached to traditional ownership set minimum standards that would be lost if they could simply be contracted away. The illusion of possession created by EULAs and TOS agreements is therefore troubling because the familiar look and feel of virtual property perpetuates the reasonable perception of ownership and longevity, which artificially inflates virtual property's economic and social value.

There are at least three scenarios that would likely lead to the recognition of property rights in virtual property. First, service providers could grant users greater rights in their virtual property in response to consumer pressure or to improve market share. Second, after a service provider exercises its rights under an EULA or TOS document, a court could invalidate the characterization of virtual property as essentially contractual in nature and grant users property rights in it. Third, a provincial government could legislate a property regime for virtual property if it foresees the termination of a popular service.

6.1 Service Providers Could Grant Users Property Rights in Virtual Property as a Means to Increase Market Share

In response to market diversification, innovation, and consumer demand, companies have already begun to grant users greater rights in virtual property through their EULAs and TOS. For example, the service provider MindArk,

⁸⁸ Fairfield, *supra* note 16 at 1050.

maker of the MMORPG Entropia Universe, allows users to sell virtual property both inside and outside the game; accepts virtual currency in the game to purchase real world items; and empowers a user's legal successors to liquidate the user's account following the user's death.⁸⁹ However, users are not the only ones with cause to celebrate: this differentiation has helped MindArk attract investments from virtual land developers. This form of investment has been conspicuously absent from MMORPGs operating under the more restrictive licensing terms described above.

Moreover, consumers are increasingly sophisticated and frequently resist efforts to move toward service provider control over content. The release of Microsoft's Xbox One offers a notable example. When the company announced the gaming console's release, it included a series of new digital rights management protocols designed to limit the re-sale of used video games and offer new game-sharing services. In effect, users would no longer own the games they purchased, including those who bought physical copies on a disc.⁹⁰ This announcement was met with an immediate consumer backlash that prompted Microsoft to reverse its decision and give users ownership in their games, similar to what was available for users who purchased an Xbox 360.⁹¹ However, in reversing its decision, Microsoft restricted game sharing via the cloud to paying subscribers who have an Xbox Live Gold membership.⁹²

The cases of MindArk and Microsoft demonstrate that users are not only willing to participate in virtual environments where virtual property rights are protected, but that they will also pay a premium to do so. Furthermore, they show that service providers are willing to recognize these property rights and that sufficient demand exists to absorb the costs of the increased risk associated with

⁸⁹ MindArk, *Entropia Universe Account Terms of Use* (13 September 2013), online: <legal.entropiauniverse.com/legal/terms-of-use.xml>.

⁹⁰ Tom Bramwell, "Microsoft kills game ownership and expects us to smile", *Eurogamer.net* (7 June 2013), online: Gamer Network <www.eurogamer.net/articles/2013-06-07-microsoft-kills-game-ownership-and-expects-us-to-smile>.

⁹¹ Ben Gilbert, "Microsoft reverses Xbox One DRM policy, kills required online check-in and used game complications (updated)", *Engadget* (19 June 2013), online: AOL <www.engadget.com/2013/06/19/xbox-one-drm-used-games-reversal>.

⁹² Alan Buckingham, "Microsoft details how Xbox One game-sharing will work", *Betanews* (9 August 2013), online: <www.betanews.com/2013/08/09/microsoft-details-how-xbox-one-game-sharing-will-work>.

legal reform. Therefore, service providers might attempt to capitalize on user demands for property rights in virtual property in order to remain competitive and to maximize revenues.

6.2 Judges Could Intervene to Grant Users Property Rights in Virtual Property as a Matter of Public Policy

As the value and volume of investments by users in virtual property continue to increase, courts might eventually interpret EULAs and TOS agreements in a manner that redefines a user's interest in virtual property on public policy grounds. This could occur if a motivated user (or group of users) were to challenge the validity of the licence granted by a mainstream service provider after experiencing bankruptcy, a disruption of service, or a loss of information due to server damage caused by humans or natural disaster.⁹³ In these situations, courts must recognize that users are increasingly vulnerable to the widespread unilateral termination of EULAs and TOS agreements as a result of their ever-increasing investments in virtual property.⁹⁴ This vulnerability is further exacerbated by the practice among some service providers of renting server space from third parties.

It would not be unprecedented for courts to reinterpret the legal relationship between parties who have consented to a licensing agreement. In the early to mid-twentieth century, courts used public policy as a reason to modify the relationship between parties based on the factual circumstances surrounding their relationship. Considering the important social and economic claims that stem from virtual property, courts—especially in common law jurisdictions—may come to treat virtual property licensing much like they have historically treated the licence agreements between theatre owners and patrons or licences to rent property.⁹⁵

⁹³ Sebastian Anthony, "Megaupload's demise: What happens to your files when a cloud service dies?", *ExtremeTech* (20 January 2012), online: Ziff Davis <www.extremetech.com/computing/114803-megauploads-demise-what-happens-to-your-files-when-a-cloud-service-dies>.

⁹⁴ Brodtkin, *supra* note 11.

⁹⁵ In England, the dichotomy between a lease and a licence was "developed in response to attempts by landlords to avoid statutory protections" for tenants "through the creation of residential licences" (Ziff, *supra* note 54 at 293). It is possible that courts will come to acknowledge that the rivalrous, persistent, and interconnected nature of virtual property grants exclusive possession to its holder, precluding the formation of a licence. In Canada, "if exclusive possession has been conferred then, generally, the interest granted is a tenancy" (*ibid.*). Per Strong J in *Lynch v. Seymour* (1888), 15 SCR 341 at 352, 1888 CarswellAlta 2

6.3 Provinces Could Legislate a Virtual Property Regime

As mentioned above in Part 4, intellectual property law is actually a very poor match for the governance of virtual property. While there exists a dual property interest in virtual property (namely the author's copyright in the code sequence and the user's property right in the particular rivalrous code sequence), provinces have an opportunity to independently regulate virtual property.⁹⁶ If the rivalrous code sequence forming virtual property is considered property like that described in Part 4, then under section 92(13) of the *Constitution Act, 1867*,⁹⁷ the regulation of virtual property would fall to the provinces as the arbiters on property and civil rights.

This would allow provinces to develop independent regimes designed to attract service providers or protect users' rights in virtual property; however, from a public policy perspective, the recognition of a user's property interest in virtual property would most effectively foster the growth of a virtual economy and increase social welfare. Thus, a province might want to legislate the creation of a new property regime and, in doing so, sidestep the federal government's jurisdiction over intellectual property.

7. TRADITIONAL PROPERTY LAW ALREADY RECOGNIZES THAT VIRTUAL PROPERTY CAN BE SUBJECT TO A PROPERTY INTEREST

In the event that one of the three scenarios discussed in Part 6 occurs, and the use of intellectual property and contract law to govern virtual property is

(WI), a tenancy is created when a user is granted the exclusive right of entry with the power to use the property at issue. By contrast, a licence is created when the right of access to the property is "incidental" to the use. Although the licence granted by service providers may not bestow rights in virtual property, the rivalrous and persistent nature of virtual property does, in fact, give the user exclusive possession of the property in question. For example, even though a user receives no rights in the email address or user ID for Apple's iCloud, only the user can use that code to send and receive information in the account. Moreover, the right in the virtual property is inseparable from the use because without the address the account would not be able to connect with the rest of cyberspace or receive information.

⁹⁶ Legislating property rights in virtual property is not unprecedented: Fairfield, *supra* note 16 at 1086. A November 23, 2001 Taiwanese regulation promulgated by the Ministry of Justice expressly stated that virtual objects are property, are alienable and transferable, that actions on such objects or accounts are found in property, and that the theft of such property is fully punishable under criminal law.

⁹⁷ *Constitution Act, 1867* (UK), 30 & 31 Vict, c 3, s 92(13), reprinted in RSC 1985, App II, No 5.

rejected, it is important to understand the nature of the interest that traditional law grants to users in their virtual property. Both the common law and civil law recognize that the intangible nature of virtual property does not prevent virtual property from being subject to a property interest. However, there are two interests that come into play with any property-based regime for virtual property: (i) the user's interest in a rivalrous, interconnected, and persistent line of code; and (ii) the user's right to access this line of code on the servers of the third-party service provider. This second right of access both makes the virtual property's existence possible and is essential to its utility. Together, these two property interests must ultimately ensure that virtual property is subject to the same rules of private ownership and market alienation that guide the tangible assets they are coded to emulate.

7.1 How the Common Law of Property Would Apply to Virtual Property

7.1.1 Common Law Recognizes a Property Interest in Intangible Virtual Property

The incorporeal nature of virtual property does not preclude the recognition of a property interest in it. At common law, property denotes “everything which is the subject of ownership, corporeal or incorporeal, tangible or intangible, visible or invisible, real or personal.”⁹⁸ This definition demonstrates that the common law has long recognized rights in intangible interests in property because it “is not concerned with...[things], but rather with the rights of persons with respect to [those things].”⁹⁹ Notably, the common law has long recognized interests in intangible financial instruments such as stocks, bonds, and bank accounts. In the case of financial instruments, the analogy between rights over intangible property and virtual property is even more apt as the digitization of financial markets has rendered most financial instruments becoming little more than lines of computer code.¹⁰⁰

⁹⁸ Benjamin Duranske, *Virtual Law* (Chicago: American Bar Association, 2008) at 135.

⁹⁹ Thomas Merrill, “Property and the Right to Exclude” (1998) 77 *Neb L Rev* 730 at 731–2.

¹⁰⁰ Fairfield, *supra* note 16 at 1057.

Moreover, the claim that virtual property purchased from service providers is kept artificially scarce and that its value can be dramatically altered by a few keystrokes should not preclude it from being considered an item of value.¹⁰¹ Most manufactured items are kept artificially scarce to maximize revenue from consumer demand.¹⁰² For example, manufacturers of rare or prestigious items, such as trading cards or designer handbags, often produce limited quantities to inflate prices.

Finally, the fact that virtual property resides on the servers of a third party does not suppress the formation of a user's property interest. Just as the servers themselves can be owned by one party and placed in a building owned by another, different parties can own virtual property and the hard drive to which it is affixed.

7.1.2 To the Extent that the Common Law Recognizes Virtual Property Rights, It Must Recognize an Interest Akin to an Easement

Without giving the user a right to access his or her virtual property stored on the service provider's servers, the recognition of virtual property rights would be of limited value. As the Megaupload case demonstrates, even if a user receives a right in virtual property, the continued existence of that right is entirely dependent on the continued support of the service provider:

Users, purchasers, and sellers of virtual property are all interested in a thing that depends on the operation of software, computing equipment and, most importantly, computer servers. To the extent that virtual property rights exist, virtual owners will be constrained in the free use of their own computing equipment. The existence of easements demonstrates that it is fairly conventional to constrain private rights in tangible property in order to enforce someone else's lesser interest in that property.¹⁰³

As a result of the user's dependence on the service provider, the law of easements provides an interesting starting point to analyze how the user's right to access virtual property could come about, so as to give value to the user's

¹⁰¹ Lastowka, *supra* note 8 at 137.

¹⁰² *Ibid* at 136–7.

¹⁰³ *Ibid* at 127.

property interest. The easement is a “versatile” tool of property law,¹⁰⁴ which recognizes for public policy reasons that constraints on the right of ownership may exist for the benefit of another’s property interest. Easements commonly exist as a right-of-way or a right to use property, and they can take the form of any “privilege, service, or convenience which one [neighbour] has of another, by prescription, grant, or necessary implication, and without profit.”¹⁰⁵ Moreover, the right associated with it can be implied from the fulfillment of a contractual obligation, such as the signing of an EULA or TOS document.¹⁰⁶

The analogy that the creation of a property interest in virtual property would create an easement-like interest is particularly apt given the similarities between land and the service provider’s hard drive. Both are foundational to the existence of the property. For example, in the physical world, it would be impossible to build a house unless there was land on which the foundation could be laid. On the Internet, lines of code cannot be rivalrous, persistent, and interconnected (and therefore fall within the definition of virtual property) unless they are stored on a third party’s server. The right being claimed by users is no more than the electronic equivalent of a right of access that, in its physical form, has long been recognized at common law.¹⁰⁷ A right of access eliminates the risk that a service provider would block users from accessing the portions of the service provider’s hard drive where their virtual property resides.

7.2 The Rigidity of Quebec Civil Law Poses Challenges to the Recognition of a Property Interest in Virtual Property

Unlike the common law, Quebec civil law is less flexible in accommodating emergent property interests.¹⁰⁸ Unfortunately, the concept of virtual property is foreign to the *Civil Code of Quebec (CCQ)*, despite the *Code*’s relatively recent adoption in 1994. While the civil law of Quebec would likely recognize data generally as constituting corporeal movables, which may be subject to the creation

¹⁰⁴ Ziff, *supra* note 54 at 377.

¹⁰⁵ *The Law Dictionary*, *sub verbo* “easement”, online: The Law Dictionary <thelawdictionary.org/easement>.

¹⁰⁶ *Wong v Beaumont Property Trust Ltd*, [1965] 1 QB 173, [1964] 2 WLR 1325 (Eng CA).

¹⁰⁷ Ziff, *supra* note 54 at 377.

¹⁰⁸ Chênevert, *supra* note 81 at 35.

of property interests, the civil law today is poorly suited to protecting ownership interests in virtual property.

The civil law of property makes a distinction between *une chose* (a thing) and *un bien* (a right within one's patrimony). However, "[o]bjective property law is interested not in things themselves, but in the property rights which exist in relation to things."¹⁰⁹ In order for a property right to exist, the thing over which the right is being asserted, whether corporeal or incorporeal, is categorized as either a movable or an immovable and must be subject to appropriation.¹¹⁰

7.2.1 Quebec Civil Law Recognizes that Virtual Property is a Corporeal Movable

Characterizing the nature of virtual property depends on the definition one assigns to the matter making up the code sequence from which virtual property derives its existence. "In its essence virtual property is immaterial and intangible," as it is impossible to physically interact with the property itself.¹¹¹ However, while it is impossible to physically grasp a virtual sword, the existence of the virtual object has a very real impact, notably on the hard drive of the service provider's server. As explained in Part 2, virtual property is essentially an organized series of electrical signals that are stored on a hard drive by changing the polarity on the face of the hard drive's disk. Accessing this information transforms it into energy that then moves from the server, across the Internet to the computer accessing it. The question is whether the organized electrical signals and the subsequent modification of magnetic fields on the hard drive qualify as a corporeal movable under article 906 of the *CCQ*.

While the civil legal tradition does not generally recognize property interests in incorporeal property,¹¹² article 906 states:

¹⁰⁹ Pierre-Claude Lafond, *Précis de droit des biens* (Montréal: Thémis, 1999) at 4–5.

¹¹⁰ Denys-Claude Lamontagne, *Biens et propriété* (Cowansville: Yvons Blais, 2002) at 4–5.

¹¹¹ Gilker & Lupien, *supra* note 18 at 189 [translated by author].

¹¹² Lastowka, *supra* note 8 at 126.

Waves or energy harnessed and put to use by man, whether their source is movable or immovable, are deemed corporeal movables.¹¹³

According to the Quebec Minister of Justice's comments to the *CCQ*, article 906 establishes an irrefutable presumption that "seeks to eliminate any doubt as to the qualification of waves and other energy forms such as electricity, gas, or heat."¹¹⁴ Article 906 likely includes forms of energy such as "sound and radiation" too.¹¹⁵

The codal provision and the minister's comments were not drafted with data in mind, as in the early 1990s the Internet had not yet become mainstream. Jurisprudence on the issue is also of little use in interpreting article 906 with regard to virtual property because it has generally dealt with tangible forms of energy like electric current or steam.¹¹⁶ Still, it seems probable that the magnetic fields and electrons that form the basis of virtual property could be considered corporeal movables under article 906. The organized electron sequence is "energy" and the ability of users to experience this information in the form of an image on a computer screen could be considered a "use by man."¹¹⁷ Thus, virtual property likely falls within the scope of article 906.

7.2.2 Virtual Property and the Issue of Appropriation

Even though virtual property probably qualifies as a corporeal movable, under the civil law it cannot be considered property unless it is subject to appropriation. In the civil law, "things are considered property once they are publicly or privately appropriated or susceptible to such appropriation,"¹¹⁸ which necessarily "pre-supposes the pre-existence of 'vacant' or 'wild' things" from which property is fashioned.¹¹⁹ So, some scholars see a conceptual difficulty with

¹¹³ Art 906 CCQ.

¹¹⁴ Quebec, Ministère de la justice, *Loi sur l'application de la réforme du Code civil*, (Quebec: Publications du Quebec, 1993) at 906 [*Commentaires*] [translated by author].

¹¹⁵ Lafond, *supra* note 109 at 22.

¹¹⁶ Jean-Louis Baudouin & Yvon Renaud, *Code Civil du Québec Annoté*, 14th ed (Montréal: Wilson & Lafleur 2011) at 1111.

¹¹⁷ Gilker & Lupien, *supra* note 18 at 193.

¹¹⁸ Lamontagne, *supra* note 110 at 4 [translated by author].

¹¹⁹ Gilker & Lupien, *supra* note 18 at 205.

regard to the appropriation of virtual property.¹²⁰ The fact that virtual property is, at its core, information has prompted authors including Paul Chênevert, Stéphane Gilker, and Charles Lupien to argue that the appropriation of virtual property would lead to legal absurdities.¹²¹

Chênevert argues that if virtual property is the output of a command sequence that creates physical impressions on a hard disk, which is subject to appropriation, then it could lead to the absurd result of requiring the user to purchase the service provider's hard drive.¹²² Meanwhile, Gilker and Lupien argue that it is possible to appropriate virtual property indirectly through movable accession under article 972 of the *CCQ*.¹²³ They suggest that "the technical process of creating virtual property requires the user to save the information necessary to create the virtual property on the service provider's server,"¹²⁴ modifying the hard drive. However, because the user's work will generally (but not always) be worth less than the hard disk, the service provider would likely be required to compensate the user for his or her efforts.¹²⁵ This result would be problematic, as it goes against the reasonable expectations of both users and service providers.

In both cases, these authors do not examine the issue of appropriation from the moment that the property interest is created. While the line of code only becomes virtual property once it is rivalrous, persistent, and interconnected (which usually occurs when information is saved on a third-party server), the property interest in the line of code comes into existence at the moment the line of code is created, separate from the property interest in the user's hardware.¹²⁶ A user who stores a document on his or her computer has a property interest in the data comprising the document when the first letter is typed in the word

¹²⁰ *Ibid* at 205–15; Chênevert, *supra* note 81 at 39.

¹²¹ *Ibid.*

¹²² Chênevert, *supra* note 81 at 39.

¹²³ Gilker & Lupien, *supra* note 18 at 210.

¹²⁴ *Ibid* at 211 [translated by author].

¹²⁵ *Ibid* at 214.

¹²⁶ In a dissenting opinion on the unreasonable search and seizure of a teacher's personal files from a laptop issued by his employer, Abella J implicitly recognized that ownership of the device and ownership of its data do not necessarily vest with the same individual: *R v Cole*, 2012 SCC 53 at para 109, [2012] 3 SCR 34.

processor,¹²⁷ as it is at that moment that the electrical signals are appropriated, organized, and stored on the RAM of the user's computer. A service provider then transfers and stores this property on the user's behalf. By contrast, where a user accesses virtual property created by a service provider, as with e-books or virtual worlds, the service provider creates the property interest before storage on the server.

Since code is made up of data that is transmitted and stored in the form of electrical signals, the process of creating code is simply the application of knowledge to arrange electrons inside a computer to some useful end. If the first law of thermodynamics is correct and "energy cannot be created or destroyed, only transferred," then the electrons within the electrical signals that form data and allow it to be transferred or stored are "pre-existent."¹²⁸ Therefore, it is possible for a user to appropriate these electrical signals and store them on the property of others in much the same way that an individual can convert the kinetic energy of wind into a useful electrical by using turbine technology to store the energy on a neighbour's battery. In both scenarios, one uses knowledge to store energy in a useful form, while giving meaning to article 906 of the *CCQ*.

7.2.3 To the Extent that the Civil Law Recognizes Virtual Property, It Must Recognize a New Innominate Real Right to Access Virtual Property

If the civil law recognizes the creation of a property interest in virtual property, then it must also recognize a new innominate real right for users to access their virtual property stored on a service provider's servers. The value of a user's property interest in virtual property depends entirely on the rights that a user may assert over the servers on which it is stored, notably the right of the user to access his or her virtual property.¹²⁹ While Quebec law could regulate virtual property with property law, it currently provides no means of enforcing this property interest when virtual property resides on the servers of a service provider.

¹²⁷ This property interest would be separate from the user's copyright in the organization of the code sequence.

¹²⁸ HyperPhysics, *Conservation of Energy*, online: Georgia State University <hyperphysics.phy-astr.gsu.edu/hbase/hframe.html>.

¹²⁹ Lastowka, *supra* note 8 at 127.

Under article 1119 of the *CCQ*, the nominate forms of dismemberments of the right of ownership are limited to usufruct,¹³⁰ use,¹³¹ servitudes,¹³² and emphyteusis.¹³³ These traditional forms of dismemberments of the right of ownership are largely unhelpful in the context of virtual property. First, use, servitudes, and emphyteusis do not contemplate the dismemberment of the rights of *usus*, *fructus*, or *abusus* in a movable in favour of another movable.¹³⁴ Second, usufruct is unhelpful as it terminates on the death of the usufructuary.

However, the real rights in relation to property (equivalent to rights *in rem*) created by article 1119 are not exhaustive. In the civil law, “jurisprudence and doctrine have generally admitted the existence of other innominate real rights” and these rights have been limited to: “logging rights, hunting and fishing rights, rights to exploit the public domain, and personal servitudes.”¹³⁵ In *Matamajaw Salmon Club v Duchaine*,¹³⁶ a decision that was affirmed by the Quebec Court of Appeal in *Club Appalaches Inc v Quebec*,¹³⁷ the Judicial Committee of the Privy Council held that innominate real rights could be created in a distinct self-contained property right “to a separable subject or incident of property,” like a fishing right that arises incidental to ownership of the riverbed.¹³⁸ The Privy Council reasoned that:

Article 406 [similar to article 947 of the *CCQ*¹³⁹] says that “ownership is the right of enjoying and of disposing of things in the most absolute

¹³⁰ “Usufruct is the right of use and enjoyment, for a certain time, of property owned by another, as one’s own, subject to the obligation of preserving its substance” (art 1120 *CCQ*).

¹³¹ “A right of use is the right to temporarily enjoy the property of another and to take the fruits and revenues thereof, to the extent of the needs of the users and the persons living with him or his dependents” (art 1172 *CCQ*).

¹³² “A servitude is a charge imposed on an immovable, the servient land, in favour of another immovable, the dominant land, belonging to a different owner” (art 1177 *CCQ*).

¹³³ “Emphyteusis is the right which, for a certain time, grants a person the full benefit and enjoyment of an immovable owned by another provided he does not endanger its existence and undertakes to make constructions, works or plantations thereon that increase its value in a lasting manner” (art 1195 *CCQ*); Art 1119 *CCQ*.

¹³⁴ Art 1162 *CCQ*. The notions of *usus*, *fructus*, and *abusus* refer to the three main civil law rights attached to ownership—namely to use, to enjoy, and to dispose of said right (art 947 *CCQ*).

¹³⁵ Lafond, *supra* note 109 at 736 [translated by author].

¹³⁶ *Matamajaw Salmon Club v Duchaine*, [1921] 2 AC 426, 59 DLR 391, Strong J (JPC) [*Salmon Club*].

¹³⁷ *Québec (Procureur Général) c Club Appalaches Inc*, [1999] RJQ 2260, [1999] RDI 589 [*Club Appalaches*].

¹³⁸ *Salmon Club*, *supra* note 136 at 398.

¹³⁹ *Commentaires*, *supra* note 114 at 947.

manner, provided that no use be made of them which is prohibited by law or by regulations.” Article 408 [similar to article 948 of the *CCQ*¹⁴⁰] provides that “ownership in a thing, whether moveable or immovable, gives the right to all it produces, and to all that is joined to it as an accessory, whether naturally or artificially. This right is called the right of accession.” There appears to be no reason why, consistently with the language of these articles, there should not be ownership of a fishing right as a mode of enjoying and disposing of a separable physical subject for possession. The title to take the fish is a title to take a product of the river, and art. 408 recognises as possible in the law the union with it as an accessory of the right to use the bed of the river or the banks when naturally or artificially stipulated for as part of that which is joined to the fishing right.¹⁴¹

Since the right to access fish is an accessory right to the ownership of the riverbed in which the fish live, it closely resembles the right to access virtual property. The nature of the Internet places the right to access data stored on the server as an important, valuable, and accessory dismemberment of the service provider’s hard drive ownership in favour of the user who owns the data stored on it. This dismemberment, which is created by the execution of an EULA or TOS, could constitute the creation of a perpetual, innominate real right to access virtual property following the logic of *Club Appalaches*, which held that innominate real rights could be created by a dismemberment of the right of ownership.¹⁴²

While an innominate right can exist as an accessory to virtual property, the nature of the right is not subject to any legal regime and is created entirely by a constituting act such as a contract.¹⁴³ Despite being governed by a constitutive act, these rights do not exist in a legal vacuum. As a dismemberment of the right of ownership, these innominate rights cannot be greater than the property interest itself.¹⁴⁴ Additionally, these rights are limited by public order.¹⁴⁵

While EULAs and TOS documents are used to govern the relationship between users and service providers, they should not form the basis for the

¹⁴⁰ *Ibid* at 948.

¹⁴¹ *Salmon Club*, *supra* note 136 at 399 [emphasis added].

¹⁴² *Club Appalaches*, *supra* note 137 at 2261.

¹⁴³ *Commentaires*, *supra* note 114 at 1119.

¹⁴⁴ M Planiol & G Ripert, *Traité pratique de droit civil français*, vol 3, 2d ed (Paris: Librairie générale de droit et de jurisprudence, 1952) at 54.

¹⁴⁵ *Ibid*.

creation of an innominate real right in their current state. The structure of these agreements creates an almost feudal regime to regulate the relationship between users and service providers.¹⁴⁶ This relationship would likely be considered against public order and incapable of forming an innominate dismemberment of the right of ownership.¹⁴⁷ However, if a civilian court reduced the obligation on users as a result of the abusive clauses contained in the EULAs and TOS agreements, then the civil law would be more amenable to the recognition of a new innominate real right to access virtual property.

As EULAs and TOS agreements are contracts of adhesion,¹⁴⁸ civil courts have greater leeway to modify the obligations in such agreements to recognize the creation of an innominate real right to access virtual property. Article 1437 of the *CCQ* provides that:

An abusive clause in a consumer contract or contract of adhesion is null, or the obligation arising from it may be reduced.

An abusive clause is a clause which is excessively and unreasonably detrimental to the consumer or the adhering party and is therefore not in good faith; in particular, a clause which so departs from the fundamental obligations arising from the rules normally governing the contract that it changes the nature of the contract is an abusive clause.¹⁴⁹

Article 1437 has been used in the past to sanction “terms of unilateral termination” by one party for reasons lacking “valid motive, without notice or without warning.”¹⁵⁰ Thus, this provision could probably be used to nullify the terms of EULAs and TOS agreements that allow providers to unilaterally terminate their services. In changing the scope of the obligations in these agreements, the right to access virtual property becomes a separate, innominate real right, forming a separate property interest. However, it is important to note

¹⁴⁶ Slaughter, *supra* note 32 at 31–2.

¹⁴⁷ G Flattet, “Bibliographie du Traité pratique de droit civil français” (1955) 1 RIDC 254 at 254–5.

¹⁴⁸ A contract of adhesion is a contract in which the essential stipulations were imposed or drawn up by one of the parties, on his behalf or upon his instructions, and were not negotiable (art 1379 CCQ).

¹⁴⁹ Art 1437 CCQ.

¹⁵⁰ Jean-Louis Baudouin & Pierre Gabriel Jobin, *Les Obligations*, 5th ed (Cowansville: Les Éditions Yvon Blais, 1998) at 135–6 [translated by author].

that, although it is possible and desirable to use article 1437 to re-characterize EULAs and TOS agreements, the recognition of property rights in virtual property would be a significant departure from the terms of contracts that often grant no rights to users in their virtual property and that unfairly characterize virtual property as intellectual property.

Nevertheless, a court's decision to imply terms into a contract of adhesion would not be unprecedented in the domain of virtual property. In *Re Harp Investments Inc.*,¹⁵¹ the Quebec Superior Court implicitly recognized a client's right to access the money in his bank account even though the account was in the name of a mandatary.¹⁵² Implying terms in a bank account contract is especially notable in the context of virtual property because a bank account *is* virtual property according to Fairfield's definition.¹⁵³

8. WHY RECOGNIZING PROPERTY RIGHTS IN VIRTUAL PROPERTY WILL PROTECT THE REASONABLE EXPECTATIONS OF THE PARTIES

Projecting the traditional Western understanding of property law into the virtual domain is necessary to protect the reasonable expectations of parties involved in virtual property transactions. If, as I have argued, virtual property is not intellectual property, then the law governing virtual property could be organized in a variety of ways to reflect this fact, ranging from the communal to the communist. However, as virtual property is designed to mimic real world property as it exists in North America,¹⁵⁴ the use of traditional Western property law best protects the reasonable expectations of the parties. Not only does "mirroring the features of real-world systems...make sense to twenty-first-century [users]," it also enables service providers to "attract the largest number of paying customers."¹⁵⁵

¹⁵¹ *Harp Investments Inc (Syndic De)*, [1992] RJQ 1581, 24 CBR (3d) 117.

¹⁵² *Ibid* at 1585–6.

¹⁵³ See Part 2, above.

¹⁵⁴ Lastowka & Hunter, *supra* note 27 at 33.

¹⁵⁵ *Ibid*.

Service providers developed virtual property in response to the “ingrained assumptions” that users have about how reality should work.¹⁵⁶ As such, it makes sense to start analyzing users’ virtual property rights, and the corresponding obligation of service providers to preserve that virtual property, from the normative structure governing the property from which virtual property is derived. This approach is to be preferred even as the traditional physical property regimes of the Canadian common law and civil law extend into the domain of virtual property, requiring a creative reconceptualization of some principles within our legal understanding of the law of property. This reconceptualization should be qualified by the norms of the service, which affect how relationships are interpreted between service providers and users, between users themselves, and between the virtual property and its physical hardware. Both the common and civil law recognize that certain legal principles must be interpreted subjectively, in light of prevailing societal norms. This concept most clearly manifests itself through the principle of good faith¹⁵⁷ and the use of the reasonable person standard¹⁵⁸ in regulating the relationships between individuals.

In the property context, the notions of “property as a relationship” and “property as an object” underpin Western understanding of the legal framework.¹⁵⁹ This understanding of property implies “not only a relationship to an object of social wealth but also a relationship with other individuals in respect to the object.”¹⁶⁰ Others are excluded from these aforementioned relationships “and have a duty not to interfere” with the resulting property rights.¹⁶¹ Practically, this principle manifests itself as the vesting of control over property in a single person (or association of persons) with the ability to exclude others.¹⁶²

¹⁵⁶ *Ibid.*

¹⁵⁷ *Bhasin v Hrynew*, 2014 SCC 71, [2014] 3 SCR 494; art 6 CCQ.

¹⁵⁸ *Galaske v O'Donnell*, [1994] 1 SCR 670, 112 DLR (4th) 109; art 1457 CCQ.

¹⁵⁹ David Lametti, “The Concept of Property: Relations through Objects of Social Wealth” (2003) 53 UTLJ 325 at 327.

¹⁶⁰ *Ibid* at 335.

¹⁶¹ *Ibid.*

¹⁶² *Ibid.*

While the exclusionary rights associated with ownership may appear unfettered, in practice these ownership entitlements are much less absolute. David Lametti explains:

[The] power to exclude is in part the cause of property's inherent and ongoing controversial nature: it is one matter to say that one ought to have access to some resource, but giving someone the power to dictate the use of that resource to the exclusion of others—and, hence, giving someone power over others—is far more debatable. It is this fact that inevitably ties the existence and architecture of private property to its underlying justifications.¹⁶³

The extent of property rights must be determined on the basis that “the form that property takes will reflect the type and relative power or weight that the justification has in balancing out the other principles or imperatives.”¹⁶⁴ As a result, the law of property has developed several mechanisms, such as easements, to protect vulnerable estates or dismemberments of ownership from the exclusive ownership interests of others. The contours and extent of the right of ownership over virtual property and its associated physical hardware should also be evaluated in light of the normative basis for each competing property interest, which are themselves qualified by the social norms of the service.

As virtual property interests are both dependent and relational, they are particularly susceptible to being qualified by their normative context. First, as discussed above, virtual property is entirely dependent on the existence of the physical hardware that supports it. As such, a caveat should be placed on service providers' rights in the hardware so that users may exercise their lesser virtual property interest. Second, as between users themselves, virtual property acts as the vehicle through which a user can interact with other actors in cyberspace (as users cannot physically interact with one another). As a result, the nature of these interactions, and the extent to which they can be regulated by another user's virtual property, will likely be tempered by the norms that govern the social contract in which the virtual property interests operate.¹⁶⁵ With this in mind, the

¹⁶³ *Ibid.*

¹⁶⁴ *Ibid* at 336.

¹⁶⁵ Lametti argues that property should be reconceptualized as a “relationship between or among individuals *through* objects of social wealth,” which would have the effect of “better reflecting the contextual nature of property in both property law and theory.” This would profoundly affect the property discourse, as it

following pages canvass practical issues that are likely to arise as a result of recognizing property rights in virtual property and briefly discuss how the norms of a service could come to temper their negative effects.

8.1 New Rights and Obligations

Recognizing property rights in virtual property will give users new rights as against service providers and third parties. This would enable virtual property to become part of the user's estate or patrimony and would be available not only to the user's heirs, but also to the user's creditors as security. Additionally, recognizing these rights will displace virtual property from the grey market, allowing users to sell their virtual property and subjecting the sale to transactional incidents, such as the payment of taxes. This will protect both users and purchasers by allowing them to contract without the risk that the service provider will terminate their accounts for violating the EULA or TOS. Moreover, both parties will benefit from the certainty of a conventional dispute resolution process, "since property gives rise to all the standard legal interests that accompany property ownership."¹⁶⁶

However, for reasons already mentioned, the rights afforded to users cannot be homogeneous across the spectrum of virtual property. The rights to be acquired by users are based on the ability of the particular type of virtual property to mimic real world property and on the social norms of the service. Users develop expectations based on the virtual item's ability to replace a real world object. For example, when a user purchases an e-book, he or she should receive a permanent property interest because users expect to continue to have access to the information contained in an e-book once it is stored in their virtual library. It is reasonably foreseeable that users could build a library of rivalrous code that grows to contain gigabytes of information. By contrast, a user may only expect to

would create specific duties of stewardship or obligations to use objects of property in a specific manner (*ibid* at 326).

Lametti's reconceptualization of the property paradigm would be particularly apt in the realm of virtual property due to the vulnerability of holders of virtual property rights, as well as the relational nature of virtual property between individual users. This idea should be explored further.

¹⁶⁶ Lastowka, *supra* note 8 at 124.

maintain ownership of property purchased in virtual worlds for as long as the game is in service. After all, a sword in World of Warcraft has no practical use or value outside of the virtual environment.

Service providers will have an obligation to respect users' virtual property interests. This is a duty that flows from the property right held by the user in the virtual property, as well as from the accessory rights that are crucial to the virtual property's existence and that the user would have over the service provider's hard drives and certain other non-virtual property.¹⁶⁷ Grounding the service provider's obligations in the framework created by traditional property rights provides both parties with a clear and comprehensive regime to manage their competing property interests. For instance, both the common law and civil law recognize that property owners who place their property in the care of others are afforded certain protections. Under the law of bailments and under articles 1299–1373 of the *CCQ* (administration of property of others), a person who takes possession of another's property has an obligation to return that property as soon as the time or use for or condition on which it was delivered has elapsed or been performed.¹⁶⁸ If it is recognized that a user has a property interest in virtual property, then the nature of the obligation on service providers to return virtual property to users will depend not only on the EULA or TOS, but also on the "specific circumstances" that determine how the parties are expected to act.¹⁶⁹ These specific circumstances generate norms that define what rights users have in their virtual property and the limits to how these rights can be asserted against service providers. The sophisticated body of law associated with these rights, as well as the mechanisms developed in the law of contracts and extra-contractual obligations, creates a framework for their orderly extinction.

The same is true for the accessory rights attached to ownership of virtual property, which affect the service provider's physical property interests. As a practical result of their obligations, service providers will need to take greater care to protect a user's virtual property from unforeseen events that could damage their servers like natural disasters. Moreover, they will not be permitted to

¹⁶⁷ See Part 7, above.

¹⁶⁸ Ziff, *supra* note 54 at 320; art 1301 CCQ.

¹⁶⁹ Ziff, *supra* note 54 at 325.

arbitrarily terminate access to virtual property and will need to provide users with a reasonable opportunity to retrieve their information. Service providers will also be limited in their ability to circumscribe the virtual property rights that users receive and will be required to take reasonable steps to protect the value of purchased virtual property, in accordance with the norms of the service. This might require service providers to remove digital locks at the termination of service in order to allow users to retain a usable interest in their virtual property.

8.2 The Norms of a Service Limit Users' Rights and Recourse Against One Another

The exercise of a user's rights in virtual property is limited by the legal and societal norms of the service. One of the arguments against recognizing of virtual property rights, especially in virtual worlds, is that it would make game play more litigious due to the clash between property law and the norms of the service.¹⁷⁰ One concern is that there would be claims for trespass on virtual property in games where such interactions are permitted or encouraged. However, these concerns are largely unfounded, as the law already recognizes environments where societal norms temper legal ones. For instance, in hockey games, fighting and checking are commonplace behaviours and sometimes result in serious injuries. Nevertheless, there are few successful claims in damages for injuries caused within the rules of the game.¹⁷¹

Sports maintain internal rules and structures to regulate play and organize competition. In sports law, the wider legal system impinges on this traditionally private sphere and subjects the politics of the sport game to the politics of the law game.¹⁷²

These internal rules create norms that limit the rights that participants may assert against one another, protecting the ability of these activities to self-regulate.

¹⁷⁰ Christopher Cifrino, "Virtual Property, Virtual Rights: Why Contract Law, Not Property Law, Must Be the Governing Paradigm in the Law of Virtual Worlds" (2014) 55 BC L Rev 235 at 259–60.

¹⁷¹ Lastowka, *supra* note 8 at 110–2.

¹⁷² John Barnes, *Sports and the Law in Canada*, 3d ed (Toronto: Butterworths, 1996) at 2.

In cyberspace, the social norms of a particular service control which property rights users may assert against service providers and other users. For example, in a virtual world where players are encouraged to steal from others, “victims” could not bring actions against one another following the theft of their virtual property. However, if one user were to steal the files of another user on a cloud service like Dropbox, the thief could not claim immunity under the norms of that service.

8.3 Service Providers Are Protected from Unlimited Liability when Modifying their Services

Similarly, depending on the nature of the service, service providers could be protected from claims by users whose virtual property has been devalued or destroyed due to a change in the nature of the service. Virtual economies, much like real ones, are subject to manipulation by national governments as well as manufacturers. Even in “free market, capitalist” economies some form of economic regulation by government or industry occurs. To varying degrees, governments manage economic development through monetary, fiscal, economic, and social policies, while industries control product supply. Governments can print more money to devalue their currencies, and manufacturers can flood the market to lower prices.

However, unless one party warrants to another that it will maintain a certain level of supply, it is unlikely that a claim against a manufacturer or government for reducing property value will succeed; yet, it is possible that the total expropriation of a virtual property interest—outside the norms of the service—would require the service provider to compensate the user for his or her loss.

8.4 Service Providers Are Protected from Unlimited Liability at Termination of the Service

Establishing a property regime for virtual property will provide for an orderly windup of services, protecting users’ property interests without creating unlimited liability for service providers. The rules of property canvassed in this

article are flexible enough to allow service providers to terminate service and still protect the core of users' property interests.

In property law, the liberty of ownership clashes with the utility of public rights over private land. On the one hand, property law seeks to protect owners from encumbrances on their right of ownership.¹⁷³ On the other hand, it recognizes that, for public policy reasons, there are cases in which one property owner should be able to exercise rights over the land of other property owners.¹⁷⁴ To balance these competing interests, property law recognizes that charges over property in favour of another may be terminated if those charges become too onerous.¹⁷⁵ Such termination occurs in an orderly and fair manner to ensure that the owner of the servient property interest acts reasonably to protect the value of the dominant property interest.¹⁷⁶

In all likelihood, service providers will not be allowed to unilaterally delete a user's virtual property on termination of the service. Instead, they will be forced to provide users an opportunity to retain a useable property interest in the code, preventing the mega losses inflicted by Megaupload from reoccurring. This could be achieved either by giving users a reasonable amount of time to transfer their data off of third-party servers or by requiring providers to remove digital locks that obstruct third parties from offering alternative solutions to access users' virtual property.

¹⁷³ "Ownership is the right to use, enjoy and dispose of property fully and freely, subject to the limits and conditions for doing so determined by law." See art 947 CCQ.

¹⁷⁴ Lastowka, *supra* note 8 at 127.

¹⁷⁵ Ziff, *supra* note 54 at 423–6; art 1189 CCQ.

¹⁷⁶ Art 1189 CCQ states:

Except in the case of land enclosed by that of others, a servitude of right of way may be redeemed where its usefulness to the dominant land is out of proportion to the inconvenience or depreciation it entails for the servient land.

Failing agreement, the court, if it grants the right of redemption, fixes the price, taking into account, in particular, the length of time for which the servitude has existed and the change of value entailed by the servitude both in favour of the servient land and to the detriment of the dominant land.

9. CONCLUSION

As large-scale shutdowns of service providers are still few and far between, there has yet to be a strong test case that defines the nature of the rights and obligations between digital content users and service providers. However, as the acquisition of virtual property and the consumption of virtual content continue their growth, the construction of this relationship will have multi-billion-dollar consequences.

While the regulation of virtual property through contract and intellectual property law has become the industry standard, it mischaracterizes the nature of virtual property and prevents both service providers and users from maximizing the efficient exploitation of cyberspace as an economic and social space. The imperative to reset the relationship between service provider and user is greater than ever following the decision in *Capitol Records, LLC v ReDigi Inc.*¹⁷⁷ which prevents American users from reselling their used digital content due to copyright infringement.

From a practical perspective, the use of property law to govern virtual property most closely reflects the reasonable expectations of the parties, especially since virtual property is designed to mimic real world property. From a legal perspective, both the common and civil law of property recognize that both the rivalrous code sequence and the right to access it could be subject to the rules of property, a recognition supported by traditional positivist justifications for the creation of property rights. Thus, it is plausible that courts could reinterpret EULAs and TOS agreements to recognize property rights. However, even if users were able to circumvent the arbitration clauses in these contracts of adhesion, a decision would likely come too late to protect billions of dollars of virtual property from destruction.

In the end, the responsibility for protecting users from service providers will fall on provincial legislatures. If one accepts that virtual property has a dualistic nature, which allows for the intermingling of a service provider's intellectual property interests in the work with the user's property interest in a unique

¹⁷⁷ *Capitol Records, LLC v ReDigi Inc.*, 2013 WL 1286134 (SDNY 2013).

rivalrous code sequence, then it is possible for the provinces to circumvent federal intellectual property statutes by legislating a more equitable virtual property regime. Ultimately, the digital age will be defined by how society comes to govern this relationship. Without careful governance, we risk preserving cyberspace as a feudal fiefdom, whereby users and their virtual property are subject to the whims of self-interested service providers.