

# **The Case for Virtual Property**

By

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## Declaration

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## Abstract

Virtual assets should be treated as a species of property. Users of virtual environments have legitimate expectations about acquiring legal interests in virtual assets as they would in their physical counterparts under similar circumstances. There are two sources of these expectations. Firstly, the architecture of virtual environments, the existence of virtual economies, and the property-like characteristics of virtual assets. Secondly, providers' representations and conduct either explicitly authorise or tolerate virtual asset transactions. As a result, issues of title and ownership arise.

The existing legal framework fails to deal properly with these issues. Currently applicable laws, such as contract, intellectual property or consumer protection law, do not recognise users' expectations as legitimate.

However, property law could provide the necessary answers by treating virtual assets as part of the law of property. The theoretical foundations of property law inform us about the origins, justifications and consequences of property rights, as well as their role in allocating valuable resources and resolving social conflict. The concept of virtual property entails property rights in virtual assets, which as durable, separable things of independent value. In consequence, a new category of virtual property would resolve the different and unjustified treatment of virtual assets. Virtual property recognizes and protects users' legal interest in virtual assets, based on their legitimate expectations.



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## US

Executive Summary Digital Millennium Copyright Act 2001, United States Copyright Office  
National Conference of Commissioners on Uniform State Laws, Revised Uniform Fiduciary  
Access to Digital Assets Act 2015

## UK

Copyright, Design, and Patents Act 1988  
Theft Act 1968  
Computer Misuse Act 1990  
Charities Act 2006  
E-Commerce Regulation 2002  
Inheritance and Trustees' Powers Act 2014, s.3  
Privacy and Electronic Communications Regulations 2003  
Data Protection Act 1998  
Data Retention Regulations 2009  
Consumer Protection Regulations 2000  
Distance Selling Regulation 2005  
Consumer Rights Act 2014  
Defamation Act 1996  
Disability Discrimination Act 1995  
Protection from Harassment Act 1997  
Malicious Communications Act 1988  
Crime and Disorder Act 1998

## International



Berne Convention, article 6bis

Charter of Fundamental Rights and Freedoms of the Czech Republic

The European Sports Charter Art. 2(1)(a), Council of Europe, No. R(92)13 rev

Information Society Directive 2001/29/EC

Software Directive 2001/29/EC Art 1(3)

Database Directive 1996/9/EC Art 3(1)

Council of Europe Convention on Cybercrime, Budapest, 23.XI.2001

Unfair Terms Directive 1993/13/EEC

e-Commerce Directive 2000/31/EC

German Telemedia Act

Dutch Criminal Code

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*BlackSnow Interactive v Mythic Entertainment, Inc.* (U.S. Dist. C.D. Cal.)

*Bragg v Linden Lab*, Pa. Magis. Dist. Ct., Chester Cty., No. CV-7606, complaint filed 5/2/06

*Feist Publ'ns, Inc. v. Rural Tel. Servo Co.*, 499 U.S.

*Hernandez v Internet Gaming Entertainment*, U.S. Dist. Ct. Southern District of Florida, Case No:07-CIV-21403-COHN/SELTZER [2007]

*Marvel Enterprises, Inc. and Marvel Characters, Inc. v NCSoft Corporation, NCInteractive, Inc. and Cryptic Studios, Inc.*, Case No. CV 04-9253-RGK in US District Court for the Central District of California

*MDY Indus., LLC v. Blizzard Entertainment, Inc.*, 629 F.3d 928 (9th Cir. 2010)

### UK

*Ladbroke (Football) Ltd v William Hill (Football) Ltd* (H.L.(E.)) [1964] 1 W.L.R 273, 1 All ER 465)

*R v Mitchell* (unreported), February 2011, Herald Express

*R v Liam Stacey*, Swansea Crown Court (30 March 2012)

*Nova Games Ltd. v Mazooma Productions Ltd.*, [2007] RPC 589 para 16

*University of London Press Ltd. v University Tutorial Ltd.* [1916] 2 Ch. 601

*Street v Mountford* [1985] AC 809

*The United Policyholders Group and others v The Attorney General of Trinidad and Tobago* [2016] UKPC 17 (28 June 2016)

*Walter v Lane* [1900] A.C., 539

### International

*Bezpečnostni softwarova asociace (BSA) v Ministerstvo kultury* C-393/09

*Chengwei case* (unreported), Shanghai No 2 Intermediate People's Court (7 June 2005)

*Football Dataco Ltd and others v Stan James (Abingdon) Ltd* ECJ C-604/10

*Infopaq v Danske Dagblades Forening* ECJ C-5/08

*Li Hongchen v Beijing Arctic Ice Technology Development Co.*, Beijing Second Intermediate Court (2003)

*McCracken v Melbourne Storm Rugby League Football Club Limited* (2007) NSWCA 353

*Nintendo Co. Ltd v PC Box Srl* Case C-355-12

*RuneScape theft*, Supreme Court of the Netherlands LJN: BQ9251, Hoge Raad, 10/00101 J

*SAS Institute v World Programming Ltd* [2013] EWHC 69 (Ch)

*UsedSoft GmbH v Oracle International Corp* (C-128/11)

*Union Royale Belge des Sociétés de Football Association ASBL v Jean-Marc Bosman* (1995) C-415/93

*Walrave and Koch*, Case 36/74 [1974] ECR 1405

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# Chapter One: Introduction

*“What is real? How do you define real? If you're talking about what you can hear, what you can smell, taste and feel, then real is simply electrical signals interpreted by your brain.”*

- Morpheus (The Matrix movie)

## 1.1 The Subject of the Thesis

Virtual environments are not real in a sense that they do not exist in the physical world. Yet, the participation in them is a form of human existence that appears to be real from the perspective of their residents. Users in virtual environments have legitimate expectations about acquiring legal interests in virtual assets. There are two sources of these expectations. Firstly, the architecture of virtual environments, the existence of virtual economies, and the property-

like characteristics of virtual assets give rise to users' expectations. Secondly, providers' representations and conduct either explicitly authorise or tolerate virtual asset transactions.

The architecture of virtual environments mimics the real world. Multiple users can interact with each other in real time in these computer-generated, immersive environments that mimic the attributes of the real world, such as physicality, continuity or scarcity.<sup>1</sup> Their design derives from a system of rewards. Users have to complete quests and tasks, progress through the narrative or maintain social connections in order to gain a powerful new weapon, magic skills, virtual currency or any other valuable asset found in various virtual environments. The number of rewards directly determines the strength and social status of each virtual character. Personal identity and reputation play an important role in shaping the social fabric of these online communities. Academic scholars have explored different social features of virtual environments, including the rich virtual culture, modes of governance, educational or political dimensions.<sup>2</sup>

The rise of virtual economies is a consequence of the internal structure of virtual environments, which also operate as online trading platforms. Providers employ different business models to generate revenue. In closed worlds, users usually need to pay a monthly subscription fee and virtual trade is restricted, like the World of Warcraft. A skilled blacksmith can produce swords and sell them on to another user, a warrior. However, it would be against the rules to sell a powerful weapon or an entire account to another user in exchange for real-world money. Virtual environments employ a variety of mechanisms for the exchange of virtual goods and services through markets, economic principles such as demand and supply, market competition, inflation or taxation. The economic significance of virtual environments has been widely analysed.<sup>3</sup>

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<sup>1</sup> For example, the principles of gravity, time or depreciation of assets determine users' actions. The environments are also characterised by scarcity of resources, whether economic or non-economic ones. Mark W Bell, 'Toward a Definition of "Virtual Worlds"' (2008) 1 *Journal of Virtual Worlds*.

<sup>2</sup> Edina Harbinja, 'Virtual worlds players – consumers or citizens?' (2014) 3(4) *Internet Policy Review*.

<sup>3</sup> See, for example, Benjamin Duranske, *Virtual Law: Navigating the Legal Landscape of Virtual Worlds* (American Bar Association 2008); Julian Dibbell, *Play Money: Or, How I Quit My Day Job and Made Millions Trading Virtual*

For instance, Second Life residents enjoy the possibility of a viable income.<sup>4</sup> It is a world of opportunity with 900,000 active users a month, who register \$60 million in profits annually. The business model is rather straightforward. In order to build something in Second Life, users need to buy a plot of virtual land, either directly from Linden Lab or from another resident. Apart from land ownership, residents also specialise in the production and sale of custom-made digital goods, such as clothes, accessories, home décor or entire avatars. As a result, the environment boasts a robust virtual economy that generates more than \$500 million in GDP every year.<sup>5</sup>

Moopf Murray, a Second Life resident and entrepreneur earned between \$20,000 and \$30,000 a year for his 'Skoopf' roller skates. He sold 60,000 pairs over two years.<sup>6</sup> Ailin Graf from China has become the first virtual millionaire in Second Life. She made her fortune on virtual real estate. Her operations have since grown to include the development and sale of properties for large-scale real world corporations.<sup>7</sup> Jon Jacobs, an independent film director, invested \$100,000 in a virtual space station in Project Entropia. He turned the space station into

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*Loot* (Basic Books 2006); Edward Castronova, *Synthetic Worlds: The Business and Culture of Online Games* (University of Chicago Press, 2006).

<sup>4</sup> Philip Rosedale, the founder and CEO of Linden Lab stated that his goal with Second Life is to demonstrate a viable model for a virtual economy or virtual society. He stated, "I'm not building a game. I'm building a new country." Daniel Terdiman, 'Fun in Following the Money' (*Wired Magazine*, 8 May 2004) <<http://archive.wired.com/gaming/gamingreviews/news/2004/05/63363>> accessed 19 September 2012.

<sup>5</sup> The environment seemed to lose some of its attraction and a portion of the user-base, but it still has plenty to offer and remains a commercially relevant virtual environment, according to Ebbe Altberg, the CEO of Second Life. Matt Weinberger, 'This company was 13 years early to virtual reality — and it's getting ready to try again' (*Business Insider UK*, March 2015) <<http://uk.businessinsider.com/second-life-is-still-around-and-getting-ready-to-conquer-virtual-reality-2015-3>> accessed 15 November 2015.

<sup>6</sup> Gareth Lancaster is the real man behind the Second Life avatar Moopf Murray and his idea to create cheap, editable, and functional roller skates for other residents translated into popular and profitable product. Rob Walker, 'Selling to Avatars' (*NY Times*, October 2006) <<http://www.nytimes.com/2006/10/01/magazine/01wwln.consumed.html>> accessed 21 September 2012.

<sup>7</sup> A business feature on a first virtual millionaire highlights the success story of Anshe Chung, who over the period of two years managed to develop a vast property portfolio in Second Life, consisting of virtual estate, shopping malls, store chains and even stock-market investments in other virtual business. Although her substantial holdings were in Linden Dollars, she could easily convert them into real-world currency. First reported in Robert D. Hof, 'My Virtual Life' (*Business Week*, 1 May 2006) and later in Robert D. Hof, 'Second's Life First Millionaire' (*Business Week*, 26 November 2006)

<[http://www.businessweek.com/the\\_thread/techbeat/archives/2006/11/second\\_lifes\\_fi.html](http://www.businessweek.com/the_thread/techbeat/archives/2006/11/second_lifes_fi.html)> accessed 13 September 2012.

a lucrative hunting resort occupied by a range of beasts and monsters. In addition, the resort hosted parties and events with top DJs and entertainers. He later sold his virtual resort for \$500,000.<sup>8</sup>

Virtual assets have property-like characteristics. They are intangible and yet durable, transferable and of an independent value. Virtual assets can be bought and sold. In addition, users exercise a certain degree of control over their virtual goods and land insofar they can transfer them to another or exclude others from using them. This is a direct consequence of the existence of virtual economies – every environment has its own currency, marketplaces and currency exchange. This means that most virtual items have a real world monetary value.

As for the second factor, providers are the architects, policy-makers, governing authorities and enforcement bodies in virtual environments. Their representations and conduct indicates that users ‘purchase’, ‘sell’ or ‘rent’ virtual assets and land. By virtue of encouraging and facilitating these transactions, they implicitly recognise users’ legal interests in virtual assets. The architecture of virtual environments, the existence of virtual economies, the characteristics of virtual assets and the role of providers are all factors that, individually and in conjunction, that frame users’ legitimate expectations about acquiring legal interests in virtual assets.

These expectations are most evident and concrete in the context of disputes. Participation in virtual environments generates social conflicts. Virtual environments represent a specific type of platform for human interactions, which goes beyond the ‘magic circle’ of game-play. As players immerse themselves in the virtual reality, their interactions with each other and the environment will inevitably lead to common everyday situations that ordinarily attract the attention of the law, such as forming and breaking a contract, coming up with intellectual

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<sup>8</sup> Daniel Terdiman, ‘Man pays \$100,000 for Virtual Resort’ (*CNet*, November 2005) <[http://news.cnet.com/Man-pays-100,000-for-virtual-resort/2100-1043\\_3-5945248.html](http://news.cnet.com/Man-pays-100,000-for-virtual-resort/2100-1043_3-5945248.html)> accessed 13 September 2012.



creations or inventions, making or losing profit, and acquiring property. Yet, resolving conflicts arising from these ordinary situations will require law of some kind.<sup>9</sup>

Upon examination of the licence agreements, which are the primary legal documents governing the use of virtual environments, users may be surprised to find that the provider reserves all of the proprietary interests in relation to the account, virtual character or any assets or items of value that users acquire at any point in time during their participation. This is, of course, in addition to the fact that providers are the exclusive owners of the underlying software, audio-visual works, patents or trademarks.<sup>10</sup> Users merely receive a limited licence to access and use the virtual environment. A grant that is directly dependent on the conditions of the contract.<sup>11</sup> And should the use of the provider's platform result in an 'original work' being created by the user, an automatic worldwide, royalty free, non-exclusive licence will be granted to the provider in respect of the intellectual property in that work.<sup>12</sup>

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<sup>9</sup> Interactions among users and with the environment take place on a number of levels. Different regulatory mechanisms exist to establish and enforce rules governing users' behaviour. In general, we can distinguish between internal rules (computer code, community norms or the influence of the internal economy) and external rules (license agreements, intellectual property law or criminal law, for instance). See for example Lawrence Lessig, 'Code: and Other Laws of Cyberspace', 2000, Basic Books; Chris Reed, 'Making Laws for Cyberspace', 2012, OUP. Chapter Five explores diverse legal treatments of virtual assets as means of protecting users' legitimate expectations. It concludes that the most appropriate means of protecting these expectations is to interpret virtual assets as a species of property (other than intellectual property).

<sup>10</sup> For example, Blizzard, the company behind World of Warcraft, stipulates in Section 2 Blizzard's Ownership that "*Blizzard is the owner or licensee of all right, title, and interest in and to the Battle.net Client, the Service, the Games, Accounts, and all of the features and components thereof.*" Battle.net End-User Licence Agreement <<http://eu.blizzard.com/en-gb/company/legal/eula.html>> accessed 15 November 2015. Similar provisions prevail in other licence agreements, such as Linden Lab's Terms of Service, Section 2 CONTENT LICENSES AND INTELLECTUAL PROPERTY RIGHTS <<http://www.lindenlab.com/tos#tos2>> accessed 15 November 2015 or Facebook's Statement of Rights and Responsibilities <<https://www.facebook.com/legal/terms>> accessed 15 November 2015.

<sup>11</sup> "*[The provider] grants you a non-exclusive, non-transferable, non-sublicenseable, limited, personal, revocable license to access and use the Service ... and expressly conditioned upon ... compliance with these Terms of Service.*" Linden Lab's Terms of Service, Section 2 CONTENT LICENSES AND INTELLECTUAL PROPERTY RIGHTS.

<sup>12</sup> Linden Lab built their reputation on a favourable property-based approach. The company advertised to grant and preserve users' ownership of their virtual creations. However, a closer examination of the license agreement reveals that the user has no legal interest in the virtual currency or virtual land and Linden Lab disclaims any liability for modification, damages, or loss of virtual land. The current contract grants users limited intellectual property rights in their creations. Linden Lab's Terms of Service, Section 2.3-2.5 <<http://www.lindenlab.com/tos#tos2>> accessed 15 November 2015; Terdiman (n 4).

The standard clauses in licence agreements referring to ownership and property usually read as follows, “[the provider] hereby grants you a non-exclusive, non-transferable, non-sub-licensable, limited, personal, revocable licence to access and use the Service.”<sup>13</sup> Throughout the document users are informed and reminded that, “[they] have no property, proprietary, intellectual property, ownership, economic, or monetary interest in [their account, currency, content, or goods and services], which remain the exclusive property of [the Provider].”<sup>14</sup>

The existing legal framework fails to deal properly with these issues. Currently applicable laws, such as contract, intellectual property or consumer protection law, do not recognise users’ expectations as legitimate. Intellectual property law, together with license agreements, allocate legal control over these intangible assets almost exclusively to the providers. Virtual environments are complex digital products, mainly protected by intellectual property rights and provided to users based on the terms and conditions stipulated in licence agreements. Users are purchasing a service facilitated by the provider rather than acquiring ownership in virtual assets. Intellectual property rights protect original contribution, effort and investment. Copyright protection may be available to users provided they meet all the legal requirements. These can be summarised as the existence of a protectable subject matter, sufficient connection to the territory and satisfaction of any applicable formalities. However, it can be challenging to demonstrate that these conditions exist in the context of pre-determined selection of choices.

While consumer protection will address the contractual side of the relationship between the user (the consumer in this context) and the provider<sup>15</sup> in relation to the sale of digital content or provision of digital services, it focuses on issues such as provision of adequate information to consumers, rights of withdrawal, or liability. Consumer protection legislation does not address the allocation of proprietary interests in virtual assets, nor does it concern the numerous

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<sup>13</sup> Linden Lab’s Terms of Service, Section 2 CONTENT LICENSES AND INTELLECTUAL PROPERTY RIGHTS <<http://www.lindenlab.com/tos#tos2>> accessed 15 November 2015.

<sup>14</sup> Ibid.

<sup>15</sup> This is subject to a number of limitations that significantly reduce the level of protection awarded to users when it comes to their legal interest in virtual assets. This is further discussed in chapter Five, section 5.4.

interactions between users themselves. In the absence of a holistic approach to regulation, what remains is a legal framework that treats virtual assets in a fragmented, diverse and incomplete way.

As Murray argues, users treat virtual items as property. “They accumulate virtual goods and trade in them. They attach value to them, sometimes massive values such as the US\$100,000 that John ‘Neverdie Jacobs paid in 2005 for the Asteroid Space Resort (now known as club NEVERDIE) in Entropia Universe, and they develop/sell virtual goods and land.”<sup>16</sup> The concept of virtual property could provide the necessary answers by treating virtual assets as property. This would resolve the different and unjustified treatment of virtual assets. It recognises virtual assets as separable, durable and transferable objects of property. It grants users of virtual environments the right to use, the rights to control uses of others, and the right to alienate the rights of use and control. The concept of virtual property arises from a system of legitimate expectations and comprises of rules concerning the title and ownership of virtual assets. In addition, virtual property reflects the principles of fairness and social utility. The legal rules would apply to situations such as, for example, property disputes (user-user, provider-user), instances of virtual theft, or inheritance of virtual assets.

This work reviews and builds on the existing literature on property rights in virtual environments. A body of academic literature has laid down the foundations of virtual property. Professor Castronova first coined the term and described in detail the growing virtual economies and potential value of the resources and assets<sup>17</sup> present in virtual environments. Virtual property is distinct from intellectual property; yet it shares similar characteristics with real and personal property. Hunter and Lastowka asked whether users could acquire real-world property interests in virtual assets. They argue that based on the “economic accounts that demonstrate the real world value of these objects and the exchange mechanisms for trading these objects... these types of objects are indistinguishable from real world property

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<sup>16</sup> Andrew Murray, *Information Technology Law: The Law and Society* (2013) OUP 106.

<sup>17</sup> Edward Castronova, ‘On Virtual Economies’ (2002) CESifo Working Paper Series No. 752 <<http://ssrn.com/abstract=338500>> accessed 23 June 2010.

interests.”<sup>18</sup> The justifications for granting property rights seem even more appropriate in a virtual environment than they would in the real world.<sup>19</sup> Professor Fairfield followed this with a legal analysis of the emerging concept of virtual property.<sup>20</sup> He believes that virtual property, not intellectual property, is more appropriate and efficient in governing rivalrous, persistent, and interconnected online resources.<sup>21</sup>

Reviewing the legal scholarship on virtual property, the majority opinion is that users should enjoy property rights in virtual property in some form or other.<sup>22</sup> Many scholars are also keen on distinguishing virtual property rights in virtual property from intellectual property rights.<sup>23</sup> They see them distinct in their scope of protection. “While virtual property rights (like real property rights) provide [users with] the right to use, exclude others from, and alienate or transfer objects, intellectual property rights only prohibit (simplified account) copying or producing of similar ideas, expressions, or products.”<sup>24</sup> Authors focusing on business and information technology issues advocate the development of business strategies that would address the resolution of virtual property conflicts between providers and users.<sup>25</sup> On the other hand,

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<sup>18</sup> This was one of the first fundamental law review articles to consider the legal issues arising from virtual environments in a comprehensive way. The authors look at a history of virtual environments, explore the arguments for and against virtual property, and consider the difficulties of virtual law and governance. Greg Lastowka, Dan Hunter, ‘The Laws of the Virtual Worlds’, 92 *California Law Review* 1 (2004) <<http://ssrn.com/abstract=402860>> accessed 23 June 2010.

<sup>19</sup> *Ibid.*

<sup>20</sup> Another pioneering article further developing the concept of virtual property is Joshua Fairfield ‘Virtual Property’, *Boston University Law Review* Vol. 85 (2005) 1047 <<http://ssrn.com/abstract=807966>> accessed 23 June 2010.

<sup>21</sup> *Ibid.*

<sup>22</sup> Martin Boonk, Arno R. Lodder ‘Virtual worlds: Yet another challenge to intellectual property law’ *Global IP Summit Magazine* (2007) <<http://ssrn.com/abstract=1079970>> accessed 5 September 2010; Greg Lastowka ‘Rules of Play’, *Terra Nova* (2007) <<http://terranova.blogs.com/RulesofPlay.pdf>> accessed 16 March 2010.

<sup>23</sup> Joshua Fairfield, ‘Anti-social contracts: The contractual governance of virtual worlds’ (2008) 53 *McGill Law Journal* 427; Andy D. Schwarz, Robert Bullis, ‘Rivalrous consumption and the boundaries of copyright law: Intellectual property lessons from online games’ *Intellectual Property Law Bulletin* (2005) 10(13) 13–30.

<sup>24</sup> Usefully summarised here: Stephan Buck ‘When Virtual Worlds Collide’ (2009) *SCL* <<http://www.scl.org/site.aspx?i=ed1060>> accessed 1 February 2010.

<sup>25</sup> Jun-Sok Huhh ‘Effects of Real-money Trading on MMOG Demand: A Network Externality Based Explanation’ *KISDI* (2006) <<http://ssrn.com/abstract=943368>> accessed 28 May 2010; Jun-Sok Huhh, S Park, ‘Game Design, Trading Markets, and Playing Practices – What Did Lineage Do for Enchanting Korean Players?’ (2005) <<http://anarinsk.com.ne.kr/data/lineage.pdf>> accessed 28 May 2010; Ian MacInnes ‘Property rights, legal issues, and business models in virtual world communities’ *Electronic Commerce Research Journal* 6 (2006) 39–56.

number of authors emphasise the negative implications of recognising property rights in virtual items and consequences it would have for virtual environments. For example, Ondrejka and Bartle represent the school of thought opposed to the idea of ‘virtual property’ as theoretically unnecessary and ineffective basis for protecting users’ interests and virtual environments.<sup>26</sup> Others see the concept of ‘virtual property’ as a symbol of capitalistic economic encroachment and against users’ ‘right to play’ in fantasy-based virtual environments.<sup>27</sup> Yet others argue that preserving the autonomy and democracy of virtual environments is preferable to extending real-world governance and regulation of social conflict and disputes arising from virtual environments.<sup>28</sup>

The thesis does not build a case for virtual property on intellectual property rights, nor does it appeal to Lockean justification of property rights. The original contribution of this research is that the legitimate expectations about acquiring legal interests in virtual assets are the basis for treating virtual assets as property.

The research questions frame the analysis in the following way:

- 1) How does one identify circumstances in which users acquire legal interests in virtual assets?
- 2) Does the existing regulatory framework acknowledges these circumstances?
- 3) Do these circumstances warrant the consideration of legal interests in virtual assets as a species of property?
- 4) If so, what are the legal implications for the concept of virtual property?

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<sup>26</sup> Richard Bartle, ‘Pitfalls of Virtual Property’ (White Paper of the Themis Group, 2004); Cory Ondrejka, ‘Escaping the gilded cage: User created content and building the metaverse’ (2004) 49(1) *New York Law School Law Review* 81.

<sup>27</sup> Edward Castronova, ‘The right to play’ (2004) 49(1) *New York Law School Law Review* 185–210; Edward Castronova, ‘A cost-benefit analysis of real-money trade in the products of synthetic economies’ (2006) 8(6) *Info* 51–68; Sara M Grimes, ‘Online multiplayer games: A virtual space for intellectual property debates?’ (2006) 8(6) *New Media and Society* 969–990.

<sup>28</sup> Andrew Jankowich, ‘Property and democracy in virtual worlds’ (2005) 11 *Boston University Journal of Science and Technology Law* 173; Ren Reynolds ‘Hands off My Avatar! Issues With Claims of Virtual Property and Identity’ (*Ren-reynolds.com*, 2003) < <http://www.ren-reynolds.com/downloads/HandsOffMYavatar>> accessed 28 May 2010.

## 1.2 Main Concepts

The next section provides an overview of the main terms and concepts playing a central role in this thesis, thereby establishing the conceptual building blocks of the central argument and more importantly its scope.

The basis for the justification to treat virtual assets as virtual property, rather than intellectual property, is the concept of *legitimate expectations*. We can find a doctrine of legitimate expectations in the field of public law. The idea of protecting expectations is based on the underlying principle of fairness. The justification for protection of expectations is twofold. The reliance theory and the rule of law theory. The reliance theory stipulates that the frustration of an expectation may result in a considerable harm to an individual, who has relied on the fulfilment of such expectation. The rule of law theory informs us that protection of expectations is central to legal certainty and personal autonomy. In addition, the protection of legitimate expectations is instrumental in promoting legitimacy and trust in public authorities.<sup>29</sup>

The principle is similar to the doctrine of proprietary estoppel, which is well established in English law. The underlying principle is that if one person makes a promise to another to the effect that they will acquire a legal interest in the promisor's property and the other party acts based on that promise, equity would prevent the promisor from exercising their own strict legal rights to their property.<sup>30</sup>

These two doctrines have a common link. They both justify binding an individual or public body to their promise on the basis that it would be unconscionable for them not to deliver what

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<sup>29</sup> The concept of legitimate expectation is discussed in more detail in section 4.6. In general, see for example Soren Schonberg, *Legitimate Expectations in Administrative Law* (Oxford Scholarship Online 2000).

<sup>30</sup> John Cartwright, 'Protecting Legitimate Expectations and Estoppel in English Law', Report to the XVIIth International Congress of Comparative Law, (2006) 10(3) Electronic Journal of Comparative Law <<http://www.ejcl.org/103/art103-6.pdf>> accessed 10 December 2016.

they have represented or agreed.<sup>31</sup> This thesis identifies, extends and applies the principle of protecting legitimate expectations in a new context; providers, in their capacity as governing and regulatory bodies, directly determine the internal structure and rules of the environment and subsequently acquiesce economic transactions that have resulted in the rise of virtual economies and virtual property. Consequently, they have to honour their representations and promises in relation to the acquisition of virtual assets.

This work examines the treatment of *virtual assets* and it is therefore essential to understand what this category means. There already exist a vast number of references to ‘digital assets’ in European and American literature<sup>32</sup>, although there is no clear definition of what falls within this category. Digital assets are usually interpreted broadly to include intangible information such as online digital content, social network profiles, emails, documents created and stored online, e-books, online music, and online video games, avatars, currency and other items associated with the account and any content metadata relating to any of these types of assets. For example, the Revised Uniform Fiduciary Access to Digital Assets Act 2015 (Revised UFADAA) digital asset as “*an electronic record in which an individual has a right or interest. The term does not include an underlying asset or liability unless the asset or liability is itself an electronic record.*”<sup>33</sup> In other words, digital asset relates to information in electronic form, which is of enduring value, whether economic or non-economic.

As we can see, the above-mentioned definition reflects the diversity of digital platforms and services and as such is open-ended and too broad for the purposes of this research. It is

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<sup>31</sup> Ibid.

<sup>32</sup> The term ‘digital assets’ appears in the following EU literature: Lilian Edwards and Edina Harbinja, ‘What Happens to My Facebook Profile When I Die?: Legal issues Around Transmission of Digital Assets on Death’ in C. Maciel and C. Cavalho Pererira (eds), *Digital Legacy and Interaction* (2013). In the US, the following authors explored the concept: Maria Perrone, ‘What happens When We Die: Estate Planning of Digital Assets’ (2012) 21 *Journal of Communications Law and Technology* 185; Jamie Hopkins, ‘Afterlife in the Cloud: Managing a Digital Estate’ (2013) 5 *Hastings Science and Technology Law Journal* 209.

<sup>33</sup> National Conference of Commissioners on Uniform State Laws, Revised Uniform Fiduciary Access to Digital Assets Act 2015  
<[http://www.uniformlaws.org/shared/docs/Fiduciary%20Access%20to%20Digital%20Assets/2015\\_RUFADAA\\_Final%20Act\\_2016mar8.pdf](http://www.uniformlaws.org/shared/docs/Fiduciary%20Access%20to%20Digital%20Assets/2015_RUFADAA_Final%20Act_2016mar8.pdf)> accessed 7 July 2016.

therefore necessary to focus on the specific context of virtual environments and what kinds of ‘things’ exist therein. Upon examination of the different types of environments, it transpires there are four general categories of things: avatars, virtual items, virtual land, and virtual currency.

The use of the word ‘asset’ also raises issues – it can refer to “anything that is considered valuable or useful, such as a skill, quality, person etc.”<sup>34</sup> Alternatively, it can refer to a legal categorisation, for example as relating to property for the purposes of tax law, family law or law of inheritance and succession. The rules determining what will fall within the category of assets for the purposes of individual laws may differ. For example, digital assets will most certainly be subject to taxation<sup>35</sup>, while the tangibility of the asset may potentially affect the legal classification and treatment for the purposes of inheritance law.<sup>36</sup>

Professor Fairfield defines virtual assets as rivalrous, persistent, and interconnected code that mimics real world characteristics.<sup>37</sup> There are many types of virtual assets and most of them have an independent economic value. In 2001, Castronova famously calculated the (potential) GDP of the virtual world Norrath to be almost \$2,000 per each inhabitant.<sup>38</sup> Since then, we have witnessed the emergence of a new phenomenon - *virtual economy* - which refers to the process of production and consumption of virtual goods and services and the supply of virtual currency in virtual environments. It integrates real-life economic phenomena like resource scarcity, monetary injections and taxation. An essential element of a working economy

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<sup>34</sup> Oxford Dictionary <<https://en.oxforddictionaries.com/definition/asset>> accessed 1 September 2016

<sup>35</sup> This is further discussed in section 5.6. For more information, see in general Jamie S. Switzer, Ralph V. Switzer, *United States Taxation of Virtual World Economies: A Review of the Current Status* (Springer International Publishing, 2015).

<sup>36</sup> Inheritance and Trustees’ Powers Act 2014, s.3: ‘personal chattels’ means tangible movable property except money or securities for money, which is used mainly for business purposes or held solely as an investment.

<sup>37</sup> Joshua Fairfield ‘Virtual Property’, Boston University Law Review Vol. 85 (2005) 1047 <<http://ssrn.com/abstract=807966>> accessed 23 June 2010.

<sup>38</sup> Castronova has provided evidence of a substantial dollar-based trade in virtual goods, as well as liquid currencies. He concluded that his brief and limited empirical assessment of virtual environments established the existence of real economic activity, both within virtual environments and between the virtual and real worlds. Edward Castronova ‘Virtual Worlds: A First-Hand Account of Market and Society on the Cyberian Frontier’, (2001) CESifo Working Paper No. 618.



is money supply as a means of exchange. Every environment will have its own currency, for example, the Linden Dollar, 'gold' or Facebook credits and some will even allow users to exchange virtual currency for real-world currency, which can be withdrawn or deposited to a regular bank account.<sup>39</sup> As a result, most virtual items have a real world monetary value.<sup>40</sup> They become assets. Subsequently, users want to exploit and protect this value through personal ownership. The parallels between real world economies, and the nature of robust virtual economies within virtual environments, and the shared existence of rules and social norms, are the main arguments for the case of virtual property.

Beyond the monthly subscription fees that users may need to pay<sup>41</sup> for using virtual environments, we will find some form of commercial activity present within the environment. Firstly, users will often collect virtual items as they progress through the environment or game.<sup>42</sup> In addition, some environments enable players to create goods and services or modify the existing ones.<sup>43</sup> Users trade virtual items in marketplaces by barter or in exchange for virtual currency.<sup>44</sup> The factors of persistence, interactivity, existence of virtual property and subsequent commercial activity "create complex virtual economies where artefacts are

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<sup>39</sup> Currency can be exchanged through an official currency exchange such as Second Life's LindenX or Entropia's PED card. More information can be found at LindenX 'Second Life Wikia' <<http://secondlife.wikia.com/wiki/LindeX>> accessed 16 November 2015; 'Entropia Universe' <<https://account.entropiauniverse.com/account/deposits/>> accessed 16 November 2015.

<sup>40</sup> Second Life Marketplace offers a variety of goods and services to residents, all priced in Linden dollars. For more information, please visit 'Second Life Marketplace' <<https://marketplace.secondlife.com/>> accessed 17 November 2015.

<sup>41</sup> Users of World of Warcraft, for example, are required to pay monthly subscription fee, while access to Second Life is free. However, if users want to purchase land, they need to pay monthly fees and 'land tax'. Further detail is given in chapter Two, Section 2.5 Architecture (How It Works), which describes how to create an account, avatar and subsequently use the service of World of Warcraft, Second Life and Facebook.

<sup>42</sup> In World of Warcraft, all characters start with a few basic abilities and as they advance through the game, they gain (or loose) specialised skills, power and social standing.

<sup>43</sup> Again, in World of Warcraft, there are a number of ways in which a player can collect gold, but this is principally done through trade with other users. For example, a user who chose to be a blacksmith might purchase some iron, produce swords and then sell them on to a warrior who needs a supply of weapons. Another way to earn gold is to kill enemies and monsters, who, when killed, release gold or experience. In addition, killing enemies and monsters also results in them dropping either armour and a variety of weapons, or a particular component that can be used to create such items.

<sup>44</sup> Conveniently, auction houses where users can buy and sell valuable items are located nearby most banks. Trading at these auctions can become a reliable source of income. So while some items are character-bound (they can only be acquired if the character is killed), other items can be freely exchanged and traded through established channels, such as the above-mentioned auctions.

acquired, exchanged and consumed.”<sup>45</sup> The most popular items that users seek to buy are accessories for their characters, such as clothing, hair and other personal augmentations that can enhance their in-game status. Furthermore, users can purchase a particular sword or weapon, magic powers or some form of experience. Many transactions will also relate to assets such as cars, virtual real estate or land. We can distinguish between official marketplaces and black markets,<sup>46</sup> where users trade powerful characters and their accounts, weapons or virtual land without the provider’s authorisation. Depending on the virtual environment and type of asset, users will have a varying degree of control over their possessions. Some items will become available after a creature is killed or in a battle.<sup>47</sup> In other situations, residents may restrict access and charge rent or entry fees to a club, hotel, and art gallery or holiday resort.<sup>48</sup>

As we can see, property and objects of property are emerging as the next concepts that need attention. *Property* is a complex term, because it has a multitude of meanings depending on the context. The scope and context are directly dependent upon whether we mention property in connection with a political, economic or legal theory. It will differ again when we try to categorise it in the context of taxation, as estate property on death, as the assets of a company in liquidation, as part of a divorce settlement or indeed as intellectual property. Property is a thing, or collection of things that belong to a person or legal entity. The legal context underpinning the analysis will again determine the variety of things that can or cannot be objects of property. Property refers collectively to things that exhibit the quality to be owned – they are durable, separable and of independent value. Durable means that virtual items continue to exist independently of the user, whether or not they are connected and active in

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<sup>45</sup> Wayne Rumbles, ‘Theft in the Digital: Can you Steal Virtual Property?’ (2011) 17(2) Canterbury Law Review <[http://www.laws.canterbury.ac.nz/documents/17\\_2\\_354\\_374.pdf](http://www.laws.canterbury.ac.nz/documents/17_2_354_374.pdf)> accessed 26 June 2012.

<sup>46</sup> Most virtual environments prohibit users from trading their virtual assets, avatars and even their whole account outside the official realm of virtual economy. This is real-money trading (RMT) and providers will address this detrimental behaviour in licence agreements. For example, the End-user licence agreement of Blizzard Entertainment prohibits users from transferring any content or elements of the service, which are an exclusive property of the provider. ‘Battle.net User Licence Agreement’ <<http://eu.blizzard.com/en-gb/company/legal/eula.html>> accessed 15 November 2015.

<sup>47</sup> In World of Warcraft, one way to earn gold or valuable items is to kill enemies and monsters, who, when killed, release gold or experience.

<sup>48</sup> Residents of Second Life are able to purchase and develop virtual land, later on charge rent or entry. The business practice is discussed in more detail in chapter Three, Section 3.5.3 Virtual Land.

the virtual environment. Separable signifies that users can exclusively use and control the uses of others in respect of these items. Moreover, valuable refers to the quality of being able to generate profit, in a broad sense. The objective value of property derives from the fact that its accumulation increases the social status, position, power and opportunity of the owner within the society.

The term *virtual environment* is a general label for virtual spaces accessed via the Internet. A virtual environment is any space where users can be together, united by some common purpose or objective. Virtual environments can be characterised as a shared space, represented graphically either as a two- or three-dimensional environment, where all of the users interact with each other at once, in real time. Virtual environments are persistent; that is, they exist and develop continuously irrespective of the presence of individual users. The appeal of these computer-generated environments lies in the focus on socialisation and community-based activities – users form teams, guilds, clubs, cliques, neighbourhoods and other social groups.<sup>49</sup> Users need to create their personal account and an online persona or avatar, which is a virtual representation of themselves. In order to access the service, users have to agree to the terms and conditions stipulated in the licence agreements. Apart from that, virtual environments will differ in the nature, design and size of their user community.

This work presents a case for the recognition of *virtual property*. The concept of virtual property recognises, acknowledge and protect property interests in virtual assets with potentially much wider implications for the current and future protection of a diverse and varied array of digital assets. Deenihan summarises the various positions in respect to legal protection as a notion of entitlement to use courts and the real-world legal systems to protect an economic interest in a virtual environment context.<sup>50</sup> Some authors attach the right to legal protection to a specific environment, such as Second Life, which allows users to retain the

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<sup>49</sup> 'What is a Virtual World' (*Virtual World Review*, 1 May 2006)

<<http://www.virtualworldsreview.com/info/whatis.shtml>> accessed 5 July 2010.

<sup>50</sup> Kevin Deenihan 'Leave Those Orcs Alone: Property Rights in Virtual Worlds' (2008) *Virtually Blind*  
<[http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1113402](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1113402)> accessed 23 April 2012.

intellectual property rights they would have in a physical environment. In that sense, it is not about extending legal protection so much as not taking protection away.<sup>51</sup> Jankowich uses the term in reaction to specific cases of abuse of the provider's position and suggests that such excess of power is undesirable. He gives examples of users' accounts being suspended or terminated, because users had engaged in real-money trading transactions. In his view, this privilege should be restricted or removed altogether in order to allow legitimate trading in exchange for real money.<sup>52</sup> Westbrook and Balkin have gone even further and proposed a unified system of legal rights, incorporating real-world legal concepts like defamation, criminal law, and certain torts into virtual environments.<sup>53</sup> Cases regarding virtual property have been reported from all over the world, involving both criminal and civil proceedings. There is, without doubt, a consensus, on the academic, policy and enforcement level, that 'legal protection' should be granted to rights arising in the context of virtual environments.<sup>54</sup>

Legal protection of rights in virtual environments refers to the application of existing laws to interactions and transactions in a slightly new context. Duranske uses the term 'virtual law' to define the pre-existing body of laws as "[t]he statutory and case law that impacts virtual worlds and the application of that law to these spaces. It also refers to the internal governance structures that are beginning to appear in some virtual worlds (such as community 'court' systems, mediation programs, and private organisations with contract-based codes of conduct) to the degree that those mimic, draw on, and sometimes interact with 'real-world' law."<sup>55</sup>

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<sup>51</sup> Cory Ondrejka 'Escaping the gilded cage: User created content and building the metaverse' (2004) 49(1) New York Law School Law Review.

<sup>52</sup> Andrew Jankowich, 'EULaw: The Complex Web of Corporate Rule-Making in Virtual Worlds', (2006) 8 TUL. J. TECH. & INTELL. PROP. 4.

<sup>53</sup> Jack M. Balkin, 'Law and Liberty in Virtual Worlds' (2004/05) 49 N.Y.L. Sch. L. Rev. 63 and Jack M. Balkin, 'Virtual Liberty: Freedom to Design and Freedom to Play in Virtual Worlds' (2004) 90 Va. L. Rev. 2043; Tom Westbrook, 'Owned: Finding a Place for Virtual World Property Rights' (2006) Mich. St. L. Rev. 779.

<sup>54</sup> David Sheldon, 'Claiming Ownership, But Getting Owned: Contractual Limitations on Asserting Property Interests in Virtual Goods', (2007) 54 UCLA L. Rev. 751; Molly Stephens, 'Sales of In-Game Assets: An Illustration of the Continuing Failure of Intellectual Property Law to Protect Digital Content Creators', (2002) 80 Tex. L. Rev. 1513; Ethan White, 'Massively Multiplayer Online Fraud: Why The Introduction of Real World Law in a Virtual Context Is Good for Everyone', (2008) 6 Nw. J. Tech. & Intell. Prop. 228.

<sup>55</sup> Benjamin Duranske, *Virtual Law: Navigating the Legal Landscape of Virtual Worlds* (American Bar Association 2008);

Property rights in virtual assets grant to users the rights to use, exclude others from using and alienating virtual items. This distinguishes the concept of virtual property from intellectual property rights, which confer legal control over copying or producing similar works. At the same time, recognition of virtual property does not limit the scope of intellectual property rights – property rights in respect of a ‘thing’ are separate from intellectual property rights embedded in the same ‘thing’. Real-world legal principles of property can apply to recognise and protect users’ legitimate expectations about ownership of virtual assets.

### **1.3 Methodology, Scope and Limitations**

This thesis studies the treatment of virtual assets worldwide. Due to the absence of a harmonised legislation and comprehensive case law, references feature the UK, EU, and US jurisdictions. Based on the large gaming communities in countries of the Pacific Rim, such as South Korea, Taiwan or China, the approach to regulating virtual assets in these jurisdictions also features in the analysis.

In developing the arguments and recommendations set out in the thesis, the work had to draw upon several economic, technical and social propositions, all of which have served as a theoretical justification. The inherent trends that exist within the academic literature, national legislation and case law addressing the concept of virtual property primarily inspired and influenced the recommendations put forward in the thesis. The theoretical tools of economics, computer engineering and sociology merely provide the explanatory basis.

Accordingly, the analysis adopted in the thesis operates with two main sources. Firstly, these are references to statutes and case law of various countries. For the purposes of this study, the selection includes only countries with case law, legal provisions or policies relating to virtual

property or any of its particular aspects. As a result, the focus will be on the US, the UK (and some other EU countries) and China, South Korea and Taiwan, which offer considerable jurisprudence, legal thought and distinct approaches to the virtual environments phenomenon. Furthermore, the analysis relies on references to international treaties and EU law.

Secondly, a wide range of legal literature from different jurisdictions was surveyed for the purposes of this work. The proposals and recommendations made based on these sources will inform the theory of virtual property presented in this work. Variety of public sources were instrumental in the writing of this work. Legal literature, commentaries, cases and reports from the various jurisdictions informed the conclusions.

## **1.4 Chapter Outline**

This thesis is divided into seven chapters. The first chapter is this Introduction.

Chapter Two introduces the topic and explains what virtual environments are and how they function. It also provides a number of ways how to classify virtual environments based on a number of different elements – technology platform, genres and set of in-game rules. The most striking features of modern video games and social platforms are interactivity, persistence and realistic experience further amplified by the role of avatars. Avatars act as online representations of individual users, establishing their virtual presence and identity. The chapter examines these constituent elements and other characteristic features of virtual environments and concludes that in many ways, they mimic real-world interactions while posing some issues specific to this type of platform. The nature of virtual environments is one of the relevant factors that frame users' legitimate expectations.

Virtual environments are more than just games and playing a game can have an impact in real life. Therefore, the question is, how real-world laws apply to activities associated with virtual environments, and not if. Chapter Three focuses on the next aspect of virtual environments and that is the economic dimension. The acquisition and exchange of virtual goods or services in pursuit of such rewards has led to the development of robust virtual economies. Providers encourage and rely on users' active participation and contribution. Depending on the type of the environment, users can exploit the resources by either acquiring materials and turning them into goods or providing services, by collecting, buying and selling virtual items, or developing virtual land. Mechanisms exist for the exchange of virtual goods and services through markets, economic principles such as demand and supply, market competition, inflation and taxation are all present in virtual environments. Virtual assets become the focus of the analysis in the second half of the chapter. The property-like characteristics of virtual assets are another source of users' legitimate expectations. Virtual assets are intangible things that users may purchase, exchange or sell at various marketplaces. The necessary qualities of assets are durability, separability and transferability.

Providers and creators of virtual environment play an important role in the account of legitimate expectations. They are the architects, policy-makers, governing authorities and enforcement bodies. Chapter Four investigates the origins and underlying policies of rules in virtual environments. The analysis focuses on what is and what is not acceptable behaviour when it comes to virtual assets. Due to the multiple levels of interaction within the environment, there will be a different set of rules and regulatory mechanisms on each level. These expectations are most evident in the context of disputes. Participation in virtual environments generates social conflicts. Examples of unwanted or detrimental behaviour include user-generated content, real-money trading and gold farming. The most common causes of disputes among users are theft and fraud. At the centre of all these disputes is the question of ownership. Users are made to believe that they 'purchase', 'sell' or 'rent' virtual assets and by virtue of these transactions acquire legal interests in these assets. This is in clear contradiction with the terms and conditions. By virtue of encouraging and facilitating these

transactions, they implicitly recognise users' legal interests in virtual assets. The architecture of virtual environments, the existence of virtual economies, the characteristics of virtual assets and the role of providers inform users' legitimate expectations about acquiring legal interests in virtual assets. The chapter concludes that there is a gap between what the law prescribes and what it ought to prescribe based on users' legitimate expectations.

Chapter Five sets out to examine the existing legal framework. It focuses on the nature of intellectual property law and licence agreements, which a priori govern ownership of virtual assets. The analysis highlights the main functions and objectives of these legal instruments, their applicability and potential limitations. Particular consideration is given to the underlying conflict of interests between providers and users, because intellectual property law allocates legal control over virtual assets almost exclusively to the providers. Virtual environments are complex digital products, mainly protected by intellectual property rights and provided to users based on the terms and conditions stipulated in licence agreements. Licence agreements are an appropriate and practical tool to protect providers' intellectual property, but they are less suitable for regulating users' behaviour within virtual environments. Intellectual property rights protect original contribution, effort and investment. These circumstances do not surround the creation, acquisition and exchange of virtual assets. The chapter then proceeds to explore a number of legal categorizations in order to identify legal principles that would recognise and protect legal interests in virtual assets. It concludes that there currently does not exist a unified approach to regulate virtual assets. However, in a number of cases, the courts have been willing to acknowledge or at least consider virtual assets as property, or as having property-like characteristics, in the context of virtual theft, inheritance, tax law or divorce settlement. The chapter establishes that current laws partially recognise property-like interests in virtual assets, but in a fragmented way.

Chapter Six focuses on theoretical foundations of the concept of property. The primer on property theories informs us about the origins, justifications and consequences of property rights, their role in allocating valuable resources and resolving social conflict. It also provides



indicators which 'things' can and cannot be owned and why. The chapter then proceeds to demonstrate that the circumstances in virtual environments warrant the consideration of legal interests in virtual assets as virtual property. Virtual assets look and function like real property, with all the necessary consequences. It concludes with outlining the concept of virtual property. The concept of virtual property entails property rights in virtual assets that are durable, separable things of independent value.

Chapter Seven presents the conclusions of this thesis. Users in virtual environments have legitimate expectations about acquiring legal interests in virtual assets. The expectations are informed by a number of factors, such as the architecture and economic dimension of virtual environments, and property-like characteristics of virtual assets. In addition, providers make these representations in their capacity as governing and regulatory bodies. These expectations ought to be recognised and protected, but due to the lack of comprehensive legislation and case law, this is not the case. As a result, users are exposed to fraud, theft, confiscation or permanent loss of their virtual assets. The concept of virtual property fills the gap between what the law currently prescribes and what it ought to be based on users' legitimate expectations about ownership of virtual assets. The consequences of implementing property rights in virtual assets are that users will have both possession and ownership of virtual items.

# Chapter Two: The Landscape of Virtual Environments

## 2.1 Introduction

Games have been an integral part of human experience. Reviewing the history of game development and the related scholarship, we can see that avatar games – games offering an alternative reality – are not exclusive to new technologies, but have been present since the beginnings of civilisation. The outline of game development also highlights the key components of all types of games, which are goals, rules, challenges and interactions. There have been several attempts to introduce a universal definition of virtual environments.<sup>56</sup> It is important to

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<sup>56</sup> Greg Lastowka, Dan Hunter, 'The Laws of the Virtual Worlds', 92 California Law Review 1 (2004) <<http://ssrn.com/abstract=402860>> accessed 23 June 2010; Benjamin Duranske, *Virtual Law: Navigating the Legal Landscape of Virtual Worlds* (American Bar Association 2008); Jacob Rogers, 'A Passive Approach to Regulation of Virtual Worlds' (2008) 76 George Washington L R 405; Ronan Kennedy, 'Virtual Rights? Property in Online Game

identify a set of common features that will inform the scope of the thesis. There exist a great number of different environments and so a spectrum of indicators will assist to navigate the landscape of virtual environment and identify their fundamental features. Firstly, virtual environments are interactive, which means that although they reside on a computer or server, a large number of users can access them remotely and simultaneously. Secondly, virtual environments simulate the real world. Finally, the environment is persistent, that is, it continues to exist and evolve regardless of anyone using it at a particular point in time.

The chapter will provide a number of ways how to classify virtual environments. It is possible to define environments based on the gaming platform into console games, computer games and mobile games. There are many different game genres. The most popular types relevant to this work are environments offering an interactive and immersive experience where users exist as avatars. The platform allows multiple users interact with each other in real time.

The way these elements – technology platform, genres and set of in-game rules – interact directly shapes the resulting nature of virtual environments. Closed and open environments and social networking platforms represent the different combinations of technological, social and business models. The complex layers of architecture, design and technology determine the nature and scope of the restrictions placed on users.

Examining three different virtual environments, *World of Warcraft*, *Second Life* and Facebook is instrumental in understanding what the constituent elements are and how virtual environments work. Virtual environments implement the integral principles of games – goals, rules, challenges and interactions – into a system of rewards. They rely on a distinct culture of shared norms and common values.<sup>57</sup> Mechanisms exist for the exchange of virtual goods or services in the pursuit of such rewards. Inevitably, this results in economic transactions

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objects and Characters' (2008) 17 *Information & Communication Technology L* 95; Mark Bell, 'Toward a Definition of Virtual Worlds' (2008) 1 *J for Virtual Worlds Research*; Kim Barker, 'MMORPGing, Law and Lingo' in Michael Freeman, Fiona Smith (eds), *Current Legal Issues: Law and Language* (OUP, 2013) 417-433.

<sup>57</sup> Angela Adrian, 'Property Rights and Personality Rights in a Virtual World' (Queen Mary University 2011) 14.

and the social practice of exploiting virtual assets. Avatars are a creative result of user's interaction with the environment and reflect on user's real identity and personality.

## 2.2 The Beginnings

This section provides a brief overview of game development from ancient games originally made from wood, paper and cloth, to the most recent computer-based role-playing games. This timeline highlights the key components of all types of games: goals, rules, challenges and interactions. Since the dawn of civilisation, humans have engaged in games that offer an alternative reality – these are *avatar games*. The players “use a single game piece to represent themselves in the make-believe play environment. The interest in avatar games is an ancient part of human culture and seems to have been driven by technology: as technology has enhanced the immersive experience of the games, the games have become more popular.”<sup>58</sup> In order to illustrate these connections, Castronova identifies two categories of games: *games of conflict* and *games of achievement*. The most famous games simulating warfare are Chess and Go, which are both over 2,500 years old.<sup>59</sup> By the 1970s, players could simulate real battles or become familiar with war tactics of Napoleon or Hitler tactics. In parallel, games built on personal achievement developed. The ubiquitous example is probably Monopoly, a game created by Charles D. Barrow.<sup>60</sup> Each player is represented by a single playing piece and aims to develop that piece into something better by acquiring wealth.

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<sup>58</sup> Castronova, ‘On Virtual Economies’ (n 17), 7-8. See also Edward Castronova, ‘Virtual Worlds: A First-Hand Account of Market and Society in the Cyberian Frontier’ (2001) CESifo Working Paper Series No. 618 12 <[http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=294828](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=294828)> accessed 15 July 2010; Edward Castronova, ‘Theory of Avatar’ (2003) CESifo Working Paper Series No. 863 2 <[http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=385103](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=385103)> accessed 15 July 2010; Edward Castronova, *Synthetic Worlds: The Business and Culture of Online Games* (University of Chicago Press, 2006) 11.

<sup>59</sup> Both chess and go are board games involving for players. They belong to the genre of mind games, which means that the main skills required are strategy, tactics and observation.

<sup>60</sup> Monopoly is a strategy board game for multiple players that dates back to the beginning of the 20<sup>th</sup> century, United States. It was originally developed as an educational tool to explain the economic theory of Henry George, in particular his ideas about taxation. Players move around the board buying properties, collecting rent and paying

'Dungeons and Dragons',<sup>61</sup> a set of gaming rules designed to offer a very romantic ideal of warfare, was probably the original inspiration for the emergence of computer-simulated games. The development of computer-based role-playing games falls into two categories: games devised for one player or a small team and games played simultaneously by many players. Contemporary one-player games originated with 'Spacewar', invented by Stephen Russell,<sup>62</sup> while the most popular multi-user virtual environments found their inspiration in 'Multi-User Dungeon', created by Roy Trubshaw and Richard Bartle.<sup>63</sup> The novelty of this game was in the persistent nature of the environment. The world represented by the computer game did not go away when the player logged off. The game environment and the objects in it persisted over time and enabled users to visit whenever they wanted. Suddenly, there was no 'game over'. As the available technology advanced, users were soon able to play games that offered a first-person perspective. Previously, they were not able to see the environment through their own eyes. The first-person perspective presented an even more immersive experience. Not only could players participate in a persistent and interactive environment, but they could also be 'present'. Therefore, it comes as no surprise that some of the most successful games are multi-user or collaborative virtual environments, such as Ultima Online, Everquest, World of Warcraft or Second Life.<sup>64</sup>

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tax. The main objective of the game is to gain a monopoly position over the market and drive the opponents into a bankruptcy.

<sup>61</sup> 'Dungeons and Dragons' refers to a set of gaming rules released in 1972, which were created by Dave Arneson and Gary Gygax. They chose 1:1 scale so that each player commanded exactly one soldier and each soldier could build up his powers and skills through good play. In order to broaden the skills a soldier could attain, they then chose a fantasy setting, drawing on concepts whose ultimate source was J.R.R. Tolkien's Middle Earth.

<sup>62</sup> *Spacewar!* was one of the first video games created in 1962. The gameplay is based on two armed spaceships that are manoeuvring within a gravity well of a star. The aim is to shoot the opponent without being pulled to close to the star and exploding.

<sup>63</sup> Multi-User Dragon is the first and oldest virtual world, created in 1978. It is an adventure-style environment where users navigate the various 430 locations and look for treasure. However, up to 32 other users are also looking for the treasure simultaneously and so fights and battles ensue. Players enter the game with no special powers. They will be able to advance their skills through fighting and negotiating different opponents. More information about Richard Bartle, MUD and other work is here: <<http://mud.co.uk/richard/>> accessed 27 November 2015.

<sup>64</sup> See for more information, for example, Richard Bartle 'From MUDs to MMORPGs: the history of virtual worlds' in Jeremy Hunsinger, Lisbeth Klastrup and Matthew Allen (eds.): *International Handbook of Internet Research* (Springer, 2010).

The fundamental feature of virtual worlds is a shared environment, which explains why users find them so engaging and popular, especially in the last decade.<sup>65</sup> This growth is due in part to the immersive nature of the environments, which provide users with stunning visuals, animations, role-playing opportunities and social communities. Much like Facebook, Twitter and MySpace, part of the popularity of virtual environments comes from the interaction that users experience with peers, friends, acquaintances, and, in many cases, strangers.

As we can see, virtual environments go directly back to avatar games, fantasy worlds and storytelling and are explored and enjoyed by a growing audience. The aim of the following section is to define what virtual environments are and, in particular, what the term *virtual environments* means for the purposes of this work. It describes how such platforms function, explores different types and features, and provides an insight into the complex nature of virtual environments.

## 2.3 Descriptions, Definition, and Categorisation

Virtual worlds, synthetic worlds, video games and virtual environments are different terms referring to the same concept. Definitions of virtual worlds include:

- a “synchronous, persistent network of people, represented as avatars, facilitated by networked computers”, (Mark W. Bell)<sup>66</sup>
- “an automated, shared, persistent environment with and through which people can interact in real time by means of a virtual self”, (Richard Bartle)<sup>67</sup>

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<sup>65</sup> A list of popular virtual worlds is accessible for example here: ‘Virtual Environments’, <<http://www.virtualenvironments.info/virtual-environments-overview>> accessed 4 October 2010.

<sup>66</sup> Mark W Bell, ‘Toward a Definition of “Virtual Worlds”’ (2008) 1 J Virtual Worlds Res 1.

<sup>67</sup> Bartle (n 64) 23–39.

- “a persistent, simulated and immersive environment, facilitated by networked computers, providing multiple users with avatars and communication tools with which to act and interact in-world and in real-time”, (Carina Girvan).<sup>68</sup>

From this very general description, it is possible to extract some defining qualities of these environments; qualities that also exist in any offline shared space. These include socialisation, realistic experience, continuity, personal identity, or scarcity.

Castronova argues that multiplayer games have the following primary features. Firstly, virtual environments are interactive, which means that although they reside on a computer or server, they are accessible remotely and simultaneously for a large number of users, “with the command inputs of one person affecting the command results of other people”.<sup>69</sup> Secondly, virtual environments mimic the real world. In other words, users “access the program through an interface that simulates a first-person physical environment ... [an] environment is generally ruled by the natural laws of Earth and is characterised by scarcity of resources”.<sup>70</sup> Ultimately, the environment is persistent, that is, it continues to exist and evolve regardless of anyone using it at a particular point in time. The programme “remembers the location of people and things, as well as the ownership of objects”.<sup>71</sup>

The term *virtual environment* in this thesis functions as a general label for virtual spaces accessed via the Internet. A virtual environment is any space where users can be together, united by some common purpose or objective. Virtual environments can be characterised as a shared space, and represented graphically either as a two- or three-dimensional environment, where all of the users interact with each other at once, in real time. Virtual environments are persistent, that is, they exist and develop continuously irrespective of the presence of individual users. The appeal of these computer-generated environments lies in the focus on socialisation

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<sup>68</sup> Carina Girvan, ‘What is a Virtual World? Definition and Classification’ (2013) School of Computer Science and Statistics (SCSS), Trinity College Dublin.

<sup>69</sup> Castronova, ‘On Virtual Economies’ (n 17).

<sup>70</sup> Ibid.

<sup>71</sup> Ibid.

and community-based activities. Users often form teams, guilds, clubs, cliques, neighbourhoods and other social groups.<sup>72</sup> Users need to create their personal account and online persona or avatar - a virtual representation of themselves. In order to access the service, users have to agree to the terms and conditions stipulated in licence agreements. Apart from that, virtual environments differ in their nature and design, and the size of their user community.

We can categorise games in many ways. The first type of categorisation is based on the gaming platform. We can distinguish between console games, computer games and mobile games. The type of platform will directly determine the nature, scope and form of the restrictions imposed on players by intellectual property owners.

Table 1. Categories of Video Games<sup>73</sup>

<b>Categories of Video Games</b>		
<b>Console</b>	<b>Personal computer (PC)</b>	<b>Mobile/Casual</b>
Run on dedicated hardware	Run on Windows, Mac or Linux	Run on tablets and phones
Expensive to develop	Wide variety in terms of cost and genre	Less expensive to develop
Wide variety of genre	No single gatekeeper for platform	Social and casual games
System controlled by IP owners	Majority of sales through digital	Largest number of potential players
Box product and digital but dominated by box sales		

Console games consist of images and sounds generated by a video game console and displayed on a screen (usually a television). A handheld device connected to the console, called a controller, remotely controls the environment. The controller allows the player to use buttons and joysticks to interact with and control the images on the screen. Thanks to advances in

<sup>72</sup> 'What is a Virtual World' (n 49).

<sup>73</sup> 'Video Games and IP: A Global Perspective' (*WIPO Magazine*, April 2014)

<[http://www.wipo.int/wipo\\_magazine/en/2014/02/article\\_0002.html](http://www.wipo.int/wipo_magazine/en/2014/02/article_0002.html)> accessed 3 July 2015.



technology, users can upload a wide variety of titles from DVDs or online directly from dedicated platforms. Examples include popular platforms such as Xbox by Microsoft, Nintendo and Wii by Nintendo and PlayStation by Sony.<sup>74</sup> The platforms that support console games are typically controlled by the console vendor, and require authorisation from the provider in order to access the service hosted.

Computer games are video games played on a personal computer (PC) rather than a dedicated video games console or arcade machine. Their defining characteristics include a lack of any centralised controlling authority and generally a greater capacity in terms of input, processing and output. The defining characteristic of the PC platform is the absence of centralised control. A single vendor usually owns and administers these gaming platforms. Games and services are cheaper at every level, and many are free. The openness of the PC platform allows players to edit their games and distribute the results over the Internet as ‘mods’. A healthy mod community greatly increases a game’s longevity and the most popular mods have driven purchases of their parent game to record heights.<sup>75</sup> *Modding* is prohibited on consoles. The term ‘mod’ refers to either a third-party cheat or a hardware alteration, which allows pirated software to be used.<sup>76</sup> Decentralised at a hardware level, there are two dominant software forces: the Microsoft Windows operating system and the Steam distribution service.<sup>77</sup>

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<sup>74</sup> Recent statistics from 2015 can be found for example here: ‘Revenue of the largest computer and video game publishers worldwide in 2015 (in billion euros)’ (*Statista*, 2015) <<http://www.statista.com/statistics/273838/revenue-of-the-largest-video-game-publishers-worldwide/>> accessed 16 November 2015.

<sup>75</sup> One such example is a mod called Counter-Strike, derivative of *Half-Life*, which drove sales of the original software for years. In general, companies like TiVo or Google have built a mutually advantageous relationship with the modding community – the ‘modders’ will agree not negatively affect the companies’ business model and the companies will share the technical specifications and information.

<sup>76</sup> The practice of modding is discussed from the economic perspective in more detail in Chapter Three, Section 3.4 Exploitation of Virtual Environments and from a governance perspective in Chapter Four. There is clearly a conflict of interests between encouraging development of user-generated content, such as fan-based creations and modifications, or ad-on software that enhance users’ experience and curtailing activities that are detrimental to the game-play or the providers’ profits.

<sup>77</sup> In early 2011, *Forbes* reported that Steam sales constituted 50-70% of the \$4 billion market for downloaded PC games worldwide. Erik Kain ‘Mobile Gaming Won’t Kill Off Video Game Consoles’ (*Forbes*, 4 August 2012) <<http://www.forbes.com/forbes/2011/0228/technology-gabe-newell-videogames-valve-online-mayhem.html>> accessed 15 July 2015.

Mobile games are accessible via feature phones, smartphones, smart watches, PDAs, tablet computers, portable media players or calculators. The first game on a mobile phone was a Tetris game on the Hagenuk MT-2000 device in 1994.<sup>78</sup> Three years later, in December 1997, Nokia launched the very successful Snake.<sup>79</sup> Snake and its variants, which featured on all mobile devices manufactured by Nokia, has since become one of the most-played video games on more than 350 million devices worldwide. App stores operated directly by the mobile platform provider significantly changed consumer behaviour and quickly broadened the market for mobile games, as almost every smartphone owner started to download mobile content.<sup>80</sup>

Game genres aim to define games in terms of a common style or set of characteristics, for example the perspective, gameplay, interaction or objective. The storyline, rules and environments interwoven into the matrix of the game can be highly elaborate and complex, like the World of Warcraft universe<sup>81</sup> or the Star Wars saga<sup>82</sup> or incredibly simple, such as game apps like Candy Crush Saga on Facebook.<sup>83</sup> The most popular environments offer an interactive and immersive experience where users exist as avatars – a three-dimensional graphic representation of themselves. Massively Multiplayer Online Role-Playing Games<sup>84</sup> (MMORPGs), Massively Multiplayer Online Games (MMOGs), or Multi-User Virtual Environments (MUVes) all describe a similar concept, in which multiple users interact with each other in real time. These environments serve a variety of functions as well as a diverse set of target markets. There are

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<sup>78</sup> A USSR programmer Alexey Pajitnov developed Tetris in 1984. The game requires players to arrange puzzle pieces in real time, as they drop from the top of the playing field.

<sup>79</sup> Snake was created for Nokia in 1997 by developer Taneli Armanto. The concept itself originates from arcade games and requires the player to navigate a line, which grows in length and subsequently becomes the primary obstacle. The game has been released for smartphones in 2015.

<sup>80</sup> 'Video Games and IP: A Global Perspective' (n 73).

<sup>81</sup> World of Warcraft is a three-dimensional representation of the Warcraft universe and contains elements of fantasy, science fiction and steam-punk. The universe consists of different continents and realms populated by two opposing factions – Alliance and Horde. These two factions then consist of different races and classes.

<sup>82</sup> This video game is set in the Star Wars universe and is inspired by three major events: the Rise of the Empire, the Galactic Civil War, and the time of the New Jedi Order.

<sup>83</sup> Candy Crush Saga has become the game of the year three years in a row and reached 50 million players in August 2015. It is a simple match-three puzzle game with the basic version free. Users have the option of in-game purchases of extra lives, special powers or advancing to a next level.

<sup>84</sup> Specific type of role-playing game set in a persistent virtual world populated by thousands of other players. The first highly popular MMORPG was Ultima Online whilst World of Warcraft holds the honour of being the current most popular.

private virtual worlds that are used for corporate or military applications. Environments such as Second Life and Active Worlds are general purpose and targeted at adults, while other environments such as Disney's Virtual Magic Kingdom or Habbo focus on specific age groups, demographics, and functional applications.<sup>85</sup> There are other genres, such as adventure games,<sup>86</sup> action games,<sup>87</sup> first-person shooter games,<sup>88</sup> real-time strategy games,<sup>89</sup> role-playing games,<sup>90</sup> simulation games,<sup>91</sup> racing games,<sup>92</sup> sports games,<sup>93</sup> and traditional games.<sup>94</sup>

The genre of the game determines the nature, scope and enforcement of the in-game rules. Virtual environments offer the right combination of risks, challenges and rewards, while allowing players to engage in both goal-oriented and free-play activities. "In this manner, video games are not to be viewed as restrictive rule systems. The necessity of exploration and

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<sup>85</sup> Brian E. Mennecke, 'Second Life and Other Virtual Worlds: A Roadmap for Research', (2008) 22 Communications of the Association for Information Systems, <<http://www.bus.iastate.edu/mennecke/CAIS-Vol22-Article20.pdf>> accessed 5 October 2010.

<sup>86</sup> Typically, the player is the protagonist of a story and must solve puzzles in order to progress. The puzzles can often involve manipulating and interacting with in-game objects and characters. A cross between an action and adventure game is the very popular and often controversial title 'Grand Theft Auto.' The game allows the player to take on the role of a criminal who can roam freely around a big city. The Grand Theft Auto series has been critically acclaimed and commercially successful, having sold more than 220 million units, as of September 2015. Justin Haywald 'Grand Theft Auto Series Passes 220 Million Sales Worldwide' (*GameSpot, CBS Interactive*, 21 August 2015) <<http://www.gamespot.com/articles/grand-theft-auto-series-passes-220-million-sales-w/1100-6429961/>> accessed 26 August 2015.

<sup>87</sup> Fast-paced events and movement define action games, which often have to be performed reflexively. Games such as Pong and Space Invaders initially defined the genre.

<sup>88</sup> Action games where the player is 'behind the eyes' of the game character in a first-person perspective. Examples include DOOM or Wolfstein 3D.

<sup>89</sup> Real-time strategy games typically define a number of goals around resource collection, base and unit construction and engagement in combat with other players or computer opponents who also share similar goals. Emphasis is often placed upon managing logistics, resources and production. Popular examples include Dune 2, Warcraft or Age of Empires.

<sup>90</sup> Originally started out as video games based on pen and pencil games like Dungeons and Dragons. A fantasy theme is often retained. Final Fantasy is an example.

<sup>91</sup> Many simulation games aim to simulate physical activities such as flying an aircraft (Microsoft Flight Simulator), others aim to provide simulations of forms of management, e.g. city management (SimCity) or lives of computer characters (The Sims).

<sup>92</sup> Racing games typically place the player behind the wheel and involve competing in a race against other drivers and/or time. Examples include Gran Turismo or GTR.

<sup>93</sup> Games that simulate the sporting experience – including sports such as football, baseball, golf, boxing, skate boarding, ice hockey, or tennis. The game can focus on the experience of playing the sport, whilst others focus on the strategy behind the sport. Examples include FIFA or Championship Manager

<sup>94</sup> Traditional games represent computerised versions of board, word, and card games and include games such as chess, checkers, backgammon, mah-jongg, go, or scrabble.

deduction as well as the player's ability to ignore or even subvert a designer's intention are relevant factors. A player can develop tactics and strategy, perhaps exploiting weaknesses or flaws in the game, or they may even define their own games within the world made available, thus imposing their own ludus rules. Furthermore, the definition of a video games employed here recognises that certain games – or certain sequences or modes within games – are designed as non-goal-oriented 'playgrounds'".<sup>95</sup>

The way these elements – technology platform, genres and set of in-game rules – interact directly shapes the resulting complex structure of virtual environments. There is a link between the type of the game (console, computer or mobile game), the genre (some games will have more stringent rules than others will) and the type of platform (owned and controlled by the intellectual property owner or allowing for user-generated content). Games that are accessible only on one device, games with no social element, or games, where there are no persistent shared environments (typically including mobile and console games) do not provide the context for the creation, exchange or sale of virtual assets. On the other hand, virtual environments with multi-player, persistent and social features provide the context in which legal control over virtual assets become relevant for the application of virtual property.

*Closed (structured, scripted)* virtual worlds, like World of Warcraft, often implement a role-playing scenario set in a fantasy world populated by fictional races and monsters, with players choosing classes in order to gain specific skills or powers. The objective of most of these environments is to slay monsters, explore a fantasy world, complete quests, go on adventures, create a story by role-playing, and advance the created character. These worlds usually revolve around completing quests. Users kill monsters, explore new destinations, and complete tasks and missions – activities through which users gain experience, skills and advance in levels. Although users can progress through the game on their own, they usually need to form and join guilds in order to succeed in particularly challenging quests. Quests usually reward users with

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<sup>95</sup> James Newman, *Videogames* (Routledge, 2004) 56.

some combination of experience points, items and in-game money. Many of the rewards received are bound to their character and users cannot legitimately trade or exchange them.

Bartle sees the defining and distinguishing feature of closed environments in the fact that “players must feel that they are advancing, that the advancement is worthwhile, and that there are some definite goals that indicate they have ‘won’.”<sup>96</sup> In other words, users are simply navigating the landscape of the closed virtual world with the tool provided by the developers. While they make decisions about the appearance and specialisation of their avatar, the progress the avatar will make depends on the restrictions and rules of the game.

*Open (unstructured, unscripted)* virtual worlds, including most notably Second Life,<sup>97</sup> allow users to simulate many real-world activities. They will reflect “the architecture of modern societies, complete with contemporary clothing, buildings, vehicles, and opportunities for starting online businesses”<sup>98</sup> and thus enable users to create their own story. Users are able to explore, socialise and participate in individual and group activities, form relationships, trade, buy and sell virtual objects and virtual land and provide services. Users can build virtual objects using simple geometric shapes and add interactivity to them using a scripting language. That is why they can feel and behave like real objects. There is an internal exchange system, which converts real-world currency into virtual currency called Linden Dollars and vice versa.

*Social networking platforms* facilitate the interaction and communication with friends and colleagues by virtue of emails, instant messages, blogs and posts on personal profiles. Users can share photographs, videos, images and audio. The ability to create a personal profile and connect to others is a common characteristic of various social networks, although they may focus on different groups, activities or forms of expression. The network incorporates individual

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<sup>96</sup> Richard Bartle, ‘Virtual Worldliness: What the Imaginary Asks of the Real’ (2005) 49 NYL Sch L R 19, 30.

<sup>97</sup> The Second Life universe exists on a large number of servers known as ‘the grid’ and provides its residents with programming tools in order to view and modify the virtual environment. The environment is partly subscription-based and was released in 2003 by Philip Rosedale of Linden Lab.

<sup>98</sup> Adrian (n 57) 36.

users' personal profile, their social links, and a variety of additional and optional services.<sup>99</sup> Social networking platforms provide a virtual representation of real social networks or social relations among people who share common interests or activities. Social networking is a way to reach audiences that might be physically inaccessible in real life, due to age, socioeconomic status or geographic hurdles.<sup>100</sup> Most social network services are web based individual-centred services.

In 2010, Facebook was a true flagship of the network era with an enormous user-base, unprecedented rise and the world's youngest self-made billionaire Chief executive.<sup>101</sup> Originally designed as a social networking platform, an internal economy was not part of the original make-up. However, the popularity of social gaming together with the proliferation of smart phones appears to offer enormous potential for platforms like Facebook. Over recent years, applications such as virtual gifts, Farmville, Mafia Wars or Restaurant City have attracted millions of users who manage their own farm or cafe. Users purchase Facebook credits to send each other virtual birthday cakes or virtual pints of beer. They can also spend their credits to buy gasoline for a tractor, or weapons and armoury, or to stock up a restaurant in one of the gaming communities on the platform.

Users of virtual worlds are also socialising with each other, yet in a different way. Social networking in virtual worlds is constructed and mostly limited to the particular virtual environment, while social networking platforms represent existing real-world social links and relationships in a more sophisticated way. The profiles have more features, provide greater self-

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<sup>99</sup> Andrew Sparrow, *The Law of Virtual Worlds and Internet Social Networks* (Gower, 2009) 6.

<sup>100</sup> Colin Wright, 'Networking Awesomely' (*Asymmetrical Press* 2010) <<http://exilelifestyle.com/learn-network-better/>> accessed 20 October 2010.

<sup>101</sup> Facebook developed from a private 'geeky' project into a multi-billion-dollar business with more than 800 million active users. Facebook statistics show some interesting data; California (home of Silicon Valley) is the most social state, with an amazing 15,267,160 users in the region. This amounts to a 41% penetration rate — which means nearly half the state's population is connected via Facebook.<sup>101</sup> Fifty per cent of all active Facebook users log on to the website in any given day. The average user has 130 friends and creates 90 pieces of content each month. Altogether, users spend over 700 billion minutes per month on Facebook and share more than 30 billion pieces of content (web links, news stories, blog posts, notes, photo albums, etc.) each month. Danah Boyd, Kate Crawford 'Six Provocations for Big Data' (2011) A Decade in Internet Time: Symposium on the Dynamics of the Internet and Society <SSRN: <http://ssrn.com/abstract=1926431>> accessed 14 November 2015.

expression and enable more ways of interacting asynchronously. Virtual worlds aim to maintain social relationships with one's virtual friends when they are all online at the same time – there is minimal support for asynchronous relationship management. The asynchronous communication usually takes place through related guild forums<sup>102</sup> and blogging sites.

Social networking sites are not separate from a user's offline life. Online and offline activities, personal characteristics and relationships blend together. They are more generic, less time-consuming and in general free to use. Users also tend to represent themselves differently in both environments. In virtual worlds, users generally play a *character*, which is identified through a name, sex, level, race, class and particular appearance, visualised by virtue of an avatar, while the online persona representing us on social networks is formed by and comprised of photos, videos, posts and shared content.

Unless specified, *virtual environments* cover both categories, virtual worlds and social networking platforms. Virtual environments employ a combination of technological, social and business models. The next part of this chapter looks at the underlying technology that facilitates the unique nature of virtual environments, the architecture and the foundations that support the social infrastructure. Chapter Three addresses in more detail the wide range of business models emerging from virtual environments and their economic implications.

## 2.4 Role of Technology

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<sup>102</sup> Users of virtual worlds usually need to become a member of a guild – association of users. Most quest and tasks can be very challenging and it is not in the power of an individual to carry them out, therefore users need to pool their resources and abilities in order to advance in the game. Guilds enforce their own internal policies, loot distribution systems and have their own forums. Guild forums serve as communication platforms for users to exchange necessary information and keep up with the progress of the game when not online.

In order to play video games or engage with online environments, a user needs both hardware and software, and an Internet connection. For console games, the user needs dedicated hardware. For mobile games, users need a smartphone and for online games, users need a computer or smartphone, access to the game or environment software and a good Internet connection. The technology and the way in which users can access it is closely linked to the adopted business model and contractual restrictions placed on users by the providers of the environment or game.

Virtual environments are complex entertainment products that exist as software. Software (or a computer program) refers to a set of instructions written to perform a specified task on a computer. In particular, software applications are programs tailored to perform a specific task. They function by using the computer's resources, as regulated by the operation system. In essence, a computer system is a hierarchical system whereby an application program instructs an operation system, which in turn instructs the micro-programmed CPU, which controls the execution of these instructions by the hardware. Virtual environments are software applications based on multiple physically separate computer programs that allow multiple users to access the environment simultaneously using the Internet.

Users typically need to install a copy of the software on their computer, which provides an interface simulating a first-person physical environment on their computer screen. The software also allows them to access another computer program, or programs, stored on a centralised server. Users control their characters (known as avatars) from their computers. They can manage, modify and develop over time the appearance of their avatar, their name and profession, their skills and powers and the collection of virtual items. The data underlying this representation of their avatar is stored in a character database operated by the server program. "Items of value to users, such as virtual armour, swords, currency, etc., are represented in a database as integers. Integer is a numeric concept that underpins the representation of every virtual object in the server's memory. The computer program on the server controls the logic of the game and maintains the state of the game. The game logic is a set of instructions that



defines the types of objects that appear in the virtual world and the events that can occur in the game.”<sup>103</sup> Amongst other things, the underlying electronic records represent virtual assets.

Virtual environments operate on a ‘gaming platform’. The gaming platform will consist of a number of virtual or physical servers that inter-connect gamers, allowing real time, and often fast paced, action. This requires a fast central processing unit (CPU) to function properly and allow the use of complex graphics, artificial intelligence and in-game physics. Video games rely on a powerful graphics-processing unit (GPU), which accelerates the process of drawing complex scenes in real time. Virtually all personal computers use a keyboard and mouse for user input. Other common gaming peripherals are a headset for faster communication in online games, joysticks for flight simulators, steering wheels for driving games and gamepads for console-style games.

The building blocks and constituent elements of virtual environments include “the Client, the Service, the Games, Accounts, and all of the features and components thereof.”<sup>104</sup> The provider is the owner or licensee of all right, title, and interest in these elements, they also may contain materials licensed by third parties.<sup>105</sup> This complex network of copyright, intellectual property and ownership is relevant for drafting contracts. This is important in the context of piracy,

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<sup>103</sup> For example, the game logic defines the appearance and power of a particular weapon and determines what a character must do before advancing to a new skill level. Adrian (n 57) 131-133.

<sup>104</sup> ‘Section 2. Blizzard’s Ownership’ Battle.net End-user Licence Agreement <<http://eu.blizzard.com/en-gb/company/legal/eula.html>> accessed 16 November 2015.

<sup>105</sup> This will include all virtual content appearing within the Service or the Games, such as “i) Visual Components: Locations, artwork, structural or landscape designs, animations, and audio-visual effects; ii.) Narrations: Themes, concepts, stories, and storylines; iii) Characters: The names, likenesses, inventories, and catch phrases of Game characters; iv) Items: Virtual goods, currency, potions, wearable items, pets, mounts, etc.; All data and communications generated by, occurring through, the Service or the Games. All sounds, musical compositions and recordings, and sound effects originating in the Service or the Games; All recordings, Game replays, or re-enactments of in-game matches, battles, duels, etc.; Computer Code, including but not limited to “Applets” and source code; Titles, methods of operation, software, related documentation, and all other original works of authorship contained in the Service or the Games; All Accounts; All Moral Rights that relate to the Service or a Game, including Custom Games, such as the right of attribution, and the right to the integrity of certain original works of authorship; and the right to create derivative works.” Battle.net End-user Licence Agreement <<http://eu.blizzard.com/en-gb/company/legal/eula.html>> accessed 16 November 2015.

unauthorised re-selling of keys, user-generated content, e-sports, or modding and licence agreements aim to pre-empt any issues arising from these situations.<sup>106</sup>

Books and board games with game pieces do not provide a particularly immersive experience and it takes a great deal of mental effort to maintain the fantasy. Technology makes fantasy life possible and significantly contributes to the growing popularity of virtual environments. Arthur C. Clarke once said, “[A]ny sufficiently advanced technology is indistinguishable from magic”.<sup>107</sup> *Virtual reality* is the computer-generated simulation of a three-dimensional image or environment we can interact with in a seemingly real or physical way.<sup>108</sup> The simulation of reality or fantasy is what makes virtual environments so attractive to their user community. Now, thanks to computers, it is possible to experience war and combat or journeys to outer space or to live through the Star Wars epic without the need to leave your chair. A specific category includes immersive virtual environments, which perceptually surround the user, increasing the user's sense of actually being present within them. Special equipment including a head mounted display or projector equipment situated in a room or ‘cave’ is typically required. The user’s head and body position, facial expressions and gestures, and other information is monitored, thereby providing complex information about where in the environment the user is focusing their attention.

The relevance of technology lies in the fact that the law affords protection to computer software, hardware, graphics, and audio-visual elements, methods of playing the game, databases, and trade secrets and so on. Initial control and ownership is allocated to the intellectual property holder, the provider. While avatars and virtual items exist as integers and strings of computer code, they exist separately from the underlying technology. They are part of

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<sup>106</sup> The nature and scope of licence agreements is discussed in more detail in chapter Five, Section 5.3 Licence Agreements.

<sup>107</sup> Arthur C. Clarke, *Profiles of The Future* (Pan 1961)

<sup>108</sup> ‘Oxford Dictionary’ <[http://oxforddictionaries.com/view/entry/m\\_en\\_gb0930220#DWS-056379](http://oxforddictionaries.com/view/entry/m_en_gb0930220#DWS-056379)> accessed 1 November 2011. See generally John Steuer, ‘Defining Virtual Reality: Dimensions Determining Telepresence’ (2002) 42(4) J Communication 73 <<http://www.cyborganic.com/People/jonathan/Academia/Papers/Web/defining-vr.html>> accessed 23 November 2015.

social interactions from which they derive their independent value. That is why the assessment of legal interests in virtual assets is separate from providers' legal monopoly in respect to the underlying software and other constituent elements.

## 2.5 Architecture (How It Works)

The previous section focused on the underlying technology that facilitates the unique experience of three-dimensional, interactive and immersive environments. What follows is an introduction to how virtual environments function. The next section will take the readers through the process of participating in virtual environments - from signing up with a virtual world or a social platform, and creating an avatar or online persona to navigating the landscape of the particular environment. As we have seen, there are different types and genres of virtual environments and it would not be possible to explore all, or even most of them. For the purposes of this work, I have selected three virtual environments to represent closed and open virtual worlds and social networks – World of Warcraft, Second Life and Facebook respectively. All of the above are American companies and while they have presence and users worldwide, the majority of users come from Western countries.<sup>109</sup>

World of Warcraft features in the analysis because of the number of subscribers, its popularity worldwide and the number of policy decisions and lawsuits initiated by Blizzard Entertainment, the world's provider. The scholarly literature describing and analysing World of Warcraft is immense and growing.<sup>110</sup> World of Warcraft boasted, at its height, over twelve

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<sup>109</sup> In Asia, popular virtual environments include Mixi (Japan), Renren and Sina Weibo (China) and Cyworld (South Korea).

<sup>110</sup> See generally William Simms Bainbridge, 'The Warcraft Civilization Social Science in a Virtual World' (2010) 10-23; Jill Walker Rettberg 'Digital Culture, Play, and Identity: a World of Warcraft Reader' (2008); Bonnie A Nardi, 'My Life as a Night Elf Priest: an Anthropological Account of World of Warcraft' (2010) 27-35.

million active monthly subscribers, which, at the time, earned it the distinction of being the most-subscribed MMORPG of all time.<sup>111</sup>

Second Life was the first environment of its kind and was initially very popular – it had 12 million unique user accounts in 2008 (although it has probably lost its momentum by now). Linden Lab, the provider, has pioneered some interesting projects and ideas, the implications of which are important for this thesis. It has a highly developed virtual estate market and many big corporations have presence in Second Life. There have also been important business projects and cases, which, together with the World of Warcraft-related cases, set an important indicator of how the real-world courts and authorities may approach the legal challenges surrounding the ownership of virtual assets.

Ultimately, the selection of Facebook has been based on of its large user-base, penetration rate and adopted business models. There have also been a series of policy decisions and cases<sup>112</sup> related to legal control over content that serve as useful evidence to substantiate the argument proposed in this work – users have legitimate expectations about having control (legal and actual) over their virtual assets and these expectations are currently not coherently and systematically grounded in law.

### 2.5.1 World of Warcraft

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<sup>111</sup> See Mark Hachman, 'World of Warcraft' Tops 12 Million Subscribers' (*PCMAG*, 7 October 2010) <<http://www.pcmag.com/article2/0,2817,2370413,00.asp>> accessed 4 October 2015. Currently in its fourth content expansion, see *WORLD OF WARCRAFT: MISTS OF PANDARIA* (Blizzard Entertainment, Inc, 2012), the game sits at just under ten million active monthly subscribers. Anne Stickney, 'World of Warcraft Down to 9.6 Monthly Subscribers' (*WOW INSIDER*, 7 February 2013) <<http://wow.joystiq.com/2013/02/07/world-of-Warcraft-down-to-9-6-million-subscribers>> accessed 4 October 2015.

<sup>112</sup> For example, in 2015, the LG Berlin addressed the issue of whether parents, as heirs, had a claim against Facebook to provide access to their deceased 15-year-old daughter's account. The case is important in setting out the different legal fields implicated by the post-mortem transfer of digital assets. LG Berlin, 20 O 172/15. In other instances, Facebook has been fined 100,000 Euros by a Berlin court for refusing to follow an earlier court order that stipulated that the company had to change its IP clause and grant users a royalty-free, non-exclusive, transferable, worldwide license to use any user-generated content. In France, a court held that Facebook's jurisdiction clause (designating the California courts) was a serious obstacle for a French user to pursue legal action and held that the clause was invalid. Further discussion can be found, for example, in Chapter 5.

Users are required to purchase the game first, either on a disc or the online version from Battle.net.<sup>113</sup> Once purchased, the software has to be installed on the user's computer and the user can proceed to create an account. Blizzard Entertainment uses Battle.net as a central game managing system that allows players to access any of the games provided by Blizzard. Users have to specify their country of residence, date of birth, contact details and other information. In addition, users have to agree to the 'Terms of Use'.<sup>114</sup> The next step is to fill in the unique key supplied together with the disc or online version and, as a result, the Battle.net account connects to the World of Warcraft account. Finally, users choose a payment method in order to cover the monthly subscription fee (unless they are playing on a free trial or were recruited by a friend).

Once they have created an account, users can proceed with creating an avatar – their online representation. The World of Warcraft universe stretches over approximately two hundred servers, each of which functions as a separate world. As it is not possible to host the over ten million users in one place at any given time, users have to choose from the very beginning which server they will inhabit. These parallel yet separate dimensions are realms. Realms will differ based on the density of the population and while a higher population may be desirable for users who want to socialise and interact with others, this means that competition for resources will be more intense. Users must choose right at the beginning, which realm they will inhabit. The next requirement is to select a race and subsequently a faction. The World of Warcraft universe has twelve different races and selection of race determines the character's visual appearance, special skills and abilities and identifies the user with one of the factions: Alliance or Horde. Only characters from the same faction can communicate with each other.

While race and faction are mainly social decisions, the choice of class is a gameplay decision – it determines what the avatar can and cannot do. The final touches focus on the character's appearance, such as tattoos, hairstyle, jewellery and more. Lastly, users have to select a name

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<sup>113</sup> The game platform 'Battle.net' can be accessed here <<http://eu.battle.net/en/>> accessed 15 November 2015.

<sup>114</sup> 'Terms of Use' can be accessed here (EU) <[http://eu.blizzard.com/en-gb/company/legal/wow\\_tou.html](http://eu.blizzard.com/en-gb/company/legal/wow_tou.html)> and (US) <[http://us.blizzard.com/en-us/company/legal/wow\\_tou.html](http://us.blizzard.com/en-us/company/legal/wow_tou.html)> accessed 15 November 2015.

for their avatar before embarking on their virtual adventure.<sup>115</sup> As the Guide explains, a user “can become a mighty paladin, smiting evil with righteous fury; a sly rogue, sneaking up on an unsuspecting enemy, dagger in hand and poised to strike from the shadows; a brilliant mage, unleashing torrents of destructive arcane energy to wipe out scores of monsters; or even a malevolent death knight, well-versed in the art of swordplay and necromancy.”<sup>116</sup> This shows that while users have the opportunity to be creative and imprint their creativity and personality into their avatars, they are ultimately limited by the game storyline, game rules and design.

All characters start with a few basic abilities and as they advance through the game, they gain (or lose) specialised skills, power and social standing. The amount of one of the in-game currencies, ‘gold’ or ‘experience’ represents user’s personal wealth. A player can collect gold in many ways. The primary source is through a trade with other users. For example, a user who has chosen to be a blacksmith might purchase some iron, produce swords and then sell them on to a warrior who needs a supply of weapons. Another way to earn gold is to kill enemies and monsters, who, when killed, release gold or experience. In addition, killing enemies and monsters also results in them dropping either armour and a variety of weapons, or a particular component that can be used to create such items. Avatars require a full set of armour and weapons, which needs to be maintained and upgraded if the user is to preserve their overall strength.

This collection of items is an inventory. This inventory can either be stored in the character’s bag(s) or kept in one of the world’s banks for safekeeping. Conveniently, auction houses are located near virtual banks and thus allow users to buy and sell valuable items. Trading at these auctions can become a reliable source of income. So while some items are character-bound (they can only be acquired if the character is killed), other items can be freely exchanged and traded through established channels, such as the above-mentioned auctions.

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<sup>115</sup> See ‘Beginner’s Guide – Getting Started’ <[us.battle.net/wow/en/game/guide/getting-started](http://us.battle.net/wow/en/game/guide/getting-started)> accessed 21 November 2015.

<sup>116</sup> See ‘Beginner’s Guide – How to Play’ <[us.battle.net/wow/en/game/guide/how-to-play](http://us.battle.net/wow/en/game/guide/how-to-play)> 21 November 2015.

Blizzard Entertainment provides resources that users can transform into valuable virtual items and populates the environment with unique, powerful and therefore valuable items. Subsequently, the provider facilitates opportunities and tools (virtual currency, banks and auction houses) for an internal economy to flourish. In addition, users can purchase further items through the Battle.net online shop, such as pets, mounts or pieces of armoury.<sup>117</sup> These characteristics of the World of Warcraft clearly indicate that the virtual assets an avatar requires to maintain their standing in the game play exhibit the characteristics of property, which supports the central argument of this thesis.

### **2.5.2 Second Life**

The process of signing-up is very similar here as it is with World of Warcraft, although the order of the individual steps differs. First, users choose the type of avatar they want to represent them – the selection ranges from people, to vampires, animals, robots or even vehicles. The next step is to select a username that will link the avatar to the user's account. In terms of accounts, users can choose between a free basic account and a premium account that comes with a monthly subscription fee. The final step is the installation of Second Life Viewer, an application that runs on the user's computer and facilitates access to the Second Life universe.

The first time a user logs in they will appear in an area known as Welcome Island, which has been set up especially for new users. This is a safe place where users can learn basic skills and information about the environment so that they get the most from their experience. Some of the first skills that a user has to master are, for example, walking, flying, chatting and interacting with other people and objects. Second Life accurately simulates the laws of physics in virtual space: flags move in the wind, objects fall to the floor if a character drops them, and so on. Linden Lab also provides its users with a scripting language for building new objects in the environment. Users can assemble prefabricated shapes into composite objects and give those objects behaviours. All objects in Second Life are composed of geometric building blocks called

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<sup>117</sup> See 'Battle.net Shop' <<https://us.battle.net/shop/en/product/game/wow>> accessed 21 November 2015.

'prims'. Each prim can be sized, shaped, coloured and textured. Additionally, users can insert event-based actions into a prim, so that it can interact with avatars or with other prims. Users have created hundreds of millions of such objects into the world.<sup>118</sup>

Not only can users create objects, they can also exchange and trade these virtual items with each other. According to the User's Guide, "shopping is one of the most popular activities in Second Life."<sup>119</sup> Users can earn the virtual currency either by selling goods or offering services to other residents or by becoming a merchant that operates through the official Marketplace. The virtual currency used as a unit of trade is the Linden Dollar and it can be purchased through the official virtual exchange, LindeX. Linden Dollars can also be exchanged back to real-world currency; for example over 380,000 distinct objects changed hands in the month of July 2006 in ten million user-to-user transactions and the annual GDP of Second Life was estimated to be \$64 million.<sup>120</sup> Linden Lab, the company behind Second Life, adopted a new revenue model in the very early phase of the environment: users are able to sell and rent virtual real estate. Becoming a landowner means that users can customize a piece of land as their private home, holiday retreat, shop of any kind or business headquarters. In order to purchase land, users have to have a premium account in good standing and pay a monthly land fee, which makes the most of the provider's annual revenue.<sup>121</sup>

To summarise, Second Life simulates a property-based environment, where users are encouraged to interact with each other through the prism of virtual possessions and ownership. From the start, the designers advertised this virtual environment as a space where users could

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<sup>118</sup> Cory Ondrejka, 'Living the Dream' (*Accelerating Change/IT Conversations*, November 2004). <[http://web.archive.org/web/20130729215032id\\_/http://itc.conversationsnetwork.org/shows/detail369.html](http://web.archive.org/web/20130729215032id_/http://itc.conversationsnetwork.org/shows/detail369.html)> accessed 13 November 2015.

<sup>119</sup> See 'User's Guide' <<https://community.secondlife.com/t5/English-Knowledge-Base/Second-Life-User-s-Guide/ta-p/1244857>> accessed 21 November 2015.

<sup>120</sup> James A Wagner, 'Second Life Turns 10: What It Did Wrong And Why It Will Have Its Own Second Life' (*Gigaom*, 23 June 2013) <<https://gigaom.com/2013/06/23/second-life-turns-10-what-it-did-wrong-and-why-it-will-have-its-own-second-life/>> accessed November 21, 2015.

<sup>121</sup> More information about buying land in Second Life is here: 'Buying Land' English Knowledge Base, Second Life <<https://community.secondlife.com/t5/English-Knowledge-Base/Buying-land/ta-p/700043>> accessed 21 November 2015.



'own' the virtual items they create, purchase, or otherwise acquire.<sup>122</sup> An internal marketplace, currency exchange, auctions and virtual estate market were part of the initial design and led to the rise of a robust virtual economy. This further demonstrates how users are encouraged to engage in economic transactions with respect to valuable virtual assets. Using terms such as 'land ownership', 'buy' and 'sell' leads to legitimate expectations that these objects are indeed their *property*.

### 2.5.3 Facebook

With over one billion users, Facebook is an important part of many people's social life. Using the social network is easy and free. A user has to fill in the sign up form with his personal and contact details. Creating an account is a relatively simple process. New users start by adding one or two friends that are already using Facebook and filling in information about where they studied and worked so that it is easier to connect to friends and colleagues. The next step is to add a profile picture and build an overall profile by adding information personal history, interests or relationship status. An important task that every new and existing user should carry out is to review their privacy settings. Facebook is a social networking platform where users share a great deal of personal information and content about themselves. Their privacy setting ascertain who can read a user's future posts, which can search their personal information such as email and phone number, and whether their Facebook timeline is displayed in search engine results.

Facebook is about making connections. Users can search for people they know and then send them a Friend request to add them to their contacts. It is common to make posts, comment on other people's posts, share links and give acknowledgement and approval of all of the above by clicking the 'Like' button. Furthermore, users can upload photos and videos to their profile, and create groups and events to which they can subsequently send out invitations. Users can communicate with each other in many ways, such as posts and comments, personal

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<sup>122</sup> Stephen J. Dubner 'Philip Rosedale Answers Your Second Life Questions' (*Freakonomics*, 13 December 2007) <<http://freakonomics.com/2007/12/13/philip-rosedale-answers-your-second-life-questions/>> accessed 15 November 2015.

messages or group chats. Users can send each other text messages, photos, videos, emoji or other file types.

More importantly, the platform offers a wide range of applications from quizzes to virtual gift exchanges and games. The game apps include sponsored titles like Scrabble and Yahtzee, classic board games like backgammon and chess, and third party-designed virtual worlds that operate on the same principle as role-playing games, for instance Farmville or Farm Heroes Saga. According to an internal survey conducted in 2014, over 375 million active users play at least one Facebook-connected game in an average month. *Candy Crush Saga* has been the most popular game on Facebook for the past three years.<sup>123</sup>

From May 2009 to September 2013, Facebook operated its own virtual currency – Facebook credits – that enabled users to purchase items in games and non-gaming applications on the social networking platform. One US dollar was equivalent to 10 Facebook Credits. However, the company later argued that after introducing Facebook Credits, most app developers implemented their own virtual currencies and thus the need for a platform-wide currency ceased.<sup>124</sup> A similar fate awaited the Facebook Gift shop, which launched in 2007 and offered simple gifts and icons for friends. The gifts lived on the user’s wall and cost \$1. Although the company made over \$100 million of profit from selling virtual gifts, they decided to scrap the project in 2010.<sup>125</sup> This does not mean that users are no longer able to buy virtual gifts, but they do not originate from the Facebook gift shop. Instead, they are provided by third-party applications.

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<sup>123</sup> More information about popular game apps can be found here ‘Top Games on Facebook 2016’ (*GameHunters*, 2016) <<https://gamehunters.club/top-games/on-facebook>> accessed 22 November 2015; Chris Taylor ‘Facebook: 375 Million Users Play Games Each Month’ (*Mashable*, 20 March 2014) <<http://mashable.com/2014/03/19/facebook-games-stats/#NbOdSeMia8qC>> accessed 22 November 2015.

<sup>124</sup> ‘Facebook scraps its own Credits currency for apps’ (*BBC*, 20 June 2012) <<http://www.bbc.co.uk/news/technology-18519921>> accessed 22 November 2015. Further discussion on virtual currency and Facebook credits is located in Chapter Three, Section 3.4.4 Virtual Currency.

<sup>125</sup> For more information, see in general Mark Chacksfield ‘Facebook announces end of virtual gifts’ (*Techradar*, 2010) <<http://www.techradar.com/news/internet/facebook-announces-end-of-virtual-gifts-702002>> accessed 22 November 2015.

As we can see, Facebook functions mainly as a socialising tool. Users build their profiles and online personas in order to attract and maintain many social connections. Having many friends, comments and 'Likes' is the ultimate reward. A large number of third-party applications employs a similar (and highly successful) combination of technology and social and business models to those found in virtual worlds.

So far, this chapter has navigated through the landscape of virtual environments – where they come from, what they are, how they function, the differences and similarities between the individual categories and how they affect what the user can and cannot do. As users strive to amass treasure, gain levels or accumulate points, rewards are central to their virtual experience. In addition, users can rely on a variety of mechanisms incorporated in the structure of virtual environments in order to trade these rewards and other valuable items. These economic transactions can be either authorised by the provider (the virtual environment's auction house, marketplaces and currency exchanges) or not (eBay auctions or gold farming), in which case they are considered a breach of the terms of the service.<sup>126</sup> Inadvertently, users acquire virtual assets of identifiable value, whether this be virtual currency, virtual objects or virtual real estate, over which they exercise a certain level of control. They have legitimate expectations about acquiring legal interests in these assets as they would in their physical counterparts under similar circumstances.

The next section addresses the last element of virtual environments explored in this chapter and that is the dimension of socialising and the role of avatars.

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<sup>126</sup> Buying and selling virtual items on eBay is no longer possible since 2007. More information can be found here 'Buying and Selling Virtual Items on eBay' <<http://www.ebay.com/gds/Buying-and-Selling-Virtual-Items-on-eBay-/1000000004609906/g.html>> accessed 17 November 2015. The issue of governance and authorisation and how it affects users' legitimate expectations is further addressed in chapter Four.

## 2.6 Avatars and the Art of Socialising

What is behind the enormous success of virtual environments, whether it be video games or social networks? The following factors are worthy consideration. First, there is a strong social context – users are engaging in an online community. Many environments provide support for pre-existing social networks (such as classmates, friends or colleagues), while others help people to connect based on their shared interests, views or activities. These communities can be small, large and diverse or based on a shared language, or racial, sexual, religious or national identity. They may seem to be random groups of users, but they are often more or less organised structures, with a hierarchy of roles and self-enforcing rules, such as the guilds in *World of Warcraft*.<sup>127</sup> Second, the environments rely heavily on users' active participation and contribution. People are motivated to join these communities, because of peer-pressure, a global audience or perhaps because they expect some form of reward that will compensate for the cost of the time and effort they put in.

Virtual environments present “a complex interplay of storytelling, graphics and music underpinned by technology which provides the mechanics that make it possible to weave together a thrilling experience for players.”<sup>128</sup> The combination of risks, challenges and rewards is what attracts the gaming community. The strong narrative context of these environments offers the essential human story of challenge, maturity and success, but with an escape clause. If things go wrong, and the user is hurt, killed or excommunicated from his community, he can start over as someone else. We can, and often do, adopt many different online personas and identities, because in Cyberspace, we are not constrained by our gender, age, or cultural, political or social background and we have the freedom to be whoever we want to be.<sup>129</sup>

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<sup>127</sup> 'Massive Multiplayer Online: Clans and Guilds, Open Directory Project' <[http://dmoz.org/Games/Video\\_Games/Roleplaying/Massive\\_Multiplayer\\_Online/Clans\\_and\\_Guilds/](http://dmoz.org/Games/Video_Games/Roleplaying/Massive_Multiplayer_Online/Clans_and_Guilds/)> accessed 10 September 2011; See also 'Allakhazam's Magical Realm' <<http://links.allakhazam.com/Everquest/Guilds>> accessed 11 September 2015.

<sup>128</sup> Catherine Jewell 'Video Games: 21st century art' (*WIPO Magazine*, August 2012) <[http://www.wipo.int/wipo\\_magazine/en/2012/04/article\\_0003.html](http://www.wipo.int/wipo_magazine/en/2012/04/article_0003.html)> accessed 3 July 2015.

<sup>129</sup> Castronova, 'Virtual Worlds: A First-Hand Account of Market and Society in the Cyberian Frontier' (n 58) 12.

The very first thing that every user has to do is to create their online persona. Users choose a name, character, appearance, skills and other attributes of their avatar, which are required within the specific environment. Users identify themselves with their avatars, they control them, and they engage through them with others and the environment. As Adrian puts it, “the characters are not actors, or drawings in a comic book, or a passage from a novel, but autonomous human beings, each with a mind, ego, and agenda of their own. Crucial to this evolution is the avatar’s gradual but relentless acquisition of ‘liveliness.’”<sup>130</sup>

Similar to a celebrity, who creates a persona for the mass media and public, users create their virtual identities, dependent on and yet separate from their real-world identity. Reed explains that an avatar can be “very different to [users’] real-life selves, not necessarily of the same sex or even in human shape, and may undertake activities that they do not or cannot undertake in the offline world. The most sophisticated avatars can become a sort of visual and cognitive prosthesis, representing an extension of self in the virtual world, or what the virtual environment visitor would like to be, or appear to be, in the virtual world.”<sup>131</sup> Some authors believe that avatars acquire legal identity with correlative rights and duties.<sup>132</sup>

Social roles arise from communications with other avatars. When a user first joins a virtual environment, a video game or social network, he will have limited ability to communicate. It is necessary to join groups, guilds and networks of friends. The standard way of communicating with others is through messages or chat forums. These communications allow social interactions that are not just a simulation of human interactions; they are human interactions, merely extended into a new medium. According to Castronova, the process of developing and

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<sup>130</sup> Adrian (n 57) 29.

<sup>131</sup> Chris Reed, ‘Why Must You Be Mean to Me? Crime and the Online Persona’ (2010) *New Criminal Law Review*, Vol. 13, Number 3, pp. 485–514.

<sup>132</sup> For example, Raph Koster, ‘Declaration of Rights of Avatars’ <<http://www.raphkoster.com/gaming/playerrights.shtml>> accessed 5 September 2012. This topic is further discussed in chapter Three, section 3.5.1. Authors that explore avatars as a legal category include Angela Adrian, ‘Property Rights and Personality Rights in a Virtual World’ (Queen Mary University 2011), Tyler T. Ochoa, ‘Who Owns an Avatar? Copyright, Creativity, and Virtual Worlds’ (2012) 14 *VAND. J. ENT. & TECH. L.*

enhancing one's online persona or avatar invokes risk and reward structures in the brain similar to those activated in real-life situations.<sup>133</sup> As with any site of human interaction, it is through communication that the virtual community confers status and standing on its members.

As it turns out, the social standing of the online persona has a powerful effect on the entertainment value of the environment.<sup>134</sup> Acquiring a vast number of followers on Twitter or YouTube will increase the likelihood that tweets and videos go viral.<sup>135</sup> In virtual worlds, co-operation is essential. Avatars will usually specialise in a certain skill, and they will find it much easier to accomplish a certain goal if an avatar with a complementary skill assists them. These social relationships are essential, and they emerge under the same circumstances as they would in the physical world. We seek out people with complementary abilities or resources in order to engage in mutually beneficial trade or relationships.

Developing the necessary skills or building up a community of followers takes time and effort. Monsters must be killed, quests must be completed, posts must be created and written, and engaging tweets must be devised. The result of this effort and investment, which can take hundreds of hours, is 'avatar capital'. Avatar capital is an enhancement of the avatar's capabilities through engagement and personal development. A level will represent the value of the social capital (for example, an avatar that has gained access to level 7 in World of Warcraft will have done so through the acquisition of sufficient gold or experience), the number of re-tweets, views and active followers on will do the same in the context of social networks. Such

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<sup>133</sup> Castronova, 'Virtual Worlds: A First-Hand Account of Market and Society in the Cyberian Frontier' (n 58) 23.

<sup>134</sup> People post pins on Pinterest, tweets on Twitter, posts on Facebook and it is the number of likes, shares and comments that determines the 'status' of the user. The same, but more elaborate principles are adopted in video games.

<sup>135</sup> One of the most influential power couples in video-blogging in the UK is Zoe Sugg and Alfie Deyes. Zoe is offering her viewers tips and advice on everything from hair and make-up to boyfriends and food, while Alfie is behind 'PointlessBlog', which documents his life. Zoe alone has over 7.4 million subscribers and receives up to 12 million hits a month. Their videos, which often reflect on the most mundane aspects of life, have attracted an army of followers. Zoe and Alfie have turned their video-blogging into a multi-million-pound business. Both of them have published a book, Zoe launched her own range of beauty products and charges up to £20,000 per month for advertising placements. The most attractive feature seems to be the fact that vloggers have complete creative control, as well as carrying out the whole process themselves - shooting, editing and post-production - of all their videos.

increases in capital make the online persona a more attractive social contact, creating a virtuous cycle of reward. Over time, avatars build reputation, which is key to maintaining social cohesion in the virtual environment.

Avatars also play an important role in the sense of bridging the gap between reality and fiction. The character represents a new virtual identity, a medium that each user in the virtual environment needs in order to enable communication and social interactions with others. The notions of personal identity and reputation are some of the most important topics in Western culture. Self is the measure of reality. A separate but related point that quickly becomes apparent from the discussion above is the interpretation of the relationship between a user and his avatar. The avatar functions as the user's virtual identity, a separate entity. At the same time, it will reflect the user's real identity, because only through manipulating the character can the user participate and interact with others. The avatar comes to life. Over time, it will acquire reputation, social status and connections. Given the important of protecting users' virtual identities, it is necessary to examine potential avenues of preventing others from exploiting their avatar capital. The status of the avatar is relevant insomuch as it determines whether avatars are a type of virtual asset (for the purposes of this work) and can be alienated. In addition, it clarifies who the party is that is entering into commercial transactions with respect to virtual assets.

## **2.7 Conclusion**

The architecture of virtual environments, the existence of virtual economies, and the property-like characteristics of virtual assets are factors shaping users' legitimate expectations about acquiring legal interests in virtual assets. This chapter examined the characteristic features of virtual environments. They are interactive, persistent and constrained by scarcity and laws of physics. Virtual environments are shared spaces, represented graphically either as a

two- or three-dimensional environment, where all of the users interact with each other at once, in real time. They exist and develop continuously irrespective of users' interactions. The experience is shaped by number of different constraints, such as the initial budget of avatars' skills and attributes. Valuable resources are limited and users are constrained by internal rules on how they can obtain them. In addition, they need to compete with each other for these resources.

The examination of the various categories of virtual environments establishes a link between the type, genre and gaming platform. Games that are accessible only on one device, games with no social element, or games without a persistent shared environment do not enable the creation, exchange or sale of virtual assets. On the other hand, virtual environments with multi-player, persistent and social features, virtual economies and virtual assets warrant the consideration of virtual property. The underlying technology and the mode of delivery of most online games and social networking sites means that users are not physically controlling or owning their virtual possessions. They are merely granted a limited right to use the software, graphics, audio-visual elements, databases, and trade secrets controlled and owned by the provider.

In that narrative, virtual currency, goods, virtual land or avatars are entries in the database, strings of computer code and computing resources. This approach exposes the different and unjustified treatment of virtual assets and their physical counterparts under similar circumstances. The concept of virtual property recognises virtual assets as separable, durable and transferable things that can be objects of property. It grants users of virtual environments the right to use, the rights to control uses of others, and the right to alienate the rights of use and control.

The next chapter focuses on the economic dimension. The existence of virtual economies and the property-like characteristics of virtual assets give rise to users' legitimate expectations. While playing a game or socialising may be the primary motivation for users to engage in virtual



environments, virtual economy relies on the notions of sale and ownership. Whenever interests have a certain legal or economic relevance, for example, because the respective goods are offered in return for payment or other consideration, contractual obligations and transfer of ownership may be assumed. The analysis of World of Warcraft, Second Life and EVE Online and their respective virtual economies demonstrates how the type of environment, internal rules and other constraints determine how users may exploit the available resources. It transpires that the provider is in control of the economy and has the ultimate authority to manipulate the currency and inflation rates, create new markets or devalue the existing ones. They can prohibit transfer of a specific object by changing the code. Providers may introduce new regulation addressing issues such as online gambling, money laundering or virtual sex industry and thus effectively forcing existing businesses to cease trading or creating new business opportunities.

Users are very creative when it comes to new and transformative uses of virtual environments, which ultimately challenge the current allocation of proprietary interests in virtual assets. The chapter proceeds with the description and categorization of the valuable resources in virtual environments.

## Chapter Three: The Rise of Virtual Economy

### 3.1 Introduction

The previous chapter established that virtual environments in many ways mirror the physical world. One aspect of economic and social interactions is disputes and conflicts, which can have consequences in real life. These can be of both an economic (theft of a virtual sword) and non-economic nature (a loss of control over information or reputation). In order to assess how real-world laws may apply to issues arising from virtual environments, there is one important objection to address first. Some authors have argued that virtual environments are primarily games and that playing a game is an activity without any legal or economic significance. Therefore, asserting property rights in virtual assets is unfounded and unwelcomed.<sup>136</sup>

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<sup>136</sup> Richard Bartle 'Pitfalls of Virtual Property' (White Paper of the Themis Group, 2004); Cory Ondrejka 'Escaping the gilded cage: User created content and building the metaverse' (2004) *New York Law School Law Review* 49(1): 81.

Examining some recent cases involving for example violence, cheating or bribery, it is clear that there are scenarios in which just ‘playing a game or a sport’ will warrant the attention of the law enforcement and courts.<sup>137</sup> The same is valid for virtual environments, even more so now when video games and social platforms have become part of the mainstream culture and therefore necessarily attract public scrutiny.<sup>138</sup> In addition, virtual environments are part of the wider economy generating billions of American dollars in revenue each year.<sup>139</sup> They also enable users to participate in the virtual economies by creating and trading virtual goods and thus contributing to millions of commercial transactions taking place in virtual environments.<sup>140</sup> As an industry, video games enjoy an increasing popularity with millions of users and sold copies worldwide. The extent of the success is clear from the fact that it has even managed to outperform even the movie industry in terms of sold copies and profits.<sup>141</sup>

Where there is capital, law will inevitably follow to protect it. Finally, participating in a sport or playing a game, whether on a professional or amateur level, will often entail purchasing equipment or accessories and winning trophies and rewards. There is no suggestion that these assets would not be the property of the player, irrespective of whether they are of significant

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<sup>137</sup> In the following section, the chapter looks in more detail at the FIFA scandal, cheating, illegal betting and violence on the pitch.

<sup>138</sup> The impact of playing video games and participating in social networking platforms has been widely studied in connection with increasing violence and child development, cyberbullying, social gambling and other social issues. Cyberbullying is one of the most troubling forms of anti-social behaviour. The media are full of tragic stories of teenagers pushed beyond breaking point by the actions of others through a number of media, but in particular through social networking platforms, leading to their eventual suicide. Cyberbullying would be covered by the Protection from Harassment Act 1997. Cyberbullying may also lead to prosecution under the Malicious Communications Act 1988, the Communications Act 2003, or the Crime and Disorder Act 1998. Section 1 of the Malicious Communications Act 1988 states it is an offence to send an indecent, offensive or threatening letter, electronic communication or other article to another person, while section 127 of the Communications Act 2003 deals with the offence of improper use of the public electronic offence.

<sup>139</sup> Online revenue for video games including digital delivery and subscriptions increased to US\$24 billion in 2012. Similarly, mobile gaming generated between US\$8 to US\$12 billion in revenue in 2012, with game apps dominating the iOS and Google Play app stores. ‘Video Games and IP: A Global Perspective’ (n 73).

<sup>140</sup> Ibid.

<sup>141</sup> According to a WIPO report from 2013, Grand Theft Auto 5 earned more than US\$800 million dollars and sold more than 11 million copies worldwide within 24 hours of its release in September 2013. Within a record-breaking three days, sales hit US\$1 billion dollars. In comparison, the biggest movie hit of the summer of 2013, Iron Man 3 brought in worldwide sales of US\$372 million in its first weekend. ‘Video Games and IP: A Global Perspective’ (n 73).

economic value. In the case of virtual environments, the providers seem to promote their virtual economy in a way that directly contradicts their licence agreements. For example, Entropia Universe and Second Life extensively advertise their Real Cash economy and Entropia Universe Cash Card, which can be used to withdraw real-world currency in spite of the fact that players “will not gain any ownership interest whatsoever in any Virtual Item.”<sup>142</sup> It is not to say that real-world laws will govern every aspect of users’ interaction, but they support the argument that specific circumstances will warrant allocating property rights to users over virtual assets.

Virtual environments are games, but they are not *just* games. The most popular and populated virtual environments mirror the risk and reward structure of personal development in real life. Players have to make choices in real time. They have to dedicate themselves to tasks such as collecting resources, practising trade skills, or engaging in less productive fun play. As a result, virtual environments have gradually evolved to resemble the real-world market economy. Users engage in economic transactions, both in and outside of the game. The acquisition and exchange of virtual goods or services in pursuit of such rewards has led to the development of robust virtual economies. Providers encourage and rely on users’ active participation and contribution. Depending on the type of the environment, users can exploit the resources by either acquiring materials and turning them into goods or providing services, by collecting, buying and selling virtual items, or developing virtual land. Mechanisms for the exchange of virtual goods and services through markets, economic principles such as demand and supply, market competition, inflation and taxation are all present in virtual environments.

This chapter studies a number of business models employed in virtual environments, including the exploitation of user-generated content, selling virtual items in exchange for real-world currency or e-sport. Encouraging users to transform or enrich the environment through avatar accessories, fan-based modifications, ad-on software and mods, is beneficial for both

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<sup>142</sup> Battle.net, ‘Exploitation Policy’ <<https://eu.battle.net/support/en/article/exploitation-policy>> accessed 1 December 2015, Entropia Universe, ‘Entropia Universe End User License Agreement (EULA), Section 4.1’ <<http://legal.entropiauniverse.com/legal/eula.xml> accessed> 1 December 2015.

users and providers. Users benefit from the experience of a truly creative, innovative and engaging environment, while providers increase their revenues. The motto of Second Life used to be 'Your Life. Your Imagination.'<sup>143</sup> The focus of this thesis is to identify circumstances in which users may acquire legal interests in virtual items. In order to achieve that, first we need to understand how virtual marketplaces and economies evolve, how they function and what their constituent elements are. We also need to understand the role of the providers and users in facilitating and contributing to this emerging phenomenon.

Studying the inner workings and underlying principles of virtual economies, the following sections identify the different means of exploiting and creating valuable resources in virtual environments. It also provides an overview of virtual assets. It is important to determine what kind of resources can be qualified as objects of property for the purposes of this work.

### 3.2 More Than Just a Game

To begin with, it is necessary to understand what games are and how this changes with time, and the political and cultural context. The common features are a narrative, rules and a mixture of cooperation and competition. Examples are gladiator games or fox hunting.

Games have always been a universal part of the human experience and are present in all cultures. A game is a structured playing, usually undertaken for enjoyment or as an educational tool. Games are distinct from work, which usually involves remuneration, and from art, which is more often an expression of aesthetic or ideological elements.<sup>144</sup> However, games played on a

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<sup>143</sup> 'What Can You Do in Second Life' Second Life Community <<https://community.secondlife.com/t5/Getting-Started/What-can-you-do-in-Second-Life/qaq-p/2354263>> accessed 15 November 2015.

<sup>144</sup> There is an extensive scholarship addressing the definition of games, starting with Ludwig Wittgenstein, 'Philosophical Investigations' (1953), Oxford: Blackwell (the term game is used to label disparate human activities that bear very little resemblance with each other); Bernard Suits, 'What is a Game?' (1967) The University of Chicago Press ("to play a game is to engage in activity directed toward bringing about a specific state of affairs,

professional level or for remuneration can become an occupation, such as professional chess playing. The key components of games are goals, rules, challenges, and interaction.<sup>145</sup> Games can take a variety of forms, such as sport, board games or video games. Sport is “an activity involving physical exertion and skill in which an individual or team competes against another or others for entertainment”.<sup>146</sup> There seem to be three basic criteria that define sport: i) a human activity involving physical skill and exertion; ii) governed by a set of rules or customs; and iii) undertaken competitively and capable of achieving a result.<sup>147</sup>

Legal definition of sport appears in, for example, The Charities Act 2006,<sup>148</sup> where it defines sport as ... *“sports or games which promote health by involving physical or mental skill or exertion.”*<sup>149</sup> In the light of this definition, the Charity Commission decided that bridge was “a game involving high level mental skill and exertion of the type which Parliament would have contemplated as falling within ‘the advancement of amateur sport’”.<sup>150</sup> In addition, the Council of Europe established a framework for sports policy in member states. Art. 2(1)(a) of the European Sports Charter defines sport as *“all forms of physical activity which, through casual or organised participation, aim at expressing or improving physical fitness and mental well-being, forming social relationships or obtaining results in competition at all levels.”*<sup>151</sup>

The classification of activities as games or sports changes depending on the historical and cultural context. Gladiator games were an important element of social and political life in the Roman Empire and Republic. Gladiators entertained the Roman audience by fighting each

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using only means permitted by specific rules, where the means permitted by the rules are more limited in scope than they would be in the absence of the rules, and where the sole reason for accepting such limitation is to make possible such activity”). Chris Crawford, ‘Chris Crawford on Game Design’ (2003) New Riders (game is “an interactive, goal-oriented activity made for money, with active agents to play against, in which players, including active agents, can interfere with each other”).

<sup>145</sup> Crawford (n 143) 15.

<sup>146</sup> ‘Oxford English Dictionary’ <[www.oed.com](http://www.oed.com)> accessed 18 November 2015.

<sup>147</sup> Ibid.

<sup>148</sup> The Charities Act 2006.

<sup>149</sup> The Charities Act 2006, section 2 (3)(d).

<sup>150</sup> Decision of the Charity Commission on Hitchin Bridge Club from 1 March 2011 <<https://www.gov.uk/government/publications/hitchin-bridge-club>> accessed 15 December 2016.

<sup>151</sup> The European Sports Charter Art. 2(1)(a), Council of Europe, No. R(92)13 rev. <[https://www.coe.int/t/dg4/epas/resources/texts/Rec\(92\)13rev\\_en.pdf](https://www.coe.int/t/dg4/epas/resources/texts/Rec(92)13rev_en.pdf)> accessed 15 December 2016.

other, wild animals or criminals condemned to death. They offered an example of Rome's martial ethics and in fighting or dying well they could inspire admiration and popular acclaim. With the adoption of Christianity in the 5<sup>th</sup> century AC, gladiator games started to decline. Although there were other political and economic reasons for this, the Christian religion perceived the games as murderous, spiritually and morally harmful instruments of pagan sacrifice and thus incompatible with their new moral code.<sup>152</sup> The understanding of what constitutes 'playing a game' and what goes beyond that concept, with the potential legal implications, is closely associated with the historical, cultural and political context.

Games, sports and even leisure activities are subject to rules or customs. In case of some sports and games, there will also be clubs, associations and committees that will act as governing bodies. Apart from the rules of the game, these bodies will also have to implement and enforce a body of law that addresses legal issues arising from the world of both amateur and professional sports and games.<sup>153</sup> For example, number of countries has enacted sport-specific laws that criminalise certain actions related to doping in sports.<sup>154</sup> Another way in which the authorities have become more willing to interfere and initiate criminal proceedings are cases of excessive violence and brutality during a game. In October 2000, a Canadian court convicted the Boston Bruins hockey player Marty McSorley for his brutal stick attack on an opponent's head with just few seconds left until the end of the game.<sup>155</sup> An Australian case *McCracken v Melbourne Storm & Orcs*<sup>156</sup> discussed violence in the context of tort law. The question for the court was whether an athlete can intentionally aim to injure another during play. Negligence torts particularly more difficult to prove in contact sports, where violent

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<sup>152</sup> Keith Hopkins, 'Murderous Games: Gladiatorial Contests in Ancient Rome' (1983) *History Today* Volume 33 Issue 6 <<http://www.historytoday.com/keith-hopkins/murderous-games-gladiatorial-contests-ancient-rome>> accessed 10 June 2012.

<sup>153</sup> This body of law is referred to as sports law and will overlap with substantially with labour law, contract law, competition or antitrust law, and tort law, defamation or privacy rights.

<sup>154</sup> Useful examples can be found in countries such as Australia, Austria, France or Italy. More details are for example here: Jaan Murphy, 'Where in the world is doping a crime?' (*FlagPost*, 24 April 2013) <[http://www.aph.gov.au/About\\_Parliament/Parliamentary\\_Departments/Parliamentary\\_Library/FlagPost/2013/April/Where\\_in\\_the\\_world\\_is\\_doping\\_a\\_crime\\_doping\\_in\\_sports\\_pt\\_6](http://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/FlagPost/2013/April/Where_in_the_world_is_doping_a_crime_doping_in_sports_pt_6)> accessed 20 November 2015.

<sup>155</sup> The case is reported in more detail for example here: Frederick D. Jay, *Clubhouse Lawyer: Law in the World of Sports* (iUniverse Star, 2004).

<sup>156</sup> *McCracken v Melbourne Storm Rugby League Football Club Limited* (2007) NSWCA 353.

actions and injuries are part of ‘playing the game’. While neither of these scenarios arise in virtual environments, they demonstrate that while players and participants primarily follow the rules of the game or sport, they are also subject to real-world laws. The same is applicable to activities in virtual environments.

Both Duranske and Castronova mention the concept of a ‘magic-circle’. “The magic circle must protect spaces that are operated as pure play spaces, but to the degree that providers wish to offer real-life benefits (e.g. the potential to make real money and own virtual property, advanced social and business interaction outside a game context, and pseudo-governmental services), courts can and will apply real-life law to activity that takes place in these spaces.”<sup>157</sup> As a result, property law, intellectual property law, contract law, or criminal law principles may apply to social interactions in virtual environments.<sup>158</sup> Castronova suggests a concept of *interration*, which stands for “a proposed legal status that would govern the creation of ‘closed worlds’. These ‘closed worlds’ would be protected from state intervention, and they would, in turn, impose restrictions (such as prohibitions against ‘real money trade’) that would theoretically prevent them from bleeding into real life.”<sup>159</sup>

However, there are few examples that illustrate how activities confined to virtual environments can be as anti-social in the real world. In 2012, Liam Stacey, a 21-year old Swansea University student, received a sentence for posting a racist tweet about Fabrice Muamba, who collapsed on the field during an FA Cup match at Tottenham because of a cardiac arrest. Stacey received a sentence of 56 days of imprisonment.<sup>160</sup> On a much greater scale, the use of Facebook and other social networking sites and messaging service contributed to social unrest that broke in England in summer 2011. It started in Tottenham, spreading quickly to other London borough of Croydon and Enfield and then over night to other parts of the country

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<sup>157</sup> Ibid.

<sup>158</sup> Benjamin Duranske, *Virtual Law: Navigating the Legal Landscape of Virtual Worlds* (American Bar Association 2008) 14.

<sup>159</sup> Castronova (n 58) 38.

<sup>160</sup> ‘Fabrice Muamba: Racist Twitter user jailed for 56 days’ (*BBC*, 27 March 2012) <<http://www.bbc.co.uk/news/uk-wales-17515992>> accessed 25 November 2015; *R v Liam Stacey* Magistrates Court 30 March 2012.



including West Midlands and Manchester. Jordan Blackshaw and Perry Sutcliffe-Keenan were sentenced at Chester Crown Court for organising and orchestrating serious disorder.<sup>161</sup>

Leisure activities, games and sports can be also economic activities. The world of sport has traditionally relied on a strong protectionist vision of sports governance.<sup>162</sup> At the same time, governments have been reluctant to intervene in the sports sector as they used to regard it as more of a cultural industry than a business. This raises a question at which point sports bodies lose authority in favour of state interference. In a landmark ruling in *Walrave and Koch*<sup>163</sup>, the European Court of Justice declared that sport was subject to EU law “in so far as it constitutes an economic activity within the meaning of Art.2 of the EC Treaty.”<sup>164</sup> The main issues related to a question whether provisions of an international sport federation might be discriminatory regarding the free movement of persons and services. In *Bosman*,<sup>165</sup> the Court of Justice confirmed that football was an economic activity despite the fact that it was also a game and a sport. As a result, Bosman, a Belgian football player, could rely on the Article 48 the Treaty providing for the free movement of persons within the EU. At the time, the football association rules stated that a professional footballer could not join a new club in another Member State

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<sup>161</sup> The police commented, “the sentences passed down today recognise how technology can be abused to incite criminal activity and sends a strong message to potential troublemakers about the extent to which ordinary people value safety and order in their lives and their communities.” ‘England riots: Two jailed for using Facebook to incite disorder’ (*BBC*, 16 August 2011) <<http://www.bbc.co.uk/news/uk-england-manchester-14551582>> accessed 15 November 2015.

<sup>162</sup> Interestingly, sometimes the opposite is true. Bridge players have been actively seeking a formal recognition as a sport, in order to be governed by a sport body. Recently, the Upper Tribunal referred a question to the CJEU regarding whether contract or duplicate bridge is a sport for the purposes of VAT exemption. The International Olympic Committee has recognised the World Bridge Federation as a sports organisation, and as such, bridge is subject to the same regulatory environment as any other Olympic sport. ‘Mind sports’ is a new term for sporting activities, such as bridge, that are largely mental tests. This encompasses chess and Go, amongst others. The fact that bridge is recognised at world level as a sport does not mean that individual countries recognise it in the same way. In fact, some do and some do not, which seems to be confusing and unsatisfactory state of affairs. In this country, being a sport confers access to Lotto funding, as well as tax advantages. Bridge is a game of mental skill, extreme powers of concentration and stamina, Top players with international ambitions will spend many hours a week training and practising. Heather Dhondy, ‘Why bridge should be officially recognised as a sport’ (*The Independent*, 26 February 2014) <<http://www.independent.co.uk/sport/general/others/why-bridge-should-be-officially-recognised-as-a-sport-9152961.html>> accessed 27 November 2015.

<sup>163</sup> *Walrave and Koch*, Case 36/74 [1974] ECR 1405.

<sup>164</sup> *Ibid.*

<sup>165</sup> *Union Royale Belge des Sociétés de Football Association ASBL v Jean-Marc Bosman* (1995) C-415/93 (known as the *Bosman* case).

unless the latter club had paid a transfer fee to the former one. This was an obstacle to freedom of movement. These rulings are evidence that participating in a sport or playing game, on both amateur and professional level, will warrant state interference.

In December 2013, Kim 'ViOLet' Dong Hwan, a professional StarCraft 2 player from South Korea, obtained a P-1A visa from the American government. This type of visa applies to internationally recognised athletes.<sup>166</sup> Official recognition of video games as 'sports' will drive sponsorship deals, broadcasting rights and sales of advertising space within virtual environments. This has been evident in the world of sport for some time now. The growing importance of the mass media created issues of corporate sponsorship and commercialization. For example, many athletes do not receive a payment for competing in the Olympic Games, but some countries offer rewards based on the type of medal received. For instance, the U.S. Olympic committee pays medal winners \$25,000 for gold, \$15,000 for silver, and \$10,000 for bronze medals.<sup>167</sup> The only direct income that athletes can receive is from corporate sponsorship. Michael Phelps received an additional \$1 million from Speedo for breaking the 1972 record for seven gold medals in a single Olympics.<sup>168</sup> There is a difference between games played for amusement and recreation and games played professionally. The latter case can involve very large profits. For example, in football, broadcasters paid 434 million euros for the television rights to the English Premier League games for five seasons in 1992. It is also important to highlight one fact and that is, assets accumulated in the course of participating in a sport or game, such as trophies and sport equipment, are the player's property. Nobody would question the underlying ownership, irrespective of whether that item can be commercially attractive. This is in a stark contrast to virtual environments, where users collect items and

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<sup>166</sup> Tracey Lien 'StarCraft 2 player receives the sport's first US athlete visa' (*Polygon*, 15 December 2013) <<http://www.polygon.com/2013/12/15/5212798/starcraft-2-player-receives-the-sports-first-us-athlete-visa>> accessed 15 November 2015.

<sup>167</sup> David Weliver, 'How Much Do Olympic Athletes Earn?' (*MoneyUnder30*, 14 June 2012) <<http://www.moneyunder30.com/how-much-do-olympic-athletes-earn-unless-youre-michael-phelps-not-enough>> accessed 15 November 2015.

<sup>168</sup> Darren Rovell, 'It's All Speedo's Cash for Michael Phelps' (*CNBC*, 6 August 2008), <<http://www.cnbc.com/id/26047381>> accessed 20 November 2015.

acquire valuable assets and yet, the licence agreements governing all in-game transactions effectively prevent the acquisition of property rights in virtual items.<sup>169</sup>

Moreover, while the economic importance is not the only consideration when justifying state intervention, it is undoubtedly relevant. Modern football can serve again as a useful example of how the transformation of a popular sport from a game into a multi-million-dollar business opportunity attracts the attention and scrutiny of the authorities. For example, Gareth Bale, who started his career in Southampton and played for Tottenham Hotspur, was transferred to Real Madrid in 2013 for a record £86 million and thus moved to the top of the list of the most expensive player transfers in football history.<sup>170</sup> However, the scandals in professional football in recent years forced a public debate about the way the sport is run amid concerns over bribery, corruption,<sup>171</sup> or the origin of money invested in football. Rumours of illegal betting and money-laundering, an increasing gap between the richer and poorer clubs, and even match-fixing practices which have, in some cases led to referees being sent to jail or prominent sports officials being arrested.<sup>172</sup> With popularity and fame usually comes capital, and with capital comes responsibility, public scrutiny and social conflict. There is no doubt that environments such as Twitter, Facebook or World of Warcraft can be used for harmful or even illegal activities

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<sup>169</sup> Steven J. Horowitz, 'Competing Lockean Claims to Virtual Property (2007) 20(2) *Harvard Journal of Law and Technology* 443.

<sup>170</sup> Top 20 most expensive transfer fees of all time (*The Telegraph*, 30 August 2015) <<http://www.telegraph.co.uk/sport/football/picturegalleries/10259401/Top-20-most-expensive-transfer-fees-of-all-time.html>> accessed 30 November 2015.

<sup>171</sup> The FIFA scandal and resignation of Sepp Blatter illustrates some of the challenges faced by modern football. Blatter is accused of using FIFA development money, earmarked for promoting soccer in impoverished nations, to secure votes and general support for his initiatives. Swiss and American teams have been investigating the selling broadcasting rights and bidding process for the World Cup in Russia and Qatar. Ian Bremmer, 'These Are the 5 Facts That Explain the FIFA Scandal' (*Time*, 4 June 2015) <<http://time.com/3910054/fifa-scandal-sepp-blatter/>> accessed 25 November 2015.

<sup>172</sup> Arnout Geeraert, 'Limits to the autonomy of sport: EU law' (2013) Action for Good Governance in International Sports Organisations (AGGIS) 7 <[http://www.playthegame.org/fileadmin/documents/AGGIS\\_Geeraert\\_-\\_Limits\\_to\\_the\\_autonomy\\_of\\_sport.pdf](http://www.playthegame.org/fileadmin/documents/AGGIS_Geeraert_-_Limits_to_the_autonomy_of_sport.pdf)> accessed 19 November 2015.

that have a direct impact in the real world.<sup>173</sup> It is inevitable that virtual environments are subject to real-world governance and regulation.<sup>174</sup>

The fact that something is classified as a game or designed for purely entertainment purposes does not mean that new ways of participating in these activities are excluded. Playing a game can become a profession, an art or an obsession. When the game gathers momentum and generates a community, we need to take it seriously and look for potential legal implications. The key point here is that money matters, even in games. Governance is essential in any big business, and virtual environments are both games and big business. Professional video gamers are legion, particularly in China, and recognition of the need to apply the same level of governance to virtual environments as in other sports is becoming widespread.<sup>175</sup>

### 3.3 Virtual Economy

Chapter Two informed us that most environments are structured around a system of risks and rewards. Users aim to collect valuable items, points, virtual currency or powerful skills as they progress through the game. These valuable resources can be subject to a number of different transactions and have an independent value. They gave rise to self-sufficient virtual economies. For the purposes of this work, the term virtual economy refers to the economic practice of exploiting the available resources within a virtual environment.<sup>176</sup> Depending on the

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<sup>173</sup> Lastowka, Hunter (n 56) 293.

<sup>174</sup> Virtual environments, or Cyberspace more general, is by far the most regulated environment. From content regulation, online gambling to data privacy and licence agreements, almost any activity may potentially fall within one of the national jurisdictions.

<sup>175</sup> Examples include David Sheldon, 'Claiming Ownership, But Getting Owned: Contractual Limitations on Asserting Property Interests in Virtual Goods', (2007) 54 UCLA L. Rev. 751; Molly Stephens, 'Sales of In-Game Assets: An Illustration of the Continuing Failure of Intellectual Property Law to Protect Digital Content Creators', (2002) 80 Tex. L. Rev. 1513; Ethan White, 'Massively Multiplayer Online Fraud: Why The Introduction of Real World Law in a Virtual Context Is Good for Everyone', (2008) 6 Nw. J. Tech. & Intell. Prop. 228.

<sup>176</sup> Castronova examines the nature and underlying principles of virtual economies in Castronova, 'On Virtual Economies' (n 17) and Castronova, 'Virtual Worlds: A First-Hand Account of Market and Society in the Cyberian Frontier' (n 58) 12.

type of the environment, users can exploit the resources by either acquiring materials and turning them into goods or providing services, by collecting, buying and selling virtual items, or developing virtual land. The following section will investigate the numerous ways in which users can create some valuable output.

These assets are central to users' experience and their avatars' development and success. Most items resemble physical personal property, such as clothing, weapons or armoury. Users acquire personal assets in order to improve their avatar's strength, abilities and powers. In addition, they can purchase items that fulfil purely decorative or social functions, such as designer clothing, furniture or pets. It is also possible to add virtual real estate to an avatar's portfolio. In *Second Life* or *Ultima Online*, avatars can purchase land and develop virtual real estate or they can rent an apartment in order to invite friends around or organise various events. Similar to physical property, goods and real estate require repairs and further investments otherwise they depreciate.

The provider determines, which items are avatar-bound and which can be exchanged without limitations. Assets that are not specifically bound to an avatar or another character can be traded through various auction houses or marketplaces. The majority of virtual environment providers, however, strictly prohibit real world transactions, including exchanges of virtual currency for dollars<sup>177</sup> or users selling their whole accounts through secondary markets. Users face number of consequences for unauthorised trading or exploiting bugs in the game, such as account suspension, confiscation of property or even ban for life.<sup>178</sup> *World of Warcraft* adopts an 'exploitation policy' in where users are found to be in 'abuse of economy', which occurs when one or more characters on the account are identified exchanging or contributing to the

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<sup>177</sup> 'Gold-farming' is such a practice on almost an industrial scale. It involves hiring low-wage workers in third-world countries to play *World of Warcraft* or other online games in order to accumulate gold that can be sold for money on the open market.

<sup>178</sup> A software bug is an error, flaw, mistake, failure, or fault in a computer program or system that produces an incorrect or unexpected result, or causes it to behave in unintended ways. Most bugs arise from mistakes and errors made by people in either a program's source code or its design, and a few are caused by compilers producing incorrect code.

exchange of in-game property (items or gold) for real-world currency, they will retain the right to suspend the user's account temporarily or terminate it.<sup>179</sup>

An entire generation of users are turning their attention to video games and social networking platforms as a way of earning a living. Already many of them can claim to be self-made millionaires.<sup>180</sup> By replicating real-life economic phenomena like resource scarcity, monetary injections, and taxation, these property-based environments enable users to generate value in things that exist only in the 'virtual reality'. There are several ways in which to make money by merely 'socialising' or 'playing a game'.

The following sections provide an overview of the selected virtual environments and their respective virtual economies. It shows the different ways in which users can exploit or create valuable resources.

### 3.3.1 World of Warcraft

The complex economic and social structures in place in the game reflect a free-market model since it employs similar principles. Firstly, there is the environment's currency – gold. Gold can buy everything from avatar accessories to virtual goods and services from traders and non-player characters (NPCs) throughout the game. The amount of gold in circulation depends on how much users interact with the environment – every time a user kills a monster or completes a quest, he can collect gold and other items the monster has dropped. The gold goes out of circulation, when users purchase goods or services from NPCs.<sup>181</sup>

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<sup>179</sup> 'Exploitation Policy', World of Warcraft <<https://eu.battle.net/support/en/article/exploitation-policy>> accessed 20 November 2015.

<sup>180</sup> Robert D. Hof, 'Second's Life First Millionaire' (*Business Week*, 26 November 2006) <[http://www.businessweek.com/the\\_thread/techbeat/archives/2006/11/second\\_lifes\\_fi.html](http://www.businessweek.com/the_thread/techbeat/archives/2006/11/second_lifes_fi.html)> accessed 13 September 2012.

<sup>181</sup> Bob Thomson, 'World of Warcraft Economics, Population Control, and Virtual Gold' (*Acton Institute PowerBlog*, 13 January 2015) <<http://blog.acton.org/archives/75151-world-warcraft-economics-population-control-virtual-gold.html>> accessed 14 November 2015. More information about World of Warcraft economy can be found here: 'Blizzard talks about the economy, the auction house, and professions' Blizzard Community (March 2013) <<http://stormspire.net/general-discussion/10090-blizzard-talks-about-economy-auction-house-professions.html>> accessed 14 November 2015.

The primary source of income is to sell virtual items like crafting materials, pets, gems, armour and weapons to other users through auction houses. Depending on the quality of the items, and therefore their value, users are required to put down a deposit in order to prevent too many trivial auctions. The more powerful items, the more significant amount of gold they will secure for the buyer. The principles of supply and demand are in full effect at the auction house, and items that players use frequently are liquid, especially as the player population increases. As the designers of the virtual environment explain, “we want economic interactions between players to be a positive experience. When selling, a player’s efforts in participating in various content (e.g., gathering herbs, collecting cloth, making armour, etc.) should feel rewarding.”<sup>182</sup>

Thomson argues that the bigger the population, the bigger is the potential audience for virtual goods and services. Virtual economies will thrive predominantly in environments with large populations, because each user acts as a co-creator of the economy. Having more players means more opportunities for everyone and a flourishing virtual market. Users inhabiting servers that host only a few thousand residents will experience the prices of essential or important items going up because of high demand against a limited supply provided by a handful of suppliers. On a very populated server, these issues disappear and those with less gold find common items more affordable due to market competition.<sup>183</sup>

Interestingly enough, the market of World of Warcraft has advanced to the point where gold has taken on a value that transcends that of a simple virtual object. Many companies make it their business to amass as much of this virtual capital as possible and sell it to players for real-world money<sup>184</sup>, despite the fact that this practice breaks an agreement that all players must make upon entering the game.<sup>185</sup> In any case, virtual World of Warcraft gold has developed into

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<sup>182</sup> Ibid.

<sup>183</sup> Thomson (n 180).

<sup>184</sup> Castronova, ‘On Virtual Economies’ (n 17).

<sup>185</sup> Eli Kosminsky ‘World of Warcraft: The Viability of Massively Multiplayer Online Role-Playing Games as Platforms for Modelling and Evaluating Perfect Competition’ (February 2010) Volume 2, Number 4

a pseudo-currency with a general exchange rate to the dollar.<sup>186</sup> Thus, the currency of the virtual game has taken on realistic characteristics without any direct exchange rate set up by the provider, Blizzard Entertainment.<sup>187</sup> At the same time, the provider has a full control over the economy. They can prohibit transfer of a specific object by changing the code. They can destroy any value virtual items may have by providing identical items to every player. They can even destroy all virtual property by shutting off the world completely.<sup>188</sup>

### 3.3.2 Second Life

Matthew Beller describes the virtual economy in Second Life in the following way. “Residents can create virtual clothing, hairdos, houses, airplanes, concert halls, video games, and endless other items by using an infinite supply of ‘primitives’, which are atomistic objects that can be shaped, coloured, combined, and programmed to behave in a particular way. Residents can then replicate their creations and sell the copies to one another at whatever price they set.”<sup>189</sup> Services include camping, working in stores, custom content creation, and other personal services.<sup>190</sup> Virtual goods include buildings, vehicles, devices of all kinds, animations, clothing, skin, hair, jewellery, flora and fauna, works of art, and in-game animals and pets such as: turtles, horses, cats, dogs, fish, dragons, virtual pets.<sup>191</sup> The existence of virtual land is behind an active virtual real estate market. Linden Lab creates and releases plots of virtual land when and as appropriate. Users can purchase virtual land through official market and use it to set up a business or develop the land for other virtual residents. “According to March 2008 Linden Lab’s report, there were 156 users who had a monthly cash flow of over \$5,000 per month.”<sup>192</sup> Virtual

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Virtual Economies, Virtual Goods and Service Delivery in Virtual Worlds

<<https://journals.tdl.org/jvwr/index.php/jvwr/article/download/869/634>> accessed 10 March 2014.

<sup>186</sup> Castronova, ‘On Virtual Economies’ (n 17).

<sup>187</sup> Kosminsky (n 188).

<sup>188</sup> Adrian (n 57) 112.

<sup>189</sup> Matthew Beller, ‘The Coming Second Life Business Cycle’ (Mises Institute, 2 August 2007)

<<https://mises.org/library/coming-second-life-business-cycle>> accessed 18 November 2015.

<sup>190</sup> ‘Second Life Marketplace’ <<https://marketplace.secondlife.com/>> accessed 10 September 2013.

<sup>191</sup> Ibid.

<sup>192</sup> Claude T Aiken IV, ‘Sources of Law and Modes of Governance: Ethnography and Theory in Second Life’ (2009) *Journal of Technology Law and Policy* 27.



land is a major source of income not just for individual virtual property owners, but for the provider as well.

Linden Lab, essentially representing the state in Second Life's economy, does not generally interfere with economic activity. Yet, it becomes clear that the provider has the ability to manipulate the single-most important commodity in any economy, the virtual currency.<sup>193</sup> In addition, as the owner of the platform, Linden Lab has the ultimate authority to change all aspects of the world, from the economy to the physics to the terms-of-service. It is interesting to see what impact changes made or proposed by the provider have on the environment.<sup>194</sup> Some changes have had the effect of creating new markets, but they have also on occasion destroyed or removed the value of existing ones, or inadvertently given a market leader at a particular time unique advantages that entrench them as a market leader in the future. Beller argues that unless this power is very tightly controlled and transparent, the Linden economy is unlikely to attract very large investment.<sup>195</sup>

Recent Linden Lab acts of greater economic importance include the banning of wagering on games of random chance or on real-life sporting events with L\$.<sup>196</sup> This arguably reflected the trend of most countries to regulate online gambling.<sup>197</sup> As soon as the company announced the change of rules, casinos had a few days to close. Casino owners and game makers either found other avenues of business or ceased trading. The fallout of this was that the largest bank in Second Life, Ginko Financial, which had its ATMs in most major casinos. As a result, users made a run on the bank, driving it into insolvency. Since the bank did not have insurance, many

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<sup>193</sup> Beller (n 188)

<sup>194</sup> Chapter Four looks more closely at the complex layer of rules, their origin, implementation and enforcement.

<sup>195</sup> Matthew Beller, 'Wildcat Banking in the Virtual Frontier' (Mises Institute, 5 February 2008) <<https://mises.org/library/wildcat-banking-virtual-frontier>> accessed 14 December 2015.

<sup>196</sup> Sarah Polson, 'Second Life bans gambling in virtual world' (Poker News, 26 July 2007) <<http://www.pokerlistings.com/second-life-bans-gambling-in-virtual-world-16320>> accessed 20 December 2015.

<sup>197</sup> The law on online gambling changed in 2003 in the UK to reflect the advancement of technology. For example, the updates to the Gambling Bill stipulate that the provider of the service must be granted a licence, permit or registration and it implements guidelines not to protect children and minors. In Germany, all forms of online gaming and betting were banned in 2008, with the exception of horseracing. More information on the complexities of regulating cross-border online gambling can be found for example here: Julia Hörnle and Briditte Zammit, *Cross-Border Online Gambling Law and Policy* (Edward Elgar Pub 2010).

residents lost money. Residents lost savings equalling to \$750,000 of real-world currency and subsequently many called for regulation.<sup>198</sup>

The next step was a ban on all interest-paying virtual banks. Unregulated banks, including Ginko Financial, offered deposits bearing high interest rates without having sufficient funds guaranteeing these deposits. Essentially, these were cases of frauds and Ponzi schemes. After the collapse of Ginko Financial, Linden Lab decided that only organisations with real-life banking licences could offer interest-paying accounts in Second Life could.<sup>199</sup>

Duranske argues that it is not online gambling, but virtual sex or Ponzi schemes as described above that are immensely profitable for the provider, but the misappropriation of global brands' trademarks.<sup>200</sup> For example, a number of stores in Second Life offer Gucci sunglasses, Fendi bags, or Nike trainers while neither of these corporations have official presence in the environment.<sup>201</sup> This further supports the argument that the purpose of virtual environments is not just entertainment, but they also integrate "a self-sustaining economy, facilitating monetary transactions of substantial value with actual repercussions in the real world."<sup>202</sup>

### 3.3.3 EVE Online

This last incident illustrates the role adopted by the provider when it comes to intervening not only in the virtual economy, but also in regulating what is a behaviour with a detrimental effect on the environment. EVE Online is a virtual environment that revolves around piracy and commerce in outer space. It is a fully open-ended environment with user-led economy and politics. The game-play focuses on player-against-player battles and practices such as stealing, defrauding or extorting money are encouraged.

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<sup>198</sup> Bryan Gardner, 'Bank Failure in Second Life Leads to Calls for Regulation' (*Wired Magazine*, 15 August 2007) <[www.wired.com/gaming/news/2007/08/virtual\\_bank](http://www.wired.com/gaming/news/2007/08/virtual_bank)> accessed 1 December 2015.

<sup>199</sup> Beller (n 188).

<sup>200</sup> Duranske (n 157) 180.

<sup>201</sup> Melissa Ung, 'Trademark Law and the Repercussions of Virtual Property' (IRL), (2009) 17 *CommLaw Conspectus* 681.

<sup>202</sup> *Ibid.*

This strongly influences the role of the environment's provider, CCP Games, in a similar financial fraud. A user called Cally realized that there was a need for a bank to allow other users to deposit their large liquid balances for safekeeping. After taking in approximately \$125,000, the scheme collapsed and Cally disappeared with the funds. In this case, of a large-scale investment fraud scheme undertaken by an EVE Online user, the provider did not intervene – the acts were perfectly acceptable within the scope of the game.<sup>203</sup>

Exploitation of virtual assets is something that happens extensively, as was shown in the previous sections. The available evidence indicates that both providers and users treat exploitation of virtual property as a valid commercial practice. The majority of virtual environments provide users with the opportunity to exchange real money for virtual currency and use it to purchase a variety of virtual assets. Whether the motivation behind these transactions is purely recreational or there is a real economic benefit in mind, virtual economies have become part of the virtual experience. Virtual currency is the means of exchange, which takes place in game or through third-party websites. Users can choose from a wide range of virtual goods and virtual land depending on the type of the environment. The largest and most developed virtual economies incorporate the real world economy – they mirror the transactions, exchange mechanisms, rules of the market and they incorporate users' expectations based on their real world experience.

### 3.4 Exploitation of Virtual Environments

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<sup>203</sup> Peter Pollack, 'Online 'Banker' Runs Off with Cash, Avatars Cry Foul' (*Ars Technica*, 28 August, 2006) <<http://arstechnica.com/news.ars/post/20060828-7605.html>> accessed 12 May 2011; 'Don't Bank On It!', TenTonHammer <<http://eve.tentonhammer.com/index.php?module=ContentExpress&func=print&ceid=11>> accessed 12 May 2011.

Next, we will examine different forms of exploitation and use of valuable resources in virtual environments. Depending on the type of the environment, users can exploit the resources by either acquiring materials and turning them into goods or providing services, by collecting, buying and selling virtual items, or developing virtual land. However, there are also a number of innovative and transformative uses of virtual environments generating financial benefits.

### 3.4.1 User-generated content

Video games and virtual environments have traditionally had a strong connection to user-generated content practices as players engage in a wide range of ‘modding’<sup>204</sup> and fan base creations not directly enabled by the original software.<sup>205</sup> The term ‘user-generated content’ describes the phenomenon of popular digital creativity. Amateur works, in contrast to professional content, existed prior to the advent of YouTube and other similar platforms. This is true for interviews, correspondence, fan clubs, radio talk shows and other ways of including non-professional content on broadcast media. New technologies enabled podcasting, blogging and online video output available for a global audience. “Emerging user-generated content platforms, such as blogs, Facebook, YouTube and Wikipedia, are clearly economically and culturally significant.”<sup>206</sup> User-generated content is an all-encompassing term and it includes, amongst other things, fan sites, fan-written fiction, comics and cartoons, photo manipulations, mash-ups and machinima art.

‘Mods’ refer to the practice of developing add-on software, which typically modifies the game’s user interface, altering the display of information, displaying otherwise inaccessible

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<sup>204</sup> Modding refers to an act of modifying hardware, software, or anything else in order to perform a function that was not part of the original design. More information in the context of virtual environments can be found here, John Baldrice, ‘Mod as Heck: Frameworks for Examining Ownership Rights in User-Contributed Content to Videogames, and a More Principled Evaluation of Expressive Appropriation in User-Modified Videogame Projects’ (2007) 8 Minn. J. L. Sci. & Tech. 681.

<sup>205</sup> In many academic articles on UGC, the cover of Time magazine in 2006 is cited as a watershed moment, with Time anointing ‘You’ as ‘Person of the Year’ and the new controller of the media landscape. Todd D. Marcus, ‘Fostering Creativity in Virtual Worlds: Easing the Restrictiveness of Copyright for User-Created Content’ (2008) 55 J. Copyright Soc’y U.S.A. 469; Viktor Mayer-Schönberger and John Crowley, ‘Napster’s Second Life? The Regulatory Challenges of Virtual Worlds’ (2006) 100 Nw. U. L. Rev. 1775.

<sup>206</sup> Greg Lastowka, ‘The Player-Author Project’ (November 2013)

<[https://www.academia.edu/5270013/The\\_Player-Authors\\_Project](https://www.academia.edu/5270013/The_Player-Authors_Project)> accessed 13 November 2015.

information, and allowing automated game control functions.<sup>207</sup> Companies, such as Blizzard Entertainment, may at times permit, or even encourage. Providers often walk a fine line between encouraging add-on developments that enhance players' gaming experiences and curtailing add-ons that are detrimental to either player community norms or the proprietor's business purposes. Blizzard has asserted copyright claims against the developers of certain types of add-on programs in *MDY Indus., LLC v. Blizzard Entertainment, Inc.*<sup>208</sup> Michael Donnelly, who is behind MDY Industries, developed software called Glider. It is an automated program, also called a 'bot', which simulates the actions of users and allows them to navigate and advance through the game without being actually online. Blizzard perceived the functionality and the use of Glider to be in contrary to the licence agreement. The company also stated that it received thousands of complaint about bot software and spent considerable sum of money on updating the underlying technology to prevent users running bots from accessing the virtual environment entirely.<sup>209</sup> Blizzard sued MDY for copyright infringement and court ruled that MDY was liable for contributory infringement as it induced Glider's users to direct infringement. The Court of Appeals ruled that for a software licensee's violation of a contract to constitute copyright infringement, there must be a nexus between the license condition and the licensor's exclusive rights of copyright and in this instance, users did not use Glider in violation of the terms.<sup>210</sup>

There can be a situation when the derivative work can often be equally or even more successful than the original work, like in the case of *Defence of the Ancients (DotA)*,<sup>211</sup> which is an alternative universe generated by users of World of Warcraft. There exist many components

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<sup>207</sup> Given the contribution of the players to the game output, and assuming that the players are authorized to engage with the game's copyrighted material, the final product seems likely to be a derivative work, or even a work of joint authorship. This issue is discussed in more detail in Chapter Six in the context of identifying rights that users can claim against a third party that interferes with their virtual items.

<sup>208</sup> *MDY Indus., LLC v. Blizzard Entertainment, Inc.*, D. Ariz. Jul. 14, 2008.

<sup>209</sup> Dan L. Burk, 'Copyright and Paratext in On-Line Gaming' in Charles Wankel and Sean Malleck (eds) *Emerging Ethical Issues of Life in Virtual Worlds* (Publisher, 2010) 33. According to World of Warcraft users, there is nothing they dislike more than an online gamer who resorts to using cheats and cheat codes. Their intent is to find a way to beat the game or beat a specific level, without putting in the time or hard work that everyone else has.

<sup>210</sup> Ibid.

<sup>211</sup> Defense of the Ancients (DotA) is a multiplayer online battle arena mod for the video game Warcraft III: Reign of Chaos and its expansion.

of the virtual world and the providers allow users to generate their own maps and scenarios of the narrative, which in turns inspires the fan community. It provides users with a much richer experience and serves as an indication what users like – a successful modification can become even more popular than the original title. DotA, an independent universe derived from World of Warcraft, originated from a mod created by users. After gaining momentum and popularity, an independent company developed the mod into a new piece of work, which was possibly based on prior art belonging to Blizzard. There has been a legal claim initiated by Blizzard arguing that one of the companies infringed the DotA brand, but the case was settled out of court.<sup>212</sup>

The case *Eros LLC v John Doe*<sup>213</sup> illustrates that users can successfully claim legal interest in virtual assets. The case took place in Second Life, where Eros offered a number of adult-themed virtual objects sold under the ‘SexGen’ trademark, for about \$45 a unit. The owner has registered the objects with the US Copyright Office. The company complained that the defendant, known as ‘Volkov Catteneo’ had made a number of copies of the SexGen virtual objects, which he sold as being authorised and legitimate copies. In addition to the copyright infringement case, Catteneo was allegedly using the Eros trademark to assist in promoting his unauthorised copies.<sup>214</sup> The user behind the avatar, Robert Leatherwood, did not respond to the copyright and trademark infringement complaint within the period of twenty days, and as a result, the Federal Court has entered a default judgement banning him from further infringement. On this occasion, the plaintiff was successful in establishing that copyright and trademark rights rest in their virtual property and that they were infringed. The subject matter was a creative work and a sign, both registered respectively as copyright-protected work and trademark.

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<sup>212</sup> Walt Scacchi, ‘Computer Game Mods, Modders, Modding, and the Mod Scene’ (*First Monday*, May 2010) <<http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/2965/2526>> accessed 19 November 2015.

<sup>213</sup> The complaint is available here: <http://secondlife.reuters.com/media/SDOC1202.pdf>. Reported by, for example, David Flint, ‘Stealing Invisible Assets’ (*InfoLaw*, November 2007) <<http://www.infolaw.co.uk/newsletter/2007/11/stealing-invisible-assets/>> accessed 02 November 2015.

<sup>214</sup> *Ibid.*

These cases demonstrate the fine line between encouraging development of user-generated content and curtailing activities that are detrimental to the game-play or the providers' profits. Users' output, such as fan-based creations, modifications, ad-on software or users' performance enhance the game experience and inform the provider about possible improvements and new developments. On the other hand, users' output can negatively affect the internal structure, economy and balance between users and the environment. More importantly, it represents a conflict of interests between the creators of user-generated content and the provider's desire to control activities, which are detrimental to their business model.

### 3.4.2 Real-money trading (RMT)

Real-money trading refers to an economic practice of trading in-game items for real world currencies. The practice has first emerged with the beginning of the new millennia when users started to list their hard-earned virtual possession on eBay and allowed others to bid for them.<sup>215</sup> For many users this has since become a reliable source of income. In recent years, providers launched in-game marketplaces and online shops, where they sell virtual goods directly to the users. The elements of virtual currency and a marketplace give users purchasing power for other virtual assets such as virtual goods and virtual land. A research report conducted by Inside Virtual Goods entitled *The Future of Social Gaming 2010* estimated that the US virtual goods market alone would reach \$1.6 billion in 2010, and that the social gaming market would contribute \$835 million of that year's total.<sup>216</sup> This is particularly true in the East Asian market.<sup>217</sup> The majority of Chinese providers of virtual environments operate a business

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<sup>215</sup> Julian Dibbell, 'OWNED! Intellectual Property in the Age of eBayers, Gold Farmers, and Other Enemies of the Virtual State, Or, How I Learned to Stop Worrying and Love the End-User Licence Agreement' State of Play Conference, New York Law School, November 2003 <<http://www.juliandibbell.com/texts/owned.html>> accessed 12 May 2010.

<sup>216</sup> 'Inside Virtual Goods: The Future of Social Gaming 2010', (Inside Virtual Goods, 2010) <<http://www.insidevirtualgoods.com/future-social-gaming/>> accessed 1 November 2010.

<sup>217</sup> Lehdonvirta reports, "in September 2005, 32% of titles surveyed by Nojima in Japan used virtual item sales as their main revenue model. In October 2006, the share had grown to 60%. Besides games, another type of service that frequently utilises the revenue model are so-called 'virtual worlds', simulated spaces where users spend time socialising, creating and shopping for virtual goods. Latest-generation connected video game consoles are also experimenting with the model. In addition to games, virtual goods are also increasingly being sold in mainstream online services. Finnish online image gallery IRC-Galleria, Korean social networking site Cyworld, Chinese instant messaging service Tencent QQ and U.S. social networking site Facebook are examples of extremely popular online

model based exclusively on micro-transactions, in which they trade virtual items directly to players.

Lehdonvirta suggests, “virtual item sales may in some cases be able to rival advertising as the primary revenue model for mainstream online services, which in turn would represent a major shift in consumer online business.”<sup>218</sup> There is a number of entrepreneurs who make regular profits from virtual environments, for example specialising as avatar designers, property designers, and land developers, as well as virtual equivalents of real world corporations offering services such as legal advice and financial advice or selling virtual (or even real) goods.

We can distinguish between structured and unstructured environments in terms of providers’ attitudes towards this activity. Structured environments like World of Warcraft are against the practice, while unstructured environments like Second Life encourage it. There seems to be also a cultural consideration. While in China the practice is legitimate and normatively acceptable, the same activity is widely condemned by both users and providers in the majority of mainstream virtual environments in the West. This is clear from reading the Terms of Use and yet both types of licence agreements are uncompromising when it comes to issues of ownership. The following clause from the World of Warcraft Terms of Use is typical of those where providers rule out any proprietary interests arising from ‘selling’ and ‘buying’ virtual items.<sup>219</sup>

“Blizzard does not recognize the transfer of World of Warcraft Accounts or BNET Accounts (each an ‘Account’). You may not purchase, sell, gift or trade any Account, or offer to purchase,

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services that earn revenues by selling virtual goods to their users. Common objects are priced at a dollar or less, while notable objects can be sold for tens of dollars. In 2006, it was reported that Cyworld’s virtual item sales amounted to nearly USD\$300 000 per day, or approximately USD\$7 per user per year. At the same time, advertising-heavy MySpace made an estimated USD\$2.17 per user per year.” Vili Lehdonvirta, ‘Virtual Item Sales as a Revenue Model: Identifying Attributes that Drive Purchase Decisions’ (2009) *Electronic Commerce Research*, vol. 9, no. 1, pp. 97-113. <[http://www.hiit.fi/u/vlehdonv/documents/Lehdonvirta-2009-Virtual\\_item\\_purchase\\_drivers.pdf](http://www.hiit.fi/u/vlehdonv/documents/Lehdonvirta-2009-Virtual_item_purchase_drivers.pdf)> accessed 14 March 2014.

<sup>218</sup> Ibid.

<sup>219</sup> Dibbell (n 214).



sell, and gift or trade any Account and any such attempt shall be invalid. Blizzard owns, has licenced, or otherwise has rights to all of the content that appears in the Game. You agree that you have no right or title in or to any such content, including without limitation the virtual goods or currency appearing or originating in the Game, or any other attributes associated with any Account. 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."<sup>220</sup>

Equally, such restrictive clauses cause some difficulty for users who engage in gold farming. Gold farming is a process whereby an organisation employs people to perform repeatedly menial tasks at the lowest levels of games such as World of Warcraft.

Gold farmers are users who specialise in earning rewards, in particular in quest games such as World of Warcraft and Everquest. By employing teams of highly skilled players, 'gold farmers' collect rewards from in-game activities such as searching for, and finding, treasure. They then sell these in-game assets on to other players on a secondary market. It is not only gold that these businesses specialise in. They will tailor for a fee an avatar by building up their skill level or they will help a player by taking their avatar through a particularly perilous part of their adventure. They will also collect items such as potions, spells and magical weapons to sell on and will even sell complete accounts on the secondary market.<sup>221</sup>

Gold farming allows users to amass virtual currency and other items and then sell them to other users for real currency. This is one method of short-circuiting the lowest levels and menial tasks in games. The Terms of Use Agreement specifically prohibits this behaviour. However, Blizzard does very little to actively stop such activity. This suggests that whilst Blizzard does not actively say so, it does not condemn RMT or Gold Farming. Blizzard is unlikely to seek to ban

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<sup>220</sup> 'Terms of Use', World of Warcraft <<http://www.wow-europe.com/en/legal/termsfuse.html>> accessed 1 November 2010.

<sup>221</sup> Dibbell (n 214).

users from playing the game, because each user represents a source of revenue. There is an inconsistency between what the EULA and Terms of Use state and actual practice, suggesting that users can engage in RMT without any repercussions. This highlights the inherent contradiction and tension in allowing developers to police the environments that they have created.<sup>222</sup>

Most gold farming takes place in China and surrounding territories. The global value of the business in 2009 was around \$3billion. Farms opening in China undermined the market for in-game currencies in some game environments and even affected exchange rates for real world currencies, leading the Chinese government to ban the conversion of virtual money into real money for buying actual goods and services.<sup>223</sup>

The issue of gold farming has also been the subject of litigation in the USA. In the case of *Hernandez v IGE*,<sup>224</sup> both parties were users of World of Warcraft. However, whilst Hernandez sought to play the game properly, Internet Gaming Entertainment Ltd was one of the organisations that encouraged gold farming operations. IGE operated an online website providing a marketplace exclusively for gaming items and accounts; much like eBay does for other goods. The suit lodged by Hernandez claimed that the activity conducted by IGE caused irrevocable damage due to 'illicit marketing and sales'. Hernandez also stated in his claim that IGE were in breach of their contractual arrangement with Blizzard because by agreeing to the EULA and Terms of Service, users agree not to engage in the selling, gifting or trading of accounts or items.<sup>225</sup> He claimed that by doing so, IGE had breached the terms to which they had agreed when they joined the World of Warcraft subscriber base. The case was eventually settled, with IGE agreeing not to engage in the trade of items or currency from World of Warcraft for a period of five years.

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<sup>222</sup> Kim Barker, 'MMORPGing, Law and Lingo' in Michael Freeman and Fiona Smith (eds), *Current Legal Issues: Law and Language* (OUP, 2013) 417-433.

<sup>223</sup> Murray (n 16) 114.

<sup>224</sup> *Hernandez v. Internet Gaming Entertainment, LTD.*, United States District Court for S.D. Fla. Case No. 1:07-CIV-21403-JIC

<sup>225</sup> Barker (n 221).

Firstly, the providers are trying to preserve a fantasy experience and for that reason, they perceive real-cash transactions interfering with the game-play. Then there is the question of how real-money trading subjects the virtual economy to principles governing the real economy. Some argue that to allow in-game items to have monetary values makes these games, essentially, gambling venues, which would be subject to legal regulation as such.<sup>226</sup> Another issue is the impact of taxation that may apply, if in-game items have a real-world value. If a magic sword is considered to have real-world value, a player who kills a powerful monster to earn such a sword could find himself being charged tax on the value of the sword, as would be normal for 'prize winning'. This would make it impossible for any player of the game *not* to participate in real-money trading.<sup>227</sup>

A third issue is the involvement of the world's developer or maintenance staff in such transactions. Since a developer may change the virtual world at any time, ban a player, delete items, or even simply take the world down never to return, the issue of their responsibility in the case where real money investments are lost through items being lost or becoming inaccessible is significant. Richard Bartle has argued that this aspect negates the whole idea of ownership in virtual world and thus in the absence of real ownership no real trade may occur, a position that this thesis does not endorse.<sup>228</sup>

It seems that despite the clauses in the EULA and Terms of Use Agreement, the reality of the situation is vastly different. What is clear is that the documents state that users have no rights to property. If the users have no rights, how can they trade their accounts and items? Blizzard Entertainment is not acting to stop such activity so it would appear that they are endorsing the claims of users that they do have property rights. Sony however, did take action to prevent its EverQuest II users engaging in such activity by listing items on eBay. Sony entered into an

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<sup>226</sup> Edward Castronova, *Synthetic Worlds: The Business and Culture of Online Games* (University of Chicago Press, 2006).

<sup>227</sup> Leandra Lederman, 'Stranger than Fiction: Taxing Virtual Worlds' (2007) *New York University Law Review*, Vol. 82, <<http://ssrn.com/abstract=969984>> accessed 12 May 2012.

<sup>228</sup> Richard Bartle 'Pitfalls of Virtual Property' (White Paper of the Themis Group, 2004).

agreement with eBay that no listings of game property would appear.<sup>229</sup> Sony instead established its own online exchange that deals exclusively in EverQuest items. Accordingly, the actions of users and the inaction of Blizzard Entertainment seemingly supersede the provisions of the EULA to which both are parties, and can be rectified easily as demonstrated by Sony.<sup>230</sup>

Providers make clear representations that users retain certain control over virtual assets, a conduct that is in clear contradiction with their own terms and conditions. By virtue of encouraging and facilitating economic transactions, they implicitly recognise users' legal interests in virtual assets. The architecture of virtual environments, the existence of virtual economies, the characteristics of virtual assets and the role of providers are all factors that, individually and in conjunction, frame users' legitimate expectations about acquiring legal interests in virtual assets.

### 3.4.3 E-sports

One of the developments in the interactive entertainment industry has been an emerging phenomenon called e-sports. Millions of players commute on a regular basis to virtual environments the purposes of adventure, amusement or social interaction. A small but growing number of exceptionally skilled and business-savvy players who are intent on making a living. With the advent of the 'professional gamer' comes the development of a supporting infrastructure that is often associated with the world of physical sports and entertainment, including tournaments, leagues, fans, teams, team owners, player contracts, and sponsors. This new and creative way of using the game platform presents a set of fundamental legal issues that concern the ownership and control of rights in player performances.<sup>231</sup>

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<sup>229</sup> David Becker, 'Real cash for virtual goods: racket or way of the future?' (*Gamespot*, 8 March 2005) <<http://www.gamespot.com/articles/real-cash-for-virtual-goods-racket-or-way-of-the-future/1100-6118160/>> accessed 12 May 2010.

<sup>230</sup> *Ibid.*

<sup>231</sup> Dan L. Burk, 'Owning e-Sports: Proprietary Rights in Professional Computer Gaming' (2013) *University of Pennsylvania Law Review* Vol. 161: 1535 <<http://www.pennlawreview.com/print/Burk-161-U-Pa-L-Rev-1535.pdf>> accessed 10 October 2015.

While this work does not focus on regulating and protecting the interests of players in respect of e-sport competitions, the nature of such events presents a set of questions analogous to those relating to virtual property. For instance, what would be a practical configuration of the formal relationships between the various right-holding entities regarding the rights to use and control digital products that are by definition mediated by computer software that is itself the subject of various intellectual property rights? As Burk usefully points out, “even if e-sports does not become as prominent as anticipated, exploring a new and expanding entertainment infrastructure is valuable because it highlights both lingering and emergent difficulties in applying current proprietary rights regimes to digital media. An analysis of e-sports underscores the issues of user participation, interactivity, and collaboration that are common to information and communication technology,”<sup>232</sup> and thus disturb the established intellectual property regime.

We can identify a variety of formats and structures, as well as commercial titles employed by e-sports tournaments. Professional gaming covers both single and team play, mimicking physical sports activities, like the FIFA football game.<sup>233</sup> The game reflects rules used in international professional football and gives the impression of being the broadcasting of a virtual international football match. E-sport competitions also revolve around titles in the first-person shooter genre, such as Counter-Strike.<sup>234</sup> These tournaments focus on action or combat activity, while the character navigates a landscape of obstacles, barriers and armed opponents. Yet another genre that inspires professional gaming is real-time strategy games, such as StarCraft from Blizzard Entertainment.<sup>235</sup> This is a type of ‘mind game’<sup>236</sup> based on deploying military units to achieve strategy-based objectives across a vast geographical area. World of

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<sup>232</sup> Ibid.

<sup>233</sup> FIFA 16 was released on the 15th of September 2015, introducing, for the first time, Women's National Teams. (Electronic Arts) <<https://www.easports.com/fifa>> accessed 15 November 2015.

<sup>234</sup> Information about the Counter-Strike franchise can be found here <<http://store.steampowered.com/sale/cs/>> accessed 16 November 2015.

<sup>235</sup> Information about the StarCraft franchise can be found here <<http://us.blizzard.com/en-us/games/sc/>> accessed 16 November 2015.

<sup>236</sup> Mind games are essentially mental tests, and include games such as chess, and Go.

Warcraft represents a significant, if less popular, type of game. Here, characters compete in science fiction or medieval fantasy scenarios.

The business models, as well as individual teams, leagues and tournaments are in flux, with some being more stable than others are. The most common model employed in e-sport tournaments employs a broadcasting contract that often features in high-profile professional sports, while other models gravitate towards online streaming media. Although there are professional players who have become multi-millionaires,<sup>237</sup> most e-sport competitors will make a comfortable living from being paid to play the game and enter competitions. As in real-world sports and tournaments, the money originates from sponsorship deals and advertising. Tournaments broadcast via live streaming sites such as Twitch.tv<sup>238</sup> or they can occur in front of live audiences.<sup>239</sup> Whereas communities of professional gamers and fans are growing all over the world, it is in South Korea that e-sports have become something of a household name. Thanks to the widespread broadband access, playing video games and inhabiting virtual worlds have become a widely accepted and ubiquitous way of life for the younger generations.<sup>240</sup>

A recent dispute between the Korean e-Sports Player Association (KeSPA), which fosters and promotes e-sports in South Korea, and Blizzard Entertainment, the California-based game

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<sup>237</sup> Josh Warwick and Philip Allen 'Meet the 21-year-old YouTuber who made millions playing video games' (*The Telegraph*, 16 October 2014) <<http://www.telegraph.co.uk/men/the-filter/11139724/Meet-the-21-year-old-YouTuber-who-made-millions-playing-video-games.html>> accessed 12 October 2015.

<sup>238</sup> Twitch is a service recently purchased by Amazon for a sum near to £650 million, which allows e-sports fans to stream live video of individual training sessions and tournaments, including comments and reports. More information about the service is here: Twitch TV <<http://www.twitch.tv/p/about>> accessed 16 November 2015.

<sup>239</sup> In the UK, GFinity has become the leading platform for e-sports enthusiasts. It opened the first e-sport stadium in the UK, based in London. The GFinity Arena will be dedicated to live events, such as the Gfinity Championship. More information is here: Rebecca Burn-Callander, 'Is your teen son earning millions playing videogames?' (*The Telegraph*, 14 February 2015)

<<http://www.telegraph.co.uk/finance/businessclub/technology/11410369/Professional-gamers-could-earn-as-much-as-Premier-League-stars.html>> accessed 16 November 2015 and here 'The GFinity Championship 2015' <<http://www.gfinity.net/news/details/the-gfinity-championship-2015>> accessed 16 November 2015.

<sup>240</sup> South Korea boasts almost 100% households having Internet access and more than half of the population regularly participating in some type of game-play. As Burk reports, gaming is encouraged by government technological, economic, and consumer policy, in which it constitutes a driver to bolster domestic electronics production and a popular prompt toward consumer electronics purchases. Dan L. Burk 'Owning e-Sports: Proprietary Rights in Professional Computer Gaming' (2013) 161 *University of Pennsylvania Law Review*.

developer and publisher, has signalled future controversies arising from e-sports. Taylor<sup>241</sup> reports that the dispute arose over Blizzard's intellectual property rights in StarCraft, one of the most popular platforms for professional tournament competitions. While KeSPA perceives e-sports as a way of promoting and boosting the developer's franchise, virtual environment providers view tournament organisers as 'free-riding' on their intellectual property. As a result, Blizzard wanted more control over the Korean e-sports scene and subsequently broke off negotiations with KeSPA in 2010 over broadcasting rights. The dispute was scheduled for trial on 13th May 2011. However, Blizzard and KeSPA settled out of court before any useful ruling was enshrined in the law.<sup>242</sup>

The dispute shone light on a series of intellectual property ownership and control issues, integral to e-sports.<sup>243</sup> This raises the question of who owns the output of playing the game, for broadcast or other purposes, the game developer and publisher or the player. In addition, is this type of control still within the well-defined limits of intellectual property rights?

Burk argues that the question of ownership of avatars and player performances is largely a moot point, because licence agreements governing the use of virtual environments and video games unequivocally state that all rights are allocated to the provider. In addition, there is simply not enough at stake for individual users to try to challenge such dispositive Terms of Service. Yet the tables may turn when we venture into the world of professional gaming, where players attract attention and revenue from fans, advertisers and sponsors. This is similar to situations where business-savvy users manage to generate sizeable revenues from virtual property portfolios. They equally invest in their avatars and business operations in the virtual environment.<sup>244</sup> Then the costs of clarifying their rights and ownership become justifiable.

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<sup>241</sup> T.L. Taylor *Raising The Stakes: E-sports And the Professionalization of Computer Gaming* (Halftones 2012).

<sup>242</sup> 'Blizzard and KeSPA Settle Over SC Broadcasting Rights' (*Complexity Gaming*, 9 May 2011) <<http://www.complexitygaming.com/articles/news/No%20Category/2724/blizzard-and-kespa-settle-over-sc-broadcasting-rights>> accessed 12 October 2015.

<sup>243</sup> Ibid.

<sup>244</sup> Robert D. Hof, 'Second's Life First Millionaire' (*Business Week*, 26 November 2006) <[http://www.businessweek.com/the\\_thread/techbeat/archives/2006/11/second\\_lifes\\_fi.html](http://www.businessweek.com/the_thread/techbeat/archives/2006/11/second_lifes_fi.html)> accessed 13 September 2012.

Putting to one side the potentially prohibitive costs of such an action, a much more fundamental argument that challenges the allocation of rights rests in the fact that contracts cannot always provide satisfactory answers to the question of the title of ownership.<sup>245</sup> As Professor Ochoa points out, contracts may fail for a variety of reasons.<sup>246</sup> They may be unconscionable or void as against public policy. They may be incomplete, failing to specify the disposition of all of the relevant rights, or of all of the relevant rights under unforeseen future circumstances. As for a more fundamental matter, one cannot begin to assess whether a contract has successfully conveyed rights without knowing the nature of the rights purportedly conveyed.<sup>247</sup> When the licence agreements cannot provide an unambiguous answer, Burk turns his attention to copyright. By extending and applying the principles of creativity and originality, he argues that the outputs of players' activity,<sup>248</sup> whether that is the performance, avatars or other types of user-generated content, can qualify for copyright protection.

Copyright protection may be available to users provided they meet all the necessary legal requirements. Within the EU, the subsistence of copyright requires three things: the existence of a protectable subject matter, sufficient connection to the territory and satisfaction of any applicable formalities. The British approach requires a 'work' to fall within one of the categories

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<sup>245</sup> The analysis highlights the fundamental difference between contract and property legal interests – rights *in rem* and rights *in personam*. *In rem* rights are proprietary in nature. They relate to the ownership of things and not to any personal relationship. This set of rights is to be recognised and respected by everyone. Rights *in personam*, in contrast, refer to individual or personal obligations binding for the parties of a contract and not the world at large. Property rights can arise from law or contractual obligations and so it may appear that rights arising from contract are very similar to *rights in rem*. The main distinction will be in their enforceability – contractual rights can be enforced only against the party to the contract. F.H. Lawson and Bernard Rudden, *The Law of Property* (3rd edn, Clarendon Law Series 2002) 20-21.

<sup>246</sup> Tyler T. Ochoa, 'Who Owns an Avatar? Copyright, Creativity, and Virtual Worlds' (2012) 14 VAND. J. ENT. & TECH. L. 959, 991.

<sup>247</sup> *Ibid.*

<sup>248</sup> In controlling the game play, the player makes a large number of selections including which maps to traverse, what avatar movements to enact, what objects to interact with or acquire, what non-player characters (NPCs) to engage, and what comments to address to other players. We will find combinations of game elements that neither the game designers nor anyone else could have anticipated; indeed, some player activity will be in direct contradiction to what the designers intended.



of protected subject matter<sup>249</sup> and, perhaps most importantly, it has to original.<sup>250</sup> The traditional requirements under UK law have simply been that the work must originate from the author (that is, it must not be copied) and that a certain amount of labour, skill or judgement must have been expended in the creation of a work.<sup>251</sup> As a result, copyright protection has been granted to compilations, mundane collections such as trade directories, indexes of information, or betting coupons in the past.

Subsistence of copyright has been subject to the process of harmonisation by a combination of international and EU instruments and associated case law. For instance, the Database Directive<sup>252</sup> and the Computer Programs Directive<sup>253</sup> require that a computer program or database is protected by copyright only if they are original in the sense that they the ‘author’s own intellectual creation’.<sup>254</sup> This originality standard was subsequently applied to all works of authorship in *Football Dataco*<sup>255</sup> and *Infopaq*.<sup>256</sup> The Court of Justice ruled that the term ‘work’ was to be construed in a manner that promoted EU harmonisation and aligned European copyright law with the Berne Convention as far as possible. As a result, *Infopaq* signalled that an eleven-word headline might qualify for copyright for the purposes of infringement if it was “original in the sense that it is the author’s own intellectual creation.”<sup>257</sup> The Court confirmed that the notion of originality is to apply to matters of subsistence as well. In cases of *BSA*<sup>258</sup> and *FAPL*,<sup>259</sup> it was indicated that, where the expression of the components of a graphical user

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<sup>249</sup> CDPA 1988, section 1 provides a detailed and exhaustive list of the types of creations protected by copyright law: literary works, dramatic works, musical works, artistic works, films, sounds recordings, broadcasts and published editions (or typographical works).

<sup>250</sup> The originality requirement applies only to authorial works – literary, dramatic, musical and artistic works. However, the CDPA 1988 is silent on the matter of originality and so the answer must be found in relevant case law.

<sup>251</sup> *Walter v Lane* [1900] A.C. 539; *University of London Press v University Tutorial Press* [1916]; *Ladbroke v William Hill* [1964] 1.W.L.R.273.

<sup>252</sup> The Database Directive 1996/9/EC.

<sup>253</sup> The Computer Programs Directive 2009/24/EC.

<sup>254</sup> Software Dir., Art 1(3); Database Dir., Art 3(1).

<sup>255</sup> *Football Dataco Ltd and others v Stan James (Abingdon).Ltd*, ECJ.C-604/10.

<sup>256</sup> *Infopaq v Danske Dagblades Forening* ECJ.C-5/08.

<sup>257</sup> *Ibid.*

<sup>258</sup> *Bezpečnostní softwarová asociace (BSA) v Ministerstvo kultury* C-393/09.

<sup>259</sup> *Football Association Premier League (FALP) v QC Leisure; Murphy v Media Protection Services*, Joined Cases C-403/08 and C-429/08.

interface (GUI) were dictated by technical function, there was no possibility of intellectual creation (and therefore no copyright), because the methods of implementing a technical idea were so limited that the idea and expression cannot be separated.<sup>260</sup> While the European and British standards may be different, they will in most cases lead to very similar results.<sup>261</sup>

In the US, the Copyright Act of 1976 stipulates that “[c]opyright protection subsists... in original works of authorship fixed in any tangible medium of expression.”<sup>262</sup> In other words, copyright law provides an automatic protection to ‘original works of authorship’ as long as they are fixed and creative.<sup>263</sup>

The argument for granting copyright protection to users’ creations stems from the recognition of users’ creativity, effort and investment, which translate into an original work of authorship. However, it will depend on the type of the environment, the rules of the game, the role of the provider and the nature of the creation, amongst other factors, whether it can meet the legal requirements for protection.

There are those who would argue that amateur creative expressions, such as e-sport performances, live streaming, fan creations or mods, do not meet the legal requirements to qualify for copyright protection and are thus infringing. Professor Wu claims that these transformative uses fall into a giant ‘grey zone’ in copyright. In particular, they may infringe the exclusive rights of reproduction, display, making derivative works, or public performance. At the same time, actual cases reaching the courtroom are quite rare and if they do get to this stage, they are often settled out of court. In these situations, providers adopt so-called ‘tolerated use’ policy. Tolerated use is “infringing usage of a copyrighted work of which the copyright owner may be aware, yet does nothing about. There may be a variety of reasons for tolerating use. Reasons can include simple laziness or enforcement costs, a desire to create goodwill, or a

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<sup>260</sup> BSA (n 257).

<sup>261</sup> Eleonora Rosati, *Originality in EU Copyright: Full Harmonisation Through Case Law* (Edward Elgar 2013).

<sup>262</sup> 17 U.S.C. § 102(a).

<sup>263</sup> *Feist Publications, Inc. v. Rural Tel. Servo Co.*, 499 U.S. 345.

calculation that the infringement creates an economic complement the copyrighted work – it actually benefits the owner.”<sup>264</sup>

Users keep finding new ways to use and enjoy virtual environments that challenge the allocation of rights. They become important actors in negotiations over property and control issues in respect of valuable assets. At the same time, providers want to extend and maintain control well beyond the scope of intellectual property law using licence agreements, which may not necessarily address these issues. The e-sport phenomenon reveals the potential weakness of licence agreements, which opens the debate on alternative means of governance. The link between e-sports and virtual property lies in the fact that there is something valuable that users want to control and if licence agreements do not provide for this, the question is how can we balance the stakes between the various right-holders? The next section explores the nature of objects that are at the centre of this debate and sets out whether they can be subject to ownership.

### 3.5 Virtual Assets

Virtual assets are intangible things that are either part of the environment or created by users from available resources and materials. These assets are durable, transferable and of an independent value. This is a direct consequence of the existence of virtual economies – every environment has its own currency, marketplaces and currency exchange, meaning that most virtual items have a real world monetary value. In addition, users exercise a certain degree of control over their virtual goods and land; insofar they can transfer them to another or exclude others from using them.

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<sup>264</sup> Tim Wu, ‘Tolerated Use’ (2008) Columbia Law and Economics Working Paper No. 333 <[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1132247](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1132247)> accessed 27 November 2016.

Fairfield defines virtual assets in a very broad and inclusive way. In his account, there exist a kind of computer “code designed to act more like land or chattel than ideas.”<sup>265</sup> Often, this kind of code makes up the structural components of the Internet itself. Domain names, URLs (uniform resource locators), websites, email accounts, and entire virtual worlds are all examples of this type of code. They are rivalrous. If one person owns and controls them, others do not. They are persistent. Unlike the software running on your computer, they do not go away when you turn your computer off. In addition, they are interconnected. Other people can interact with them. This kind of code he calls ‘virtual property’. He defines virtual property as rivalrous, persistent, and interconnected code that mimics real world characteristics.<sup>266</sup>

The legal effect of bits is turning rivalrous goods into non-rivalrous goods. Rivalrousness of goods means that consumption of these goods by one consumer prevents consumption of the same thing by another simultaneously. Tangible things are rivalrous – for example, two people rarely read the same book at the same time, as its physical form does not accommodate sharing. Certainly, two people do not wear the same item of (fashionable) clothing at the same time. On the contrary, multiple consumers can consume non-rivalrous goods at the same time – for example, people frequently watch DVDs together. Such goods fall into the category of intangible things. These examples illustrate the fuzziness of the boundary – a parent can read a book to a child, and a couple may watch their DVDs separately. Equally, while it is possible to photocopy an entire book, the duplication and distribution of a DVD is far simpler and more economical. While a suit or a dress is clearly rivalrous, a ‘knock-off’ copy is easy to manufacture. These examples demonstrate that non-rivalrous goods have something in common; they are all informational goods.<sup>267</sup>

The shift from rivalrousness to non-rivalrousness poses a fundamental challenge for the legal system. Traditional legal values reflect the distinction between tangible and intangible things. For example, property law examines how valuable resources ought to be used. It is predicated

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<sup>265</sup> Fairfield (n 37).

<sup>266</sup> Ibid.

<sup>267</sup> Murray (n 16).

on an environment where valuable goods are scarce and either tangible and rivalrous or where intangible goods (as protected by intellectual property law) are fixed to some form of tangible carrier: book, canvas, certificate, etc. In Cyberspace, much code acts as a non-rivalrous resource. Counter-intuitively, perhaps, virtual assets are often rivalrous – a game player will have exclusive use of a sword linked to their account, for example, and, once sold on to another user, they will no longer be able to use it.

There are other characteristics drawn from the physical world that are incorporated into code as well. Objects and places in the physical world are persistent. For example, a statue needs to be sculpted only once. After that, it remains in the city square for hundreds of years. Similarly, code is persistent – that is, it does not fade after each use, and it does not run on one single computer. For example, the user's account and his character is accessible from a laptop, a desktop, or the local library. When the user turns his laptop off, the information in that account does not cease to exist. It persists on the servers of virtual environment.

Objects in the real world are also naturally interconnected. Two people in the same room experience exactly the same objects. Objects in the real world can affect each other, by the laws of physics. Similarly, code is interconnected, so that although one person may control it, others may experience it. The value of a powerful virtual sword is not solely that the owner can control it; the value is that other people can connect to it and experience it, with the owner's permission. However, this definition is rather broad and open-ended. It is therefore necessary to look for further qualifications that will be instrumental in determining, which resources will fall within the category of virtual assets.

There are different types of resources in virtual environments that fall into the following categories: avatars, virtual items, virtual land and virtual currency. The next section will address each category in turn in order to determine whether they can be treated as *virtual property* for the purposes of this work.

### 3.5.1 Avatars

When a user first joins a virtual environment, a video game or social network, they will have limited ability to communicate. It is necessary to create an online representation of themselves – an avatar or character by choosing a name, character, appearance, skills and other attributes. Similar to a celebrity, who creates a persona for the mass media and public, users create their virtual identities, dependent on and yet separate from their real-world identity. The social standing of the online persona has a powerful effect on the entertainment value of the environment. The result of this effort and investment, which can take hundreds of hours, is ‘avatar capital’: an enhancement of the avatar’s capabilities through engagement and personal development.

Some commentators have explored the relationship between users and their avatars and we can see that there are a few available approaches. One approach rests on considering copyright and authorship.<sup>268</sup> Providers have asserted property rights over the avatars and other game output created by users based on the argument that these are mere combinations of the choices presented by the developers. The issue is that current copyright law does not yet recognise a category for ‘amateur creative expressions’<sup>269</sup> and it is thus unclear what precisely the legal implications of such transformative uses are.

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<sup>268</sup> For a general discussion see, for example, Dan L. Burk, ‘Electronic Gaming and the Ethics of Information Ownership’ (2005) 4 Int’l R Info Ethics 39 (copyright considerations that might go into determining ownership of player avatars); Dan L. Burk, ‘Copyright and Paratext in On-Line Gaming’ in Charles Wankel, Sean Malleck (eds) *Emerging Ethical Issues of Life in Virtual Worlds* (Publisher, 2010) 33 (copyright aspects of gaming performances in a broader sense); W. Joss Nichols, ‘Painting Through Pixels: The Case for a Copyright in Videogame Play’ (2007) 30 Colum JL & Arts 101, 117; Tyler T. Ochoa, ‘Who Owns an Avatar? Copyright, Creativity, and Virtual Worlds’ (2012) 14 Vand J Ent & Tech L 959, 991; see also Erez Reuveni, ‘On Virtual Worlds: Copyright and Contract Law at the Dawn of the Virtual Age’ (2007) 82 Ind LJ 261, 271-75 (discussing works of authorship generated within the context of virtual worlds).

<sup>269</sup> A term used to refer to amateur works, in contrast to professional content. These amateur expressions existed prior to the advent of YouTube and other similar platforms. This is true for interviews, correspondence, fan clubs, radio talk shows and other ways of including non-professional content. However, new technologies enabled podcasting, blogging and online video output available for a global audience.

However, Burk argues that while providers hold copyright in the individual elements of the environment, “[t]he number of combinations is sufficiently large, and the number of possible play outcomes sufficiently diverse, that it seems likely that players have added original expression to develop the audio-visual output of the games.”<sup>270</sup> Therefore, “[g]iven the contribution of the players to the game output, and assuming that the players are authorized to engage with the game’s copyrighted material, the end product seems likely to be an adaption or derivative work, although the fit of this doctrine to the interaction of player and game remains problematic.”<sup>271</sup>

The issue about granting copyright protection to users’ creations, that are likely to arise from the transformative use of interactive digital products like virtual environments, is that some of the necessary elements required by the law may be absent (for example, originality). Ochoa proposes, “that each avatar should itself be considered a joint work between the game provider and the user, and that each avatar should also be considered a contribution to a collective work (the game as a whole). This particular solution strikes the best balance between game provider and player interests.”<sup>272</sup>

Another possible approach is to perceive avatars as an extension of the user’s own personality and identity. The term identity, in a broad sense, refers to “anything by which a certain human being can be identified. This covers everything: personal names, nicknames, stage and pen names, pictures, and persona in a role or characterisation. It can also include physical objects, which identify a person.”<sup>273</sup> Similar to celebrities building (and protecting) their public image, users invest in creating an online character that represents them in the virtual community. Based on the presumption of unity between the user and their avatar’s identity and

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<sup>270</sup> Dan L. Burk ‘Authorization and Governance in Virtual Worlds’ (2010) 5(15) First Monday  
<<http://firstmonday.org/ojs/index.php/fm/article/view/2967/2527>> accessed 24 November 2015.

<sup>271</sup> Ibid.

<sup>272</sup> Ochoa (n 245).

<sup>273</sup> Thomas J. McCarthy, ‘Public Personas and Private Property: The Commercialization of Human Identity’, (1989) 79 TMR 685.

reputation, users can control the use and exploitation of their character by means of trademarks<sup>274</sup> or publicity rights.

In the US, the right of publicity prevents the unauthorized commercial use of an individual's name, likeness, or other recognizable aspects of one's persona. It gives an individual the exclusive right to license the use of their identity for commercial promotion. In a controversial case, Lindsay Lohan sued Rockstar Games, the provider of Grand Theft Auto V, for allegedly using her likeness to create the character of Lacey Jonas. The court ruled that the lawsuit was without merit.<sup>275</sup> Elsewhere, the former dictator of Panama, Manuel Noriega, filed a lawsuit against video game publisher Activision for depicting him as a 'kidnapper, murderer and enemy of the state' in Call of Duty: Black Ops II, which has sold more than 24 million copies worldwide. The court dismissed the lawsuit on grounds that the dictator's likeness was sufficiently 'transformative'.<sup>276</sup> By contrast, in the UK, there is no specific right to a person's own image or likeness in any statute. Neither has such principle arisen from the case law. However, the English law does provide avenues to use other intellectual property rights to aid in the protection of an image.<sup>277</sup>

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<sup>274</sup> In *Marvel Enterprises Inc and Marvel Characters Inc. v NCSoft Corp, NC Interactive, Inc. and Cryptic Studios, Inc.*, No. CV 04-9253-RGK (PLAx) 8–12 (C.D. Ca. Jan 25, 2005), Marvel alleged that NCsoft and Cryptic infringed, amongst other rights, their registered trademark, 'Captain America', by using the character 'Statesman' in the virtual environment City of Heroes. The full text of the claim can be found here, for example, Britton Payne 'Super-Grokster: Untangling Secondary Liability, Comic Book Heroes and the DMCA, and a Filtering Solution for Infringing Digital Creations' (2006) <[http://www.brittonpayne.com/Marvel/MarvelvNCsoft\\_Appx.pdf](http://www.brittonpayne.com/Marvel/MarvelvNCsoft_Appx.pdf)> accessed 24 November 2015.

<sup>275</sup> In particular, the court stated that the "video game's unique story, characters, dialogue, and environment, combined with the player's ability to choose how to proceed in the game, render it a work of fiction and satire." Kat Hall, 'Lindsay Lohan's Grand Theft Auto V cartoon case kicked out of court' (*The Register*, September 2016) <[http://www.theregister.co.uk/2016/09/02/lohan\\_case\\_against\\_rockstar\\_games\\_thrown\\_out/](http://www.theregister.co.uk/2016/09/02/lohan_case_against_rockstar_games_thrown_out/)> accessed 1 November 2016.

<sup>276</sup> Reports of the lawsuit can be found here, for example, Keith Stuart, 'Manuel Noriega sues Activision over Call of Duty video game character' (*The Guardian*, July 2014) <<https://www.theguardian.com/technology/2014/jul/16/manuel-noriega-sues-activision-over-character-in-call-of-duty-video-game>> accessed 1 November 2016.

<sup>277</sup> In the United Kingdom, the courts have not found these types of characters to be for copyright protection. See e.g., *King Features Syndicate Inc v O&M Kleeman Ltd.*, [1941] A.C. 417, [1941] 2 All E.R. 403 regarding the character of Popeye.



Taking this theme of identity and personality even further, authors like Raph Koster, claim that avatars are independent entities. With that in mind, Koster created a *Declaration of the Rights of Avatars*<sup>278</sup> covering some basic issues of virtual existence. He argues that rights, and the subsequent legal protection of such rights, are not ‘granted’, but arise from within the community. He uses the analogy of the French revolution. He proclaims that, “among these rights is the right to be treated as people and not as disembodied, meaningless, soulless puppets. Inherent in this right are therefore the natural and inalienable rights of man. These rights are liberty, property, security, and resistance to oppression.”<sup>279</sup>

While avatars theoretically meet all the qualities of things – that is being durable, separable and transferable – the main issue is that avatars are an inherent part of users’ individual accounts. At present, the rules do not allow users to transfer accounts and account details from one to another or between different virtual environments. However, characters on a high level or in possession of a valuable virtual item are a very popular commodity at unofficial auctions outside the environment. World of Warcraft issued a statement condemning such practices, mainly because high power-levelled characters come from hacked accounts.<sup>280</sup> As a result, avatars are not included in the category of virtual assets for the purposes of this work.

### 3.5.2 Virtual Items

Virtual items are ‘things’ available for purchase to users in the virtual environment. From vanity items, such as costumes, jewellery, pets, and non-essential accessories to building materials, tools, or weapons, most of them have their counterparts in the physical world. The first end of spectrum represents items that are “fluffy, extraneous, and unnecessary.”<sup>281</sup> They are not compulsory, nor do they affect a user's progress in the environment. However, they can

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<sup>278</sup> Raph Koster, ‘Declaration of Rights of Avatars’ <<http://www.raphkoster.com/gaming/playerrights.shtml>> accessed 5 September 2012.

<sup>279</sup> Ibid.

<sup>280</sup> ‘Gold Selling: Effect and Consequences’, World of Warcraft <<http://www.wow-europe.com/en/info/faq/antigoldselling.html>> accessed 1 November 2010.

<sup>281</sup> ‘Redefining MMOs: The Massive Money of Micro-transactions’ (*Massively*, 11 September 2009) <<http://www.massively.com/2009/09/11/redefining-mmos-the-massive-money-of-microtransactions/>> accessed 16 October 2010.

contribute to the overall experience and personal visual gratification. Status symbols, like designer clothing or virtual gifts, are one example.

At the other end of the spectrum, we will find items that are vital for advancement in the environment, whether this is to achieve a higher level or access new areas. Some environments require users to purchase these items in order to progress to further levels. In others, the user is able to work away and acquire items similar to the ones available in the virtual marketplaces. This approach is typical for game-based virtual environments, like World of Warcraft. Social platforms and unstructured virtual environments, such as Second Life, are often free, but without investing into virtual items and land makes the experience very limited.

In September 2008, Facebook was making around \$35m in digital goods sales annually. The social network for example features the function of highlighting upcoming friends' birthdays on the home page, prompting gifts on birthdays and allowing users to buy gifts in advance. As birthday gifting is the most common use in the case of Facebook digital goods, these changes increase users' opportunity to buy virtual goods.<sup>282</sup> In terms of the most popular digital goods in general, they are gift cards, e-books, photography, software and apps, graphics and clipart, lectures and tutorials.<sup>283</sup>

The growing size and importance of digital goods market has highlighted the absence of a comprehensive legal framework addressing the treatment of digital goods. In 2011, a large-scale survey on 'Digital Content Services for Consumers', undertaken on behalf of the European Commission, examined "the specific problems consumers experience when purchasing digital content products. Lack of information and unclear/complex information were identified as the main issue, together with access problems. Further, but to a lesser extent, the study identified

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<sup>282</sup> Mark Chacksfield 'Facebook announces end of virtual gifts' (*Techradar*, 2010) <<http://www.techradar.com/news/internet/facebook-announces-end-of-virtual-gifts-702002>> accessed 22 November 2015.

<sup>283</sup> Daniel Threlfall 'The Five Best-Selling Digital Items on the Internet' (*Blog Selffy*, 1 November 2013) <<http://blog.sellfy.com/the-five-best-selling-digital-items-on-the-internet/>> accessed 12 October 2015.

problems resulting from unfair contract terms.”<sup>284</sup> The motivation behind the study is to understand the market with digital goods, the issues and concerns of consumers and providers, and to establish the existing legal framework. Despite a number of EU-wide legislative initiatives focusing on the treatment of digital assets, there is a distinct lack of a holistic approach. This has created a lacuna, which is likely to undermine the creation of a fully functioning Digital Single Market.<sup>285</sup>

Unlike avatars, virtual items possess the qualities of things – they are durable, separable and transferable.

### 3.5.3 Virtual Land

As mentioned earlier, Second Life has highly developed and structured real estate markets. Virtual land amounts to disk space that users can use for their activities. As one of the representatives of Linden Lab stated, “[h]ow we resell our computing resources is using the proxy of virtual real estate. We sell land. So if you want more of our CPU horsepower, you need to buy more land.”<sup>286</sup> Land is, as in the real world, a limited commodity. For example, Linden Lab releases new plots of Mainland at their discretion and distributes them through an auction to dealers, who subdivide it and sell it on to other users. In contrast, Estate land follows users’

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<sup>284</sup> “The use of digital content products has become an important part of the daily life of the modern European consumer and the market is still growing. However, with the new development, consumers also face new problems and the complaints of consumers that have trouble when buying or using digital content products is increasing. Until recently, digital content products were not explicitly mentioned in EU-Directives or other EU legislation and no specific consumer protection rules pertaining to digital content services existed. In October 2011, the European Commission proposed an optional Common European Sales Law (CESL). In November 2011, the Consumer Rights Directive (CRD) was adopted. Both deal explicitly with contracts on digital content products. However, to protect the consumer and to meet consumer needs, it may be necessary in the future to develop further regulation on digital content products delivered online.” See also the UK Consumer Rights Act 2014, which introduced a separate category of ‘digital content’ – similar obligations pertain to this category as to goods. Uta Stenzel, Maria Goretti, Sanches Lima, John J. Downes and Berit Wader, ‘Study on Digital Content Products in the EU’ N° 17.020200/12/629623 <[http://ec.europa.eu/consumers/enforcement/sweep/digital\\_content/docs/dcs\\_complementary\\_study\\_en.pdf](http://ec.europa.eu/consumers/enforcement/sweep/digital_content/docs/dcs_complementary_study_en.pdf)> accessed 15 November 2015.

<sup>285</sup> Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, COM (2015) 192 final (6 May 2015).

<sup>286</sup> Cory Ondrejka and Jim Purbrick, ‘User Creation and Scripting in Second Life’, <<http://download.microsoft.com/download/9/4/1/94138e2a-d9dc-435a-9240-bcd985bf5bd7/Jim-Cory-SecondLife.wmv>> accessed 7 October 2010.

demand after they pay the start-up fee.<sup>287</sup> Clause 6 of Second Life’s TOS defines virtual land as “the graphical representation” of the world space. Users purchase a license, which allows them a limited “access and use of certain features of the Service associated with Virtual Land stored on [Linden Lab’s] Servers.”<sup>288</sup>

Effectively, virtual land is a unit of the server’s space and the size and quantity of these units determines how many objects users may allocate within a particular area of virtual land. However, other resources of the region server, such as CPU<sup>289</sup> time and network bandwidth, are not budgeted in this way, creating problematic situations. A typical example is that a user may buy a large area of land and use it for development, only to have someone else buy a smaller area in the same region and use it to build a public venue such as a nightclub. By attracting a large number of other users, the popular area consumes all of the region’s servers’ CPU time and network connections. As a result, the large landowner experiences a greatly reduced performance on their land or inability to access it at all. The club takes up all the available connections to the region. To prevent or mitigate this effect, Linden Lab introduced the concept of *covenants* in 2007. A covenant allows an estate owner to specify additional rules and standards that a buyer must adhere to beyond those covered by the Second Life TOS. Most covenants allow the estate owner to repossess the land without compensation in the event that the buyer breaches the land ownership terms – giving estate owners some ability to enforce local zoning restrictions.<sup>290</sup> A covenant is a type of contract, where one party promises to another to either act or not act in a certain way. Such a legal instrument indicates one possible way users are able to secure at some enforceable rights in respect of use and control of their virtual assets, in particular, land.

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<sup>287</sup> ‘Buy Land: Frequently Asked Questions’ Second Life <<http://secondlife.com/land/faq/>> accessed 19 October 2010.

<sup>288</sup> ‘Terms of Service’ Clause 6, Second Life <<http://secondlife.com/corporate/tos.php#tos6>> accessed 3 November 2010.

<sup>289</sup> CPU means central processing unit. It is the most important element of a computer system, where all of the calculations take place.

<sup>290</sup> ‘Covenants’ Second Life <<http://wiki.secondlife.com/wiki/Covenants>> accessed 3 November 2010; Glenn Setzer, ‘Second Life Businesses Can Rake In Some Surprising Profits and Participants’ <[http://www.mortgagenewsdaily.com/5162007\\_Second\\_Life\\_Real\\_Estate.asp](http://www.mortgagenewsdaily.com/5162007_Second_Life_Real_Estate.asp)> accessed 3 November 2010.

Each virtual environment operates a different model when it comes to virtual land and real estate. World of Warcraft does not allow users to acquire virtual land. Facebook applications such as Farmville and Restaurant City provide users with real estate, which they have the opportunity to manage effectively, thereby promoting their interests in the game. Users have to purchase virtual goods and services in order to improve their performance. Ultima Online combines privately owned land with planes inhabited only by dragons and monsters. There.com users had to rent houses and zones on a monthly basis.<sup>291</sup> In the town of Blazing Falls, a user can either purchase a piece of virtual land together with building material and build his own virtual residence, or contact real estate agents operating in the virtual environment and purchase a virtual residence from them. Virtual estate, furniture, accessories and other equipment usually require repair and maintenance, which gave rise to a wide range of services specifically tailored for homeowners. Users are encouraged to receive as many visitors as possible and in return they collect rewards from the central government for these services. The financial incentives reflect the number of visitors and the length of their stay. Further evidence that providers promote virtual economies based on the notions of property and ownership, without actually reflecting the social and economic practice in the licence agreements.

Virtual land also exhibits the qualities of things and as such can be subject to ownership.

### 3.5.4 Virtual Currency

Each environment has its own currency – Linden Dollars in Second Life, gold in World of Warcraft, Facebook Credits on Facebook - although these are changing, and each has a unique internal policy regulating the distribution and convertibility of the currency. Virtual economies

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<sup>291</sup> There.com shut down on 9 March 2010. The company's representative, Michael Wilson, has claimed that because of recession, the membership continued to grow, but revenue has decreased. The company said any purchases of its virtual currency, Therebucks, after February the 1st will be refunded in full. Dean Takahashi, 'Virtual world There.com shutting down March 9' (*Venture Beat*, 3 March 2010) <<http://venturebeat.com/2010/03/03/virtual-world-there-com-shutting-down-march-9/>> accessed 19 October 2010.

have resulted in interactions with real world economies. Virtual assets, including virtual currencies and accounts, are available for sale on online auctions for real currency.

Money can be anything accepted as payment for goods and services and repayment of debts in a given socio-economic context.<sup>292</sup> It acts as a unit of account, a store of value, and a medium of exchange. Most of modern money systems originates from fiat money – a term referring to type of money that has no intrinsic value as a physical commodity. The value of money originates from the declaration that it is ‘legal tender’, and the trust placed in that declaration by a given community. Legal tender serves as an accepted form of payment and functions as a valid mechanism of offering a consideration.<sup>293</sup>

For example, World of Warcraft exemplifies the type of environment that prohibits such interactions. To “buy or sell for real money or exchange gold, weapons, armour, or any other virtual items that may be used in World of Warcraft outside the World of Warcraft platform” is considered a serious violation of Terms of Use of World of Warcraft.<sup>294</sup> Blizzard, the company operating this environment, believes that the direct exchange of virtual assets for real money negatively affects the game economy. Nevertheless, this has not stopped the company from participating in growing revenues from virtual good sales in 2009 and 2010<sup>295</sup> and launching virtual pets – the first in-game items sold for real-world money. Users purchase these items from the Blizzard Store.<sup>296</sup> They acquire virtual currency and virtual goods by playing the game. By killing monsters, exploring new destinations, and completing quests users gain experience and advance in levels. They can collect items and gold on their journey through the

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<sup>292</sup> Frederic S. Mishkin, *The Economics of Money, Banking, and Financial Markets* (Boston: Addison Wesley 2007) 8.

<sup>293</sup> *Ibid.*

<sup>294</sup> ‘Terms of Use’, World of Warcraft, Section III Article 3 paragraph 5, <<http://www.wow-europe.com/en/legal/termsofuse.html> accessed> 1 November 2010.

<sup>295</sup> For further information see, for example, ‘Sales of Virtual Goods Boom in US’ (*BBC*, 22 October 2009) <<http://news.bbc.co.uk/1/hi/technology/8320184.stm>> accessed 5 April 2010; ‘Virtual Real Estate Draws Real Dollars’ (*US Today*, 3 June 2004) <[http://www.usatoday.com/tech/webguide/internetlife/2004-06-03-virtual-realty\\_x.htm](http://www.usatoday.com/tech/webguide/internetlife/2004-06-03-virtual-realty_x.htm)> accessed 5 April 2010; Douglas MacMillan, ‘Zynga and Facebook: It’s Complicated’, (*Businessweek*, 22 April 2010) <[http://www.businessweek.com/magazine/content/10\\_18/b4176047938855.htm](http://www.businessweek.com/magazine/content/10_18/b4176047938855.htm)> accessed 1 November 2010.

<sup>296</sup> ‘Blizzard Store’ <<http://us.blizzard.com/store/browse.xml?f=c:5,c:33>> accessed 1 November 2010.

environment. Many of the rewards received are bound to their character, which prevents the, from being traded. Given the nature of the challenges that users have to face, a semi-formal type of currency has developed, so called Dragon Kill Points. This is a score-keeping system used by guilds in the role-playing game World of Warcraft. Users have to associate with guilds if they want to overcome some large-scale challenges or raids. These cannot be surmounted individually and require a high level of interaction, possibly involving dozens of players at a time. DKPs emerged from the guild community as a mechanism for the distribution of rewards gained in the raids.<sup>297</sup>

In contrast, Linden Lab's liberal approach allows users to acquire Linden Dollars for real money. Linden Lab also facilitates a marketplace for the reverse operation – the exchange of Linden Dollars back to real world currency – but without guarantees. The Terms of Service of Linden Lab explicitly state that the Linden dollar “is a virtual token... [and is] not redeemable for monetary value.”<sup>298</sup>

Facebook followed a completely different path. As a social networking platform, it did not initially incorporate virtual economy. However, the popularity of social gaming together with the proliferation of smart phones appeared to have enormous potential for platforms like Facebook. Over recent years, applications such as virtual gifts, Farmville, Mafia Wars and Restaurant City have attracted millions of users who manage their own farm or cafe. Users purchase credits for each game in exchange for real money, which allow them to buy gasoline to run a tractor, stock up a restaurant or give virtual gifts. After virtual birthday cakes and pints of beer, Facebook introduced a single currency called Facebook Credits provided exclusively by Facebook and applicable to all applications and games associated with the platform.<sup>299</sup>

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<sup>297</sup> Edward Castronova, Joshua Fairfield, 'Dragon Kill Points: A Summary White Paper' (2007) <<http://ssrn.com/abstract=958945>> accessed 20 August 2011.

<sup>298</sup> 'Terms of Use', Second Life <<http://secondlife.com/corporate/tos.php>> accessed 1 November 2010.

<sup>299</sup> MacMillan (n 294).

Virtual currency is probably one of the most researched and documented elements in virtual economies and environments.<sup>300</sup> It is beyond the scope of this work to examine the implications for public regulation of currency, taxation and so on. However, the author will focus on the property attributes of virtual currency, which make it an important mechanism in the virtual marketplace. Virtual currency is relevant to this work inasmuch as it is a means of payment and exchange. The issuing and regulation of virtual currency, online gambling policies or money laundering regulation do not feature in the analysis. The focus of the research is on virtual items and virtual land, because they meet the necessary qualifications of things and therefore be subject to property law.

### 3.6 Conclusion

In order to engage in games, sports and even leisure activities it may be necessary to follow various rules, standards or customs. These can exist independently or they can derive from official bodies such as clubs, associations or other governing bodies. Their tasks is to monitor, implement and enforce policies or regulations applicable in specific circumstances. Nevertheless, there will be a set of interactions within the game or sport that will be protected from the intervention of real-world regulations, the so-called 'magic circle'. And in specific circumstances, when activities carried out in course of playing a game or competing in a sport discipline will have a harmful or anti-social impact in the outside the game, these activities will be subject to real-world laws. Situation such as doping, cheating, money laundering or aggressive behaviour have been identified as some of possible examples.

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<sup>300</sup> For a further reading on virtual currency and related issues: Hiroshi Yamaguchi, 'An Analysis of Virtual Currencies in Online Games' (2004) <<http://ssrn.com/abstract=544422>> accessed 1 November 2010; Brian Mennecke, William D. Terando, Diane J. Janvrin and William N. Dilla, 'It's Just a Game, or is It? Real Money, Real Income, and Real Taxes in Virtual Worlds' (2007) <<http://ssrn.com/abstract=1022064>> accessed 1 November 2010; for a further reading on virtual economy Castronova (n 271).



Leisure activities, games and sports have also an economic dimension. This also applies to virtual environments that also operate as a platform for facilitating economic transactions, both in and outside of the game. The acquisition and exchange of virtual goods or services in pursuit of such rewards has led to the development of robust virtual economies. Mechanisms exist for the exchange of virtual goods and services through markets, economic principles such as demand and supply, market competition, inflation and taxation are all present in virtual environments. Providers are in a unique position to manipulate the virtual currency, availability, price of virtual assets, and set out any limitations to economic activities.<sup>301</sup>

Exploitation of virtual assets is something that happens extensively, as was shown in the previous sections. The available evidence indicates that both providers and users treat exploitation of virtual property as a valid commercial practice. The majority of virtual environments provide users with the opportunity to exchange real money for virtual currency and use it to purchase a variety of virtual assets. Whether the motivation behind these transactions is purely recreational or there is a real economic benefit in mind, virtual economies have become part of the virtual experience. Providers often have to find balance between encouraging economic transactions and transformative use of virtual environments and curtailing activities are detrimental to the user community or the proprietor's business purposes.

The chapter further developed the account of users' legitimate expectations by examining the nature of valuable resources in virtual environments that are subject to various transactions and interactions. Different categories of virtual assets feature in the analysis. They are durable, separable and transferable. Virtual assets are more like physical property rather than intellectual property, because they are characterised by scarcity of resources. The other distinction is that intellectual property law prescribes who has the exclusive right to make copies of a work (for example, a virtual sword), while the law of property prescribes who is entitled to use a thing and how (the same virtual sword). These two qualifications are not the

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<sup>301</sup> A useful example is the regulation of gambling or money laundering as described in chapter Three, section 3.3.

same. This work demonstrates that there are unjustified distinctions in the treatment of virtual assets compared to the treatments afforded to their physical equivalents.

The next chapter examines the role of providers in the account of legitimate expectations. They are the architects, policy-makers, governing authorities and enforcement bodies. Chapter Four investigates the origins and underlying policies of rules in virtual environments. The analysis focuses on what is and what is not acceptable behaviour when it comes to virtual assets. In addition, it examines the implementation and enforcement of these. Due to the multiple levels of interaction within the environment, there will be a different set of rules and regulatory mechanisms on each level. These expectations are most evident and concrete in the context of disputes. As Murray said, “these games have real-cash economies, and where financial rewards are available the problems of the real world are usually not far behind, leaving these communities liable to fraud, theft, extortion, money laundering, and trading in illegal and immoral items. Also more mundane issues of ownership and title arise.”<sup>302</sup>

Participation in virtual environments generates social conflicts. Examples of unwanted or detrimental behaviour include user-generated content, real-money trading and gold farming. At the centre of all these disputes is the question of ownership. Users are made to believe that they ‘purchase’, ‘sell’ or ‘rent’ virtual assets and by virtue of these transactions acquire legal interests in these assets; a conduct that is in clear contradiction with the terms and conditions. By virtue of encouraging and facilitating these transactions, they implicitly recognise users’ legal interests in virtual assets.

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<sup>302</sup> Murray (n 16) 89.

# Chapter Four: Social Conflict and Governance in Virtual Environments

## 4.1 Introduction

Virtual environments enable economic, social and cultural interactions on number of levels, which brings us to the crucial role of providers and creators of these platforms. They are the architects, policy-makers, governing authorities and enforcement bodies. This chapter investigates, from a broad perspective, the origins and underlying policies of rules in virtual environments. Due to the multiple levels of interaction within the environment, there will be a different set of rules and regulatory mechanisms on each level (rules relating to the game-play, codes of conduct, licence agreements and copyright law, and general legal principles preventing defamation or bullying). Providers make clear representations that users ‘purchase’, ‘sell’ or ‘rent’ virtual assets, a conduct that is in clear contradiction with their own terms and conditions.

The chapter explores different modes of government and it borrows the four categories as identified by Lessig – code, market, social norms and law. Providers perceive it to be in their interest to intervene in the social and economic life of the virtual community. Frequent updates and modifications that result in new content, new items, and new adventures, or in the depreciation or even removal of unbalanced items, maintain the internal economic balance. Providers have the ultimate power to modify the code, remove items, user accounts or shut the whole environment down without warning, explanation or compensation.

For example, World of Warcraft implements a slow inflation in the economy to ensure further investment and engagement of users in the market.<sup>303</sup> Providers have also formulated a wide range of community standards that reflect the individual nature of virtual environments. The Second Life Community Standards stipulate that a user who commits assault may be suspended, or lose access to their account. An assault is, for instance, “shooting, pushing, or shoving another Resident in a Safe Area or creating or using scripted objects, which singularly or persistently target another Resident in a manner which prevents their enjoyment of Second Life.”<sup>304</sup> This is an example of social norms mimicking real world. Ultimately, all virtual environments are governed through the contracts between providers and users – EULAs – that give providers almost unlimited legal powers to be exercised at their discretion (legal rules).

As Murray has correctly noted, these are not, however, one-sided regulatory activities.<sup>305</sup> Users are not completely powerless. Primarily, providers pursue profit and as such, they are liable to market pressures. Secondly, users generate a wide range of feedback, through online forums, complaints and concerns. Deenihan reports on several cases where users’ feedback and market pressures effectively worked as community-based regulatory activities through which users and providers found mutual solutions.<sup>306</sup> Community forums and online

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<sup>303</sup> Kevin Deenihan ‘Leave Those Orcs Alone: Property Rights in Virtual Worlds’ (2008) *Virtually Blind* 28 <[http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1113402](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1113402)> accessed 23 April 2012.

<sup>304</sup> Second Life Community Standards are available here <<http://secondlife.com/corporate/cs.php>> accessed 10 April 2010.

<sup>305</sup> Murray (n 16) 134.

<sup>306</sup> Deenihan (n 302).

blogs give users opportunity to express their opinion and influence providers in making decisions that affect the game experience. Users of World of Warcraft can relocate from one server to another, taking all their virtual possession with them. When a few users noticed a group of avatars with high-level gear never seen before, it transpired they were transferred in violation of the Terms of Use. “The new presence of heavily-gearred and wealthy outsiders upset the social system, economy, and morals of the established players.”<sup>307</sup> Blizzard had to, under a mounting pressure and numerous complaints, apologise and transfer these characters back. Providers can also use the community forum as a source of information. We mentioned the practice of ‘botting’, which is a frequent complaint amongst users. Blizzard implemented a ‘vote’ system to allow users collectively remove users engaging in ‘botting’ from the game.<sup>308</sup>

Conflicts can arise between users and providers and there are a number of possible claims that providers can avail themselves of, ranging from copyright infringement, unauthorised use of computer/trespass of computer, to anti-circumvention laws. Examples of unwanted or detrimental behaviour include user-generated content, real-money trading and gold farming. The most common causes of disputes among users are theft and fraud. At the centre of all these disputes is the question of ownership.

By virtue of encouraging and facilitating these transactions, they implicitly recognise users’ legal interests in virtual assets. The architecture of virtual environments, the existence of virtual economies, the characteristics of virtual assets and the role of providers are all factors that, individually and in conjunction, frame users’ legitimate expectations about acquiring legal interests in virtual assets. The chapter concludes that the doctrine of legitimate expectations is the basis for justifying the protection of users’ expectation about acquiring legal interests in virtual assets.

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<sup>307</sup> Ibid.

<sup>308</sup> See ‘World of Warcraft Bots – Welcome To The Darkside’ <<http://ezinearticles.com/?World-of-Warcraft-Bots---Welcome-To-The-Darkside&id=608074>> accessed 11 December 2014.

## 4.2 Governance in Cyberspace

There have been a number of proposals for regulating the Internet. None of these has received great traction, none the less, with recent legislative activity; the likelihood of regulation of the Internet is coming ever closer. However, these legislative initiatives typically are around security and commercial regulation, and as such have no direct bearing on the substance of this thesis. He argues that, similar to Internet as a disruptive technology, the existing legal structures were flexible enough to be applied. The constructs of contract, privacy, trespass and property were made applicable to most legal issues posed by the information age. We can identify three approaches to regulating Cyberspace – regulation, self-regulation or non-regulation.

Cyber-libertarianism is a school of thought that believed that real world law would or should have no effect in Cyberspace. The arguments were twofold. Firstly, the digital environment had no physical and geographical borders and equally its occupants had no corporeal body. Secondly, Cyberspace was perceived as an independent and sovereign state over which no real-world state had jurisdiction. The lack of legitimacy to exercise control over cyberspace by any one state or government suggested that a self-regulatory system would develop with the consent of Cyberspace citizens.<sup>309</sup>

Cyber-paternalism has developed as a direct critique of cyber-libertarianism. Reidenberg argues that the Internet is, in fact, highly regulated by its architecture. He refers to the sum of laws imposed on network users by technological functionalities and system design choices. In other words, Reidenberg suggests focusing on regulating the Internet by implementing changes to the network architecture, which would consequently control the behaviour of users in Cyberspace.<sup>310</sup>

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<sup>309</sup> Reed, Murray, and Lessig have all refuted the cyber-libertarianism position has been refuted by. See for example, Chris Reed *Internet Law: Text and Materials* (2ed, Cambridge: Cambridge University Press, 2004).

<sup>310</sup> *Ibid.*

Professor Lawrence Lessig has expanded this idea in *Code and Other Laws in Cyberspace*.<sup>311</sup> Lessig identifies four key modalities that regulate human behaviour in any environment: 1) laws, 2) markets, 3) architecture, and 4) norms.

*Law* defines the boundaries between what is permitted and what is not. At the same time, it is not merely the threat of punishment that deters people from acting illegally. Law enforces moral and social norms that are fundamental for an orderly society. Therefore, people do not commit crimes not because the law says so, but because these acts, such as theft or murder, are morally wrong and socially unacceptable in the first place. Then there are acts and activities that are morally neutral, such as driving through a red light or speeding. Reckless driving can be dangerous and harmful and therefore requires regulation. Drivers' behaviour is therefore constrained by the threat of punishment. Licence agreements often refer to a 'code of behaviour' that prescribes what users are and are not permitted to do when interacting with each other.<sup>312</sup>

The *marketplace* can be used to regulate consumers' behaviour through price and price-related signals. Market incentives play an important role in deterring, or provoking, behaviour that may be normatively, technically, and legally undesirable. For instance, anti-smoking government policy will translate into higher prices of tobacco products. Virtual environments are typically structured around a reward paradigm – players amass treasure, gain levels or accumulate points. The exchange of virtual goods or services in the pursuit of such rewards has resulted in nascent robust internal economies, including virtual currencies and stock exchanges. Furthermore, virtual environments are business ventures themselves, generating profits through subscriptions or other mechanisms, linking the game to the larger external economy. These two economies, internal to the game and external to the game, will frequently overlap. Providers may discourage users from engaging in real-money trading or gold farming by

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<sup>311</sup> Lawrence Lessig, *Code version 2.0* (Basic Books 2006).

<sup>312</sup> *Ibid.*

devaluing certain high-demand items by intentionally releasing many such items into the environment.<sup>313</sup>

*Architecture* constrains people by physical boundaries, such as locked doors, fences and alarm systems. Chapter Two described the architecture of virtual environments. It also demonstrated that they resemble the real world. Firstly, users are constrained by an initial budget of skills and attributes when creating an avatar. Any benefits gained through certain characteristics, such as strength or intellectual powers, are compensated for by some disadvantages. In addition, avatars may die and lose some of their powers. Secondly, users are constrained by the physicality of virtual environments. Important resources are limited and can be obtained only by progressing in the game. Thirdly, users have to compete against each other to gain certain social status. Changing the architecture alone does not necessarily result in successfully preventing undesirable behaviour. The provider of Disney virtual worlds, such as Club Penguin or Disney Superbia,<sup>314</sup> introduced a functionality that would stop children from swearing or saying other risky things in the environments. Nevertheless, the players circumvented the measure by greeting each other with comments such as ‘I am sofa king glad to see you.’<sup>315</sup>

Environments built on the principles of sharing and community, without scarcity-related constraints, are equally exposed to real-world issues resulting mainly from resources distribution. For example, the MUD LambdaMOO initially did not recognise the institution of ‘ownership’ or ‘property’ within the environment. Nevertheless, with the increasing number of property related conflicts it soon became an issue for the provider that needed to be addressed. Amongst other reasons, it was necessary to determine who owns and therefore controls the airspace above land occupied by individual users, who owns popular areas and objects that are freely accessible to the public, and what happens to the virtual assets of a

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<sup>313</sup> Ibid.

<sup>314</sup> Club Penguin is a virtual environment where players use cartoon penguin-avatars and play in a winter-set virtual world. Disney Superbia is a free online gaming platform aimed at children and minors.

<sup>315</sup> Deenihan (n 302).



deceased avatar? The institution of property and mechanisms of formal recognition were eventually introduced in order to control the data space available to each user for building and creating objects.<sup>316</sup>

*Social norms*, as mentioned above, control human behaviour by applying social pressure. For example, not allowing an elderly person to sit down or speaking loudly on a phone on a bus can be met with criticism from other passengers. In most virtual environments, activities such as grieving, gold farming or botting<sup>317</sup> will be perceived as socially unacceptable behaviour that negatively influences the gaming community and the overall experience. Users, who engage in such behaviour, may be ostracised and forced to leave the virtual realm. Reputation and social standing is an importance currency when it comes to virtual environments.

The providers determine the architecture and economic dimension of virtual environments, they have introduced virtual assets that have property-like characteristics and they act as governing and regulating bodies in relation to acquisition and transfer of virtual assets.

### 4.3 Rules and (Un)Fair Play

This section is dedicated to the varying nature of these restrictions and the consequences of not playing fair. Rules in virtual environments, video games and online social networks come from many sources. Some come from the software code, some from the licence contracts or terms of use, and some from the online communities themselves.

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<sup>316</sup> Jennifer Mnookin, 'Virtual(ly) Law: The Emergence of Law in LambdaMOO' (1996) 2(1) Computer-Mediated 2J.

<sup>317</sup> Botting refers to using automated software programs ('bots'), which will simulate the actions of users and allow them play the game and earn rewards without actually being online. Griefing refers to deliberately irritating behaviour and harassment of other players within a game by using aspects of the game in unintended ways. It can take form of cursing, cheating, stealing, and unreasonable killing. Gold farming refers to collecting rewards, items and currency on an industrial scale with the intention of exchanging them for real-world currency.

There are rules that are part of the logic of the game, such as dragons can fly or avatars are specialised agents. Users perceive the environment or the space they inhabit through the eyes of their avatar. Walls and boundaries are impenetrable. Online identities and avatars change and develop with the passage of time. Their skills and abilities improve with practice and training. Depending on the skills chosen, an avatar might be able to fly, see for miles, hypnotise others, heal wounds, teleport themselves, or shoot great flaming fireballs at other avatars' heads. Avatars can acquire things and they can lose or give them away. They can attack or kill others or become victims of such attacks. Each game or online platform incorporates rules on different levels. Social networks usually regulate who can make connections, view users' profiles and their content.

We can find other characteristics drawn from the physical world, such as scarcity. Castronova describes various forms of scarcity in virtual environments.<sup>318</sup> Firstly, users are constrained by an initial budget of skills and attributes when creating an avatar. Any benefits gained through certain characteristics, such as strength or intellectual powers, are matched by some disadvantages. In addition, avatars may die and lose some of their powers. Secondly, users are constrained by the physicality of virtual environments. Important resources are limited and available only through progressing in the game. Thirdly, users have to compete against each other to gain certain social status.

Another type of rules originates from the game ethic, which focuses on regulating anti-social behaviour. Most MMPORGs, like World of Warcraft, regulate such behaviour in their Terms of Use, in the Code of Conduct section.<sup>319</sup> Other worlds, such as EVE Online, encourage users to explore mechanisms of political intrigue, corporate espionage, and Machiavellian machinations as they struggle for fame and fortune.<sup>320</sup> Ultimately, environments like Second Life, embrace

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<sup>318</sup> Castronova, 'Virtual Worlds: A First-Hand Account of Market and Society in the Cyberian Frontier' (n 58).

<sup>319</sup> Terms of Use, Section 7, Code of Conduct <[http://us.blizzard.com/en-us/company/legal/wow\\_tou.html](http://us.blizzard.com/en-us/company/legal/wow_tou.html)> accessed 24 November 2015.

<sup>320</sup> Due to the game's focus on freedom, consequence, and autonomy, many activities interpreted as grieving in other environments are actually allowed in *Eve*. This includes stealing from other players, extortion, and causing other players to get killed.

adult content as long as it confined to dedicated areas – sexual activities, role-play or gambling.<sup>321</sup>

Another layer of rules originates from the virtual community. The previous section explored the notions of virtual identity and the reputation of avatars and their users. The important point in this context is that identity without reputation is meaningless and building a reputation takes time. Therefore, devices tracking the reputation of users like credit scores or a domain name system or eBay ratings have been created.<sup>322</sup> Virtual environments that require a team effort and incorporate level-based advancement also have an in-built system of maintaining users' reputation. Unfair play is punished and the user is banished from the game; his avatar, other virtual assets and the entire account are terminated.<sup>323</sup> In turn, this mechanism supports the establishment of very strong social norms.

An example of semi-formal and self-enforcing social norms can be found in the World of Warcraft loot distribution system.<sup>324</sup> The loot distribution system, called Dragon Kill Points (DKP), represents a set of norms that govern the distribution of rewards to players, in an equitable and predictable way. As mentioned in the previous sections, users form organised groups, such as guilds, in order to co-ordinate their efforts to overcome various challenges. When they succeed, the question of how to distribute the rewards (so-called loot) arises. Due to intense commitments, users rely on a set of rules that enable the fair distribution of rewards after a successful raid. Ignoring the distribution system and collecting a desired item from the acquired loot would be against these norms and followed by a social sanction. Such a user

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<sup>321</sup> For example, nudity and sexual behaviour is forbidden in Second Life outside of private areas and sex clubs. In addition, avatars are all gender-neutral when they enter the virtual environment, which means users can purchase genitals to add to their avatar. Sex shops, sex entertainment and virtual escort services are common in Second Life. 'Maturity Content Guidelines' <<https://community.secondlife.com/t5/English-Knowledge-Base/Maturity-ratings/ta-p/700119#General>> accessed 15 November 2015; See also Mitch Wagner, 'Sex in Second Life' (*Information Week*, 24 May 2007) <[http://www.informationweek.com/sex-in-second-life/d/d-id/1055499?page\\_number=1](http://www.informationweek.com/sex-in-second-life/d/d-id/1055499?page_number=1)> accessed 24 November 2015.

<sup>322</sup> See Paul Resnick, Richard Zeckhauser, John Swanson and Kate Lockwood, 'The Value of Reputation on eBay: A Controlled Experiment' (2006) 9(2) *Experimental Economics* 13.

<sup>323</sup> Mnookin (n 315).

<sup>324</sup> I also use this example in chapter Six in the context of property as a resource distribution system.

would be ex-communicated and his tarnished reputation would prevent him from joining another guild on the same server.

The impact of these semi-formal social norms means that for a period it was technically possible to 'steal' the loot and transfer it to another server, where the user was unknown. As a rule, only someone with software-embedded permission can manage the rewards. However, following a technical glitch that prevented some users from picking up the looted treasure,<sup>325</sup> most guilds left the entire loot unlocked and accessible to all members of the guild. While user's reputation was known and maintained on his home server, in the case that a user decided to transfer his avatar to another server there was no system that registered and maintained the avatar's reputation across the various servers.<sup>326</sup> Technically, getting hold of the treasured items and relocating them to a different server with no previous history became very simple. Virtual theft became an option. In addition, it was unlikely that the provider, Blizzard Entertainment, would interfere and take action against the perpetrator, since they did not recognise users' property rights in virtual assets. In spite of the number of users, interactions and opportunities for anti-social behaviour, and the absence of any external governance of the loot distribution, this activity is not omnipresent.<sup>327</sup>

In sum, activity in virtual environments requires social integration, but social integration requires activity. The avatar faces the same sort of social reward systems that are found in the offline world. The levelling and integration systems also draw on the basic human tendency to obtain self-esteem from the opinions of others, and the result is that users are powerfully

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<sup>325</sup> Castronova and Fairfield (n 296).

<sup>326</sup> In mid-2006, Blizzard Entertainment began the Paid Character Transfer Service, which allows users to move characters to other realms as well as between two accounts, subject to certain restrictions. More information here (US) 'Character Transfer' <<https://us.battle.net/support/en/article/character-transfer>> accessed 15 November 2015 and (EU) 'Character Transfer' <<https://eu.battle.net/support/en/article/character-transfer>> accessed 15 November 2015.

<sup>327</sup> Many virtual worlds will have some form of loot-distribution system in-built in the environment to implement a degree of fairness. A game etiquette will exhibit a varying level of tolerance towards taking an unfair advantage of the rules. Persistent ninja-looters are named and shamed on user forums and in online communities for disrupting the game. Examples can be seen here: 'Title' <<http://eu.battle.net/wow/en/forum/topic/10700370008>> accessed 15 November 2015. More on game etiquette here: Blair Nishkian, 'MMORPG Etiquette' (*MMO Huts*, 28 October 2011) <<http://mmohuts.com/news/mmorpg-etiquette>> accessed 30 November 2015.

motivated to increase the capital of their online persona. It is the success and standing of an avatar that motivates people to devote their time and effort to playing video games or building their social network; indeed so many hours that one can almost believe that for many people it is not their *second life*, but indeed their first and only one.<sup>328</sup>

Burk applies these regulatory rules to the example of gold farming. It may be that normative disapproval will somewhat deter or curtail gold farming as it is considered bad form by many players. Changes to the design restricting the movement of virtual objects or treasure in the game may also help deter the practice. Alternatively, the provider may adjust the internal market of the game to provide alternatives to trading on the external market. Nevertheless, increasingly, providers of virtual environments turn to formal legal rules — either contractual provision in the Terms of Service or to intellectual property law such as copyright, to deter or control unwanted behaviours. Service providers control architecture, the internal economy and can influence social norms.<sup>329</sup>

Similar to the unsuccessful fight against illegal file sharing, in the case of virtual property the architecture and law modalities run counter to the established social norms. The majority of users view these technical and legal constraints as unreasonable and counter-intuitive. It is socially and legally acceptable to purchase a book, read it, lend it to a family member and a friend, and then give it to a charity shop. However, it is not acceptable to purchase a digital version of the same book and share it with your friends and family, or give it away.

As Burk states, “the question is how legal claims apply to the activity associated with virtual worlds, and not if.”<sup>330</sup> Users are developing greater awareness and articulate their expectations and demands. They perceive their accumulated virtual assets as ‘property with real-world

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<sup>328</sup> Castronova and Fairfield (n 296) 12-14.

<sup>329</sup> Burk ‘Authorization and Governance in Virtual Worlds’ (n 269).

<sup>330</sup> Ibid.

value'.<sup>331</sup> However, the legal position of users is uncertain with respect to protection of their virtual assets against those who try to steal, hack or defraud them. Users may also be powerless against confiscation of their assets or cancellation of their accounts – common sanctions meted out by providers in cases of unwanted behaviour.

Users feel very strongly about available safeguards protecting them against theft of their virtual assets. Based on available surveys, it transpires that the culture of virtual theft is ripe in the countries of the Pacific Rim, such as China, Taiwan or South Korea. According to insiders' reports, virtual property theft has already matured into 'an industry with a fully developed supply chain' and with 'efficient work-processes of advertising, Trojan planting, account theft, transferring of stolen virtual property, in-game selling of stolen virtual property, real-money, trading and division of profits'.<sup>332</sup> Similar to bank customers expecting their banks to safeguard their cash deposits, users expect that virtual environment providers will protect their virtual assets and in the case of virtual theft, they will attempt to trace the perpetrators and reimburse at least partial value of the stolen item.

These examples demonstrate the various types of interaction that need to be considered. Attacks targeting the avatar or his property allowed by the architecture are part of the game. This would include killing another avatar in a battle and stripping him of his possessions. Virtual robbery, murder or rape have predominantly an in-game impact and are managed within the virtual environments, through architecture and codes of conduct. The situation will change if the actual harm takes place in the real world or if actual financial harm occurs outside the context of the game.<sup>333</sup>

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<sup>331</sup> Indicated in surveys of Chinese and South Korean users. These survey results show that Chinese gamers generally think they should be allowed to buy, sell, own, inherit, and speculate with virtual assets, especially those resulting from their own labour or those purchased with real-world money.

<sup>332</sup> Chew, 'Virtual property in China: The emergence of gamer rights awareness and the reaction of game corporations' (2010) *new media & society* 13(5) 722–738.

<sup>333</sup> Lastowka, Hunter (n 56).

Apart from rampant virtual theft, users often experience a large number of disputes relating to the acquisition, transfer or control of virtual assets. Just browsing through the main forum for an online game presents a picture of “the proliferation of ninja looting incidents, dragon kill points disputes, loot sharing disputes, scamming of newbies and casual gamers, corruption of guild and clan leaders, unsatisfactory divorce settlements of virtually married couples, and many other.”<sup>334</sup>

Disputes between users as well as between users and providers reveal the gap between users’ expectations in relation to the legal status of virtual assets and the law, as it currently stands. The following overview of case law is illustrative of the various legal issues that may arise from users’ interaction with the environment on multiple levels and possible approaches to regulation of virtual assets.

#### 4.4 Provider-User Disputes

One of the first cases brought about by the increasing speculation in virtual assets was *BlackSnow v Mythic*<sup>335</sup> in 2002. Ultima Online is a property-based virtual environment, because it encourages users to acquire personal property and real estate. BlackSnow Interactive was set up with a clear business objective – to employ workers for a minimum wage in a virtual ‘sweat shop’ to acquire virtual assets and avatars and then to sell the accumulated virtual property on eBay and keep the profit.<sup>336</sup>

Ultima Online, similar to other virtual environments, prohibits such activities directly in their EULA. So when the provider, Mythic, discovered the venture, they promptly removed all accounts and virtual property associated with BlackSnow and together with eBay banned all

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<sup>334</sup> Chew (n 331).

<sup>335</sup> *BlackSnow Interactive v. Mythic Entertainment Inc.*, No. 02-00112 (C.D. Calif.) 2002.

<sup>336</sup> The issue of real-money trading and gold farming is discussed in more detail in chapter Three, section 3.4.2.

their auction listings. BlackSnow decided to sue Mythic for unfair business practices and took the virtual environment provider to court in California. BlackSnow argued that the confiscated virtual assets were their property and therefore they had the right to sell it. Furthermore, they invested time and money, although indirectly, into playing the game and establishing numerous accounts and related subscriptions. Mythic opposed such practices, claiming that based on the EULA's terms and conditions, accounts and all content within the virtual environment was intellectual property belonging to Mythic, making the claimant a mere licensee without any rights whatsoever. The virtual environment pursued commercial objectives – it was a platform for wholesome entertainment.<sup>337</sup> Unfortunately, BlackSnow did not have sufficient funds to proceed with the lawsuit.

Authorising virtual economies brings in more profit for the providers, but also carries liabilities. Users, who invest time, money and energy into acquiring virtual property, may do this solely for entertainment purposes. It is understandable that providers do not want to lose control over property rights in virtual assets. This would open the floodgates for individuals and companies to dominate and unbalance the virtual economy, making the virtual environment no longer a platform for entertainment, but for enterprise. *BlackSnow v Mythic*<sup>338</sup> in 2002 was the first case that clearly demonstrated a disparity between users' expectations and the allocation of property rights in virtual assets provided for by licence agreements. Whether the court would have found in favour of the provider or the users, we can only speculate.

Another early case to establish property rights in virtual assets comes from China. In December 2003, a Beijing court ruled in favour of a user called Li Hongchen<sup>339</sup>, who had spent two years and more than a thousand dollars playing the online game Red Moon. A hacker, who gained access to the system, stole his virtual currency and weapons. He made a complaint to the provider, only to be refused because his virtual assets had no real value. He decided to sue.

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<sup>337</sup> Matthew Lee, 'Online Role Play Games: The Legal Response' (2006) 4(2) Hertfordshire Law Journal, 72-80 <[http://www.herts.ac.uk/fms/documents/schools/law/HLJ\\_V4I2\\_Lee.pdf](http://www.herts.ac.uk/fms/documents/schools/law/HLJ_V4I2_Lee.pdf)> accessed 3 June 2012.

<sup>338</sup> *BlackSnow* (n 334).

<sup>339</sup> *Li Hongchen v Beijing Artic Ice Technology Development Co*, the full opinion is available at <[www.chinacourt.org/public/detail.php?id=143455](http://www.chinacourt.org/public/detail.php?id=143455)> accessed 12 September 2010.



The court ruled that because the virtual assets resulted from Mr. Hongchen's labour, time, money and skills, they therefore belonged to him.<sup>340</sup> The case of Li Hongchen, other users in China have successfully sued providers and other users in respect of lost virtual assets and have been awarded either or both compensation and reinstatement of their lost assets.<sup>341</sup> Although these cases attempted to give a legal basis for the protection of virtual property, they relied on contract and consumer protection laws instead of developing a comprehensive concept of virtual property.

*Bragg v Linden*<sup>342</sup> is a first case referred to the term 'virtual property' and it has become a flagship case for a real-world legal system intervention. Linden Lab, the provider of Second Life, has created its media and public profile as a virtual property company. Users can purchase currency, goods, land, and enter into various transactions and interactions with others. In addition, Linden Lab grants users the right to retain their intellectual property in content they create using software tools and applications provided by the company.<sup>343</sup> Business savvy users made fortunes by selling virtual goods, services or through land speculation. Avatars can purchase 'virtual land', make improvements to that land, exclude other avatars from entering onto the land, rent the land, or sell the land to other avatars for a profit. Companies, such as Coca-Cola or IBM, have invested substantially in building their virtual headquarters.

In 2005, Marc Bragg joined the Second Life community and became an active speculator in virtual real estate. Within a year he had purchased numerous parcels of land, on which, in turn, he regularly paid tax. Linden Lab charges an average of \$20 per virtual 'acre' per month when

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<sup>340</sup> Dave Birch, 'Virtual Worlds: Regulating virtual worlds: current and future issues' (2007) 9(1) e-Commerce Law & Policy < [http://e-comlaw.com/lp/archive/volume\\_9\\_issue\\_1.htm](http://e-comlaw.com/lp/archive/volume_9_issue_1.htm) > accessed 4 June 2010.

<sup>341</sup> Wayne Rumbles, 'Theft in the Digital: Can you Steal Virtual Property?' (2011) 17(2) Canterbury Law Review <[http://www.laws.canterbury.ac.nz/documents/17\\_2\\_354\\_374.pdf](http://www.laws.canterbury.ac.nz/documents/17_2_354_374.pdf) > accessed 26 June 2012.

<sup>342</sup> *Bragg v. Linden Lab*, Pa. Magis. Dist. Ct., Chester Cty., No. CV-7606, complaint filed 5/2/06. The complaint is available at <<http://pub.bna.com/eclr/cv7606.pdf>> accessed 1 September 2010.

<sup>343</sup> Linden Lab planned to distinguish its services from those of other providers by recognizing property rights in virtual assets. The Terms of Service provided that users retained copyright for any content they had created, and the server and client provided simple digital rights management functions. Users could buy, own, and sell virtual goods ranging 'from cars to homes to slot machines'.

users lease property.<sup>344</sup> He also started his own business based on designing fireworks and selling them to others. In April 2006, Bragg exploited a system that allowed him to start a land auction that was invisible to others and acquired another piece of land for \$300. Subsequently, he discovered that the transaction took place at an illegal auction. Consequently, his account was frozen, his avatar was removed from the environment, and all of his assets were confiscated, including those acquired before the auction.<sup>345</sup>

Mr Bragg, an attorney in the real world, decided to sue Linden Lab for fraud, breach of contract, and breach of consumer protection laws. He based his legal action on his expectations about acquiring ownership in his virtual assets. In the court documents, Bragg stated that he was induced into ‘investing’ in virtual land by representations made by the company in press releases, interviews, and through the Second Life website about their intellectual property system. As Deenihan noted, “Linden Labs tried to have it both ways – embracing the academic consensus for virtual rights while retaining dictatorial power.”<sup>346</sup> Linden Lab retained unlimited powers to regulate the currency system and exchange transactions, and the right to suspend or terminate users’ accounts without notice, liability or compensation.<sup>347</sup>

Bragg was successful in his pursuit. He was able to Linden Lab in the federal court, because the court ruled that the arbitration clause in Linden Lab’s Terms of Service was invalid. Following this ruling, Linden Lab settled the case out of court, which suggests they weighed the cost of litigation, the likelihood of success and the costs of settlement, and came out in favour of not having the issue aired in court. The opening line of the judge’s statement is more than

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<sup>344</sup> ‘Living a Second Life - Virtual online worlds’ (*The Economist*, 2006) <[https://www.law.upenn.edu/blogs/polk/property/slides/Virtual\\_Property\\_Readings.pdf](https://www.law.upenn.edu/blogs/polk/property/slides/Virtual_Property_Readings.pdf)> accessed 1 September 2010.

<sup>345</sup> Deenihan (n 302) 19.

<sup>346</sup> *Ibid.*

<sup>347</sup> “Linden Lab has the right at any time for any reason or no reason to suspend or terminate your Account, terminate this Agreement, and/or refuse any and all current or future use of the Service without notice or liability to you. In the event that Linden Lab suspends or terminates your Account or this Agreement, you understand and agree that you shall receive no refund or exchange for any unused time on a subscription, any license or subscription fees, any content or data associated with your Account, or for anything else.” Second Life Terms of Service <<https://www.lindenlab.com/tos>> accessed 12 December 2011.

instructive. “This case is about virtual property maintained on a virtual world on the Internet.”<sup>348</sup> Despite being a case about virtual property, it did not examine virtual property per se. The judges focused on personal jurisdiction and contractual mutuality. The court did not examine the ownership of virtual assets. As a result, the case has not established a precedent with respect to virtual property. Rather, it leaves many issues unsettled.

## 4.5 User-User Disputes

The opposite view emerged in *Hernandez v IGE*<sup>349</sup>. In 2007 Antonio Hernandez, the plaintiff, filed a class action on behalf of the majority of World of Warcraft users against one of the largest virtual property companies, Internet Gaming Entertainment (IGE). IGE offered not only virtual commodities in exchange for real money but also provided professional customer service. The company had trained staff that would handle financial issues, customer inquiries and technical support to ensure that gamers are satisfied with each real money purchase.

Hernandez claimed that IGE had devalued the gaming experience by running a gold farming operation, devaluing gold, and spamming chat, all of which were in breach of the World of Warcraft Terms of Use and EULA. Although IGE’s employees had to agree to the Terms of Use and EULA in order to use World of Warcraft prior to accumulating and transferring gold and other virtual property, they then proceeded to sell virtual assets and accounts for real world currency contrary to the licence agreement provisions. The plaintiff relied on the concept of ‘third party beneficiaries’ to the contractual relationship between IGE and Blizzard, the provider of World of Warcraft. The complaint alleged that the plaintiffs had suffered harm because of IGE’s breach of these agreements. He argued that every gold farming company has to agree *not* to engage in farming gold, spam chatting, and other negative things associated with

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<sup>348</sup> *Linden v. Bragg*, Civil Action No. 06-4925, 2007 U.S. Dist. LEXIS 39516.

<sup>349</sup> *Hernandez v. Internet Gaming Entertainment*, U.S. Dist. Ct. Southern District of Florida, Case No: 07-CIV-21403-COHN/SELTZER.

real-money trading (RMT).<sup>350</sup> Companies that do not agree to this are in breach of the licence agreement. The main objective of that agreement is to provide all types of entertainment for users, including business opportunities, but within the context of the environment. The agreement specifically bans any RMT transactions.

Eventually, Hernandez settled his dispute with IGE U.S. securing an agreement that IGE U.S. would no longer engage in activities commonly referred to as ‘gold farming’ and ‘RMT’ for a period of five years.<sup>351</sup> However, the agreement has not significantly affected IGE’s business model – World of Warcraft gold remains for sale at IGE.com. It appears that IGE U.S. was not the correct target for the lawsuit, as it did not operate the online auction at IGE.com. The corporate structure of the company is very complex and the ownership of the company’s assets changed several times after filing of the complaint.<sup>352</sup>

The following conclusions emerge from these cases, although none of them lasted long enough to give a ruling on the matter. All three show the stark difference between the social norms and architecture underpinning virtual environments and the legal framework created by licence agreements, in which the social interactions and transactions take place. On one side stand providers with a strong desire to maintain maximum control over users and the environment and on the other side stand users, who realise the opportunities presented to them. User-provider disputes seem to be leaning in favour of the provider in case the user has acted against the rules of the game, whether formal or informal. The burden of proof is then on the user to prove that, such rules do not apply or are invalid. However, this may be difficult, as

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<sup>350</sup> Real Money Trading refers to virtual asset transactions that involve selling avatars, spells, and other virtual goods and real estate through online auction websites like eBay or IGE.com for real money. While many providers, such as Blizzard, prohibit the practice, it is common that users sell goods and services on online auction sites and exchange them for real currencies. Chapter Three, section 3.4.2 Real-money Trading (RMT) addresses the issue and the impact it has on the game experience.

<sup>351</sup> Benjamin Duranske ‘Hernandez v. IGE Settles, IGE U.S. Confirms It Will Not “Engage in the Selling of WoW Virtual Property or Currency” for Five Years; Class Action Still Possible’ (*Virtually Blind*, 2008) <<http://virtuallyblind.com/2008/08/27/hernandez-ige-settles/>> accessed 5 December 2012.

<sup>352</sup> *Ibid.*

EULAs in their current form constitute the governing contracts for millions of people using software products in both online and offline contexts.

Users often develop a bond with their avatar, the virtual wealth and social status associated with it. Recently, a survey conducted in Singapore aimed to ascertain who the users of virtual environments<sup>353</sup> perceive to be the rightful owner of virtual property. The majority of the respondents, namely 54 per cent, indicated that they believed the users themselves, not their avatars or environment providers, have acquired ownership interests in virtual objects. Moreover, when such expectations are frustrated, they can have serious real-life consequences. In 2005, a Chinese user, Qui Chengwei, stabbed another user to death in a row over a sword in a game.<sup>354</sup> Chengwei earned a particularly powerful weapon – a dragon sabre – in a quest in the virtual world of Legend of Mir II. He agreed to loan it to another user only to find out later that he had sold it for £460. Chengwei reported the incident to the police, but they declined to act. Theft of virtual assets was not a crime, because virtual property was not an asset protected under the applicable laws. Chengwei received a death sentence for taking matters into his own hands, later commuted to life imprisonment. Rumbles observes that the Korean and Chinese supreme courts were the first to acknowledge the inherent value of virtual assets, spurred on by the vast financial growth of virtual environments.<sup>355</sup>

In comparison, the US and Europe have been less active in the space, although this is changing. Precedent was set in Europe by a Dutch court that sentenced two boys for violent theft in the *RuneScape* case.<sup>356</sup> The boys had forced another user to transfer some virtual assets to their account after they attacked and threatened the victim in the real world. The court acknowledged that the essence of the crimes was twofold – assault and theft, because they

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<sup>353</sup> In this case, the survey was limited to MMPORGs, which are massively multiplayer online role-playing games. The ubiquitous examples today are multiplayer online games such as World of Warcraft and Second Life. More details about the survey are here: Anil, S. with others, 'Virtual Property - a Theoretical and Empirical Analysis' (2012) European Intellectual Property Review.

<sup>354</sup> 'Game Theft led to fatal Attack' (*BBC News*, 31 March 2005) <<http://news.bbc.co.uk/go/pr/fr/-/2/hi/technology/4397159.stm>> accessed 26 June 2012.

<sup>355</sup> Rumbles (n 340).

<sup>356</sup> Rechtbank (District Court) Leeuwarden 21 October 2008, LJN BG0939.

involved stolen goods. The Dutch Supreme Court upheld the case in February 2012. The judgement accepted the argument that virtual items qualified as goods under Dutch law.<sup>357</sup>

The Dutch Supreme Court had to decide whether the incident is a theft. In order to answer that question, it had to consider the following arguments:

1. Virtual items are not goods, but data
2. Virtual items are information
3. 'Theft' is part of the game-play
4. Whatever their form, virtual items are property of the provider and therefore could not have been stolen.<sup>358</sup>

Addressing the first argument, the court stated that virtual assets have an intrinsic value, because users invest time, money and effort in obtaining them. Both providers and users, who engage in virtual environments, recognise the value of virtual assets. More importantly, the defendants recognised it, because they tried to acquire the valuable items by any means. The stolen virtual goods were under the exclusive control of the user, who was subsequently relieved of this control by the defendants. The court made a comparison between electricity and virtual goods – the fact of intangibility does not prevent the asset from being owned, and stolen for that matter.

Secondly, the court indicated that while virtual assets have data-like properties, that does not prevent them from having other properties. Similar to real-world property, they have other typical characteristics such as value, control, exploitation and exclusion. The video game, RuneScape, evolves around combat. Users strive to fight and kill their opponents in order to acquire dropped items, rewards and points. The fact that theft was part of the gameplay was

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<sup>357</sup> Supreme Court of the Netherlands Ruling: LJN: BQ9251, Hoge Raad, 10/00101 J as reported in 'RuneScape Theft – Dutch Supreme Court Decision' (*Virtual Policy*, 1 February 2012) < <http://www.virtualpolicy.net/runescape-theft-dutch-supreme-court-decision.html> > accessed 13 July 2014.

<sup>358</sup> *Ibid.*

irrelevant to the analysis. The defendants stole the virtual assets outside the 'context' of the game.<sup>359</sup>

Finally, the court confirmed that under the terms and conditions, the provider was the exclusive owner of the environment, users' accounts and any virtual resources within.<sup>360</sup> However, the court concluded that the virtual items in question were under the 'exclusive dominion' of the victim until the moment the defendants removed them. The position of the provider from the perspective of intellectual property and contract law was not pertinent in the context of the criminal case under consideration. Here the court drew an analogy to money, which is the property of the state, but anyone can steal them.<sup>361</sup>

The case presents a significant shift in perception of the relationship between users and service providers in respect of virtual property. In spite of the license agreement's clear statement that users do not acquire any legal interest in the digital content or the underlying software, the acquiescence of providers in virtual economies makes this a contentious matter.<sup>362</sup> This ruling acknowledged that there is a degree of control that a user can have over a virtual asset, which is sufficient for that asset to be stolen. Rumbles formulates the obvious question that arise from this decision. If a virtual asset is capable of being stolen, does this mean that other rights accrue to the user? The crucial point is that criminal act of theft operates with the assumption of ownership, a form of legally recognised control. If that is the case, users can sell virtual assets, seek redress if the provider deletes or changes the content, or even claim compensation in the event of the shutting down of the virtual environment.<sup>363</sup>

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<sup>359</sup> Chapter Three, section 3.2 More than Just a Game explores the scenarios when activities taking place in virtual environments has repercussions in real life.

<sup>360</sup> The nature of license agreements is explored in more detail in Chapter Five, sections 5.3. and 5.4.

<sup>361</sup> 'RuneScape Theft – Dutch Supreme Court Decision' (n 363).

<sup>362</sup> Rumbles (n 347).

<sup>363</sup> Ibid.

A case relating to virtual environments also arose in the UK. In February 2011, Exeter Crown Court recognised the existence of ‘virtual property’ in virtual environments in *R v Mitchell*.<sup>364</sup> Ashley Mitchell admitted to hacking accounts of online gaming company Zynga, which operates on Facebook. Mr Mitchell pleaded guilty to five charges brought under the Computer Misuse Act. The defendant was not convicted of virtual theft, but the judge explicitly referred to virtual property in his ruling.<sup>365</sup>

The issue was whether virtual currency differs from real-world currency and therefore can be stolen. Prosecutor Evans replied that, in theory, there was no difference because the mint can produce more currency if it was stolen. Although the chips existed only in the virtual environment, if sold legitimately the value would have been around \$12 million. Mitchell proceeded to convert the virtual currency, but realised only £53,000 from sales before he the police caught him. The case has set a new precedent. “This shows that the legal regulation and protection of virtual goods and currency, which historically has been fairly uncertain, is evolving fast – driven partly by the boom in virtual goods sales in games. It involved a UK court recognising virtual currency – in this case, Zynga chips – as legal property which can be protected by existing UK criminal laws.”<sup>366</sup>

Although similar in essence, these cases differ slightly with respect to the circumstances. The defendants in the *RuneScape* case used actual physical violence and threats to gain unauthorised access to the victim’s virtual assets, while in *Mitchell* the defendant gained unauthorised access to the system and subsequently stole virtual assets solely by using his

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<sup>364</sup> *R v Mitchell* (unreported), February 2011, Herald Express, ‘Zynga hacker faces jail for \$12 million theft’ <<http://www.thisissouthdevon.co.uk/news/HACKER-ADMITS-STEALING-12m-POKERCHIPS/article-3170994-detail/article.htm>> accessed 13 September 2015.

<sup>365</sup> ‘Hacker faces jail over poker chip theft’ (*BBC*, 3 February 2011) <<http://www.bbc.co.uk/news/technology-12357005>> accessed 3 February 2011; further discussion relating to the case can be found for example in Kim Barker, ‘MMORPGing - The Legalities of Game Play’ (2012) *European Journal for Law and Technology*, Vol. 3, No. 1.

<sup>366</sup> Jas Purewal, ‘The First Virtual Currency Crime: Hacker Jailed After \$12m Zynga Theft’ (*Gamer Law*, 17 February 2012) <<http://www.gamerlaw.co.uk/2011/the-first-virtual-currency-crime-hacker-jailed-after-12m-zynga-theft/>> accessed 13 September 2015.



computer. This may have influenced the two different judgements delivered by the Dutch and UK courts.

The UK Theft Act 1968 clearly states in section 1 that “[A] person is guilty of theft if they dishonestly appropriate property belonging to another with the intention to permanently deprive the other of it.”<sup>367</sup> There exist the same assumption of ownership and subsequent loss of control as established by Dutch law. However, the UK court avoided the difficult question of title and ownership, because applied the computer misuse law instead. Computer misuse is a collective term for a number of criminal offences committed by means of a computer and they include computer hacking, the creation and distribution of computer viruses and other malware, and the denial of service attacks, all of which are regulated by the Computer Misuse Act 1990. Mitchell was charged with the illegal activity of hacking.<sup>368</sup> Fairfield argues, “such laws are inadequate because it is possible to steal virtual property without ever touching a chattel computer owned by the owner of the virtual property, or hacking a server. In fact, such thefts are routine. The thief logs on to the account containing the property, often making use of a password gained by fraud. The thief then transfers, sells, or deletes the virtual property.”<sup>369</sup>

These examples demonstrate that participation in virtual environments generates social conflicts. Due to the multiple levels of interaction within the environment, there will be a different set of rules and regulatory mechanisms on each level (rules relating to the game-play, codes of conduct, licence agreements and copyright law, and general legal principles preventing defamation or bullying). Conflicts can arise between users and providers or users themselves. Examples of unwanted or detrimental behaviour include user-generated content, real-money trading or gold farming. Other situations that will require the attention of real-world laws will

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<sup>367</sup> Theft Act 1968, s 1.

<sup>368</sup> Computer Misuse Act 1990, s 1: A person is guilty of an offence if: a) He causes a computer to perform any function with the intent to secure access to any program or data held in any computer; b) The access he intends to secure is unauthorised; and c) He knows at the time when he causes the computer to perform the function that that is the case.

<sup>369</sup> Fairfield (n 37).

include, for instance, forming and breaking a contract, coming up with intellectual creations or inventions, making or losing profit, and acquiring property.

Users of virtual environments have legitimate expectations about acquiring legal interests in virtual assets. The sources of these expectations are the following factors. Firstly, the architecture of virtual environments, the existence of virtual economies, and the property-like characteristics of virtual assets that give rise to users' expectations. Secondly, providers' representations and conduct either explicitly authorise or tolerate virtual asset transactions. The existing legal framework fails to deal properly with these issues. Currently applicable laws, such as contract, intellectual property or consumer protection law, do not recognise users' expectations as legitimate. The next section develops the foundations of the concept of legitimate expectations further.

## 4.6 Legitimate Expectations

The concept of legitimate expectations finds its origins in public law and refers to the duty to honour expectations that may arise from decisions, representations, and conduct of public authorities.<sup>370</sup> There exist numerous combinations of procedural, substantive and compensatory rules relating to the protection of legitimate expectations. The term 'procedural legitimate expectations' refers to "the existence of some species of process right, whether in the form of natural justice, fairness or a related idea of consultation, which the applicant claims to possess as the result of some behaviour by the public body which generates the expectation."<sup>371</sup> The term 'substantive legitimate expectations' refers to "the situation in which the applicant seeks a

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<sup>370</sup> Soren Schonberg, *Legitimate Expectations in Administrative Law* (Oxford Scholarship Online 2000).

<sup>371</sup> Paul P. Craig, 'Substantive Legitimate Expectations in Domestic and Community Law' (1996) 55(2) Cambridge Law Journal, 290.

particular benefit or commodity, whether this takes the form of a welfare benefit, a licence or one of the myriad other forms which such claims can assume.”<sup>372</sup>

For example, the English law traditionally recognised only procedural protection of legitimate expectations. If a public body has made a representation to an individual that they will have a particular procedural right, or receive a substantive benefit, that expectation shall be protected.<sup>373</sup> In a recent case, the Supreme Court formulated the doctrine as requiring a “clear, unambiguous promise, devoid of any relevant qualifications and directed to an identifiable person or group, which had acted to the detriment on that basis.”<sup>374</sup> It followed that the public body has to honour such promise unless there exist good reasons not to do so. These reasons have to be proportionate and take into account “any conflict with wider policy issues, particularly those of a macro-economic or micro-political kind.”<sup>375</sup>

Granting substantive protection to expectations has proved to be more controversial. Schonberg reports that the idea of substantive protection of expectations was not without opposition, because it would require the courts to review the merits of administrative decision-making, restrain the exercise of statutory powers, and undermine the principle of legality by being forced to uphold expectations created by unlawful representations. For example, in the case of *Hamble Fisheries*<sup>376</sup>, Sedley J. ruled that there could be substantive legitimate expectations and suggested that expectations could arise from two different situations – where a public body has given some form of promise; and where the applicant based their expectations on a specific practice, which had now been altered.<sup>377</sup> There have been a number

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<sup>372</sup> *Ibid.*

<sup>373</sup> John Cartwright, ‘Protecting Legitimate Expectations and Estoppel in English Law’, Report to the XVIIth International Congress of Comparative Law, (2006) 10(3) *Electronic Journal of Comparative Law* <<http://www.ejcl.org/103/art103-6.pdf>> accessed 10 December 2016.

<sup>374</sup> *The United Policyholders Group and others v The Attorney General of Trinidad and Tobago* [2016] UKPC 17 (28 June 2016).

<sup>375</sup> *Ibid.*

<sup>376</sup> *R. v. Ministry for Agriculture, Fisheries and Foods, ex p. Hamble (Offshore) Fisheries Limited* [1995] 2A11E.R.

<sup>377</sup> Craig (n 370) 300.

of other decisions<sup>378</sup> where it was said, “it may amount to an abuse of power to go back on a precise and unqualified representation because doing so is unfair.”<sup>379</sup>

The basis for the justifications of legitimate expectations can be found in the ‘reliance theory’, with its origins in the doctrine of estoppel, and the ‘rule of law theory’, which is linked to the notion of legal certainty.<sup>380</sup>

The reliance theory relies on the principle that there exists a general obligation not to cause preventable harm to others. This obligation sets limits to individual’s autonomy to the extent that such exercise of personal freedoms causes harm to others. The principle of preventing harm is also crucial for the legal doctrine of estoppel, which applies in the absence of a promissory or contractual relationship between the parties. The common link between the two doctrines, estoppel and legitimate expectations, in English law, is that they bind the individual on the ground that it would be unconscionable for him to deny what he has represented or agreed.<sup>381</sup> Based on the reliance theory, legitimate expectations should be protected, because not doing so would cause harm to those who have been guided by these expectations in their actions.

Protection of legitimate expectations is also justified by the rule of law theory. Predictability and certainty are fundamental requirements for individual autonomy. In order to be able to act autonomously, individuals need to be able to plan and foresee the consequences of their actions.<sup>382</sup> It is therefore essential that law and those who apply it are guided by the principles of predictability, formal equality and legal certainty, as identified by Schonberg.<sup>383</sup> Predictability

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<sup>378</sup> Support for protection of legitimate expectations can be found in cases such as *Matrix Securities* and *Unilever*, which were connected with taxation. The Court of Appeal held that the Inland Revenue could not cease a practice of accepting annual tax refund claims after the expiry of a statutory time limit. It consistently applied for about twenty-five years. Craig (n 370).

<sup>379</sup> Schonberg (n 376) 111.

<sup>380</sup> *Ibid.*

<sup>381</sup> *Ibid.*

<sup>382</sup> Paul P. Craig, ‘Substantive Legitimate Expectations and the Principles of Judicial Review’, in M. Andenas (ed), *English Public Law and the Common Law of Europe* (London, 1998), 23.

<sup>383</sup> Schonberg (n 369) 13.

means that individuals can easily predict actions and decisions of public authorities. Formal equality means that similar cases will be treated alike and individuals can rely on previous decisions, procedures and policies. Moreover, in the absence of formal equality, law becomes arbitrary and unpredictable. Protection of legitimate expectations gives a clear expression to the above-mentioned principles and promotes legitimacy and efficacy of public authorities.<sup>384</sup>

The brief overview of the doctrine of legitimate expectations inform us that there will be circumstances in which public authorities are bound by the promises, representations or conduct they have made, because the opposite would be against the principles of fairness, predictability and legal certainty. This thesis proposes that the doctrine is the basis for justifying the protection of users' expectation about acquiring legal interests in virtual assets. The previous chapters described how these expectations arise. Virtual environments simulate physical environments. Users are constrained by the internal structure, scarcity, game rules and social norms. Other common qualities include socialisation, realism, continuity, personal identity and reputation.

Furthermore, at the centre of users' experience lies a system of rewards. Users strive to create their virtual identity and to maintain reputation of their avatars. In order to achieve that, they need to slay monsters, kill enemies, acquire powerful skills or maintain a substantial social network of friends and acquaintances.<sup>385</sup> These resources thus become valuable assets that are subject to everyday interactions and transactions. Providers implement mechanisms for a legitimate exchange of virtual currency, virtual goods and services through marketplaces and auction houses. Virtual economies, based on economic principles such as demand and supply, market competition, inflation and taxation, have evolved. The category of virtual assets refers to a set of valuable resources that feature in authorised transactions.<sup>386</sup> These factors are instrumental in framing users' expectations about virtual assets being a species of property.

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<sup>384</sup> Ibid.

<sup>385</sup> The nature of virtual environments and the role of avatars and socialising features in chapter Two.

<sup>386</sup> The constituent elements and the rise of virtual economies is discussed in chapter Three. It also provides an overview of different types of virtual assets. For the purposes of this research, virtual assets include virtual items and virtual land.

The role of providers is essential in the account of users' expectations and is the source of legitimacy. Providers design virtual environments, set out internal structures and rules of the game, and facilitate economic activities in relation to a variety of resources. Through their representations and conduct, providers create legitimate expectations that users acquire legal interests in virtual assets. It is evident from the available case law<sup>387</sup> that providers will intervene in instances of unauthorised transactions.<sup>388</sup> There will also be a category of uses and transactions that tolerated by the provider without actively encouraging it or preventing it.<sup>389</sup> Ultimately, providers will encourage users to acquire, use and trade virtual asset through the internal structure, markets and auction houses.<sup>390</sup> Unless providers specifically identify, prohibit and enforce sanctions for unauthorised behaviour in relation to virtual assets, they implicitly or explicitly authorise the transactions and these transactions are therefore legitimate. The role of providers as governing and regulating bodies is instrumental for the argument that users' legitimate expectations should be recognised and protected.

The rationale behind the doctrine of legitimate expectations is that it would be unconscionable not to act upon a promise that led another rely on it. It is perhaps necessary to mention, that providers do not act in the role of public authorities; they are legal entities that offer their digital products and services to end-users for profit and based on that logic they can adapt, transform or discontinue that provision at any time, without notice or compensation.<sup>391</sup>

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<sup>387</sup> The issue of governance, rules and resulting disputes appears in chapter Four.

<sup>388</sup> For example, structured environments like World of Warcraft are against the practice of real-money trading. It has adopted an 'exploitation policy' whereby users are found to be in 'abuse of economy', if one or more characters on the account are identified exchanging or contributing to the exchange of in-game property (items or gold) for real-world currency, they will retain the right to suspend the user's account temporarily or terminate it. On the other hand, unstructured environments like Second Life encourage it.

<sup>389</sup> Gold farming allows users to amass virtual assets and sell them to other users in exchange for real currency. This is one method of short-circuiting the lowest levels and menial tasks in games.

<sup>390</sup> Environments like Second Life provide virtual currency (Linden Dollars), virtual currency exchange, virtual land and constituent elements to create virtual objects. Linden Lab, the company behind the platform, has built a truly interactive and immersive environment where users can engage in a variety of activities, including creating and transferring virtual assets. Users can avail of mechanisms to exchange virtual assets for real-world currency and vice versa.

<sup>391</sup> License agreements will contain a clause where the provider retains the right to suspend or terminate users' accounts without notice, liability or compensation. For example, section 5.4 states that "[i]f Linden Lab elects to

The representations made by providers and their conduct is clearly in contrast to the license agreements. Chapter Three has shown that games, sports and activities may be subject to real-world rules, regulations and legal precedents where the activity has harmful, anti-social or economic impact in the real world. Users' expectations ought to be protected by virtue of granting them legal interests in virtual assets, such as virtual items and virtual land that they acquired through legitimate means, authorised by the providers.

## 4.7 Conclusion

Providers have the ultimate power to modify the code, remove items, user accounts or shut the whole environment down without warning, explanation or compensation. A complex structure of rules and mechanisms governs all the aspects of the 'virtual' experience. Lessig articulated these rules to fall into four distinct categories. There are rules that are part of the logic of the game, embedded in the code or architecture of the environment. Then there are markets that will regulate users' behaviour. Providers have the ultimate authority to control the virtual economy. Another type of rules originates from the game ethic, which focuses on regulating anti-social behaviour.

There are activities, such as gold farming or modding that may be detrimental to both providers and users. In a situation like this, the formal rules, usually enshrined in license agreements and codes of behaviour, will adhere to the social norms. There also may be rules

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generally suspend or discontinue the Service, in whole or in part, for any reason, Linden Lab may terminate your Accounts. In such event, you will not be entitled to compensation for such suspension or termination, and you acknowledge that Linden Lab will have no liability to you in connection with such suspension or termination." In addition, section 5.5 further provides that "[u]pon termination of your Account, you will no longer be able to access your Account or access (or transfer or direct the transfer to any other Account) any Content or data you have stored on the Servers. All licenses granted by Linden Lab to use the Service, including without limitation any Linden Dollar Licenses will automatically terminate. You acknowledge that you have elected to procure Linden Dollar Licenses or any premium account or paid features of the Services notwithstanding the possibility of termination of such license rights under the circumstances set forth in this Agreement." Linden Lab Terms of Service, <<https://www.lindenlab.com/tos#tos5>> accessed 5 November 2016.

integrated in the code or the architecture of the environment. The community will enforce these prerogatives by applying social pressure on those who do not conform. Reputation and social standing of avatars are an important element of social interaction with other users in virtual environments. Therefore, users are motivated to follow the rules. The last category are the formal rules – laws. We have seen in the previous chapter that real-world laws already apply to situations in virtual environments under certain circumstances.

The code and architecture of majority of virtual environments provide users with the opportunity to collect virtual items, create new items, provide services and subsequently trade these in exchange for virtual currency. There exist marketplaces, banks, auction houses and currency exchange points. At the same time, providers use licence agreements to assert all rights in virtual assets and thus prevent users from acquiring ownership. That in isolation would not have to pose any difficulties. However, participation in virtual environments and in virtual economies in particular, attracts disputes.

Due to multiple levels of interaction with the environment, there will be a different set of rules and mechanisms of enforcing rules on each level (rules relating to the game-play, codes of conduct, licence agreements and copyright law, general legal principles preventing defamation or bullying). Providers act in the capacity of a governing and regulating body by virtue of determining the design virtual environments, setting out internal structures and rules of the game, and facilitating economic activities in relation to a variety of resources. Users of virtual environments have legitimate expectations about acquiring legal interests in virtual assets as they would in their physical counterparts under similar circumstances. There are two sources of these expectations. The architecture of virtual environments, the existence of virtual economies, and the property-like characteristics of virtual assets give rise to users' expectations. Providers' representations and conduct either explicitly authorise or tolerate virtual asset transactions.



The doctrine of legitimate expectations originates from public law and refers to the duty to honour expectations that may arise from decisions, representations, and conduct of public authorities. The brief overview of the doctrine of legitimate expectations inform us that there will be circumstances in which public authorities are bound by the promises, representations or conduct they have made, because the opposite would be against the principles of fairness, predictability and legal certainty. As demonstrated in this chapter, unless providers specifically identify, prohibit and enforce sanctions for unauthorised behaviour in relation to virtual assets, they implicitly or explicitly authorise these transactions. The existing legal framework fails to deal properly with these issues. Applicable laws, such as contract, intellectual property or consumer protection law, do not recognise users' expectations as legitimate.

Chapter Five examines different means of regulating virtual assets. Firstly, it concentrates on intellectual property law and license agreements as the primary legal instruments and any potential limitations. It transpires that intellectual property and license agreements allocate control and ownership to providers and thus preventing users to acquire legal interests in virtual assets. It then proceeds to explore other legal categories and regulations that may address users' expectations. The conclusion is that the existing legal framework fails to deal properly with these issues.

# Chapter Five: Different Means of Regulating Virtual Assets

## 5.1 Introduction

This chapter explores the subject matter and scope of protection that may be available to users in relation to virtual assets. The starting point is a discussion of intellectual property, which governs the use of virtual environments as complex digital products, and license agreements, which specify the terms and conditions under which users can access and use these products. From this viewpoint, users are purchasing a service facilitated by the provider and they do not acquire legal interests in any element of the virtual environment, including virtual assets. Intellectual property rights protect original contribution, effort and investment.

Particular consideration belongs to the underlying conflict of interests between providers and users. Licence agreements are an appropriate and practical tool to protect providers' intellectual property, but they are less suitable for regulating users' behaviour within virtual environments. They extend the intellectual property owner's legal monopoly beyond the statutory scope of protection. The scope and application of license agreements is not without limitations and challenges. For example, the validity of license agreements and individual provision has been scrutinised in a number of recent decisions and signalled the need of providers to comply with national laws. Provisions, which are in conflict with consumer protection framework, abusive of the provider's dominant position or beyond the scope of the applicable laws, will be ruled invalid.

There is currently no such legal category as virtual assets. However, there have been instances where the regulators and courts were willing to acknowledge or at least consider virtual assets as property, or as having property-like characteristic. The selection of decisions, cases and regulations does not aim to be a comprehensive overview of how the law addresses the question of legal status of virtual property. Tax authorities have been monitoring and assessing economic transactions in relation to virtual goods and services, in particular whether they give rise to tax liability. As the size and diversity of wealth held by users in virtual environments grow exponentially, first cases dealing with the question of what happens with these assets post-mortem emerged.

Countries with a high level of virtual environment participation, such as China, Taiwan or South Korea, have tackled a drastically increasing criminal activity relating to virtual environments by virtue of bespoke legislation, dedicated enforcement units or court divisions. What is significant is that the adopted legislation frequently recognises that virtual assets are species of property under the exclusive control of the user and as such are alienable and transferable. It is not the owner of the server where the code happens to reside, or the intellectual property owner of the underlying software who owns and therefore controls the virtual object, but the user who acquired it through legitimate means.

The issue of legal nature and entitlement to virtual assets have become relevant to property, contract, criminal law and other legal disciplines that govern the rights and responsibilities of real-world communities on day-to-day basis. The chapter establishes that current laws partially recognise property-like interests in virtual assets, but in a fragmented, diverse and incomplete way.

## 5.2 Intellectual Property Law

Video games are a complex entertainment product that subsists in software. Licence agreements are the main and most important legal instruments that govern the use of online services and digital products. In order to understand the nature and objective of licence agreements, I look briefly at the history of the legal understanding of interactive entertainment products, such as video games and virtual environments. This provides the background for the robust legal protection afforded to digital products in general, while extensively restricting users.

This section will focus on analysing the content and legal nature of the licence agreements that govern the use of virtual environments. Licence agreements are indeed the very first obstacle in acknowledging and granting rights of any type to users. As we shall see in the next section, prior to accessing virtual environments users have to agree to the terms and conditions that govern the use of the service. Irrespective of their potentially complex, incomprehensible and one-sided nature, these documents are valid legal terms (unless challenged in court) and as such must be followed. Ignorance of the law is no defence. Some authors have questioned their enforceability on the basis that they are contracts of adhesion, they are in the form of click-wrap or shrink-wrap licences or they are contrary to the rules of privity of contract. It is not the enforceability that is an issue, but the applicability of licence agreements. While there is need

for providers to protect the use of their intellectual property and digital products, their intentions to extend the remit of these agreements to regulate social and economic interactions between third parties are outside the scope of both intellectual property and contract law.<sup>392</sup>

As indicated in chapter Two, three main environments and their respective licence agreements, namely Second Life, Facebook and World of Warcraft provide examples for the analysis. The main reasons for choosing this sample is their popularity, accessibility (English language) and the available literature, which provides further insight into the interactions within these environments. The number of reports, articles and case studies associated with these environments influenced the choice. Cases such as *Bragg v Linden*,<sup>393</sup> *Hernandez v IGE*<sup>394</sup> or *BlackSnow v Mythic*<sup>395</sup> demonstrate that it is usually intellectual property and contractual rights, which feature most frequently in legal claims arising from the wide spectrum of social and economic interactions in virtual environments.

Licence agreements are the main and most important legal instruments that govern the use of online services and digital products. The same applies for virtual environments. Before I proceed to analyse the content, legal nature and consequences thereof for users' rights, I think that it is important to explore the objectives of developers and providers enshrined in licence agreements. All of the relevant entities involved in the video game ecosystem – providers, developers, financiers, publishers and distributors – have a common objective, which is to protect creativity that goes into the complicated process of developing and distributing a game. The need to safeguard this creative input translates into a proactive intellectual property strategy, which is essential to the success of the provider's enterprise. Video games are complex entertainment products that mainly manifest as software, and yet there is much more to virtual environments than the underlying code. The following Mind Map demonstrates the various components of virtual environments that fall within the intellectual property regime.

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<sup>392</sup> Harbinja (n 2).

<sup>393</sup> *Bragg v. Linden Research Inc* (n 341).

<sup>394</sup> *Hernandez v. Internet Gaming Entertainment* (n 348).

<sup>395</sup> *BlackSnow* (n 334).

Table 2: Video Games and IP Law Mind Map<sup>396</sup>

<b>Game Project and IP Law</b>			
<b>Copyright</b>	<b>Trade Secret</b>	<b>Trademark</b>	<b>Patent</b>
Music	Customer mailing lists	Company name	Hardware technical solutions
Code	Pricing information	Company logo	Inventive game play or game design elements
Story	Publisher contacts	Game title	Technical innovations such as software, networking or database design
Characters	Middleware contacts	Game subtitle	
Art	Developer contacts		
Box design	In-house development tools		
Website design	Deal terms		

As the table above demonstrates, there are many creative elements of video games. The question is whether they meet criteria for protection. The Berne Convention<sup>397</sup> represents the internationally agreed principles of copyright and for example guarantees that protection is automatic and immediate and that there are no formal requirements to register a work in order to qualify for protection.

In the UK, the video game itself may not be protected under copyright, as it does not qualify as one of the protected subject matter – a dramatic work, artistic work or film.<sup>398</sup> The functionality

<sup>396</sup> 'Video Games and IP: A Global Perspective' (n 73).

<sup>397</sup> 'Berne Convention for the Protection of Literary and Artistic Works' September 9 1886, <[http://www.wipo.int/treaties/en/text.jsp?file\\_id=283698](http://www.wipo.int/treaties/en/text.jsp?file_id=283698)>.

<sup>398</sup> Dramatic works (not involved within its every-day meaning, has to be performed for an audience, not enough unity), artistic works (only still images) or a film (only protects photographing copying, similar game does not infringe copyright).

of software,<sup>399</sup> method of playing games, rules, or game mechanics<sup>400</sup> are also not protected, nor is the 'look and feel' of the product.<sup>401</sup> However, the Court of Justice ruled in the *Nintendo v PC Box*<sup>402</sup> case, that video games were original works as a whole, but they also included other protected subject matter, such as graphic and sound elements, and "have a unique creative value which cannot be reduced to their underlying program as such."<sup>403</sup> This means that video games receive protection as authorial works under the regime of the Information Society Directive<sup>404</sup>, in addition to the protection received in respect of the underlying computer programs under the Software Directive<sup>405</sup>.

The situation is slightly different in the US, where games qualify as audio-visual works and the patent eligible subject matter can be anything that is new and non-obvious, which is much broader than in the EU. With the threat of patent trolls,<sup>406</sup> imitations and replicas of successful titles and online piracy, there is a clear need for a robust legal solution protecting the creative input and investments of all parties, including providers, developers and distributors, involved in such projects. It is equally understandable that consumers and users need a similarly concrete legal framework to facilitate their access to and enjoyment of virtual environments.

Lastowka has looked at the history of protecting video games as an interactive entertainment medium. "Throughout their short history, video games have posed challenges to intellectual property laws. Courts in the United States have struggled to apply the traditional laws of copyright to video games. The primary problem that video games pose to copyright is that they, like all games, are interactive processes. Players of video games both experience the

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<sup>399</sup> *SAS Institute v World Programming Ltd* [2013] EWHC 69 (Ch).

<sup>400</sup> Copyright, Designs and Patents Act 1988, determines what copyright does not protect and what does not qualify as patents.

<sup>401</sup> Willem F. Grosheide, Herwin Roerdink and Karianne Thomas, 'Intellectual Property Protection for Video Games: A View from the European Union' (2014) 9(1) *Journal of International Commercial Law and Technology*.

<sup>402</sup> *Nintendo Co. Ltd v PC Box Srl* Case C-355-12.

<sup>403</sup> *Ibid* [23].

<sup>404</sup> Information Society Directive 2001/29/EC.

<sup>405</sup> Software Directive 2009/24/EC/.

<sup>406</sup> Adam Saunders, 'Patent troll cases heard by US Supreme Court' (*Open Source*, 30 April 2014) <<https://opensource.com/law/14/4/us-supreme-court-on-patent-trolling>> accessed 19 November 2015.

games as creative works and perform those works during the course of their play. From the perspective of copyright law, the interactive nature of video games makes players somewhat like authors and undermines the authorial status of the game creator. A video game creator does not design a single scripted experience, but instead designs an interactive system. Early case law in the United States has suggested that video game design, to the extent it is not traditionally authorial, is not fully protected by copyright law. Video games receive protection under copyright only to the extent that they resemble non-interactive authorship. Traditional copyright law may therefore be insufficiently protective game designers as authors. Additionally, video games today are increasingly social and rich with creative affordances. Those who provide video games as platform technologies often benefit from the creative labour of authorial players. Copyright law may therefore be insufficiently protective of player authorship by channelling the economic benefits of player authorship toward platform owners.”<sup>407</sup>

Intellectual property rights seem to be the most appropriate legal category to protect the variety of constituent elements, but also the tools used to develop these digital products. “For example, copyright safeguards the creative and artistic expression that goes into the software (the code), the artwork and the sound (and music) of a game. Trademarks protect the names and logos associated with a game and its characters and can be used to set a company and its games apart from others in the minds of consumers; patents protect the next generation hardware (and are particularly important for hardware manufacturers) or technical solutions as well as the inventive game play or design elements; and trade secrets can be used to safeguard a company’s competitive advantage by protecting confidential business information, such as contacts or subscriber mailing list data, or an in-house development tool.”<sup>408</sup>

Since the mid-1970s, when video games were still somewhat obscure, the industry has experienced an immense boom and in the last decade, it has become mainstream. Computers

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<sup>407</sup> Greg Lastowka, ‘Copyright Law and Video Games: A Brief History of an Interactive Medium’ (October 2013) <[http://www.academia.edu/4415769/Copyright\\_Law\\_and\\_Video\\_Games\\_A\\_Brief\\_History\\_of\\_an\\_Interactive\\_Medium](http://www.academia.edu/4415769/Copyright_Law_and_Video_Games_A_Brief_History_of_an_Interactive_Medium)> accessed 13 March 2015.

<sup>408</sup> ‘Video Games and IP: A Global Perspective’ (n 76).



that are more powerful, 3D graphics, user-generated content, convergence and the rise of mobile game apps are some of the main driving forces in the industry's development. The revenue of the global gaming market was in the region of \$8.5 billion in 2014,<sup>409</sup> which was even more than that of the film industry. Legislators and policymakers have overlooked the industry for some time, thus allowing for unencumbered growth and expansion. It is only in the past few years that legislation has started to target issues such as online gambling, money-laundering, and violent and sexual content. Game developers and publishers are also fighting the increasing trend of intellectual property infringement with respect to certain elements of video games.

The question remains whether intellectual property rights, copyright in particular, govern the acquisition, trade and transfer of virtual assets within virtual environments. Previous chapters explored the possibility of users being award copyright protection for their avatars<sup>410</sup>, expressive amateur creations<sup>411</sup> or their performances.<sup>412</sup> The issue is that current copyright law does not yet recognise a category for these forms of expressions and it is thus unclear what precisely the legal implications of such transformative uses are. Some have argued there is basis for copyright protection, provided the legal requirements are met,<sup>413</sup> while others suggested they qualify as infringing uses of a copyright protected works. Copyright owners tolerate these infringing acts, for a variety of reasons – practical, economic or cultural.<sup>414</sup>

Crucially, the acquisition, trade and transfer of virtual assets usually does not involve creative expressions, nor does it rest on reproduction or distribution of copyright protected works. Based on the initial authorisation by providers, users exercise control over virtual assets they gained by playing the game, purchased or exchanged for another object through auctions and

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<sup>409</sup> 'Top 100 Countries Represent 99.8% of \$81.5Bn Global Games Market' (*New Zoo*, April 2014) <<http://www.newzoo.com/insights/top-100-countries-represent-99-6-81-5bn-global-games-market/>> accessed 30 April 2015.

<sup>410</sup> Chapter Three, section 3.5.1.

<sup>411</sup> Chapter Three, section 3.4.1.

<sup>412</sup> Chapter Three, section 3.4.3.

<sup>413</sup> Burk 'Owning e-Sports: Proprietary Rights in Professional Computer (n 239).

<sup>414</sup> Wu (n 263).

marketplaces. As such, there is no grounds for intellectual property to govern these transactions. In the physical world, this would correlate with the distinction between intangible subject matter protected by intellectual property rights and their tangible manifestations that exist separately and independently from intellectual property. In the absence of intellectual-property-based legal grounds that would justify the elimination of property rights in virtual assets, providers have been using contract law and licence agreements to govern online communities, including virtual asset transactions.

### 5.3 Licence Agreements

Contract theory informs us that licence agreements consist of promises made by each party, including the grant of rights that constitutes a copyright or patent licence.<sup>415</sup> Common and civil law traditions have different requirements when it comes to contract formation. To simplify, common law requires the elements of offer, acceptance and consideration to all be present.<sup>416</sup> In the civil law tradition, contracts come into being only with the presence of offer and acceptance, so pecuniary remuneration, reciprocity and the intention to enter into a commercial transaction do not play the same important role in contractual doctrine and practice. From a civil law perspective, the objective of a licence agreement is to regulate private law aspects of the transaction and to specify the extent of the use that the licensee is entitled to make of the intellectual property protected work, which would otherwise be prohibited by copyright.<sup>417</sup>

Originally, licence agreements took the form of a 'shrink-wrap' licence, whereby the licence was part of the inner package of the boxed software and was accepted by the act of opening the package. Shrink-wrap licensing essentially adopted a model originating from transactions

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<sup>415</sup> Douglas H. Phillips, *The Software License Unveiled* (Oxford University Press 2009).

<sup>416</sup> *Ibid.*

<sup>417</sup> Joshua Fairfield, 'Anti-Social Contracts: The Contractual Governance of Virtual Worlds' (2008) 53 McGill L. J. 427.

between sophisticated buyers and the vendors of bundled software and mainframe or mini data processing systems. That model later expanded to mass-market sales of software and other digital products and takes the form of either click-wrap or browse-wrap licences. Users of online services or digital products receive a non-negotiable standard form, which will usually come up in a pop-up window during the initial use of the service in the case of a click-wrap licence. They have to manifest their consent by clicking on 'OK', 'I agree' or 'I accept' in order to use or purchase the service. Alternatively, browse-wrap licences covering the use of an intellectual property protected work will be available on a website, typically as a hyperlink at the bottom of the page.<sup>418</sup>

There is no express manifestation of consent; rather the user agrees to the terms and conditions by simply using the product - by accessing the website, downloading software, etc. Users become licensees because of conduct rather than by express consent.<sup>419</sup> Courts that have ruled on the issue of enforceability of both click-wrap and browse-wrap licences have established that it depends on whether a user has actual or constructive notice of the terms and conditions that may apply.<sup>420</sup> Contract formation may not be as clear as it should be in some situations, but in general, in both common and civil law jurisdictions, the courts have accepted that users and providers form a valid contract, if certain conditions are present. These include the actual or constructive notice of the terms and conditions.

A number of documents governs the use of virtual environments. The most important ones are called 'End-User-Licence-Agreements' (EULA), 'Terms of Service' (ToS) or 'Terms of Use' (ToU). EULAs give the user permission to use a copy of the licensed material, while ToS or ToU refer to a broader set of terms and conditions covering the use of the service, including the licence terms. The content of the documents will vary, but it is possible to identify common

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<sup>418</sup> Robert W. Gomulkiewicz and Mary L. Williamson, 'A Brief Defence of Mass Market Software License Agreements' (1996) 22 Rutgers Computer & Tech. L.J. 335; Robert W. Gomulkiewicz, 'The License is the Product: Comments of the Promise of Article 2B for Software and Information Licensing' (1998) 13 Berkeley Tech. L.J. 891.

<sup>419</sup> Phillips (n 414).

<sup>420</sup> Andrew Nicol, 'Clickwrapped: Who Respects Your Rights Online?' <<http://www.clickwrapped.com/about>> accessed 30 July 2013.

topics and even similar wordings in some provisions. They will regularly address the process of registration, account creation, grant of a licence, limitations on the use of the service, rules of conduct, violation of the terms of the agreement, termination of the account, amendments to the agreement, dispute resolution and governing law, warranty disclaimers and limitation of liability. The legal terms for Facebook are called the ‘Statement of Rights and Responsibilities’ (SRR) and they reflect the fact that Facebook is a social networking platform. They mostly concern issues of privacy, sharing data and information, safety and protecting rights of third parties. Each platform has a subset of related policies that focus on specific areas such as Payment Terms, Community Standards (Facebook),<sup>421</sup> an Anti-Cheating Agreement (World of Warcraft),<sup>422</sup> and Trademark Guidelines, a Snapshot and Machinima<sup>423</sup> Policy, Second Life Mainland Policies, Gambling Policy, Banking Policy or Age Play Policy (Second Life).<sup>424</sup>

### 5.3.1 World of Warcraft

Chapters Two and Three closely examined the social, technical and economic dimensions of this environment. The following section will briefly summarise the main characteristics before moving on to analyse the legal terms and the implications they have for users.

The Terms of Use specify that users have no ownership or other property interest in any account provided by the provider. “All title, ownership rights and intellectual property rights in and to the Game and all copies thereof (including without limitation any titles, computer code, themes, objects, characters, character names, stories, dialog, catch phrases, locations, concepts, artwork, character inventories, structural or landscape designs, animations, sounds, musical compositions and recordings, audio-visual effects, storylines, character likenesses, methods of operation, moral rights, and any related documentation) are owned or licensed by

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<sup>421</sup> Facebook Statement of Rights and Responsibilities is accessible here <<https://www.facebook.com/legal/terms>>. Related policies appear at the bottom of the page, accessed 13 March 2015.

<sup>422</sup> World of Warcraft ToU is accessible here <[http://eu.blizzard.com/en-gb/company/legal/wow\\_tou.html](http://eu.blizzard.com/en-gb/company/legal/wow_tou.html)>. Related policies and additional terms are available on their main site ‘Blizzard Legal Documentation’ here <<http://eu.blizzard.com/en-gb/company/legal/>> accessed 13 March 2015.

<sup>423</sup> Machinima refers to the use of real-time computer graphics engines to create a cinematic production.

<sup>424</sup> Second Life ToS is available here <<http://www.lindenlab.com/tos>>. Related policies appear at the bottom of the page, accessed 13 March 2015.

Blizzard... You acknowledge and agree that you have no interest, monetary or otherwise, in any feature or content contained in the Game.”<sup>425</sup>

The provider does not recognise transactions including the transfer of an account. The agreement specifies, “[a user] may not purchase, sell, gift or trade any Account, or offer to purchase, sell, and gift or trade any Account, and any such attempt shall be null and void. [The provider] owns, has licensed, or otherwise has rights to all of the content that appears in the Game.”<sup>426</sup> Additionally, “[the provider] 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, [a user] may not sell in-game items or currency for ‘real’ money, or exchange those items or currency for value outside of the Game.”<sup>427</sup> World of Warcraft, like many other MMPORPGs (RuneScape, Warhammer Online, Final Fantasy XI) strictly prohibits gathering in-game currency, items or resources for sale or performing in-game services in exchange for payment outside the environment with real-world money.<sup>428</sup>

The terms and practices of the operator are restrictive when it comes to virtual asset transactions. Users can obtain virtual currency and goods from participating in the game. For example, after a successful raid on a rival guild, members of the victorious guild will receive a reward in the form of gold and virtual items in proportion to their participation. However,

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<sup>425</sup> World of Warcraft EULA, clause Ownership, available here <[http://us.blizzard.com/en-us/company/legal/wow\\_eula.html](http://us.blizzard.com/en-us/company/legal/wow_eula.html)>, accessed 13 March 2015.

<sup>426</sup> World of Warcraft TOU, clause 9.B Account, available here <<http://us.blizzard.com/en-us/company/about/termsfuse.html>> accessed 13 March 2015.

<sup>427</sup> World of Warcraft TOU, clause 9.C Virtual Items, available here <<http://us.blizzard.com/en-us/company/about/termsfuse.html>> accessed 13 March 2015.

<sup>428</sup> RuneScape went as far as making this practice impossible by removing unbalanced trade and their traditional player vs. player fighting system (this was scrapped on February 1, 2011 after having been in place for 3 years), which resulted in over 60,000 cancelled subscriptions in protest. Final Fantasy XI and Warhammer Online both have entire task forces dedicated to the removal of real money trading from the game. To control real money trading, EVE Online created an official and sanctioned method to convert real world cash into in-game currency; players can use real world money to buy a specific in-game item and redeem it for account subscription time or trade it on the in-game market for in-game currency. Dan Sabbagh, ‘Online games group aims for growth the Nintendo way’ (*The Times*, 1 February 2008) <<https://www.thetimes.co.uk/article/online-games-group-aims-for-growth-the-nintendo-way-90l9pcqwxng>> accessed 23 March 2010.

World of Warcraft has incorporated a Blizzard store,<sup>429</sup> which recently began to offer virtual pets and avatar characters for purchase. The operator charges users from \$10 up to \$45 for various characters.<sup>430</sup> Although the main licence agreements do not refer to this type of transaction, it will be in accordance with the nature of the agreements – the goal is to maintain and extend control over the environment with all of its content, and to monetise that content. A user directly purchasing a flying pony or receiving armoury in the form of a reward, according to the agreement, only acquires a licence to use the item in the virtual environment.

As World of Warcraft is largely a closed environment, most of the rules involved are rules of the game, belonging to the so-called 'magic circle' – the provider and developer of the game. At the same time, when we look at internal mechanisms whereby users may have their assets restored by the provider after someone steals them, this reflects the notion that users do have some apparent legal interest in the items. Such restoration of e.g. hacked accounts, suggests that the provider implicitly recognises the property rights of the user, whilst precluding them in their intellectual property licence agreements.

### 5.3.2 Second Life

Linden Lab formulates its terms and conditions in the Terms of Service (TOS). The operator grants certain licences to use and access the services if users comply with the terms. The operator retains all of the intellectual property rights in and to the service, except the content created by users. Users retain all intellectual property rights they already hold under applicable law in content they upload, publish and submit to or through the service. However, they have to acknowledge that “by uploading, publishing, or submitting any content to or through the service, they thereby automatically grant Linden Lab a non-exclusive, worldwide, royalty-free, sub-licensable, and transferable licence to use, reproduce, distribute, prepare derivative works

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<sup>429</sup> See 'Battle.net Shop' <<https://us.battle.net/shop/en/product/game/wow>> accessed 21 November 2015.

<sup>430</sup> World of Warcraft Terms of Use are available here <<http://us.blizzard.com/en-us/company/about/termsfuse.html>> accessed 13 March 2015.

of, display, and perform the content solely for the purposes of providing and promoting the service.”<sup>431</sup>

Virtual currency and virtual land are, in fact, licenses. The Linden Dollar is a virtual token, which constitutes a limited licence permission to use features of the service. The token can “be held, bartered, traded and/or transferred in Second Life with other users (and/or Linden Lab), in exchange for permission to access and use Content, applications, services, and various user-created features, in accordance with these Terms of Service”.<sup>432</sup> Linden Dollars are not a real currency or other financial instrument. Linden Lab also includes a component called the ‘LindeX exchange’ or the ‘LindeX’, which facilitates transactions in which users may exchange their Linden Dollars with one another.

The following definition of the terms used in Linden Dollar transfers aims to prevent any suggestion of acquiring property rights in virtual assets. “The term ‘Sell’ means to transfer for consideration to another user their Linden dollars in accordance with the Terms of Service”, and “the term ‘Buy’ or ‘Purchase’ means to receive for consideration from another user their Linden dollars in accordance with the Terms of Service”.<sup>433</sup> Because the Linden dollar is a licence, a user selling his virtual house or a piece of land to another user will only transfer one licence for another. The licence to use and access features of the service such as a virtual house or virtual land present the consideration in this transaction. The operator attempts to treat the Linden Dollar as licensed content available in the virtual environment, but cannot avoid it being a means of exchange. Based on the definition of money as a legal tender, Linden Dollar is a recognised form of payment and a legally valid mechanism of offering consideration.

Virtual land follows the same pattern – it is a feature provided by the service and users enjoy a limited access and use of the virtual space, which is stored on the operators' servers. The TOS

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<sup>431</sup> Second Life TOS, available at <<http://secondlife.com/corporate/tos.php?lang=en-US>> accessed 13 March 2015.

<sup>432</sup> Ibid. For a general discussion see for example Daniel C. Miller, ‘Determining Ownership in Virtual Worlds: Copyright and License Agreements’ (2003) 22 Rev. Litig. 435.

<sup>433</sup> Second Life TOS, clause 5.2, available at <<http://secondlife.com/corporate/tos.php?lang=en-US>> accessed 13 March 2015.

specify that users may permit or deny other users to access their virtual land. Covenants are agreements where users stipulate the terms tied to the use of the land. These can impose rights and obligations on adjoining landowners and therefore substitute zoning restrictions. These agreements cannot be in conflict with the licence agreement.

Linden Lab must collect and remit Value Added Tax (VAT) from users residing in European Union countries. This is required by the EU sales tax regulations. Transactions in Linden Dollars between individual users are not subject to VAT. Any transactions between Linden Lab and EU users paid for in Linden Dollars will have VAT applied. For instance, this includes premium account registration, purchases from the Land Store, land use fees, Private Region fees, Land auctions and LindeX transaction fees.<sup>434</sup> This confirms the view that the Linden Dollar is a valid form of payment, which derives its value from the fact that it is recognised and accepted as legal tender in the virtual environment. It is yet another example of how real and virtual economic transactions complement each other.

Although Linden Lab provides the necessary elements for the transactions to take place – currency, goods, land and markets – the agreement aims to extend its control over the social and economic interactions by interpreting the virtual currency and other virtual assets as limited licences to content available through the service.

### **5.3.3 Facebook**

The Statement of Rights and Responsibilities regulates the use of Facebook. It derives from the Facebook Principles, and governs the relationships between Facebook, Facebook users and others who interact with Facebook. Users agree to the Statement by using or accessing Facebook. From the relevant areas, the Statement directly addresses only content created by users and related intellectual property rights. Content covered by intellectual property rights, like photos and videos, is licenced to Facebook under the following conditions: “you grant us a

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<sup>434</sup> Second Life Corporate VAT, available at <<http://secondlife.com/corporate/tos.php?lang=en-US>> accessed 13 March 2015.



non-exclusive, transferable, sub-licensable, royalty-free, worldwide license to use any IP content that you post on or in connection with Facebook (“IP License”). This IP License ends when you delete your IP content or your account unless your content has been shared with others, and they have not deleted it.”<sup>435</sup> In other words, users who post content and information retain ultimate ownership and can control how it is shared through your privacy and application settings, but that they have given the site a license to use content without payment until the user removes his content.

Facebook’s own compliance with these principles has been a matter of much publicity recently. The Statement refers to Payment Terms that apply when a user makes a payment on Facebook or uses Facebook Credits and provides relevant definitions. It states, “even though we use terms like ‘purchase’, ‘buy’, ‘sell’, and ‘order’ to talk about transactions related to virtual gifts and credits, we don’t transfer an ownership interest in those items. For example, the virtual gifts we make available through our gift shop are licensed to you, not sold.”<sup>436</sup>

Credits will buy virtual goods, or virtual gifts, however it will not constitute transfer of ownership. “Rather, [a user receives] a limited right to use such credits in connection with certain features on Facebook, such as the purchase of a virtual gift.”<sup>437</sup> These purchases are non-refundable and “[c]redits are not redeemable for any sum of money or monetary value from us unless we agree otherwise in writing.”<sup>438</sup> The provider prohibits selling credits or transferring them to anyone outside of Facebook. The Statement or the Payment Terms do not refer to the nature of virtual goods or virtual gifts per se. The wording of the agreement makes it clear though that transfer of ownership does not take place at any point in time. Any content and currency that can be ‘purchased’, is in fact only licensed.

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<sup>435</sup> Facebook, Statement of Rights and Responsibilities, Clause 1, para 2, <<http://www.facebook.com/terms.php>> accessed 14 November 2012.

<sup>436</sup> *Ibid*, Clause 1, para 7.

<sup>437</sup> *Ibid*.

<sup>438</sup> *Ibid*, Clause 1, para 3.

How to interpret economic transactions in the light of the contractual terms in place? Taking a first example, a user purchases a virtual gift – icon of a pet – he wishes to send to his friend as a birthday present. He visits a gift shop, confirms the transaction by selecting an item and makes a payment of \$1. The provider then posts the gift to his friend’s profile. In fact, the user bought a license to access the gift and later transferred it to a friend. The license translates to a right to post the content on one’s profile. In a second example, the same user purchases credits for \$20 in order to stock up his virtual restaurant with food and ingredients. When the payment goes through, his profile shows the purchased goods used to keep up his restaurant. Again, according to the agreement, the user has purchased a license to use virtual currency (credits), which can be exchanged for a license to use virtual goods (in this case, coffee, croissants or spaghetti Bolognese).

## 5.4 Limitations and Challenges

In general, license agreements are valid contracts. However, some of the provisions may lack legitimacy. For example, providers use EULA as a ‘one-stop shop’<sup>439</sup> and include all matters relating to their relationship with users in the present and for the future in a single document. It covers the rights and obligations of the parties, and the licence to use the software and all of the content, and it often incorporates codes of conduct by reference. Barker notes that the nature of licence agreements – contracts of adhesion – makes them one-to-one contracts rather than one-to-many or many-to-many contracts. Applying the doctrine of privity of contract (subject to its many exceptions), it follows that a contract can only be binding upon those that are party to it. In addition, the licence agreements cannot prevent users from entering into agreements with others, and only binds the parties to the contract. This principle is a freedom to contract. This presents difficulties, because users can only rely upon a EULA to which a games developer or platform provider is a party. There is no express contractual

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<sup>439</sup> Barker (n 221) 4.

agreement between one user and all other users of the virtual environment, although English case law such as *Clarke v Dunraven*<sup>440</sup> shows how such a web of contracts could emerge.

This issue arose in the case *Hernandez v IGE*,<sup>441</sup> where the claimant tried to apply the doctrine of third-party beneficiaries. Hernandez argued that the company, IGE, engaged in ‘illicit marketing and sales’, which was harmful for the environment and its users. The EULA and Terms of Service prohibit gold farming by preventing users from selling, gifting or trading of accounts or items. Third-party rights may apply to an identifiable group (all currently registered users) that can benefit – however, when disputes arise, they are often based on hacks, exploits and data theft, which may be carried out by third parties who are not registered users of the platform. As such, if a user has a dispute with another, reliance will rest on third party rights arising from the EULA. This is far from desirable when it is likely that a dispute between users can arise more easily than between a user and a provider.<sup>442</sup>

In the words of Fairfield, “contract cannot be the sole means of creating rights and obligations for members of online communities. For online communities to thrive, courts must recognize that private property, torts, and other community-critical rights and obligations can be adapted from the familiar rules that already govern communities in the real world to suit the realities of the virtual world.”<sup>443</sup>

A number of cases in Europe have challenged the validity of some of the clauses contained in licence agreements. For an illustration, a Berlin court issued a fine of 100,000 Euros to Facebook for refusing to comply with an earlier court order to change an intellectual property clause whereby users gave Facebook a royalty-free, non-exclusive, transferable, worldwide license to

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<sup>440</sup> Jankowich (n 52).

<sup>441</sup> *Hernandez v. Internet Gaming Entertainment* (n 348).

<sup>442</sup> Barker (n 221) 5. Further discussion on the interface between contract and property law can be found here: Mark A. Lemley, ‘Intellectual Property and Shrinkwrap Licenses’ (1995) 68 S. Cal. L. Rev. 1239; Raymond T. Nimmer, ‘Breaking Barriers: The Relation Between Contract and Intellectual Property’ (1998) 13 Berkeley Tech. L.J. 827.

<sup>443</sup> Fairfield (n 37).

use any user IP.<sup>444</sup> In France, a court held that Facebook’s jurisdiction clause, which had designated the California courts, was a serious obstacle for a French user to pursue legal action. As a result, the court ruled it invalid.<sup>445</sup> In 2016, the French Data Protection Authority (CNIL), and the Directorate-General for Competition, Consumer Affairs, and Prevention of Fraud (DGCCRF) publicly notified Facebook that it had failed to comply with French regulations by virtue of the company’s terms and conditions being abusive under French law. Specifically, the DGCCRF found Facebook’s right to delete content and to modify unilaterally the contract between it and the user to be in contrary to the law. These cases and decisions illustrate the ability, and willingness, of courts and competent authorities to challenge license agreements where they are in conflict with the local law.<sup>446</sup>

Another issue, presented by copyright, is the legality of transferring virtual assets to another. Ownership of copyright and ownership of the tangible fixation of a copyright work are two different rights. Transfer of digital content does not include transfer physical property or of the original work. Instead, the purchaser receives an implied or express licence to use the digital content.<sup>447</sup> In the EU, the Information Society Directive provides that copyright “may be transferred, assigned or subject to the granting of contractual licences, without prejudice to the relevant national legislation on copyright and related rights.”<sup>448</sup> It distinguishes between tangible and intangible works when it comes to transfer of copyright – distribution right applies to works that have physical embodiments (these are considered goods) and the right of making work available to the public applies to works that exist in a digital form (they are considered services).<sup>449</sup> Different treatment of tangible and intangible works manifest itself when it comes to the transfer of copyright-protected works. The Directive establishes the principle of copyright exhaustion, which means that the copyright owner’s distribution right is exhausted by means of

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<sup>444</sup> Landgericht Berlin, judgment of 06.04.2012, Az. 16 O 551/10 (LG Berlin).

<sup>445</sup> Cour d’appel de Paris, Pôle 2 - Chambre 2, 12.2.2016 <[http://www.legalis.net/spip.php?page=jurisprudence-decision&id\\_article=4907](http://www.legalis.net/spip.php?page=jurisprudence-decision&id_article=4907)> accessed 5 November 2016.

<sup>446</sup> Elizabeth Kennedy, Christopher Millard, ‘Post-mortem issues for cloud Digital Assets: European Union Perspectives’ (2016) QMUL Cloud Legal Project <<http://cloudlegalproject.org>>

<sup>447</sup> Ibid.

<sup>448</sup> Information Society Directive, Recital 30.

<sup>449</sup> Ibid.

a lawful sale or transmission.<sup>450</sup> This is not the case of intangible works and therefore, there cannot be exhaustion of the distribution right of intangible works.

This issue emerged in *UsedSoft GmbH v Oracle International Corp*,<sup>451</sup> where the Court of Justice ruled that such distinction would go beyond the scope of copyright. The decision is significant for software and other digital industries.

Oracle creates and distributes computer software and allows users to download a copy from the Internet. Each sale is a subject to a licence agreement, which stipulates a right to use under a non-exclusive, non-transferable right to use the software for an unlimited period. UsedSoft was a company selling second-hand software. Oracle filed for an injunction trying to prevent UsedSoft carrying on with these activities. The Court of Justice ruled, “[w]here a customer downloads a copy of Oracle’s software and enters into a licence agreement under which it receives the right to use that copy for an unlimited period in return for payment of a fee, such a transaction amounts to a ‘sale’ for the purposes of Article 4(2) and involves a transfer of the right of ownership in that copy.”<sup>452</sup> It also confirmed, “since the copyright holder cannot object to the resale of a copy of software for which that rights holder’s distribution right was exhausted, a second acquirer of that copy (and any subsequent acquirers) were “lawful acquirers” for the purposes of Article 5(1).”<sup>453</sup> The case indicates that, regardless of the categorization of the contract between the service provider and user, digital content that comprises of software could be resold without infringing the right-holder’s distribution right.<sup>454</sup>

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<sup>450</sup> Article 4(2).

<sup>451</sup> *UsedSoft GmbH v Oracle International Corp* (C-128/11). See more here: Kathy Berry, ‘EU - UsedSoft v Oracle: ECJ Approves Sale of “Used” Software’ (*Linklaters*, 26 November 2012) <<http://www.linklaters.com/Insights/Publication1403Newsletter/TMT-News-November-2012/Pages/EU-Used-Soft-Oracle-ECJ-approves-sale-used-software.aspx#sthash.mWqmJwz1.dpuf>> accessed 10 August 2015.

<sup>452</sup> *Ibid.*

<sup>453</sup> Felix Hilgert and Konstantin Ewald, ‘Despite UsedSoft – German Court Rules Valve May Prohibit Steam Account Transfers’ (*Osborne Clarke*, 2 February 2014) <<http://www.osborneclarke.com/connected-insights/publications/despite-usedsoft-german-court-rules-valve-may-prohibit-steam-account-transfers/#sthash.wbIKD7ma.dpuf>> accessed 10 August 2015.

<sup>454</sup> Kennedy and Millard (n 445).

The scope of rights and responsibilities between the licensor and licensee need to comply with EU legislation.<sup>455</sup> Membership of the EU ensures for example additional protection for consumers. If one party in the economic interaction satisfies the legal definition of the status 'consumer', and the other party satisfies the legal definition of the status 'business', consumer-protection law applies to the interaction. Consumers enjoy a minimum level of protection in all EU states. In addition, consumer contracts enjoy special jurisdiction rules introduced by EC Regulation 44/2001.<sup>456</sup> After establishing jurisdiction, the courts apply the Rome Convention on applicable law. Non-compliance with compulsory laws, such as consumer protection law or unfair contract terms regulation, can substantially limit the scope of these agreements. American companies, such as Facebook, Linden Lab and Blizzard Entertainment provide the environments selected for the purposes of this work and as a result, all three agreements are subject to the US jurisdiction. Given the differing legal standards, licence agreements usually distinguish between users accessing the service from the US and those accessing it from outside the US,<sup>457</sup> with potentially different terms applying in different jurisdictions.

The distribution of virtual environments also falls into the category of contracts concluded at a distance via electronic means, irrespective of whether a consumer is involved in the transaction or not. In 2000, the European legislator adopted the Directive on Electronic

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<sup>455</sup> Council Directive 93/13/EEC of 5 April 1993 on unfair terms in consumer contracts (Directive on unfair terms), Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on Certain Legal Aspects of Information Society Services, in Particular Electronic Commerce, in the Internal Market (Directive on electronic commerce).

<sup>456</sup> Regulation on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32001R0044:EN:HTML>

<sup>457</sup> From the UK perspective, legal terms and conditions governing participation in virtual environments need to address a plethora of issues. There are several pieces of legislation that must be complied with before the operator can meet his full legal responsibilities. There are obligations under the E-Commerce Regulation 2002 regarding the minimum content law requires for virtual environments; Copyright, Trademark, Licensing and Creative Commons with respect to protection and exploitation of Intellectual Property; The Privacy and Electronic Communications Regulations 2003 regarding marketing, promoting and advertising of virtual environments; The Data Protection Act 1998, database right and The Data Retention Regulations 2009 regarding protection of personal privacy in virtual environments; The Consumer Protection Regulations 2000 and Distance Selling Regulation 2005 regarding sales in virtual environments; The Defamation Act 1996 regarding protection of corporate and individual reputation; and The Disability Discrimination Act 1995 regarding disability discrimination consideration. Duranske 'Virtual Law: Navigating the Legal Landscape of Virtual Worlds' (n 157).

Commerce<sup>458</sup> to address the persisting uncertainty around the formation of electronic contracts. The Directive laid down obligations for all information society services “to provide certain information prior to the conclusion of the contract and to make the contract terms and general conditions available to the recipient in a way that allows him to store and reproduce them”.<sup>459</sup> Any additional requirements laid down by the mandatory laws have to be met in order to form a valid and binding contract.

For example, German consumer protection law puts a set of quite specific restrictions on the enforceability of clauses in business-to-consumer (B2C) standard contracts, such as Terms of Service for an online game or platform. Furthermore, it is an overarching principle of these statutory consumer protection rules that Terms of Service in consumer contracts must be clear, unambiguous, and easy to understand for the customer. The German Telemedia Act<sup>460</sup> requires any business providing online services to disclose a statutory set of contact information. Failure to comply with these rules may result in enforcement action from public authorities – but much more frequently, in cease and desist letters and lawsuits brought by competitors or consumer associations.<sup>461</sup>

The scope of consumer protection provisions may be limited. It may not cover situations when the contract has not been concluded for money, or where there has not been express conclusion, like in the case of click-wrap agreements. For example, Recital 51 of the Consumer Rights Directive states: “the determination of the conditions for the transfer of the ownership of the goods and the moment at which such transfer takes place, should remain subject to national law and therefore should not be affected by this Directive.”<sup>462</sup>

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<sup>458</sup> Directive on Electronic Commerce 2000/31/EC.

<sup>459</sup> *Ibid.*

<sup>460</sup> ‘Germany - New Telemedia Act Introduced’ (*LinkLaters*, 24 March 2007) <<http://www.linklaters.com/Insights/Publication1403Newsletter/PublicationIssue20070324/Pages/PublicationIssue2217.aspx>> accessed 12 December 2014.

<sup>461</sup> Felix Hilgert, ‘German Terms of Service mandatory when targeting German consumers’ (*Online Games Law*, 19 January, 2015) <<http://onlinegameslaw.com/german-terms-of-service-mandatory-when-targeting-german-consumers/>> accessed 12 December 2014.

<sup>462</sup> Consumer Rights Directive, Recital 51.

## 5.5 Virtual Assets as a Legal Category

An asset, as a legal category, is an item of property owned by a person or legal entity. It has an independent value and is available to meet debts, commitments, or legacies. We divide things as tangible or intangible (or corporeal or incorporeal), and secondly as moveable or immovable. Tangible assets are quite simply those that can be touched, while intangibles refer to products of the mind, things that do not have a literal physical presence. English law further sub-divides property into choses. There is another distinction between *choses in possession* and *choses in action*: the former identifies objects of property that can be physically held, and the latter refers to a type of property that confers a right to initiate court proceedings against someone else. Choses in action are *rights in personam* held against specifiable individuals.<sup>463</sup>

Virtual property is not a legal category acknowledged and protected by current legal framework. The following overview highlights some of the circumstances, in which the authorities and courts had to address the realities of virtual environments and rectify the lack of justification continue to treat virtual assets differently from their physical counter-parts in identical situations. As a result, a growing number and variety of precedents recognise virtual assets as property, or as having property-like characteristics. The key point is that the recognition and protection of virtual property arise from users' legitimate expectations.

The legal status of virtual assets and the consequences thereof have been the topic for a number of discussions. In a response to an emerging phenomenon of virtual economies, real-world tax authorities in the US have recently issued statements that transactions in virtual

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<sup>463</sup> James E. Penner, *The Idea of Property in Law* (Clarendon Press 1997) 108.



environments may incur liabilities for both VAT and income tax under their national laws.<sup>464</sup> The Internal Revenue Service (IRS), responsible for collection of taxes in the United States, has issued guidance on the tax consequences of economic activities in virtual environments.<sup>465</sup> It states, “you can receive income in the form of money, property, or services. If you receive more income from the virtual world than you spend, you may be required to report the gain as taxable income.”<sup>466</sup>

Professor Lederman investigated how and to what extent US taxes regulation applied to virtual environments. She recognised that not all virtual economies are alike and that there was a strong case for not taxing in-game receipts and trades in closed environments, including sales within those games for virtual currency. The real world value that can exist for in-game items because of trading by some players should not transfer game world successes into taxable income. However, virtual environments that implement economic structures by design, such as Second Life, inevitably give rise to tax issues. A change in policy may be required to prevent eligible transactions to go untaxed. “Prizes and awards from contests (including games), as well as windfalls such as lottery winnings, are subject to federal income tax. The same is true of profits on barter transactions, even with respect to barter of personal use items.”<sup>467</sup>

Camp’s central thesis is that while users’ activity in virtual environments produces measurable economic value to the player, it occurs solely within the online virtual world and therefore does not qualify as gross income under the law. He argues for a ‘cash out’ rule. Players whose wealth consists solely of ‘units of play’ should not be taxed unless and until they

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<sup>464</sup> Adam Reuters, ‘US Congress Launches Probe into Virtual Economies’ (*Reuters*, 15 October 2006) <<http://secondlife.reuters.com/stories/2006/10/15/us-congress-launches-probe-intovirtual-Economies>> accessed 3 June 2010.

<sup>465</sup> Jamie S. Switzer, Ralph V. Switzer, *United States Taxation of Virtual World Economies: A Review of the Current Status* (Springer International Publishing, 2015).

<sup>466</sup> Tax Consequences of Virtual World Transactions, IRS (2016) <<https://www.irs.gov/businesses/small-businesses-self-employed/tax-consequences-of-virtual-world-transactions>> accessed 1 December 2016.

<sup>467</sup> Leandra Lederman, ‘Stranger than Fiction: Taxing Virtual Worlds’ (2007) *New York University Law Review*, Vol. 82, <<http://ssrn.com/abstract=969984>> accessed 12 May 2012.

convert those units into cash or property that is something other than a unit of play.<sup>468</sup> Conversely, when the play ceases, taxation begins.<sup>469</sup>

Some users will play the game for entertainment – with no expectation of a personal profit. Others, entrepreneurs or gold-farmers, will participate in virtual environments in pursuit of making real money. The former group might be liable to capital gains tax, should they realise their assets, whilst the latter group might be liable to corporation tax. Again, in probate, should the virtual assets be realised, an inheritance tax liability may well arise.

The reported lawsuit between the actor Bruce Willis and Apple, whether true or dare, has yet again stirred a discussion on what it actually means to ‘buy’ music from the iTunes store or any other competing digital entertainment download sites, such as Kindle Books from Amazon. Allegedly, Willis was investigating the possibilities of leaving his digital music collection to his children.<sup>470</sup> However, the standard licence agreement clearly states that users are just purchasing a licence to, for example, play iTunes music on up to five devices. The account and content is not transferable. Legal clarification with respect to inheritance rights to digital content and virtual assets will be required. A survey reports that in the UK, 30% of people have considered digital possessions as a potential digital inheritance.<sup>471</sup>

Both users and avatars can die. In Second Life, for instance, users can enter an area that allows damage to occur. When the percentage of health reaches 0%, the user will be teleported to his home location.<sup>472</sup> Therefore, the ‘death’ is not a permanent one, does not result in the

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<sup>468</sup> Bryan Camp, ‘The Play’s the Thing: A Theory of Taxing Virtual Worlds’ (2007) *Hastings Law Journal*, Vol. 59, No. 1 <<http://ssrn.com/abstract=980693>> accessed 12 May 2012.

<sup>469</sup> Graeme Nuttall, ‘Tax: Income earned in virtual worlds: taxation issues’ (*Mondaq*, 26 June 2007) <<http://www.mondaq.com/x/49658/Corporate+Tax/Income+Earned+In+Virtual+Worlds+Taxation+Issues>> accessed 14 May 2012.

<sup>470</sup> Charles Arthur, ‘No, Bruce Willis isn’t suing Apple over iTunes rights’ (*The Guardian*, Monday 3 September 2012) <<http://www.theguardian.com/technology/blog/2012/sep/03/no-apple-bruce-willis>> accessed 4 June 2014.

<sup>471</sup> Debbi Evans, ‘You don’t own me: the value of virtual property beyond bits and bytes’ (*Wired*, 22 March 2012) <<http://www.wired.co.uk/news/archive/2012-03/22/virtual-property>> accessed 4 June 2014.

<sup>472</sup> Second Life Community Standards are available here <<http://secondlife.com/corporate/cs.php>> accessed 10 April 2010.

user losing any inventory and allows the user to return to the damage-enabled region later. It is clear that when death takes place within the virtual environment, there are in-built procedures dealing with the consequences. There is no or little impact outside the virtual environment.

On the other hand, when a user dies, this has consequences in both worlds, the virtual and physical one. There have been several cases in the recent years involving disputes about access to online accounts of deceased users.<sup>473</sup> In 2005, parents of a deceased marine brought a case against Yahoo in the state of Oklahoma. The parents could not access their son's email correspondence in order to create a memorial page.<sup>474</sup> The case was settled outside of the court after Yahoo provided the emails, however, the parents were never allowed access to their son's account. This case was first in a line of similar cases that demonstrate an increasing interest in the area of digital legacy.

An important decision addressing the issue of inheritance in relation to Facebook account has emerged from a Berlin court, in 2015. The case concerned the question whether parents, as heirs, had a claim against Facebook to provide access to their deceased 15-year-old daughter's account.<sup>475</sup> The mother and co-heir was hoping to recover information from her daughter's Facebook profile that would help the parents establish the circumstances of her sudden death. Before the parents could access the account, Facebook has 'memorialised' it. It is no longer possible to access a memorialised account. The court ruled that Facebook has to provide access to the account based on the claimant's request. Specifically, the circumstances of the case warranted that the rights of the heirs weighed more heavily than the data protection rights of third parties. The court concluded that there is no justification for treating physical and digital assets differently for the purposes of the law of succession and as a result, the contract was

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<sup>473</sup> Jessica Hopper 'Digital Afterlife – What Happens to Your Online Accounts When You Die?' (*MSN*, 1 June 2012) <[http://rockcenter.msnbc.msn.com/\\_news/2012/06/01/11995859-digital-afterlife-what-happens-to-your-online-accounts-when-you-die?](http://rockcenter.msnbc.msn.com/_news/2012/06/01/11995859-digital-afterlife-what-happens-to-your-online-accounts-when-you-die?)> accessed 4 June 2014.

<sup>474</sup> *Ibid.*

<sup>475</sup> LG Berlin, Urteil vom 17 December 2015, 20 O 172/15.

characterised as heritable under the German Civil Code.<sup>476</sup> The decision is not final as Facebook's appeal is pending.<sup>477</sup>

In the US, the Revised Uniform Fiduciary Access to Digital Assets Act (UFADAA) has clarified the legal status of digital assets post-mortem. The Uniform Law Commission adopted the act in 2015 as a response to concerns raised by academics, lawmakers, and online service providers in relation to retaining control over digital property and specifically, its disposition post-mortem. It provides fiduciaries with access to digital assets and gives them the legal authority to manage digital assets and electronic communications in the same way as they would manage the deceased's tangible assets. Revised UFADAA establishes that generally, a "fiduciary will have access to a catalogue of the user's communications, but not the content, unless the user consented to the disclosure of the content."<sup>478</sup>

Questions of access and management of virtual assets may also arise in the case of a divorce. It is very common occurrence for users to get married in social virtual environments, such as Second Life. It consists of a very simple procedure. One user sends to his partner a request for partnership and if the other user accepts by clicking 'Accept', the pair has been officially married. Virtual marriage consists of two partners only; the environment does not allow for multiple partnerships. In addition, the environment offers an all-inclusive wedding service covering wedding planners, venues, catering, honeymoon destinations, etc., allowing users to create a truly special experience. In case the couple do not want to be married to each other anymore, a user can apply for dissolution of the partnership through their personal profile. After paying administration fee of 25L (Linden dollars), the marriage is dissolved. Consent of the other party is not required. When it comes to dividing virtual marital assets, the procedure is equally simple. Every virtual item is associated with a particular account; each user maintains their virtual possessions.

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<sup>476</sup> German Civil Code 1922.

<sup>477</sup> Kennedy and Millard (n 445).

<sup>478</sup> Revised UFADAA, preparatory note 2.

How does the situation change when a couple gets divorced in the real world? What happens to a joint virtual environment accounts or shared iTunes library? Family laws differ from state to state. In 'community property' states, marital property is divided equally between spouses in a divorce. The court has to decide which assets will be included in this category. This often proves difficult with personal and real property, let alone virtual assets. Hypothetically, if a spouse's wages bought a virtual real-estate development in Second Life, and if the other spouse rented out apartments in this online space, then the first spouse might be entitled to a share of the rent or proceeds from the venture if the couple divorces.

A case like that appeared in China in 2010. A wife requested that virtual assets earned by her and her husband over the course of their marriage be divided, along with the rest of their property. The couple met in an online game, married, and once married, continued to play the game under a single account registered in the husband's name. He controlled the passwords and virtual currency in the account.<sup>479</sup> When they decided to split, the husband refused to give his wife what she believed to be her share of the virtual property they earned together, leading her to file the petition. However, a Beijing court rejected her request, declaring that the law can only decide such matters "when virtual assets are related to the real world, such as when they have been valued with real currencies."<sup>480</sup>

This seems to be a different approach than the one applied in criminal cases involving virtual theft. Courts were inclined to recognise the real economic value of virtual property and actual financial harm, in which the theft resulted. There have been no other reported cases to date and it is therefore too premature to conclude, how a UK or US court would rule in a similar

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<sup>479</sup> Anita Ramasastry, 'Divorce, Digital Identities, and Virtual Property: Who Gets Your Facebook Friends and Farmville Dollars When You Split Up?' (Verdict Justia, 14 February 2012) <<http://verdict.justia.com/2012/02/14/divorce-digital-identities-and-virtual-property>> 12 September 2014.

<sup>480</sup> 'Court dismisses woman's claim to virtual assets' (China Daily, 27 December 2010) <[http://www.chinadaily.com.cn/china/2010-12/27/content\\_11761509.htm](http://www.chinadaily.com.cn/china/2010-12/27/content_11761509.htm)> 12 September 2014.

matter. Nevertheless, once the recognition of users' legal rights in virtual assets penetrates the legal system, it will be difficult to stop it from spreading into other areas of law.

## 5.6 Regulations Relating to Virtual Property

While there has been lack of regulation addressing the legal status of virtual property in Europe and the US, countries such as China, Taiwan, South Korea or Singapore have stepped in to assume authority over virtual environments, if only partially.

China's online gaming industry has been booming in recent years with a multi-billion dollar annual income and approximately 296 million players.<sup>481</sup> The case of Qui Chengwei, who stabbed another user to death over a dispute relating to virtual property, highlights the gap between applicable laws and users' legitimate expectations.<sup>482</sup> In reaction to this shocking case, the Chinese authorities were prepared to adopt a more proactive approach in similar cases of virtual theft that followed. Two seventeen-year-old boys received a sentence for virtual property theft in 2005, and the Chengdu police investigated a theft of virtual equipment worth approximately \$8,900.<sup>483</sup>

In the wake of increasing criminal activity in virtual environments, the country's Public Security Ministry published an advisory letter regarding virtual property theft in order to assist police with addressing the harmful practice. Despite successful prosecutions taking place, there is still a considerable lack of clarity and the authorities are considering the possibility to enact a specific law to protect virtual property.<sup>484</sup> This would be a preferable solution to relying on case,

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<sup>481</sup> Anil (n 352).

<sup>482</sup> 'Game Theft led to fatal Attack' (*BBC News*, 31 March 2005) <<http://news.bbc.co.uk/go/pr/fr/-/2/hi/technology/4397159.stm>> accessed 26 June 2012.

<sup>483</sup> Fairfield (n 37) 1085.

<sup>484</sup> *Ibid.*

because decisions in one court do not create a binding precedent. Secondly, the legal basis and reasoning for decisions is not always apparent and, ultimately, full texts of judgments are often not available or the judgments are very brief.

In Taiwan, the authorities were facing similar challenges and the government responded firmly and unequivocally. The Taiwanese Criminal Code protects electromagnetic records under theft provisions. Virtual assets are relevant to the law of property. They are alienable and transferable and theft of such property is fully punishable under criminal law.<sup>485</sup> Notably, the legislation expressly confers the right to control the electromagnetic record to the owner of the virtual object, not the owner of the server where the code happens to reside, or the intellectual property owner of the underlying software. Based on this legal concept, Taiwan has developed a comprehensive jurisprudence, numbering in the hundreds of cases, involving the protection of personal virtual property through the use of criminal theft, fraud, and robbery offences.<sup>486</sup>

Another country that has embraced the recognition and protection of virtual property is South Korea. The country boasts the highest broadband penetration in the world. With one of the largest gaming markets globally, it comes as no surprise it has an equally strong position in terms of virtual environment participation. South Korea has embraced the digital culture and developed ways to deal with disputes that can arise in the virtual environment context.<sup>487</sup> The Korean Cyber Terror Response Centre records show that an estimated seventy per cent of teenage crime is in some way related to virtual property.

The authorities and courts identified and extended existing criminal law principles to prosecute virtual property theft. Virtual assets are intangible assets, of independent value and under the control of users, rather than virtual environment providers.<sup>488</sup> A dedicated police

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<sup>485</sup> Ibid.

<sup>486</sup> Ibid.

<sup>487</sup> Rumbles (n 347).

<sup>488</sup> Ibid.

force deals exclusively with disputes relating to virtual property.<sup>489</sup> In addition, there also exists the Contracts Review Committee of South Korea, which responds exclusively to contractual disputes arising from End User License.<sup>490</sup> In September 2010, South Korea's top court ruled that unlike online gambling, acquiring virtual assets in virtual environments takes time, effort and skill. Therefore, virtual assets transactions are legal, as long as proceeds through authorised channels. In a related ruling, a South Korean court held that profits made economic transactions in virtual environments should be liable to taxation as an acknowledgement of the value of virtual property.<sup>491</sup>

The emerging legal framework of virtual property responds to a global trend that sees a growing number of users invested in virtual environments, in particular in their valuable virtual assets.<sup>492</sup> Together with the case law, they present a set of piecemeal rights of control over virtual assets. Critically, they describe identify the property-like characteristics of virtual assets, they have an independent value, they are durable, separable and transferable. There is a case for protection of virtual property, allocations of valuable resources, and thus limiting the potential for abuse.

## 5.7 Conclusion

Intellectual property laws are concerned with the recognition and protection of rights in respect of creative and informational subject matter, such as authorial works, inventions,

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<sup>489</sup> For example, Ward reports that there were over 22,000 crimes related to online gaming in 2004 alone. Mark Ward, 'Does virtual crime need real justice?' (*BBC News*, April 2003) <<http://news.bbc.co.uk/1/hi/technology/3138456.stm>> accessed 9 September 2012.

<sup>490</sup> Barker (n 221) 2.

<sup>491</sup> Anil (n 352).

<sup>492</sup> For illustration, this article lists the ten most expensive items users can come across in virtual environments, see Nathan Gibson, '10 Of The Most Expensive Virtual Items In Video Games' (*The Richest*, 2014) <<http://www.therichest.com/rich-list/most-popular/10-of-the-most-expensive-virtual-items-in-video-games/>> accessed 1 December 2016.



product appearance or confidential information. It is a legal regime that balances competing rights and interests in respect of this subject matter, or regulates access to their benefits.<sup>493</sup> It gives owners the right to restrict others from using the intangible subject matter protected by various intellectual property rights without affecting rights to their tangible manifestations. Virtual environments are digital products that will attract a variety of intellectual property rights as they consist of computer program, musical works, characters, storyline, logos and commercial signs, innovative game design and many others. There is much more to virtual environments than just the underlying code as was established in *Nintendo*.

There is no doubt that intellectual property rights apply, to some extent, to virtual environments, their constituent elements and the digital content within. This work argues that this does not include the acquisition, trade and transfer of virtual assets. Previous chapters explored the possibility of users being award copyright protection for their avatars<sup>494</sup>, expressive amateur creations<sup>495</sup> or their performances.<sup>496</sup> However, virtual asset transactions are not characterised by creative expression, nor does it rest on reproduction or distribution of copyright protected works. Based on the initial authorisation by providers, users exercise control over virtual assets they gained by playing the game, purchased or exchanged for another object through auctions and marketplaces. In the physical world, this would correlate with the distinction between intangible subject matter protected by intellectual property rights and their tangible manifestations that exist separately and independently from intellectual property. As such, there is no grounds for intellectual property to govern these transactions.

In the absence of intellectual-property-based legal grounds that would justify the elimination of property rights in virtual assets, providers have been using contract law and licence agreements to govern online communities, including virtual asset transactions. EULA and ToS contractual provisions govern the day-to-day interactions of millions of users aiming to

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<sup>493</sup> Justine Pila, Paul Torremans, *European Intellectual Property* (OUP 2016) 4.

<sup>494</sup> Chapter Three, section 3.5.1.

<sup>495</sup> Chapter Three, section 3.4.1.

<sup>496</sup> Chapter Three, section 3.4.3.

substitute real world laws such as the rules of private property, succession or the criminal system. Licence agreements function as a one-stop shop legal instrument to include all matters relating to interactions between users, providers and the environment, in the present and for the future. Contracts bind only those who are party to it and these promises do not bind, subject to number of exceptions, third parties. As such, contracts are not suitable to govern rights and responsibilities of vast and shifting communities.

Furthermore, contracts and license agreements in particular, are subject to a range of limitations. For example, the validity of license agreements and individual provision has been scrutinised in a number of recent decisions and signalled the need of providers to comply with national laws. As a result, the courts and relevant public authorities ruled these provisions invalid and ordered the provider to amend them accordingly.<sup>497</sup>

There is a clear disparity in the treatment of virtual assets and their counterparts in the physical world. In a growing number of instances, courts, authorities and academics have argued that this distinction is unjustified and users should enjoy a similar set of rights in respect of their virtual assets as well as the physical ones. The outline of different legal treatments demonstrates that it is possible to recognise and protect users' legal interests in virtual assets through public bodies' policies, case law and bespoke legislation. A different approach may be required when property entitlement to virtual assets arises in succession law or in the case of criminal law. The appropriate form of recognition and protection of virtual property will also depend on the jurisdiction and legal tradition of individual countries.

This thesis does not propose exact form that legislative measures should take. Instead, it seeks insight into conceptualising virtual assets from a number of different sources. This includes examining what specific steps have been adopted regulating virtual property in various jurisdictions. A broad review needs to be undertaken at the EU and national levels into the treatment of virtual and physical assets to determine whether current laws are suitable for the

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<sup>497</sup> Chapter Five, section 5.4.

digital era of the twenty-first century. This chapter emphasised a specific dimension of the differential treatment in the context of property rights in virtual assets and their physical equivalents.

The following chapter is therefore concerned with the nature of property. It communicated what we understand under the term of property, where the concept originates from and what rights and responsibilities it confers to owners of things. Legal interests in virtual assets are akin to other property rights. There is a case for protection of virtual property, allocations of valuable resources, and thus limiting the potential for abuse. Virtual property rights would bestow a set of transferable, assignable and exclusionary rights in respect of discreet and identifiable virtual objects. Users would have powers and privileges such as control, exploitation and exclusion, which would be enforceable in civil or criminal proceedings.

# Chapter Six: Justifications of Virtual Property

## 6.1 Introduction

Chapter Six focuses on the theoretical foundations of the concept of property. The primer on property theories informs us about the origins, justifications and consequences of property rights, as well as their role in allocating valuable resources and resolving social conflict. It also provides indicators of which ‘things’ can and cannot be owned and why. The Chapter then proceeds to demonstrate that the circumstances in virtual environments warrant the consideration of legal interests in virtual assets as virtual property. Virtual assets look and function like real property. Therefore, the concept of virtual property entails property rights in virtual items that are durable, separable things of independent value.

Virtual environments have become thriving virtual marketplaces where virtual assets have certain economic value. A closer look at how virtual economies operate in Chapter Three

revealed that it is immaterial whether the environment provider intended for an internal economy or not. Users have legitimate means to acquire virtual currency, access authorised auctions and marketplaces, and trade items of certain value in exchange for payment or other consideration and as such, virtual economies do not fundamentally differ from other types of other online marketplaces. By virtue of their representations and conduct, providers create legitimate expectations that users acquire legal interests in virtual assets. The very notion of sale operates with the concept of ownership and property. It rests on the assumption that, at a particular point, the ownership passes from the previous owner to the buyer.<sup>498</sup>

The Chapter explores the nature, meanings and theories behind the idea of property. It will focus particularly on the relevance of property theory in the context of virtual environments. Property is a social institution possessing significant historical variety and flexibility. Irrespective of the form it takes, property correlate with other themes central to human life – freedom, prosperity, security and self-expression. Property defines our personal space, and our rights and responsibilities, and this is true for both real and virtual environments. This Chapter is concerned with the connection between the process of social diversification and the recognition of property. When a society reaches a certain level of complexity, it will introduce commodification – marketplaces and trade for the exchange of goods and services emerge.<sup>499</sup>

This would support the view that property does not originate in law, but law merely formalises an institution that arises from social practice. Markets where anything can be transferred at prices agreed by willing parties maximise the overall utility and therefore the property system should facilitate such economic activities. Bentham demanded a comprehensive property law that would arise from system of legitimate expectations and comprise of clearly defined titles and objects of ownership.<sup>500</sup> A property system is a response to

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<sup>498</sup> Christiane Wendehorst discusses the fragile distinction between ownership and access, goods and services in the context of smart devices in 'Consumer contracts and the Internet of things' *Digital Revolution: Challenges for Contract Law in Practice* (Hart Publishing 2016) Reiner Schulze, Dirk Staudenmayer (eds) 204.

<sup>499</sup> This perspective would be in line with property justifications based on contemporary legal theories. Stephen Buckle, 1991, *Natural Law and the Theory of Property: Grotius to Hume* (OUP 1991).

<sup>500</sup> Alan Ryan, *Property and Political Theory* (Basil Blackwell 1984).

the requirement to efficiently use and distribute available resources. The thesis sets out that these property systems materialise as an inevitable outcome of economic transactions.

A set of basic principles and attributes, which distinguish property from other legal categories, emerges throughout the analysis in this Chapter. It would be incorrect to perceive that every relationship, transaction, or liability relating to tangible or intangible objects is relevant to the law of property. A contract with a business to provide service with respect to personal or real property will be part of the law of contract rather than the law of property. A person committing a tort of negligence in relation to property will be most probably qualified as part of tort law rather than of property.<sup>501</sup> What is special about property? Property is concerned with ownership, but the following attributes set it apart from other legal categories. Firstly, objects of property can be bought and sold. Secondly, property entails the right to exclude others.

The review of property justifications, theories and interpretations of property demonstrates that property is a complex and rather flexible concept that may change depending on the historical, social or legal context. Property definitions will differ in common and civil law jurisdictions, and may include different set of objects depending on the applicable law. It may be defined as a bundle of rights, or as correlating duties not to interfere and liabilities incurred by such interference. Harris and Penner identify the fundamental elements as the right to use, the right to control uses of others, and the right to alienate the rights of use and control.

## 6.2 Primer on Property Theories

The focus on intangible assets, in contrast to tangible assets, represents a paradigm shift in legal theories in general. In the modern history, this process has led to an increasing protection

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<sup>501</sup> Jim W. Harris, *Property and Justice* (Clarendon Press 1996) Chapter 4.

of concepts such as intellectual property, confidential information, or 'know how'. Information technology brings new dimensions to communication and socialisation and offers some yet unexplored opportunities for social, economic, political and legal development. Cyberspace is characterised by a network-type of interaction between participants and their individual contributions. Some online user communities develop into long-term projects – networks of relationships and transactions – that generate a highly valuable output. There is a question of legal governance and ownership with respect to this estimable production. Property law, intellectual property law, contract law, or for instance criminal law principles, may be relevant to this sphere. In order to build the case for the recognition of virtual property rights, it is first necessary to understand the origins, nature and scope of the concept of property. The following pages offer a primer on property theories, primarily exploring works that evaluate the social, economic and legal implications of property rights.

According to Glackin, contemporary legal theory comprises of two distinct schools of thought. The first theory has been prevalent among legal theorists for most of the last century and argues that the concept of property is akin to a 'bundle of sticks' and is therefore called the 'bundle theory' of property rights. In principle, the bundle theory holds that ownership can be broken down into separable elements – rights. Thus, ownership of a thing comprises, amongst others, a right of exclusion, a right of use, a right of possession, and a right of alienation, none of which are essentially connected. These separate 'sticks' in the bundle can accompany each other in any possible combination without being conceptually dependent on each other. This means neither right nor set of rights are essential to establish ownership. Ownership, proponents of the bundle theory argue, is an out-dated empty concept that determines nothing about legal relationships in respect of things.<sup>502</sup>

An interpretation of property, which rests on a robust ownership of things, challenges the 'bundle rights' theory.<sup>503</sup> It argues that while the 'bundle of sticks metaphor of property may be

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<sup>502</sup> Shane N. Glackin, 'Back to Bundles: Deflating Property Rights, Again' (2014) *Legal Theory* 20 (1): 1-24.

<sup>503</sup> *Ibid.*

instrumental in explaining and demonstrating how ownership operates, but it is not an adequate account of legislative and judicial justification for property rights. The most influential critics of the ‘bundle theory’ of property rights are James Penner and Jim W. Harris, both of which versions of property are explored later in this Chapter. The understanding of property, whether as a ‘bundle of rights’ or as a robust relation of ‘ownership of things’, influences the discourse about economic and distributive justice.<sup>504</sup>

This thesis is concerned with formulating the case for the recognition of virtual property rights. It is therefore necessary to define property at the outset. Property is a profound and fundamental social, political, economic and legal category. In order to understand the phenomenon of property in all of its complexity the following sections will explore the nature of property from various perspectives. The outcome will be a set of attributes of property rights characterised by a number of recurring themes and motifs across the spectrum of property theories. The nature of property materializes through the following set of questions.

### **6.2.1 How and Why Property Comes into Existence**

The view of modern natural law theory is that a certain category of rights and obligations exist independent of positive law. Grotius and Putendorf represent two main variations of modern natural law theory, which they perceive as “a science of morals grounded in human nature.”<sup>505</sup> The core element of the natural law tradition is the ‘sociable-ness’ of human beings. It is the balance between cooperation and competition that best characterises the nature of society. It is perfectly acceptable to pursue one’s own interests provided the rights of others are not infringed. Self-love leads to a high degree of sociability, kindness and respect and it results in mutual obligations. The source and origin of natural law comes from the necessity of self-preservation.

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<sup>504</sup> Ibid.

<sup>505</sup> Buckle (n 498).



The key feature of human nature is the notion of ‘one’s own’ – the *suum*. Grotius<sup>506</sup> defines *suum* as a set of essential possessions – life, limbs and liberty – belonging to each person and no one else can take them away from them without injustice. For Grotius “property relations are a natural response to the changes in human circumstances wrought by increasing sophistication in human social life.”<sup>507</sup> Therefore, property is a construction designed to protect and preserve human beings in a better, more effective way. At the same time, the right is not absolute as it provides for scenarios when individuals need to use or access resources owned by others. From the perspective of the doctrine of rights, property is a specific type of right empowering the person to access, control and use resources without injustice. Natural law theorists believe that rights are natural rights in the sense that they are necessary for peaceful social existence or an overall utility.

The moral theory posits that property arises from the interaction between humans and the external world. Men with their wills and purposes confront the immaterial world and imprint their mind in it. Ownership is a formal recognition of the human will to amass objects and control them. “Owning is having control to the full extent allowed by the law; and this can be naturally acquired by merely taking whatever it is”.<sup>508</sup> Several theorists have examined the process of acquiring and accumulating assets and laid down the necessary conditions. For instance, Locke is primarily concerned with the justification of the legitimate use of resources and the origins of private property.<sup>509</sup> Reeve “attempt[s] to establish an entitlement to property deriving from acts of original acquisition”.<sup>510</sup> His concern with the origin of property stems from

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<sup>506</sup> Hugo Grotius, *de Iure Praedae Commentarius* (first published 1604, OUP 1950); Puttendorf widely revised and commented on the natural law theory represented by Hugo Grotius and Thomas Hobbes. Samuel von Putendorf, *On The Duty of Man and Citizen According to the Natural Law* (first published 1673, Cambridge University Press 1991).

<sup>507</sup> Buckle (n 498) 11.

<sup>508</sup> Ryan (n 499) 24.

<sup>509</sup> English-born writer and philosopher, John Locke was one of the most influential figures amongst the Enlightenment thinkers. His writings inspired Voltaire and Rousseau, many Scottish Enlightenment philosophers, as well as the American revolutionaries. Locke argued that property is a natural right and derives from labour. Based on this premise, he developed a labour theory of property. John Locke, *Two Treatises of Government* (first published 1689, Cambridge University Press 1975).

<sup>510</sup> Andrew Reeve, *Property: Issues in political theory* (Macmillan 1986) 112.

the origin and justification of government.<sup>511</sup> Property serves as a moral space that allows an individual to exercise control over his own affairs. Ryan calls this approach instrumental, because the approach does not enquire into the essence of the relationship between owners and the owned, merely considering it sufficient to establish what gives a man good title to possession. The instrumental theory requires justification because the concept of property determines the freedom of everyone else to access, control and use the available resources.<sup>512</sup>

In contrast, the self-developmental approach does not see work as an obligation or punishment, but as an activity that can be and should be enjoyable, that should bring men pleasure. It is a way of expressing one's personality. Therefore, the relationship between a person and their possessions is essential and special. Hegel understood property as the realisation of man's freedom and his ability to impose his will on the external world.<sup>513</sup> Labour is the means by which man transforms the world around him and makes himself at home, which implies that property is a necessary outcome of the existence of freedom. Reeve concludes that Hegel realised the self-contradictory character of property and therefore perceives it "as a necessary but inadequate aspect of overcoming the apparent dualism between individual consciousness and the external world."<sup>514</sup>

With respect to the origins of property, there are two general standpoints: property exists independent of law - that is the view of the natural law tradition;<sup>515</sup> or property is a legal

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<sup>511</sup> Ryan (n 499) 27.

<sup>512</sup> Ibid.

<sup>513</sup> Georg W. F. Hegel was a prominent thinker of the Enlightenment school of thought and influenced philosophers such as Marx or Nietzsche. He has developed and articulated the philosophy of spirit, referred to as absolute idealism. He discusses the origin and nature of rights and identifies the willing subject as a bearer of fundamental rights. Georg W. F. Hegel, *Elements of the Philosophy of Right* (first published 1821, Cambridge University Press 1991).

<sup>514</sup> Reeve (n 509) 142.

<sup>515</sup> The natural law theory is a philosophy where certain rights are integral to human nature. The law and the fundamental rights are therefore universal and originating from either God, nature or reason. This is in contrast with man-made laws that originate from the community, state or judge. Some of the most influential thinkers and writers are, for instance, Aristotle, Cicero, Thomas Aquinas, Thomas Hobbes, Hugo Grotius, Samuel von Putendorf, John Locke, or Francis Hutcheson.

construct, which represents the positivistic view.<sup>516</sup> Davies argues that if property is a natural right, it ought to be self-evident and universal.<sup>517</sup> It is clear from the plethora of different views and interpretations of property that this is not the case. In general, this applies to any right, not just property. She argues that property has no essential or universal form, nor is it exclusively a legal creation; “property is itself plural, contestable, dynamic, and shaped by a multitude of legal and other discourses.”<sup>518</sup> She adopts a critical approach regarding positive law as conceptually plural, inseparable from social environments, and liable to be contested from both internal and external perspectives. In her view, a proprietorial, positivist, understanding of law might be practical but is not sustainable and she proposes the adoption of an alternative non-proprietorial approach. The horizontal, plural and social spaces of law are better visualised as a network rather than a pyramid. She is one of the authors who see the pluralism of property regimes as the only solution to balancing all of the existing competing interests.

This work adopts the view that property is inseparable from social and economic interactions. Property rights exist in connection with other political, social and legal concepts such as social justice, state powers and individual freedoms.

### 6.2.2 Property as an Innate Concept

The dictionary defines the term innateness as born with, possessed as an essential characteristic, or inherent. Something that is innate seems essential to the nature, character or constitution.<sup>519</sup> In the context of philosophy, for example, Plato<sup>520</sup> and Descartes<sup>521</sup> assumed

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<sup>516</sup> The concept of positive law is distinct from natural law and refers to a set of laws enacted by a state’s supreme power to apply at a certain time and at a certain place as far as it is binding. One of the most influential philosopher representing legal positivism was Hans Kelsen.

<sup>517</sup> Davies challenges the contemporary legal theory on property rights and offers a different account of property, perceived through the lens of feminist legal theory, legal pluralism and postmodernism. Margaret Davies, *Property: Meanings, Histories, Theories* (Routledge-Cavendish 2007) 17.

<sup>518</sup> Ibid.

<sup>519</sup> Oxford English Dictionary (online version [www.oed.com](http://www.oed.com))

<sup>520</sup> Plato was a philosopher in the times of Classical Greece and together with his teacher, Socrates, and his most influential student, Aristotle, Plato laid the very foundations of Western philosophy, religion and science.

<sup>521</sup> Descartes was a French philosopher, mathematician and scientist. He represents the school of thought known as ‘rationalism’ and opposed to empiricist thinks, such as Locke or Hobbes. Rene Descartes, *Meditations on First Philosophy* (Cambridge University Press 1986).

that a God or an equivalent being or process inserts innate ideas and principles into the human mind. An innate idea is something that is universal to all humanity – that is, something people are born with rather than something they have learned through experience. Noam Chomsky<sup>522</sup> argues that the environment is too variable and indeterminate a factor for it to be possible for people to derive all of their knowledge from it. He demonstrates his assumption with the example of linguistic skills. Language is a complex system, yet even very young children are able to learn and understand it. Chomsky concludes that humans must be born with a universal innate knowledge of grammar, because of the apparent invariability of human languages at a fundamental level. His research demonstrates that at least a part of human knowledge consists of cognitive predispositions triggered and influenced by the environment, but not determined by it.<sup>523</sup> The issue is controversial, and remains an aspect of a long-running nature versus nurture debate related to the question of understanding human nature.<sup>524</sup>

Innate ideas also play a crucial role in natural law, which rests on morals inherent to human nature.<sup>525</sup> Moral sense theory originates from Hutcheson and Hume, who believed that moral obligations originate in the moral sense, and when lacking motivation they required the back up of a formal legal framework. The moral philosophy reflects on the “approbation of the moral sense and establishes what the content of natural law is – a system of maxims, or rules of conduct derived from the moral sense”.<sup>526</sup> It is worth noticing that rules of conduct should comprise both rights and obligations, but Hutcheson defines the content of natural law exclusively in terms of rights. A right is a power to act rightly and to enhance the general

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<sup>522</sup> Noam Chomsky is an American linguist, philosopher and social critic. One of his influences is the foundation of cognitive science, which studies the workings of the human mind. He coined the term ‘universal grammar’, which refers to an innate body of knowledge possessed by language users.

<sup>523</sup> Noam Chomsky, *Aspects of the Theory of Syntax* (MIT Press 1965).

<sup>524</sup> This ‘debate’ reflects the distinct approaches to understanding human development and behaviour. John Locke coined the term ‘tabula rasa’ to indicate his belief that that humans acquire all or almost all their behavioural traits from ‘nurture’, while Charles Darwin’s book *On the Origin of Species* has informed the science of influence of heredity and environment on social advancement.

<sup>525</sup> Buckle (n 498).

<sup>526</sup> *Ibid.*

good.<sup>527</sup> Property is a right that originates in human moral sense and is therefore universal to humankind and innate.

Some early empiricists such as John Locke, also an exponent of natural law, claimed that the human mind is a 'blank slate' at birth. In his view, there are no innate ideas. Knowledge only arises from experience. Locke's framework for natural law is explicitly theological.<sup>528</sup> Natural law is part of Divine Law and the source and origin comes from the necessity of self-preservation. "Property relations are a natural response to the changes in human circumstances wrought by increasing sophistication in human social life."<sup>529</sup> Property arises naturally from human practices, from the recognition of the fundamental moral domain of what is one's own. Locke uses the term property in two senses. Strictly, it refers to goods, while in broader terms it encompasses 'Life, Liberty, and Estate'. As Davies points out "the person already has property in himself before coming across any external thing or person."<sup>530</sup> A person is born without any imprinted ideas; rules of moral conduct together with ownership in one's person derive from God.

Utilitarian theories present the view that the state of scarcity and mutual competition required the existence of a system of private property. They are conditions of a natural state, which was the pre-social stage. For example, Hobbes depicts it as a state of war.<sup>531</sup> On the contrary, Rousseau<sup>532</sup> believes that there was no natural cause of conflict. Man was wild, solitary and selfish and because he led an isolated existence, there was no need for confrontation. He believes that property can exist only in a civilised and developed society with a political constitution and authoritative legal system. Similarly, to Rousseau's view, Hegel<sup>533</sup> argues that property can only exist in the context of a community, because it recognizes

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<sup>527</sup> Ibid.

<sup>528</sup> John Locke, *Two Treatises of Government* (first published 1689, Cambridge University Press 1975).

<sup>529</sup> Buckle (n 498) 56.

<sup>530</sup> Davies (n 516) 99.

<sup>531</sup> Buckle (n 498) 64.

<sup>532</sup> Ibid.

<sup>533</sup> Georg W. F. Hegel, *Elements of the Philosophy of Right* (first published 1821, Cambridge University Press 1991).

individual identities and personalities. Humankind with their wills and purposes confront the immaterial world and imprint their mind on it. Each human as a conscious agent aims to subject another to his will “by wanting the world to be his and everything in it to be dependent on his will.”<sup>534</sup> From this perspective a person and their property is post-social, and therefore not innate.

Modern scientific research has followed various leads to suggest alternative approaches. In the social and political sciences, the nature versus nurture debate translates into a structure versus agency debate – for instance, socialisation versus individual autonomy.<sup>535</sup> Behavioural geneticists<sup>536</sup> examine the role of genetics in animal (including human) behaviour. Many scientists feel that the very question opposing nature to nurture is a fallacy. Evolutionary biology<sup>537</sup> gives an insight into human nature from the perspective of genes, instincts, and the social life of the animal world. Human nature is as a product of “the billion-year coagulation of our genes into cooperative teams, the million-year coagulation of our ancestors into cooperative societies, and the thousand-year coagulation of ideas about society and its origins.”<sup>538</sup> Social development thrives because of a continuous competition and struggle, but also cooperation between individuals seeking mutual benefits. This approach suggests that certain innate ideas are part of our genetic make-up. It operates with the assumption that property can be associated with the early historical stages of our society and it is therefore part of human genotype. The substance of social institutions, for instance monogamous marriage or ownership, becomes clearer by comparing and contrasting the process of human and animal

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<sup>534</sup> Ryan (n 499) 120.

<sup>535</sup> Analogous conflict exists in social sciences over the superiority of structure or agency in shaping human behaviour. Structure reflects the existing patterns or arrangements in society that limit or influence individuals' choices and opportunities, while agency is the capacity of individuals to act independently.

<sup>536</sup> Behavioural genetics is often associated with the nurture versus nature debate. It is a field of study that examines the role of genetic and environmental influences on animal behaviour, including humans.

<sup>537</sup> Evolutionary biology studies the various forces driving evolutionary process and going beyond natural selection, including sexual selection, genetic drift and biogeography.

<sup>538</sup> Matt Ridley, *The Origins of Virtue* (Penguin 1996) 7. Ridley has popularised the field of evolutionary biology through his books and in here, he focuses on the development of human society and morality.

evolution, identifying common features and analysing the causes of certain features' appearance.<sup>539</sup>

All animals tend to multiply beyond their means of subsistence, which leads to a struggle for existence and to natural selection,<sup>540</sup> and competition for scarce resources. The process of evolution co-exist with sexual selection,<sup>541</sup> which gives an advantage to individuals over their rivals and helps to allure or excite females. Sex drives evolution and results in uniqueness of every individual, different natures of genders, and an inherited characteristic to be attracted to people with "high reproductive and genetic potential, in other words to the healthy, the fit and the powerful."<sup>542</sup> As we could see in chapter Two<sup>543</sup>, the process of creating an avatar is, to a certain extent, similar to the evolutionary process. In particular, the evolution of individual skills, social status and integration into the existing social structures, although on a much shorter time-scale. At the outset, certain skills or powers are balanced with a lack of strength or intelligence. Yet as the avatars progress through the environment and gain experience and new skills, their social status grows. In turn, this lends further support to development of virtual property theory and the link to 'owning' objects.

This approach can offer a new perspective on the theory of property by understanding the motivation behind the need to *own* – to exercise control and power over available resources. Ridley compares humans with animal species in order to extract a set of behavioural rules intrinsic to human social life. He elucidates the motivation behind the need to amass, accumulate, and control external resources. He argues that humans are self-domesticated animals as any dog or cow may be.<sup>544</sup> Despite the conditions, many experiments proved that

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<sup>539</sup> Ibid 47.

<sup>540</sup> Natural selection is a key mechanism of evolution and explains the variations amongst species and individuals. Charles Darwin articulated the theory in his book *On the Origin of Species*.

<sup>541</sup> Sexual selection is a manifestation of natural selection and it determines, for instance, physical appearance and behaviour of male and female individuals. Further developed in Matt Ridley, *The Red Queen: Sex and the Evolution of Human Nature* (Penguin 1993).

<sup>542</sup> Ibid 13.

<sup>543</sup> Chapter Two, section 2.6 Avatars and the Art of Socialisation examines in more detail the process of creating an avatar, the importance and functions of avatars in virtual environments.

<sup>544</sup> Ridley *The Red Queen: Sex and the Evolution of Human Nature* (n 540) 103.

human communities would always introduce a hierarchy and always atomise into possessive sexual bonds. A system of common or private ownership will spontaneously develop together with procedures for dispute resolution in order to manage available resources. Property rights are an integral part of social life, they define our identities and institutions, and serve as boundaries, property drives communication and exchange. If that is the case, property rights are likely to be present in virtual environment communities as well.

Ridley explores property from the perspective of environmental sustainability, co-operation and exploitation. He argues that all environment-related values may result from a process of learning and socialising. His aim is to overcome the presumption of a 'tragedy of the commons'<sup>545</sup> and prove that commons do not necessarily equate to 'free-for-all'.<sup>546</sup> On the contrary, many examples show that common ownership often comprises individual private rights allocated to specific persons. Various functional systems of common and private ownership regarding resources like fish, water for irrigation, forests, etc. have developed independently from any coercion by, or intervention from, a central authority or government. The Maine Lobster Fishery is a well-known example of how individual self-interest combined with biological and technological circumstances can lead to conditions that are conducive to collective action.<sup>547</sup>

The case study focuses on the way in which social structures emerge from a competitive behaviour amongst fishers.<sup>548</sup> Lobster fishers contend to find the best patch of resources and at the same time, they attempt to destroy the traps of other fishers. Both forms of competition lead fishers to interact frequently and to self-organise into relatively small groups. They are

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<sup>545</sup> The tragedy of commons is an economic theory. It refers to a situation, when users of a commonly shared resource act independently, guided by their own self-interest, with the result of depleting that resource. This is obviously contrary to the common good of all the users as a community.

<sup>546</sup> The term commons originally meant common land and the related use-rights. However, in this context it refers to any shared and unregulated commodity, such as oceans, atmosphere, fish stock or ideas.

<sup>547</sup> Jack Wilson, Liying Yan and Carl Wilson, 'The Precursors of Governance in the Maine Lobster Fishery', *Proceedings of the National Academy of Sciences of the United States of America* (2007)104 15212-15217 <<http://www.pnas.org/content/104/39/15212.full>> accessed 30 April 2010.

<sup>548</sup> *Ibid.*



forced to restrain their competitive behaviour in favour of their neighbours but do not extend that same restraint to non-neighbours. The basic premise of the model is that the combination of the relatively settled behaviour of lobsters and the technology used to capture them, together with the self-interested, competitive behaviour of individual fishers creates circumstances that facilitate collective action. The authors argue that the notion of property is an intrinsic element of human society, which will spontaneously develop in various forms under any circumstances.

Fairfield and Castronova conducted similar research in virtual environments. They describe the 'Dragon Kill Points' system,<sup>549</sup> which is a self-enforcing and non-pecuniary set of rules designed to regulate the allocation of valuable resources.<sup>550</sup> In video games based on a massively multi-player online environment (MMO), users have to co-ordinate their efforts in larger groups and over a longer period in order to collect rewards to overcome challenges present in the environment. Given the intense time and effort commitments made by the players, they care deeply about who will receive which reward and disputes can break out. The Dragon Kill Points (DKP) system developed over time to facilitate transparent and equitable allocation of rewards. The authors emphasise the fact that these systems are extremely efficient due to the strong social connections

This example illustrates the numerous arguments put forward the concept of virtual property. Users are encouraged to collect valuable items rewards, but without being granted property rights in their virtual assets. Yet the notion ownership underlies the economic and social interactions in virtual environments and informs various informal and semi-formal policies, such as virtual land covenants (governing the use and control of virtual land) or DKP systems (governing the distribution and allocation of valuable virtual items). These rules reflect existing social practices and arise independently of the environment's design (internal economy may or may not be part of the architecture) or provider's intentions (asserting all rights over the

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<sup>549</sup> Castronova and Fairfield (n 296).

<sup>550</sup> The system is described in more detail in chapter Four, section 4.3 Rules and (Un)Fair Play.

environment's content to themselves). It further supports the argument that the notion of ownership and property is inherent to human nature and exists as a response to interactions with other and the environment.

As the mainstream theories inform us, property either exists as part of the natural order of things, or arises with an increasing sophistication of social interactions or as a direct result of subjecting the external world to our will. If we are to accept natural theory, supported by the findings of evolutionary biology, property is a universal institution that will play a central part within any society. Therefore, property systems will be an integral part of life in virtual environments irrespective of the providers' intentions, design and legal documents stating the opposite. They can prevent users from acquiring property rights through code, architecture or contract, but users will feel and behave like owners in respect of their possessions regardless of this. Another position is that property, amongst other fundamental institutions, is a part of the necessary framework of polite and civilised society. It is a focal point in determining our social rights and responsibilities, our freedoms. Again, if applied to virtual environments, we can conclude that after the initial stage of the 'natural state', property rights will arise together with other social norms in order to maintain both social cohesion and competition.

### **6.2.3 Property as a Social, Political, Economic or Legal Construct**

Property means different things in different contexts. Various property systems provide for differing ownership criteria, differing levels of control over property, and differing rights, for example, with regard to access to land, and so forth.

#### Property as a Social Construct

A variety of theories works with the notion of social contract.<sup>551</sup> It explains the legitimate origins of governments and states, whose main task is to maintain social order. It is a turning point between the natural pre-social state and a sophisticated form of co-habiting. To avoid the state of war and establish social order, people surrender sovereignty to a government or other

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<sup>551</sup> Vivien Burr, *An Introduction to Social Constructionism* (Routledge 1995).

authority that offers to guarantee the rule of law. The standpoint of natural law is in accordance with the existence of social contracts. People derive the notion of 'one's own' from their moral sense. It is an idea of a private sphere defining an individual in the social order, and a political realm that is morally inviolable, both of which require adequate societal protection that may include legal regulation.<sup>552</sup>

The moral criterion of utility indicates that people are motivated to co-operate and seek mutual benefits. Locke, one of the most influential representatives of the social contract theory,<sup>553</sup> argued that people feared each other in the state of nature and agreed to form a state in order to protect their lives, liberty and property. His theory elaborates on the utility theory through labour. Labour improves human life, secures preservation and serves God. Through this argument, Locke builds his theory of property on the workmanship model of society. It presupposes "an original community designed specially to meet the needs of the workmanship model"<sup>554</sup> and labour as improving activities. He is a strong supporter of enclosure, and the rational and effective use of available resources. In the end, by introducing God and Divine Law as the origin and source of natural law, Locke negates the view of property as an institution with purely social foundations.<sup>555</sup>

Rousseau, on the other hand, drew a different conclusion from the acceptance of social contracts and he considered state and related social institutions to be socially constructed.<sup>556</sup> He advocated liberal republicanism, because he believed that people are the only legitimate source of fundamental rules of social conduct. Law is a civilising force that led humans from the state of nature to a civil society and the rule of law determines what is good for the society at large forcing the individual to abide by the rules. He was convinced that only a certain property system was consistent with a democratic society. Moreover, it requires justification, because one's property limits the freedom of everyone else and excludes him or her from using and

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<sup>552</sup> Ibid.

<sup>553</sup> Locke (n 508) 78.

<sup>554</sup> Buckle (n 498) 152.

<sup>555</sup> Ibid.

<sup>556</sup> Ibid.

acquiring those resources. In compliance with his views the self is not given to humans by God, nor fixed by nature, but is constructed by society.<sup>557</sup>

Maximising the total utility of individuals in order to secure overall utility is the main doctrine of utilitarianism. Bentham emphasised that “[property] rights were not absolute, that they were licenced by the larger purpose of the whole society.”<sup>558</sup> This provides mechanisms to determine what uses are bad or good, rational or irrational; purposes of the larger society legitimize purposes of individuals while individual purposes form those of larger society. In addition, Mill’s view on property<sup>559</sup> is that ownership is more a social privilege than a natural right. Property as a social construct has crystallised by habit into an institution from the mass of subjective understandings of individuals and underlined by language, philosophy, and socialisation to become part of human identity.

The previous Chapters provide evidence that the notions of property and ownership are part of the fabric of virtual environments. Even where the designers of virtual worlds did not account for virtual property or virtual economy, these institutions have spontaneously developed. For example, the MUD LambdaMOO initially did not recognise the institution of ‘ownership’ or ‘property’ within the environment, but an increasing number of property-related conflicts became a pressing issue for the provider. Amongst other reasons, it was necessary to determine who owns and therefore controls the airspace above land occupied by individual users, who owns popular areas and objects freely accessible to public, or what happens with the virtual assets of a deceased avatar. The provider responded by introducing the institution of ownership and control in order to manage the data space available to each user for building and creating objects.<sup>560</sup>

### Property as a Political Construct

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<sup>557</sup> Ibid.

<sup>558</sup> Ryan (n 499) 133.

<sup>559</sup> Ibid.

<sup>560</sup> Mnookin (n 315).

Liberalism derives from values like liberty and equality. Early liberal tradition regards property as one of the basic liberties.<sup>561</sup> The freedom to acquire and dispose of private property was essential. The distribution of property and the role of state and individuals in this process are the key elements in this ideology.<sup>562</sup> Liberalism, as an independent philosophical tradition, originates from the work of John Locke, one of the early liberal thinkers.<sup>563</sup> He employed the concept of natural rights and the social contract to argue that the rule of law should replace absolutism in government, that rulers were subject to the consent of the governed, and that private individuals had a fundamental right to life, liberty, and property.<sup>564</sup>

Reeve points out that the liberal conception of property evolves from narratives such as the distinction between private and public, the ‘possessive individual’, and property as a protection against the state. In this view, property marks out private and public zones. It constitutes citizenship, and provides effective safeguards against state interference. Property, together with other individual rights, is inviolable. This is a fundamental criterion for free and democratic society. This concept confers power connected with property on individuals; “people are regarded as equally free, equally able to accumulate (subject to opportunity), and differentiated in private by their property.”<sup>565</sup> The emphasis on the property-power link is supposedly irrelevant in the public sphere by virtue of the equality of citizens as political actors.

Freedom or self-determination has important ontological implications in the works of Plato<sup>566</sup>, Kant<sup>567</sup> and Hegel.<sup>568</sup> Hegel presents property rights in terms of freedom, because law itself is an expression of human freedom. He “rejects social contract as an account of the actual

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<sup>561</sup> Ibid.

<sup>562</sup> Paul Kelly, *Liberalism* (Polity Press 2007) 20.

<sup>563</sup> Ryan (n 499) 156.

<sup>564</sup> Ibid.

<sup>565</sup> Davies (n 516) 10.

<sup>566</sup> Plato (n 519).

<sup>567</sup> Immanuel Kant was a German philosopher who revolutionised philosophy by arguing that human experience is dependent on the structures of human mind. Immanuel Kant, *Critique of Pure Reason* (first published in 1781, CreateSpace Independent Publishing Platform 2011).

<sup>568</sup> Hegel (n 532).

origin of states and the law, but as a model for legal relations too.”<sup>569</sup> Men are born free and property rights are implicit in a society where men are born free. The capacity of property system to exhibit great variety causes difficulties for a political theorist when trying to specify the content, formal characteristics of property, historical development, and especially when investigating the connection between property, liberty and labour. There are distinct concepts of liberty and the nature of labour, which flow from alternative understandings of human nature and the primary purpose of social organisations like markets.

Protection of legal rights in virtual assets can serve as a protection of users’ virtual identity and virtual space with respect to interference by a third party, whether that is the environment’s provider or other users. Raph Koster has advocated for the recognition of avatars’ rights and freedoms while other authors have used the concept of virtual property as means of curtailing providers’ powers.<sup>570</sup>

#### Property as an Economic Construct

Property provides links between economic, legal, and political systems. The economic approach mainly focuses on access, use and management of available resources. Posner<sup>571</sup> suggests that property rights encourage the effective usage of resources. The focus of the analysis is on resources, not things. Resources can be any object of want. He sees the efficiency of property rights in their being universal, exclusive and transferable. Economists talk about ownership as a bundle of property rights, leaving out the liabilities it carries with it. Pryor<sup>572</sup> insists that property rights must have an economic value as well as being exchangeable.

Private property is an essential foundation of markets, which are universal forums for exchange.<sup>573</sup> In general, a market facilitates the exchange and distribution of goods or services between the participants by the operation of a price mechanism. The extent to which a market

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<sup>569</sup> Ryan (n 499) 121.

<sup>570</sup> Koster (n 227).

<sup>571</sup> Ryan (n 499) 93.

<sup>572</sup> Ibid.

<sup>573</sup> Ibid.

system depends upon a particular property system is a question that divides theorists across the political spectrum. Economic accounts tend to see property as intrinsically tradable objects, while encouraging the commodification of resources in non-traditional areas. This may result in reducing all rights into alienable property. De Soto conducted an empirical study<sup>574</sup> in order to explain why capitalism does not flourish in the poor post-communist countries. He identified the cause as a lack of formalised property systems. In order to transform the extensive grey economy, it is necessary to establish and normalize the invisible network of laws that will turn dead assets into liquid capital. He believes that by focusing on building a legally integrated property system people's work and savings will convert into capital. This would support the view that property does not originate in law, but law merely formalises an institution that arises from social practice.

New developments in the field of technology illustrate how of new business models challenge the existing concepts of property. For example, intellectual property has gained immense economical potential and importance, as the assets of many companies are almost exclusively intellectual-property rights. On the other hand, technology causes anxiety for those who wish to maintain control over intellectual resources. This necessarily requires continuous justification of granting property rights in respect of a specific category of assets and within a specific scope. It also means a continuous re-adjustment and evolution of meanings and legal theories of property, for it is the key role of law to encompass, protect, and balance contesting interests and values.

The economic perspective of property primarily focuses on protecting the value of things. Moreover, while the economic value of virtual assets may be an important consideration, it will not suffice to justify the grant of property rights in virtual assets. It is users' legitimate expectations about acquiring property rights, based on the social practice of exploiting virtual assets that primarily warrant the concept of virtual property.

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<sup>574</sup> Hernando De Soto, *Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else* (Basic Books, New York 2000).

### Property as a Legal Concept

Unlike the natural law, legal positivism sees the law as being conceptually separate from moral and ethical values. Law consists of man-made rules based on custom or convention. This school of thought begins with Bentham, and develops through works of Austin<sup>575</sup>, Kelsen<sup>576</sup> and Hart<sup>577</sup> with distinct consequences in common and civil law jurisdictions. It is a system of rules legitimately introduced by the legislative power and enforced by sanctions. In this account, the legitimacy derives not from God or nature, but from the legal system as such.

Bentham bases his theory on expectations. He proposed a comprehensive property law that would arise from system of legitimate expectations and comprise of clearly defined titles, objects of ownership.<sup>578</sup> Positivist and realist thinkers argue that property is not a special relationship and that the difference between property and other legal obligations “is that property gives rise to a multitude of rights and correlative duties, whereas rights arising under a contract are confined to the parties.”<sup>579</sup> This is essence encapsulates the difference between rights *in rem* and rights *in personam*.

The comparison of Anglo-American and continental tradition shows that the theory of property took different directions. Common law perceives property as a set of rights defining a specific relationship between persons and things. This set of rights will include the right to use, transfer, or to exclude others from using the thing. Property is not fixed. It has no distinct, special and fundamental characteristics. Probably the most typical attributes of property are flexibility, variability and ambiguity. In this sense, common law supports this flexibility and allows for an increasing range of things to become object to property.<sup>580</sup> By contrast, in the civil

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<sup>575</sup> John L. Austin was a British philosopher, mainly focusing on the theory of language. He advocated the examination of the way words are used in order to understand their true meaning.

<sup>576</sup> Hans Kelsen was an Austrian jurist and legal philosopher, one of his most influential works on legal positivism was *Pure Theory of Law*.

<sup>577</sup> Herbert L.A. Hart was a British philosopher and a leading figure in political and legal philosophy. Alongside Kelsen, he articulated and defined the concept of law. His most famous work is *The Concept of Law*.

<sup>578</sup> Ryan (n 499) 99.

<sup>579</sup> *Ibid.*

<sup>580</sup> *Ibid.*



law tradition, ownership specifically comprises of both rights and obligations, while the term property refers to a class of objects. From the outset, the owner has to dispose of their property within the limits imposed by the laws and other people's freedoms. This interpretation of property and ownership does not present it as an 'absolute' right. For example, article 11 of the Charter of Fundamental Rights and Freedoms of the Czech Republic, which is part of the constitutional order, states "Ownership entails obligations. It may not be misused to the detriment of the rights of others or in conflict with legally protected public interests. It may not be exercised so as to harm human health, nature, or the environment beyond the limits laid down by law."<sup>581</sup>

A robust protection of property rights is essential for proper development and functioning of the market economy system. Honoré lists rights and liabilities that "constitute the content of ownership as following: the rights of use, of management, to possess, to an income, to security, to capital, transmissibility, absence of term, prohibition of harmful use, liability to execution, and residuary character."<sup>582</sup> This reflects commercial practices. For instance, a property owner can rent out their house to tenants without losing ownership in the house. To acquire a certain legal or economic interest from another does not necessarily mean that the buyer or customer will own the particular asset.<sup>583</sup> This is an important distinction of subject matter. The intellectual property owner of virtual content only transfers a limited licence to the player to use the content in a very specific way. Yet, the player acquires a distinct, separate legal interest in the same virtual object through acquiring that object in virtual environments.

The thesis argues that the idea of property is innate – programmed in our very nature. Social conventions give rise to the need to allocate and share scarce resources. A property system naturally gives rise to a market economy, which governs the allocation of the scarce resource (property). As societies mature, a hierarchy of property interests develops, and the property

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<sup>581</sup> Charter of Fundamental Rights and Freedoms, The Constitutional Court of the Czech Republic, <<http://www.usoud.cz/view/1443>> accessed 20 August 2010.

<sup>582</sup> Tony (A.M.) Honoré, 'Ownership' in Anthony G. Guest (eds.) *Oxford Essays in Jurisprudence* (Oxford University Press 1961) 107-47.

<sup>583</sup> Reeve (n 509) 19.

market becomes more developed. These natural trends in social development arise in the virtual environments, where the principles of social interaction, development, market economies and scarcity of resources prevail.

### 6.3 The Nature of Property

Understanding the nature of rights and liabilities conferred by the law of property is essential in determining whether users' legal interests in virtual assets are merely a metaphor of property or actual property rights, will all the necessary consequences. The rubric of *property* or *ownership* invariably means a legal relationship either a set of legal rights or a legal entity with a distinct moral status. Whatever the meaning, property is a central concept to every legal system and historical developments form two distinct legal traditions. The origins of common law go back to land appropriation, because land used to be the most important and enduring form of wealth. It is a relationship comprising of a separable bundle of rights between the owner and their possessions, which will vary according to the context and the type of asset.

Hohfeld elaborated the bundle theory by claiming that property relations consist of a variety of legal relations, in particular claim-rights, privileges, powers, and immunities.<sup>584</sup> Moreover, he claimed that instead of being a legal relationship between a person and things, property relations are legal relations between an infinite numbers of persons in respect of a thing. This argument removes the legal distinction between rights *in rem* and rights *in personam* as it argues that rights *in rem* are in fact a multitude of rights *in personam*. To the contrary, the notion of property in civil law tradition originated from the appropriation of movable property, such as animals or goods. *Dominium* (property in Latin) is as an unlimited legal domain over a

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<sup>584</sup> Wesley N. Hohfeld, *Fundamental Legal Conceptions as Applied in Judicial Reasoning*, (Yale University Press 1946).

thing. *Dominium* is absolute, direct and universal and as such, it stands on the top of the hierarchy of legal rights – rights *in rem*.

The law provides a positive account of property. It defines what property is, what can be the object of its protection, and determines which interests are proprietary. Property refers to a set of privileges, which is open-ended, that is, there is no exhaustive definition or list of proprietary interests. However, the right to use, the right to control uses by others, and the right to alienate the rights of use and control are the most dominant and characteristic aspects of property. At the same time, the concept of property provides limits and correlatives for the absolute character of legal rights, standard incidents of ownership, and a catalogue of tangible and intangible things to which these incidents refer.<sup>585</sup>

Both property and contract law are central to a functioning market economy. While property law determines what ownership entails, under which circumstances it arises and what the objects of property are, contract law governs the rights and obligations of the parties under a voluntary agreement, a contract. It governs the relationship, validity and interpretation of an agreement between two or more persons (individuals, companies or other organisations) regarding the sale of goods, the provision of services or exchange of interests or ownership.<sup>586</sup> There is another significant difference between contractual and proprietary rights. Property rights are rights *in rem*, which means that they represent the relationship between the owner and the object of property. As such, they are universal, applicable and enforceable against everyone. Rights *in personam*, in contrast, constitute binding obligations only between the contractual parties. Under privity of contract, a fundamental principle in contract law, a third party cannot enforce a contract to which it is not a party.<sup>587</sup>

The previous chapter examined the existing regulatory framework in relation to virtual assets and established that contracts played a significant role in both allocating intellectual property

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<sup>585</sup> Ryan (n 499) 190.

<sup>586</sup> *Ibid.*

<sup>587</sup> The principle is discussed more closely in chapter Five, section 5.4 Limitations and Challenges

rights over virtual assets and governing virtual environments. The relevant sections of chapter Five addressed the legal nature licence agreements, standard terms and conditions, validity, and enforceability of individual provisions. Some authors have suggested that the contracts are essentially unfair and could be challenged based on consumer protection laws.<sup>588</sup> However, the use of contract as means to regulate a complex set of issues such as code of conduct, game rules in-game disputes and incidents, privacy policy, intellectual property rights or dispute resolution procedures between users and the provider is inappropriate. In addition, current consumer protection legislation only applies in business-to-consumer transactions and thus it is difficult to see how that would encompass virtual asset transactions between users. Fairfield claims that licence agreements alone cannot give rise to rights and obligations for an entire online community. He advocates for real-world laws such as property rights, torts and fundamental legal systems that are critical for communities to thrive.<sup>589</sup>

The analysis of structural, social and economic characteristics of virtual environments and the existing regulatory framework leads to the conclusion that neither contract, consumer protection legislation, or intellectual property law address the substance of virtual assets transactions. Instead, as the primer on property theories usefully demonstrates, the law of property is more adequate and appropriate to account for legislative and judicial justification for property rights.

## 6.4 The Foundations of Property

The review of property justifications, theories and interpretations of property demonstrates that property is a complex and rather flexible concept that may change depending on the historical, social or legal context. It transpires that a property right comprises, amongst others, a

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<sup>588</sup> Jankowich (n 52) 50. Paul Riley, 'Litigating Second Life Land Disputes: A Consumer Protection Approach' (2009) 19(3) *Fordham Intellectual Property, Media and Entertainment Law Journal* 907.

<sup>589</sup> Fairfield (n 37).

right of exclusion, a right of use, a right of possession, and a right of alienation, but neither of these rights are essentially connected. The 'bundle of rights' approach to property does not therefore provide a satisfactory answer to the core question arising from virtual assets transactions and that is who owns a virtual sword or virtual in World of Warcraft or virtual real estate in Second Life. Arguably, users may purchase any virtual item from the provider or other user through authorised channels, they exercise certain degree of control over their virtual property, they can transfer it to another and they can prevent others from using or access it without their permission. Yet, that does not automatically make them owners of their virtual property. Therefore, the next section explores a school of thought that argues all property relations comprise of a 'minimal structure'.<sup>590</sup> These core elements unite the concept of property and distinguish it from other legal interests.

According to Harris, common foundations of all property institutions (property as land, chattels, intellectual property or virtual property) rest on two pillars, 'ownership interests' and 'trespassory rules'. Together with other optional elements, these create the minimal structure.<sup>591</sup> Ownership interests encompass owner's rights and privileges with respect to a thing, while trespassory rules ensure others will not interfere with this relationship. Penner identifies the foundations of our understanding of property as the 'separability thesis' and the 'exclusion thesis'. Property is best defined by the duty imposed on others to respect property by not interfering with it (exclusion thesis). This relationship is a right *in rem*, because it does not involve any personal dealings with the owner. Instead, it arises from the things the owner owns which, as separable things, exist in their own right (separability thesis).<sup>592</sup>

Property institutions consist of three fundamental elements. These are the right to use, the right to control uses of others, and the right to alienate the rights of use and control. The right to use allows the holder to use a thing within a scope of use-privileges conferred upon him by

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<sup>590</sup> Jim Harris and James Penner both advocate for establishing a robust ownership of things, which would be more adequate and appropriate to account for legislative and judicial justification for property rights.

<sup>591</sup> Harris (n 500) 56.

<sup>592</sup> Penner (n 462) 117.

the specific property institution. For example, an easement is a proprietary interest that allows individuals to use another's land for specific purposes without possessing it. This brings us to the concept of possession or occupation (in the case of land), which is best expressed in the right to control uses of others. Possession refers to a situation of fact, which describes the control that a person may have over a thing. By occupying or taking hold of a thing, we act as owners and thus enforce the general duty of non-interference. All members of society are obliged to exclude themselves from things granted with proprietary interests better than our own. Ultimately, the right to alienate the rights of use and control is inherent to property rights higher on the spectrum. The element of transferability entails powers of exchange, sale, and gift and, finally, testamentary freedom. Without having the right to alienate his rights to another, a person can be merely a protected possessor.<sup>593</sup>

The works of Harris and Penner propose that these three elements are separately or collectively present in different property rights. In order to resolve tension between individual rights, they are ordered hierarchically and a stronger property right trumps a weaker one. This allows resolving disputes between parties who wish to make inconsistent uses of a thing. These elements confer some open-ended use-privileges and control-powers to the holders of proprietary interests and their scope depends on where their interest stands on the hierarchy of legal rights.<sup>594</sup>

Harris sees property in land as an ideal example to demonstrate the variety of different proprietary interests that may subsist in an asset. At the upper end of the property spectrum is 'ownership', which is essentially an absolute legal interest in a thing and thus it contains all the three elements of a property institution. As such, it operates with the assumption that the owner is entirely free to do what he will with his property, whether by way of use, abuse, or transfer. For instance, an estate in land is essentially the legal and beneficial rights and interests

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<sup>593</sup> As Harris explains "in the case of chattels, the interest of a bailee may be protected against third-party wrongdoers, but it is generally not enforceable against successors of the owner and hence such bailees are described as to having a 'special property' in the goods." Harris (n 500) 83.

<sup>594</sup> Ibid.

a person has over land and property. The Land Registry creates a complete picture of title (ownership) to land and property, and shows the rights, obligations and interests attaching to or affecting the land.<sup>595</sup> Freehold has the most extensive, absolute rights in respect to the land as it provides the owner with an open-ended set of use-privileges and control-powers that include rights to occupation, management, control, and to exclude others, rights to income, capital and other benefits, to transfer *inter vivos*<sup>596</sup> or on death, and the right to protection under the law.

At a lower level of the spectrum, we have a property right that combines open-ended set of use-privileges and powers of control over uses made by others, but within more or less drastic limits. Leasehold is the second form of legal estate and entails exclusive possession and right to use for a pre-set fixed period of time, but not an ownership. A leasehold estate or a tenancy originates from an agreement between parties to confer and receive 'exclusive possession' for a term at a rent, as stipulated in *Street v Mountford* by the House of Lords.<sup>597</sup>

The position of long leaseholder, short leaseholder, and statutory tenants ranks higher on the ownership spectrum than that of the licensee. Although within severe limits, the licensee enjoys an open-ended set of use-privileges and control-powers. He can occupy and use the property as stated in the agreement, but he has no powers of transmission and thus acting as a protected possessor. The limiting case is someone whose occupation is protected by trespassory rules but who lacks any power to allow others to share his or her residual use-privileges. A mere lodger or guest has no proprietary interest.<sup>598</sup> The element of possession or

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<sup>595</sup> Land Registration Act 2002.

<sup>596</sup> This refers to powers of exchange, sale, and gift.

<sup>597</sup> *Street v Mountford* [1985] AC 809. The crucial question was whether the occupier was granted the limited rights of a lodger, in which case he had a licence, or whether he was accorded the open-ended set of use-privileges and control-powers characteristic of an ownership interest. Lord Templeman said "The tenant possessing exclusive possession is able to exercise the rights of an owner of land which is in the real sense his land, albeit temporarily and subject to certain restrictions. A tenant armed with exclusive possession can keep out strangers and keep out the landlord unless he is exercising rights reserved to him by the tenancy agreement to enter and view and repair. A licensee, lacking exclusive possession, can in no sense call the land his own and cannot be said to own any estate in land." *Street v Mountford* [1985] AC 809.

<sup>598</sup> Harris (n 500) 74.

occupation of a thing in this case only reflects the factual situation – a lodger, guest or squatter has no right to use or to control uses of others over the thing. Both Harris and Penner emphasise that the concept of property does not solely exist as a bundle of rights, but it is equally well defined by correlating duties not to interfere and liabilities incurred by such interference.

The next question is what the attributes of ‘things’ are, that is, the objects of property, assets. Subsequently, we will establish that virtual items possess these attributes and therefore can become objects of property relationships.

## 6.5 The Objects of Property

For most authors writing about property theories the focus is on the acquisition and distribution of valuable resources, and subsequently the justification of unequal holdings. The actual objects of property and their defined characteristics are usually of very little interest. The most basic division is between real and personal property, that is, land and everything else. Historically, this division reflects a distinction between the kinds of legal remedies available to the owner, rather than the nature of the things themselves. Due to economic growth and advances in technology, we have seen many new forms of personal property arise. Perhaps the most significant of these is that between tangible and intangible assets. Tangible assets are quite simply those that can be touched, while intangibles refer to products of the mind, things that do not have a literal physical presence. *Choses in possession* refer to physical property, while *choses in action* are *rights in personam* held against specifiable individuals.<sup>599</sup>

In order to grant property rights, it is necessary to identify what exactly a person can own. MacCormick identifies such objects as “durable objects existing separately from and

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<sup>599</sup> Penner (n 462) 108.



independently of other objects and of persons, subject to being used, possessed, and enjoyed by persons, and capable of being transferred from one person to another without loss of identity as that very thing.”<sup>600</sup> Three criteria emerge from this definition. Things must: (i) be durable; (ii) exist separately from and independently of a person; and (iii) be alienable from one person to another without the loss of their identity.<sup>601</sup>

Firstly, for a thing to become an object of property rights it must endure. MacCormick explains that this requires that a thing must have “a continuing identity over a period”<sup>602</sup> and in some cases, it will have a location in space. Thus while both tangibles and intangibles can endure in time, only tangibles can also physically exist in space – however, this does not preclude the ownership of intangibles.

Secondly, to be an object of property a thing must first be separable and distinct from any person who might hold it.<sup>603</sup> This second requirement allows us to distinguish between things and non-things by excluding assets that possess certain attributes of property, such as value, control, exploitation and exclusion, but cannot be ‘things’. As Penner argues, “the difficulty does not lie in whether we can exploit it in some way or whether we can exclude others from it; the difficulty lies in treating these things as separable from us in any straightforward way. It follows that a person can have a legal right to this or that thing as against some other person only if she or he has some title which in law confers rights to that thing.”<sup>604</sup>

The need for things to have an independent and distinct existence from their owners creates certain limits for the ownership of persons, either completely or in part, or their incorporeal elements. The sale of a kidney is almost commonplace – kidneys may be objects of property. Most people have two but can survive without one. As science is capable of disconnecting an organ so that one remains essentially the same person, as is the case with a kidney, we can

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<sup>600</sup> Neil MacCormick, *Institutions of Law* (Oxford University Press 2007) 136.

<sup>601</sup> Gillian Black, *Publicity Rights and Image: Exploitation and Legal Control* (Hart 2011).

<sup>602</sup> MacCormick (n 599) 136.

<sup>603</sup> Penner (n 462) 113.

<sup>604</sup> Black (n 600) 58.

regard such an organ as a contingent material possession, and therefore one's property. However, consider the idea of selling one's brain – there is no realistic possibility of making it separable and distinct from the person. The key factor that distinguishes object of property from other resources is not alienability, or at least transferring the value of the thing. Nor it means that a person must be able to abandon or destroy it.<sup>605</sup>

The question of owning human bodies remains a complex and ethically challenging one. From MacCormick's definition, Penner concludes that although an individual cannot own his own body, this does not exclude the possibility of owning other people, as their bodies exist separately and independently of our own and may therefore be subject to ownership. Although owning other human beings is a concept that is unacceptable to our society, it is not an impossible one: slavery was "an institution which permeated [Roman] law and society but which is so alien to ours."<sup>606</sup> It is therefore not correct to conclude that a legal system cannot recognise a human body as susceptible to ownership, although society may have very cogent reasons for deciding that one human being should not own another.

The criterion of separability and independent existence draws attention to another factor, corporeality. While a kidney has a physical and tangible existence, a plot of land is more abstract. The land itself is tangible, the boundary of a particular plot of land, while naturally occurring, is frequently identified in Land Certificates and legal documents by imaginary lines that have no physical representation on the ground itself and are only reproduced as grid references on maps.<sup>607</sup> Physical property are often subject to the same methods of measurements, quantification and identification as intangible property, such as intellectual property.<sup>608</sup> In the UK, there is no legal requirement to register the boundary of a plot of land – this is only required in order to gain a financial charge (mortgage) over the property. In turn, this is only a requirement to provide for the efficient economic transaction of sale.<sup>609</sup>

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<sup>605</sup> Ibid.

<sup>606</sup> Penner (n 462) 117.

<sup>607</sup> Ibid, 137.

<sup>608</sup> Ibid.

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A landowner's use rights are essentially indefinable, comprising every possible use of the land. One cannot draw up an exhaustive list of them, and this is true even of others like a passer-by who may gain some value from the land. A patent is an exclusive right to a particular use of an invention or idea that translates into manufacture and industrial application. Although the market use of the idea is likely to be the most valuable one this does not mean that it is the only one. A patent is like the 'lease' to extract oil in the same way that the lease is not a real property right in the land. The patent is not a property right in the idea or invention.<sup>610</sup>

The final requirement in MacCormick's definition of things is that of transferability without loss of identity. This requires that the thing maintains its character, and is capable of being the same, regardless of who owns it. This emphasises the *erga omnes* character of real rights: because real rights impose a duty of exclusion on third parties that is not person-specific but thing-specific, the duty owed by the third party in respect of the thing remains the same no matter who the owner is. A thing must have a continuing identity regardless of how often it is transferred, or to whom.<sup>611</sup>

One helpful test at this stage as to whether something is separable and transferable (and therefore capable of ownership) involves asking whether it is corporeal or incorporeal property in specific situations. Thus, it is possible to ask what things creditors may obtain in the event of insolvency. Shifting the focus from the individual to creditors raises the much more complex question of whether and how creditors could harness the latent or future value of such 'assets'. This approach thus operates to highlight the distinction between separability and transferability, as it is possible to conceive of something that is separable but not always transferable. Asking whether a creditor could appropriate the thing may therefore help to clarify whether it is an object of property. It may be "a better test of the property status of our

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<sup>610</sup> Ibid, 121.

<sup>611</sup> Black (n 600) 135.

right to our kidneys to ask, not whether we may sell them, but whether they can be removed and sold by our trustee in bankruptcy to pay our debts.”<sup>612</sup>

Property rights translate in human relationships to the ability to control. By virtue of property, an individual can execute control over his affairs during his life and after his death. Equally, a person can control the actions of others and his environment. Control may consist of direct physical control, such as actual possession of a tangible thing, or mediated control. For instance, a user who possesses login details to an account can then use and control the avatar, currency and virtual assets linked to that account. The user will be able to determine who will be able to interact with the avatar, for example, by entering into a commercial transaction.

Presently, there does not exist a formal framework for the assignment of virtual assets *inter vivos* (exchange, sale, and gift) or on death (inheritance). For a virtual item to be the subject matter of ownership, it must meet the criteria of durability, separability and transferability.

Virtual assets meet the test of durability. They are stored as computer code or data in computer and server systems that support the virtual environments with a lifespan comparable to the plot outlines in the Land Registry, or the databases that support banks in storing their clients' money. This attribute seems identical to Fairfield's definition of virtual property as persistent, which means that it exists and develops continuously irrespective of the whether the user logged in and present in the virtual environment.<sup>613</sup> Virtual assets meet the test of separability. They can exist separately from users and the transfer of ownership does not change their identity. Applying this test to the different categories of virtual assets leads to the conclusion that avatars do not qualify as separable. Avatars are the medium between the user and the environment and both the user's identity and the identity of the avatar would cease to exist when transferred to another.<sup>614</sup> Ultimately, virtual assets meet the test of transferability.

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<sup>612</sup> Penner (n 462) 117.

<sup>613</sup> Fairfield (n 37).

<sup>614</sup> Avatars play an important role in the sense of bridging the gap between reality and fiction. The character represents a new virtual identity, a medium that each user in the virtual environment needs in order to enable

Virtual assets, specifically virtual items and virtual land, are durable, separable and transferable. They possess all three elements of ownership, the right to use, the right to control uses of others, and the right to alienate the rights of use and control, as identified by Harris and Penner.<sup>615</sup>

## 6.6 Conclusion

Property is the bedrock of social foundations. It is a social construction, which has become a phenomenon created, institutionalised, and made into tradition by society. There is no motivation for an individual living in solitude and isolation to introduce property rights, unlike in a society, which simply requires a property system in order to allocate the available resources to eligible members. Legitimate origins of social institutions, such as the state, money, or property, arise from a social contract. There are various schemes of how this mutual agreement came into existence and what the main purpose behind it may be. Despite the differences, all of the accounts see property as the basic and major social institution that sets standards for defining and distributing fundamental rights and duties. Through the process of socialisation, property has become part of human identity within society.

Economic theory examines the key elements of the historical account of property. It identifies changes in economic systems, and the technology these systems employ. The economic approach mainly concentrates on access, use and management of available resources. In particular, the focus is on the methods of appropriate distribution. The market, which is a universal forum for exchange, plays a crucial role in the economic account. The market facilitates trade and enables the distribution and allocation of resources in a society.

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communication and social interactions with others. They can qualify as creative and original work authored or co-authored by the players, as a virtual extension of their real-world personality or merely as a valuable commodity.

<sup>615</sup> Harris (n 500) and Penner (n 462).

Stability in a property system is essential for effective and efficient interactions. Whether a market develops spontaneously or intentionally, a property system eventually emerges to support the network of transactions and contracts. From this point of view, anything of value can become tradable, which may lead to extensive commodification of resources.

The legal concept of property takes form as a system of rules – formal or informal – and sanctions for breaking the rules. These rules can originate from various agents, laying down criteria for distinction between natural and positive law tradition. The view of natural law theory is that certain rights and obligations exist independently from positive law and are common to all humankind. Evolutionary biology may identify the common grounds in the following way. The human mind has simply evolved a special instinct for social exchange that enables humans to reap the benefits of co-operation, ostracise those who break the social contract and avoid the trap of being ‘rational fools’.

Schools of thought, such as legal positivism, attempt to separate conceptually any moral or ethical values from law. Legal positivism perceives law as a system of rules legitimately introduced by the legislative power and enforced by sanctions. To define property from the standpoint of positive law is simple: property is what the law establishes that it is. This thesis argues that property is a naturally occurring social convention, based on legitimate expectations, and regulated by applicable laws.

A property system justifies allocation of valuable resources, guided by the underlying principles of fairness and social utility. It clearly defines titles and determining objects of property.<sup>616</sup> The legal consequences of property rights are open-ended set of privileges that include rights to occupation, management, control, and, for instance, to exclude others. Other rights include the right to income, the right to transfer things *inter vivos* or on death, or the right to protection under the law. The key point of virtual property is that it bestows a set of

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<sup>616</sup> Ryan (n 499) 99.

transferable, assignable and exclusionary rights in respect of discreet and identifiable virtual objects.

## Chapter Seven: Conclusions

The thesis establishes a case for virtual property. It proposes that virtual assets should be treated as a species of property. Users in virtual environments have legitimate expectations about acquiring legal interests in virtual assets as they would in their physical counterparts under similar circumstances. The account of legitimate expectations is central to the concept of virtual property in this thesis and thus sets it apart from other academic literature, which frequently appeals to intellectual property rights, Lockean theory of property or purely economic justifications.<sup>617</sup> Users do not acquire property rights in virtual assets, because they created them, paid for them or invested time, effort and their personality in them. Users ought to own virtual assets, because there exist number of factors forming their expectations that virtual assets are their property.

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<sup>617</sup> The overview of the relevant literature can be found in chapter One, section 1.1.



The concept of legitimate expectations originates from public law and refers to the duty to honour promises that may arise from decisions, representations, or conduct of public authorities.<sup>618</sup> The rule of law and the reliance theory inform us that not protecting legitimate expectations would be against the principles of fairness, predictability and legal certainty. It would cause harm to those who were guided by these promises in their actions. In the context of virtual property, there are two sources of these expectations. Firstly, the architecture of virtual environments, the existence of virtual economies, and the property-like characteristics of virtual assets give rise to users' expectations. Secondly, providers' representations and conduct either explicitly authorise or tolerate virtual asset transactions.

Chapter Two introduces the phenomenon of virtual environments. Virtual environments are "persistent, simulated and immersive environments, facilitated by networked computers, providing multiple users with avatars and communication tools with which to act and interact in-world and in real-time."<sup>619</sup> The architecture of virtual environments in many ways resembles the real world. Virtual environments are interactive, which means that users can interact with each other in this shared space, in real time. They are also persistent, that is, they exist and develop continuously irrespective of the presence of individual users. Ultimately, virtual environments implement number of restrictions, such as natural laws or scarcity of resources. This factor is relevant for the rise of virtual economies. The inherent structure, rules and restrictions also directly determine the property-like characteristics of virtual assets.

Virtual environments are primarily digital products, which only emphasises the role of providers as the architects, policy-makers, governing authorities and enforcement bodies in virtual environments. The examination of the various categories of virtual environments establishes a link between the type, genre and gaming platform. Games that are accessible only on one device, games with no social element, or games without a persistent shared environment do not enable the creation, exchange or sale of virtual assets. On the other hand,

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<sup>618</sup> Schonberg (n 370). The concept of legitimate expectations is first introduced in chapter One, section 1.2 and discussed in more detail in chapter Four, section 4.6.

<sup>619</sup> Girvan (n 68). Chapter 2, section 2.3 provides definitions and categorisations of virtual environments.

virtual environments with multi-player, persistent and social features, virtual economies and virtual assets warrant the consideration of virtual property.<sup>620</sup> The underlying technology and the mode of delivery of most online games and social networking sites means that users are not physically controlling or owning their virtual possessions. They are merely granted a limited right to use the software, graphics, audio-visual elements, databases, and trade secrets controlled and owned by the provider.<sup>621</sup>

Virtual environments are games, but not just games. Chapter Three demonstrates that games are not beyond the reach of the law and relevant authorities.<sup>622</sup> They usually incorporate a structure of risks and rewards, which motivates users to engage in virtual environments in the first place. Users have to make choices in real time. They have to collect resources, practise skills, cooperate and compete with other users. Due to a number of restraints and scarcity of resources, marketplaces, auction houses and currency exchange points emerged to facilitate transactions between users. The acquisition and exchange of virtual goods or services in pursuit of rewards and social status has led to the development of robust virtual economies. The analysis of different virtual environments and their respective virtual economies revealed that the evolution and sophistication of virtual economies is directly dependent on the growing complexity of virtual environments. Where there is a need for cooperation and competition over scarce resources, mechanisms facilitating the exchange of these valuable resources will emerge. The existence of virtual economies is another factor forming users' legitimate expectations.

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<sup>620</sup> Virtual environments can be categorised based on the gaming platform or the genre. We can distinguish open and closed virtual environments based on the underlying structure. Chapter Two, section 2.2 gives more detail about the different types of virtual environments.

<sup>621</sup> This is specifically stated in license agreements that govern the use of virtual environments. Examples are provided throughout the thesis, but chapter Five, sections 5.3 and 5.4 give a full account of these contractual arrangements, their scope, and limitations.

<sup>622</sup> Chapter Three, section 3.2 provides justification for applying real-world principles, precedents and laws to virtual environments. Online games and social networking platforms can be used for generating profit, running a business or engaging in harmful or illegal activities that have a direct impact in the real world.

There are number of ways in which users can engage in economic transactions, whether the primary motivation is to play the game or generate profit. Examples examined in the thesis include user-generated content, real-money trading or e-sports.<sup>623</sup> Users keep finding new ways to use and enjoy virtual environments that challenge the original allocation of rights. They become important actors in negotiations over property and control issues in respect of valuable assets. Chapter Three also defines and distinguishes the different types of valuable resources – virtual assets – that are at the centre of this analysis.<sup>624</sup> Virtual assets should be treated as a species of property, because they property-like characteristics, that is being durable, separable and transferable.

The examination of various resources present in virtual environments leads to the following conclusions. While avatars theoretically meet all the qualities of objects of property, the main issue is the relationship between avatars and users' identities.<sup>625</sup> An avatar is the extension of user's personality, their online representation in virtual environments and as such is an inherent part of their personal account. In addition, there is a clear lack of authorisation treat avatars as objects of property. At present, users cannot transfer accounts and avatars from one to another or between different virtual environments. License agreements stipulate that users are not allowed to transfer their personal accounts including avatars and no authorised mechanisms are provided for such a transfer. For these reasons, avatars do not fall within the category of virtual assets for the purposes of this work.

Unlike avatars, virtual items and land possess the qualities of things – they are durable, separable and transferable. They have an independent value and users are able to exercise a certain degree of control over their assets insofar they can transfer them to another or exclude others from using them. The nature of these transactions will depend on the type of the

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<sup>623</sup> These examples can be found in chapter Three, section 3.4.

<sup>624</sup> There are different types of resources in virtual environments that fall into the following categories: avatars, virtual items, virtual land and virtual currency. Chapter Three, section 3.5 provides further details and examples.

<sup>625</sup> The relationship between users and their avatars is explored in section 3.5.1. One approach suggests that avatars are users' original creations and qualify for copyright protection. Another proposition relies on personality rights to allocate control to users over their avatars.

environment. For example, closed environments, such as World of Warcraft, will have a greater number of restrictions with regards the internal economy, the circumstances and types of assets that users can buy or sell through official marketplaces. Open environments, like Second Life, provide users with a greater degree of freedom with respect to creating, selling and buying virtual items and land, within or outside the environment.

Ultimately, virtual currency is also a valuable resource and subject to many economic transactions, but is primarily recognised as a means of payment and exchange, not as an object of property. To summarise, virtual items and virtual land have property-like characteristics and form the legal category of virtual assets.

The role of providers has been evident in connection with the architecture of virtual environments, the existence of virtual economies and the treatment of virtual assets as objects of property. Providers are in a unique position to manipulate the virtual currency, availability, price of virtual assets, and set out any limitations to economic activities. The conflict between the different set of rules and regulatory mechanisms in virtual environments is explored in further detail in chapter Four. There are rules that are part of the logic of the game, embedded in the code or architecture of the environment. Markets that will regulate users' behaviour. Providers have the ultimate authority to control the virtual economy. Another type of rules originates from the game ethic, which focuses on regulating anti-social behaviour. Examples of unwanted or detrimental behaviour include user-generated content, real-money trading or gold farming. The code and architecture of majority of virtual environments provide users with the opportunity to collect virtual items, create new items, provide services and subsequently trade these in exchange for virtual currency.<sup>626</sup>

Providers design virtual environments, set out internal structures and rules of the game, and facilitate economic activities in relation to a variety of resources. Through their representations

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<sup>626</sup> Chapter Four addresses the role of providers when it comes to the architecture of virtual environments, the existence of virtual economies and to some extent the applicable norms in virtual environments.

and conduct, providers create legitimate expectations that users acquire legal interests in virtual assets. It is evident from the available case law that providers will intervene in instances of unauthorised transactions.<sup>627</sup> There will also be a category of uses and transactions that tolerated by the provider without actively encouraging it or preventing it. Ultimately, providers will encourage users to acquire, use and trade virtual asset through the internal structure, markets and auction houses. Unless providers specifically identify, prohibit and enforce sanctions for unauthorised behaviour in relation to virtual assets, they implicitly or explicitly authorise the transactions and these transactions are therefore legitimate.

The issue of authorisation is crucial in circumstances when the question of title and ownership arise, which may result in a variety of disputes.<sup>628</sup> Chapter Five establishes that the existing legal framework fails to deal properly with these issues. Providers use licence agreements to assert all rights in virtual assets and thus extend and maintain control well beyond the scope of intellectual property law.<sup>629</sup> This reveals the potential weakness of licence agreements, which opens the debate on alternative means of governance. There is something valuable that users want to control and if licence agreements do not provide for this, the question is how we can balance the stakes between the various right-holders. There is a growing number of different legal contexts, such as criminal law, taxation or inheritance, in which the category of virtual property features as a serious consideration.<sup>630</sup> Currently applicable laws, such as contract, intellectual property or consumer protection law, do not recognise users' expectations as legitimate. The analysis reveals the limitations, which represent a gap to be filled by the concept of virtual property.

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<sup>627</sup> For example, closed environments like World of Warcraft are against the practice of real-money trading. On the other hand, open environments like Second Life encourage it.

<sup>628</sup> Chapter Four, sections 4.4 and 4.5 analyse relevant cases concerning the ownership of virtual assets.

<sup>629</sup> The underlying principles of intellectual property law and legal qualification of license agreements feature in chapter Five. It focuses on the nature, scope and limitations of license agreements.

<sup>630</sup> Section 5.5 highlights circumstances, in which the authorities and courts had to the different treatment of virtual assets and their physical equivalents. As a result, a few precedents considered virtual assets as a species of property, or as having property-like characteristics.

In order to resolve the different and unjustified treatment of virtual assets, property law provides the necessary answers by treating virtual assets as a species of property. Chapter Six explores the nature, meanings and theories behind the idea of property.<sup>631</sup> Property is concerned with ownership and three elements of ownership, the right to use, the right to control uses of others, and the right to alienate the rights of use and control, characterise property and distinguish it from other legal categories.<sup>632</sup> The accounts of property are complex, flexible and dependent on the historical, social or legal context. Yet, property is a universal concept inherent to human nature, even in the context of virtual environments. Chapter Three demonstrates that when a society reaches a certain level of complexity, it will introduce commodification – marketplaces and trade for the exchange of goods and services emerge. Property is central to a functioning market economy. It determines what ownership entails, under which circumstances it arises and what the objects of property are.

The concept of virtual property is different from the concept of intellectual property. Intellectual property law confers exclusive rights on intellectual property right holders to exploit various creative works, machines, discoveries and inventions, or applications. In other words, intellectual property rights are, to a certain extent, market monopolies. An alternative viewpoint advocates for a system of intellectual property rights protecting the creative process as part of the creator's personality and thus as one of his human rights. Intellectual property is non-rivalrous and non-excludable in nature. Once an invention released to the public, anybody can copy it. Virtual assets are unique – virtual environments are characterised by scarcity of resources imposed by the provider – and in this respect resembles physical assets rather than intellectual assets. Secondly, virtual property and intellectual property are also different in their scope of protection. While virtual property rights, similar to real and personal property rights, provide the right to use, exclude others from, and alienate or transfer virtual assets, intellectual property rights define a scope of authorised use and thus impose constraints on the world at large. The law of property prescribes who is entitled to use a virtual sword and how, while

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<sup>631</sup> Chapter Six, section 6.2 provides an overview of various interpretations, definitions and meanings of property.

<sup>632</sup> Sections 6.4 and 6.5 analyse the theoretical justification of property by Penner and Harris, which establishes three fundamental elements of property institutions.

intellectual property law prescribes who has the exclusive right to make copies of a virtual sword – these two qualifications are not the same.

Consequently, a new category of property law needs to be defined and delimited appropriately. What would be the implications of recognising virtual property rights? Virtual property would treat virtual assets as separable, durable and transferable objects of property. It would grant users of virtual environments the right to use, the rights to control uses of others, and the right to alienate the rights of use and control. In practise, this would mean that if a user has possession of a virtual item then other users could not possess the same item at the same time. A user would have the right to manage how and who can use the virtual asset, including a right to consume, waste or destroy an item. In addition, users should enjoy the income and profit from the use, exploitation or transfer of that property without limitation. This is in line with the property-like characteristics of virtual assets. They are separable, durable and transferable to have some external value in order to trigger the legal protection. A user could exclude others from using or interfering with their property, such as theft or expropriation.<sup>633</sup> The legal rules need to work, for example, for property disputes (user-user, provider-user), instances of virtual theft, or inheritance of virtual assets.

There is a clear disparity in the treatment of virtual assets and their counterparts in the physical world. In a growing number of instances, courts, authorities and academics have argued that this distinction is unjustified and users should enjoy a similar set of rights in respect of their virtual assets as well as the physical ones. The outline of different legal treatments demonstrates that it is possible to recognise and protect users' legal interests in virtual assets through public bodies' policies, case law and bespoke legislation. For example, in China, South Korea or Taiwan, the authorities, courts and legislators identified and extended existing criminal law principles to prosecute virtual property theft. Virtual assets are intangible assets, of independent value and under the control of users, rather than virtual environment providers.<sup>634</sup>

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<sup>633</sup> Rumbles (n 340).

<sup>634</sup> Chapter Five, section 5.6 examines different types of laws and regulations addressing the legal status of virtual property.

The appropriate form of recognition and protection of virtual property will depend on legal context, jurisdiction and legal tradition. This thesis does not propose exact form that legislative measures should take. Instead, it suggests that lawmakers can gain insight into how virtual assets could be governed from a number of different sources, including individual countries and specific steps that have been adopted regulating virtual property.

If such rights were realised, would it undermine the nature of virtual environments, or complement it? Changing the law would have consequences. On one hand, the introduction of virtual property would result in increasing legal certainty for users by protecting their interests. It would also create a system of rules and remedies regarding virtual property necessary for the relevant regulatory and enforcement authorities and courts. In general, property rights enhance property value through reducing risk and transaction costs, the same should be true of virtual property.<sup>635</sup> Recognition of virtual property would legitimise economic transactions and prevent potential unjust enrichment of hackers and fraudster at grey markets and illegal auctions.<sup>636</sup> Ultimately, the concept of virtual property would address the different treatment of virtual and their physical equivalents in similar circumstances and thus met users' legitimate expectations.

Arguably, introducing the concept of virtual property would significantly shift the balance between the various right-holders. It would most certainly create burdens for providers of virtual environment in terms of interoperability and continuity of service.

Nevertheless, the recognition and protection of virtual assets as a species of property is virtual property is the appropriate and efficient way of governing these rivalrous, persistent, and interconnected resources. In a wider context, the concept of virtual property may be relevant in relation to regulating ownership of digital assets after death.

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<sup>635</sup> Greg Lastowka, Dan Hunter, 'The Laws of the Virtual Worlds', (2004) 92(1) California Law Review.

<sup>636</sup> Westbrook (n 53).



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