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VIRTUAL WORLDS – A LEGAL POST-MORTEM ACCOUNT

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This paper addresses the lack of legal literature in the area of death and virtual worlds. It sheds light on the legal status of different in-game assets, assessing whether these could fit within the notions of property or other relevant legal concepts such as intellectual property, usufruct, or easements. Having determined this, the paper goes on to explore the possibilities regarding the transmission of these assets on death.

The author does not share views of a great portion of the legal literature arguing for recognition of "virtual property" as a concept. Rather, this paper proposes an alternative solution in order to reconcile different interests arising in VWs; primarily, those of developers and players. Recognising a phenomenon of consitutionalisation of VWs, this article suggests a solution in the form of servitudes (usufruct). Virtual usufruct is herein conceived as player's entitlement to use the VW account and profit from it, if applicable. It is suggested that the entitlement to use the account expires on death, but that it allows a player's personal representative/executor to gain access to the account and extract any possible monetary value. This solution would enable players to take more control over their virtual assets and heirs to potentially benefit from valuable VW accounts.

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1. Introduction

The concept of virtual worlds (hereinafter: VWs) pre-dates the Internet. The history of Virtual Worlds started in text-based, offline role playing games, created on the basis of the different works of fiction such as, for instance, Tolkien's books and idea of world building.¹ The first text-based interactive computer game, The Colossal Cave Adventure, appeared in 1970 with real-time interactive computer games called MUDs (Multi-User Dungeons) appearing by the end of the 1970s.² These were the first VWs. The very first was *MUD1* was created by Richard Bartle and Roy Trubshaw at Essex University in 1979, and was the first online connected computer game. However, the most famous of the games to emerge from this group was *LambdaMOO*, created by Pavel Curtis in 1990.³

The literature analysing the social, economic, technological and legal aspects of virtual worlds originated from the late 1990s – in relation to these text-based VWs⁴ – and continued to develop throughout the 2000s, discussing visually represented VWs and later MMOPGs (massively multiplayer online playing games). This literature, however, rarely addresses legal post-mortem aspects of VWs and gaming accounts. Legal aspects of transmission of other digital assets on death (e.g. emails, social networks accounts, online banking accounts, photos, domain names etc.) were explored to an extent following the growing importance of these assets in the life and death of their users,⁵ however only sporadically were virtual world accounts mentioned as types of digital assets.

¹ F G Lastowka and D Hunter, "Virtual Worlds: A Primer" in J M Balkin & B Simone Noveck (eds) *The State Of Play: Laws, Games, And Virtual Worlds* (New York: NYU Press, 2006) 13-28, at 17-18; W Erlank *Property in Virtual Worlds* (December 1, 2012), doctoral dissertation at Stellenbosch University, at 22-23, available at <http://ssrn.com/abstract=2216481> (accessed 1 Dec 14).

² F G Lastowka FG and D Hunter "The Laws of the Virtual Worlds" (2004) 92 *California Law Review* 1-74, at 17.

³ F Rex "LambdaMOO: An Introduction" *LambdaMOO*, available at <http://www.lambdamoo.info> (accessed 02 Dec 14); For more details about the history and the development of computer games in general, see e.g.: J Juul, "A History of the Computer Game" 2001, available at <http://www.jesperjuul.net/thesis/2-historyofthecomputergame.html> (accessed 02 Dec 2014) or J Dibble, *My Tiny Life: Crime and Passion in a Virtual World* (New York: Henry Holt, 1998)

⁴ E.g. R Bartle "Hearts, Clubs, Diamonds, Spades: Players Who Suit MUDs," *The Journal of Virtual Environments* (1996) 1 (1), available at <http://mud.co.uk/richard/hcds.htm> (accessed 03 Dec 2014)

⁵ See, e.g., L Edwards & E Harbinja, "What Happens to My Facebook Profile When I Die? Legal Issues Around Transmission of Digital Assets on Death", in C Maciel & V Pereira, eds, *Digital Legacy And Interaction: Post-Mortem Issues* (Berlin: Springer, 2013) 115-144; J Mazzone, "Facebook's Afterlife" (2012) 90 *North Carolina Law Review* 67-122; D R Desai, "Property, Persona, and Preservation" (2008) 81 *Temple Law Review* 67-122; J Darrow and G Ferrera "Who Owns a Decedent's E-Mails: Inheritable Probate Assets or Property of the Network?" (2006) 10 *New York University Journal of Legislation and Public Policy* 281-320; J Atwater "Who Owns Email? Do you have the right to decide the disposition of your private digital life?" (2006) *Utah Law Review* 397-415; T G Tarney, "A Call for Legislation to Permit the Transfer of Digital Assets at Death" (2012) 40 *The Capital University Law Review*. 773-802; K Sherry "What Happens to Our Facebook Accounts When We Die?: Probate versus Policy and the Fate of Social-Media Assets Postmortem" (2013) 40(1) *The Pepperdine Law Review* 185-250; D McCallig "Facebook after death: an evolving policy in a social network" (2013) *The International Journal of Law and Information Technology*, 1-34.

This paper addresses this gap in literature and sheds light on the post-mortem legal status of different in-game assets (e.g. avatars, weapons, houses, land). The analysis will assess whether these assets could fit within the notions of property or alternatively within other relevant legal concepts (such as intellectual property, servitudes, easements) which would result in these assets being recognised as a part of a user's estate.

The paper combines doctrinal and socio-legal methodology by both looking at the legal concepts and laws of property, contracts, IP and consumer protection in their correlation with specificities and by exploring the peculiar nature of VWs in the wide socio-economic and humanities literature.

2. Conceptualisation of VWs

From a linguistic perspective, VWs could be defined as states of human existence; states which do not exist physically, are not real, but appear nonetheless to be real from the point of view of the program or user.⁶ From this definition we could extract the most important features that define VWs: computer-moderation; persistence; environmental attributes (immersive and persuasive worlds; mimicking the real world); interactivity; and the participation of multiple individuals.⁷

Developers use different business models for their VWs. Some of them are closed, used for military or business simulations, whereas others are open, commercial worlds where users can join for free either for a monthly fee payment (World of Warcraft) or on a freemium basis where basic services are free and others have their price (Second Life for instance).⁸

The umbrella term for VWs is the term MMOPGs, but these can be divided on the basis of their player community and structure into 'game' worlds on the one hand and 'social' worlds on the other. In 'game' VWs (known by the term: massively multiplayer online role-playing games - or MMORPGs), players take on a specific role and compete to achieve certain predefined goals (World of Warcraft for example). In 'social' or unstructured worlds the emphasis is placed on interaction with other players and with the environment (e.g. Second Life, IMVU). These latter VWs are not, therefore, games but rather platforms for social

⁶ The Oxford English Dictionary (Oxford: Oxford University Press, 2014), available at <http://www.oed.com/> (accessed 02 Dec 14)

⁷ W Erlank, see note 1 above, at 47-57.

⁸ See J Fairfield "The End of the (Virtual) World" (2009) 112(1) *West Virginia Law Review*, 53-95, at. 53, P Riley "Litigating Second Life Land Disputes: A Consumer Protection Approach" (2009) 19(3) *Fordham Intellectual Property, Media & Entertainment Law Journal* 877-923, at 890.

interaction, or “mirror worlds”.⁹ It is also possible to distinguish a third kind of VWs in kids’ worlds, which target children as the main player base (e.g. Club Penguin).¹⁰

According to the technology employed to enable access to the worlds they are divided into client-based worlds and those where the players can join simply online. Some video games, including some VWs (e.g. The Lord of the Rings Online, Dungeons & Dragons Online, Everquest II, Diablo et.al.) can also be accessed from intermediaries. The most prominent of these is an entertainment platform called STEAM.¹¹

This paper will focus on two examples specifically: World of Warcraft and Second Life. The reason for choosing these two US based VWs, as opposed to those based elsewhere, stems from a combination of the fact that most of the successful Western VWs are hosted in the US;¹² that choice of law provisions usually point to the US law; and that the majority of common law cases have been resolved in this jurisdiction.¹³ Additionally, these examples were also chosen for their domination of the market and user base, their impact and their “cultural footprint”.¹⁴ Despite the fact that Second Life is currently perceived as declining in popularity it still remains worth mentioning as most of the existing case law involves this VW.¹⁵

The term virtual assets, for the purpose of this discussion, will be used to describe any item, object or asset found in VWs and which is used or created by the players (e.g. avatars, weapons, land, houses, clothes, furniture, etc.). Before initiating the discussion on the concept of virtual property (VP) and whether in-game assets are property transmissible on death the following section will present a classification of virtual assets as potential objects of property in VWs, to be used in the subsequent analysis throughout this paper.

⁹ Kzero Worldwide. “Radar Charts Q2 2014 VWs and MMOs shown by genre, average user age and status” (2004), available at <http://www.kzero.co.uk/blog/category/education-and-academia> (accessed 02 Dec 14).

¹⁰ G Lastowka *Virtual Justice: The New Laws of Online Worlds* (New Haven, CT: Yale University Press, 2010), at 58.

¹¹ The platform distributes different video games and other software, from both independent and established software companies. It is also a communication, social networking and multiplayer platform, allowing different kinds of interactions between players (akin to social networks sites). The further evolution of VWs includes innovative hardware (e.g. Oculus Rift), bringing even more reality to these worlds. Kzero Worldwide “Consumer Virtual Reality: State of the Market Report” (2014), available at <http://www.kzero.co.uk/blog/category/education-and-academia> (accessed 03 Dec 14).

¹² B. Edwards “The 11 Most Influential Online Worlds of All Time. PCWorld” (2011) available at <http://www.pcworld.com/article/228000/influentialonlineworlds.html> (accessed 03 Dec 14).

¹³ Fairfield, see note 8 above, at 430.

¹⁴ P J Quinn “A Click Too Far: The Difficulty In Using Adhesive American Law License Agreements To Govern Global VIRTUAL WORLDS” (2010) 27 *Wisconsin International Law Journal*, 757-789, at 760.

¹⁵ Sporadic references will be made to other VWs and platforms, but the main analysis will be based on the examples of these two VWs.

2.1. *Layers of virtual assets*

The term ‘virtual assets’ is used instead of ‘virtual property’ to avoid any connotations regarding the potential legal nature of these assets. Later in this paper, the term will be replaced with “virtual worlds usufruct” in an adaptation to the findings of this paper. Until then, the short form of VAs will be used. It is also important at this point to differentiate VAs from digital assets, with the latter defined as any asset of value online potentially capable of post-mortem transmission (e.g. social network accounts, emails, domain names, digital music etc.).¹⁶

The majority of virtual property theories tend to confuse different types of code and content in VWs, equating the underlying software (the building blocks of VWs) and the user generated content (virtual assets). In this regard, Abramovitch offers a helpful theory and proposes three levels whereby property/VAs can possibly be identified within VWs.¹⁷ At the first level sits the developer’s code, which is protected by IP as software. This level, therefore, represents software and code that determines the properties and features of VWs and their user’s actions and behaviours. At the second level, Abramovitch identifies objects or items inside the VW which resemble real world items (objects like avatars, weapons, buildings, clothing, cars, spaceships, and houses) while at the third level, she identifies in-game virtual assets that could potentially also be protected by Intellectual Property (e.g. a book that is found lying on a table inside the VW).

The layer approach is useful for the purpose of this analysis for two main reasons: Firstly, it offers a more nuanced approach and does not represent the unified, rigid “player-deserves-all” (that virtual property should belong to the players) or “developer-deserves-all” (property in servers/IP in software should extend to the virtual realm) dichotomy usually found in the early 2000s literature. These two approaches fail to recognise, on the one hand, the *constitutionalisation* of virtual worlds (explained further below) and their significance for player and, on the other, the intellectual property interests of developers.

Secondly, this approach acknowledges the Internet architecture and the fact that significant investments are made by the world owners while assessing at the same time the rights of the users at a different game level. This differentiation opens the possibility for discussion and suggests recognising different legal concepts at different levels of code/virtual reality, offering as such some compromising and more widely acceptable legal solutions.¹⁸ Generally, protection for the different layers could be provided for by Intellectual property,

¹⁶ L Edwards and E Harbinja, see note 5 above.

¹⁷ S H Abramovitch “Virtual Property in Virtual Worlds” (2009) *Gowlings.com*, at 2, available at <https://docs.google.com/viewer?url=http://www.gowlings.com/knowledgecentre/publicationPDFs/TLI-2009-Susan-Abramovitch-Virtual-Property-in-Virtual-Worlds.pdf> at 1-2 (accessed 01 Dec 14).

¹⁸ W Erlank, see note 1 above at 182.

property, lesser proprietary rights or contracts depending on the characteristics of the individual layer.¹⁹

The analysis in this paper will accept and use this classification, focusing primarily on the second level.²⁰ The first level is excluded as it is not generally disputed that the underlying code indeed belongs to the developer (and is protected therefore by copyright or patent in software and property in the physical servers).²¹ Thus, the first level will be discussed only to the extent it relates to or determines the second and third levels. Apart from having a clearer legal nature, the first level is also beyond the scope of this paper as this paper looks at the player's ability to transmit their virtual assets on death; a situation which is inconceivable in the case of the first level due to this usually involving a company's asset. In the case of the third level, this will be mentioned sporadically but, due to the limited scope of this paper, the IP issues will not be analysed in details. Rather, property and proprietary rights is the intended focus.

3. Virtual property

3.1. Introduction

Virtual Property is a theoretical construct about property rights in the items and resources originating and existing in VWs. Much has been written *pro* and *contra* the recognition of virtual property. However, it is still a concept existing mainly in academic discussions and courts or legislators have not recognised its importance. There have been some judicial attempts to address virtual property (see for example *Bragg* or *Evans* below), but there have not been any legislative efforts to do so at all. This section aims therefore to shed light on virtual property and, more specifically, to explore whether there should be property rights in VWs and the potential alternatives if not.

The key in recognising something as property is, first, to identify the relevant theoretical justifications.²² This section will refer to the leading western justifications of *propertisation* – labour theory, utilitarianism and personhood theory – in this regard, discussing their potential

¹⁹ Ibid.

²⁰ For more details about the copyright protection in VWs see S R Dow *et.al.* "Authorship in Virtual Worlds: Author's Death to Rights Revival?" (2013) 6(3) *Journal of Virtual Worlds Research* 1-15; or D Miller, "Determining Ownership in Virtual Worlds: Copyright and License Agreements" (2003) 22 *The Review of Litigation* 435-471.

²¹ E.g. cases such as *SAS Institute v World Programming C-406/10* and *Nova Productions v Mazooma Games* [2007] RPC 25 suggest that graphics in computer games could be regarded as artistic works and protected by copyright,

²² Erlank argues that virtual property could be more easily recognised in common law systems, as these 'just require a good justification': W Erlank, see note 1 above, at 252.

application to virtual assets and VWs. The analysis will use the layer classifications explained in the previous section.

The discussion in the following sections will be based on the two main assertions: first, that virtual assets are valuable for the various reasons identified below and therefore generally deserve an academic account; and second, that virtual assets are qualitatively different from the other types of digital assets discussed in the literature so far. This significance of virtual assets, discussed subsequently through the lenses of property theories, can be subsumed under the following three categories: intimate/personal value; social importance; and economic value. This categorisation is offered as a result of the analysis of different arguments offered by a range of socio-economic and legal theorists of VWs. However, it will not be discussed separately, but rather as an integral part of the theories explored further below.

3.2. *Justifications*

3.2.1. *Labour theory*

Many authors contend that Locke's labour theory is applicable to virtual property. The main argument here is that time and effort that users put in while creating virtual assets should entitle them to claim property rights in respect to such assets.²³

Empirical research indicates that players spend significant periods of time in VWs. For instance, in 2010, research showed that online video games were the second most used activity on the Internet in the US, consuming 10.2% of Internet time.²⁴ This research, however, does not provide data on the use of VWs in particular. In addition, an earlier survey found that 35% of adults who used the Internet played online video games, but that only 2% visit a VW such as Second Life. However, those individuals who are active in Second Life average about 40 hours a month in this VW.²⁵ Mayer-Schönberger and Crowley assert that 9.4 million players are each "in-world" for about 22 hours per week, claiming that "subscribers to VWs could be devoting over 213 million hours per week to building their virtual lives."²⁶

²³ R Shikowitz, "License to Kill: MDY v. Blizzard and the Battle over Copyright in World of Warcraft" (2009-2010) 75 *The Brooklyn Law Review*, 1015-1054.

²⁴ M. Lasar "Most Internet time now spent with social networks, games" (2010) available at <http://arstechnica.com/business/2010/08/nielsen-social-networking-and-gaming-up-email-uncertain/> (accessed 02 Dec 14).

²⁵ A Lenhart, S Jones and A Macgill, "Adults and Video Games" (2008) available at <http://www.pewinternet.org/Reports/2008/Adults-and-Video-Games/1-Data-Memo/07-Virtual-worlds-and-MMOGs-have-yet-to-catch-on.aspx> (accessed 02 Dec 14).

²⁶ V Mayer-Schoenberger and J R Crowley "Napster's Second Life? - The Regulatory Challenges of Virtual Worlds" (2006) 100 *Northwestern University Law Review*, 1775-1826, at 1787; H Mahmassani et.al. "Time to

On the first obvious question of whether we could consider “game playing” as labour, it is argued that labour in the form of “grinding” can be deemed as relevant for the purpose of labour theory. Grinding is a series of repetitive menial actions in VWs, completed in order to level-up ones character.²⁷ In addition, the quality of labour can be demonstrated by looking at the phenomenon of “gold farming”. Gold-farmers are a particular sub-set of users who dedicate their hours “in game” specifically to creating assets of value for the purpose of later sale on either in-game or grey markets.²⁸ Gold farms, or “gaming workshops”, are places that might employ a few dozen such farmers who perform various tasks specific to a certain game in order to build up virtual currency for the farm owners.²⁹ Although the data on this practice is rather uneven, there are nonetheless some quite staggering estimates of the value of this “virtual economy”. Heeks, for instance estimated in 2010 that approximately 400,000 people were employed in gold farming, of which perhaps 85% were based in China and Ryan estimates that one million gold farmers are working on a global trade worth more than \$10 billion in total.³⁰ Therefore, the labour is already recognised as such in these black or grey markets.

The argument *against* applying labour theory to VWs however stems from the fact that the majority of players play these games for entertainment purposes and not for gold-farming or labouring in general. Therefore, the time playing a game cannot qualify as adequate labour for the purpose of labour theory.³¹ Erlank replies to this objection by noting that not all the worlds are used for the purpose of entertainment (some are, indeed, used for many other purposes including education, business, and politics), and that the real world also rewards individuals who play games there; giving in this regard the example of athletes as professionals are paid. Second, he comments that some players do indeed “labour” by “painstakingly” repeating the same actions in order to reap an award, in a manner alike to blacksmiths.³²

Advocates of applying Locke’s theory to virtual property also argue that it is fairly easy to satisfy Locke’s “enough and as good” proviso in VWs: the proviso, in short, that an individual can appropriate an object under the condition that there is enough and as good left

Play? Activity Engagement in Multiplayer Online Role-Playing Games”. (2010) *Journal of the Transportation Research Board*, 129-137.

²⁷ A. E. Jankowich “Property and Democracy in Virtual Worlds” (2005) 11 *Boston University Journal of Science & Technology Law*, 173-220, at 183.

²⁸ R. Heeks “Understanding “Gold Farming” and Real-Money Trading as the Intersection of Real and Virtual Economies” (2010) 2(4) *Virtual Economies, Virtual Goods and Service Delivery in Virtual Worlds*, February 2010, 1-27, at 6.

²⁹ *Ibid.*, at 7.

³⁰ *Ibid.*

³¹ G Lastowka and D Hunter, see note 1 above, at 461. W Erlank, see note 1 above, at 153.

³² W Erlank, see note 1 above, at 98.

for the others (although this proviso was subsequently revised by Locke³³). In VWs, arguably, an infinite number of resources are available for the players to labour and create.³⁴ This, however, does not have to be taken as self-evident as the abundance of the VW resources depends on the developers' actions and, for some, the users do need to pay and do not labour (e.g. land in *Second Life*). The developers, therefore, can (and often do) artificially create a scarcity of resources in their virtual world. On the other hand, in-game resources are arguably available to all the players under the same conditions and the developers can adjust the scarcity feature according to their desires, making more resources available if needed. Consequently, looking at a VW as a self-contained entity, this proviso does ultimately seem fulfilled.

According to the proponents of applying labour theory to virtual property, Locke's spoilage proviso is also satisfied. This refers to the argument that the labourer is limited to "as much as anyone can make use of to any advantage of life before it spoils."³⁵ The argument is that for the self-evident reasons of the nature of virtual assets (namely the underlying code that determines them) they cannot be spoilt and are similar in this regard to money. Therefore, the limitation is unnecessary for VWs since developers produce virtual assets or enable their creation by the players. The limitation is embedded in the underlying VW's code.

However, Lastowka and Hunter criticise this justification for virtual property, basing their arguments on Nozick's general objection to Locke's theory, viz. that the labour which users embed in the VWs is insignificant compared to that of the owners of VWs.³⁶ Opponents of Nozick's argument argue that for some property labour, no matter how insignificant it seems, still adds value to the resource and recreates the essence of it.³⁷ Similarly, Lastowka and Hunter reply to this objection arguing that while it is correct in the sense that a player cannot claim property in the whole VW they do deserve property in those items where their labour makes up the greatest part of the value. They assert that players do not claim property in the world itself, but rather only in their items and avatars.³⁸

³³ With the introduction of money as property, Locke's removed the spoilage and enough and as good limitations for the reason that money does not spoil. The enough and as good proviso is abandoned with the development of commerce and the consent to use money. C B Macpherson in J. Locke *Second treatise of government, Essay concerning the true original extent and end of civil government* (first published by Crawford Brough 191; Indianapolis, Ind.: Hackett Pub. Co. 1980, with the preface by C. B Macpherson), p XVII.

³⁴ *Ibid*, at 64-65.

³⁵ *Ibid*, at 60.

³⁶ G Lastowka and D Hunter, see note 1 above, at 97; R Nozick *Anarchy, state and utopia* (Oxford: B. Blackwell, 1974), at 175.

³⁷ G S Alexander and E M Peñalver *An Introduction to property theory* (Cambridge: Cambridge University Press, 2012) at 48.

³⁸ G Lastowka and D Hunter, see note 1 above, at 63.

The most commonly articulated objection to applying Locke's theory to virtual property is the same one used against propertisation of IP; the absence of commons.³⁹ According to this argument, the initial stage from which appropriation takes place – the commons – does not exist here and VWs are not common *ab initio* but are usually owned by the developers. Therefore, they seem to have better claims according to labour theory, as they actually invest their labour and resources in creating VWs.⁴⁰

Cifrino shares this stance, noting that if any labour, and not only the labour on the initial commons, would create property rights, then the borrowing and sharing of any object would be a problem if someone later labours on that object and claims the title allegedly resulting.⁴¹ Other authors reply to this contending that the comparison could be made to the Locke's commons created by god: VWs's commons are created by their "gods", or by someone with godlike powers in respect to at least them in their developers.⁴² In addition, for those arguing that IP is property in essence, the absence of commons can be bypassed and interpreted widely as has happened practically.⁴³

Prima facie, labour theory therefore presents a good justification for recognising property in the second-level VW's code, as this code satisfies both the labour requirement and its two provisos (spoilage and "enough and as good"). In addition, a player's labour constitutes the greatest part of the virtual assets value. For the first level items, understandably, developer's labour and investments constitutes the biggest part of its value, and thus they should remain entitled to own this layer.

However, the lack of the commons here is problematic as one cannot argue that there is any common of ideas, facts or resources in VWs⁴⁴. One way to neutralise this limitation would be to recognise the godlike powers of the developers and analogise them with god and Locke's common. Alternatively, if the second layer is perceived separately and furthermore in relation to the other players and not the developer then the VWs features, which are open to all, can instead be seen as the commons.

³⁹ See S V Shiffrin "The Incentives Argument for Intellectual Property Protection" (2009) 49 *Journal of Law, Philosophy and Culture* 94-105, at 96; R P Merges, *Justifying intellectual property* (Cambridge, Mass.: Harvard University Press, 2011) at 35-39.

⁴⁰ S J Horowitz "Competing Lockean Claims to Virtual Property" (2007) 20(2) *Harvard Journal of Law & Technology*, 443-458.

⁴¹ C Cifrino "Virtual Property, Virtual Rights: Why Contract Law, Not Property Law, Must Be the Governing Paradigm in the Law of Virtual Worlds" (2014) 55 *The Boston College Law Review* 235-264.

⁴² W Erlank, see note 1 above, at 156-157.

⁴³ See e.g. J. Peterson "Lockean property and literary works" (2008) 14(4) *Legal Theory*, 257-280.

⁴⁴ Apart from, perhaps, open sources games which are not in the focus of this analysis.

3.2.2. Personhood theory of virtual property

Personhood theories originate from Hegel's conception of property as an extension of personality,⁴⁵ and from Radin's classifications of property as fungible and personal. For Radin, property is an essential vehicle for the development of the personality and, therefore, property which is especially close to person's self-definition deserves special legal protections and precedence over fungible property.⁴⁶

This theory is, arguably, more applicable for justifying property interests in virtual assets than even traditional property.⁴⁷ In VWs, players are represented by a character, or avatar,⁴⁸ which is essentially the player's agent for interacting with environment.⁴⁹ An avatar, and consequently a player, generally leads a more or less full, rich, and interesting life in VWs, often as a simulation of the real world. Using their avatars but also offline, in the real world, players communicate and socialise with others, gain reputation and acquire social capital.

In most VWs, players usually establish extremely firm ties with their avatars, conceiving them as extensions of themselves and their *alter egos*.⁵⁰ A large body of research of VWs confirms this, referring to the concept of immersion.⁵¹ Bartle, for instance, argues that VWs are all about "the celebration of identity" and summarises the path players follow in game in the phrase: "locate to discover to apply to internalise." This refers to the player's development from acquiring skills, to achieving something in the world (whatever its specific goals are), to exploring the world and applying the skills, finishing with internalising the

⁴⁵ G W F Hegel, *The Philosophy Of Right* (first published 1821, translated by *Knox*) (Oxford: Oxford University Press, 1967), at para 41.

⁴⁶ M J Radin, "Property and Personhood" (1982) 34 *Stanford Law Review*, 957-1015.

⁴⁷ G Lastowka and D Hunter, see note 1 above.

⁴⁸ E Castronova "On Virtual Economies" (2003) 3 *The International Journal of Computer Gaming Research* available at <http://www.gamestudies.org/0302/castronova/> (accessed 02 Dec 14)

⁴⁹ More about avatars, history, and use in VWs, G Lastowka, see note 10 above, at 45-46 or J Dibble, see note 3 above.

⁵⁰ G Lastowka, see note 10 above, at 46, or D Williams, T Kennedy and R. Moore "Behind the Avatar: The Patterns, Practices and Functions of Role Playing in MMOs" (2011) *Games & Culture* 171-200.

⁵¹ Y Lee and A Chen "Usability Design and Psychological Ownership of a Virtual World" (2011) 28(3) *Journal of Management Information Systems*, 269-308; D A Bowman and R P McMahan "Virtual Reality: How Much Immersion Is Enough?" (2007) 40(7) *Computer*, 36-43; M L Ryan "Immersion vs. Interactivity: Virtual Reality and Literary Theory" (1999) 28(2) *SubStance*, 110-137; K Cheng and P A Cairns "Behaviour, Realism and Immersion in Games" (2005, ACM: Proc. Portland OR) available at <http://www.ucl.ac.uk/paul/research/Cheng.pdf> (accessed 02 Dec 14); L Ermi and F Mayra "Fundamental Components of the Gameplay Experience: Analysing Immersion" (2005, DiGRA: Proc. Second International Conference, Vancouver) available at http://www.uta.fi/~tlilma/gameplay_experience.pdf (accessed 02 Dec 14); P Sweetser and P Wyeth "GameFlow: A Model for Evaluating Player Enjoyment in Games" (2005) 3(3) *ACM Computers in Entertainment* article 3A, available at: <http://www.itee.uq.edu.au/~penny/papers/Sweetser-CIE.pdf> (accessed 02 Dec 14).

world and complete immersion in it.⁵² The concept of immersion in VWs is tied to presence and to an illusion that this computer mediated environment is not in fact mediated, but is real.⁵³ The result of this “hill-climbing activity through identity space” is “that players understand themselves more.”⁵⁴ Similarly, Lastowka shows immersion using the example of the use of language and in particular the pronouns “you” when referring to another person’s avatar and “I” when referring to their own avatar’s actions.⁵⁵

The argument against using this theory to justify virtual property is found in the inalienability of personal property, as suggested by Radin and achieved, for instance, in the case of intellectual property moral rights on the Continent.⁵⁶ The result of such an approach would be to proclaim avatars and other second level virtual assets inalienable, since they are so intrinsically related to a person. This is, however, not desirable as some users in some of the VWs do in practice want to trade their avatars and such avatars often reach a considerable price on the markets.⁵⁷

Lastowka and Hunter maintain that, even if this could be the case, on the practical side it is not a certain outcome as the courts might conclude otherwise and permit virtual trade.⁵⁸ In addition, if classified as personal property virtual assets would be protected better than the fungible property – i.e. the developers’ property – raising more disputes than providing solutions.⁵⁹ On the other hand, the fact that something might be deemed non-transferable does not necessarily exclude its proprietary character (e.g. common, public property).

An objection to this theory in general, and its application to virtual assets in particular, can be found in the argument of “separability” or “thinghood”; that the things, in order to be property, must not be conceived as “an aspect of ourselves or our on-going personality-rich

⁵² R A Bartle “Virtual Worlds: Why People Play”. In T Alexander *Massively Multiplayer Game Development 2*, (Hingham MA: Charles River Media, 2005) 3-18, available at http://www.mud.co.uk/richard/VIRTUAL_WORLDWPP.pdf (accessed 02 Dec 2014); “Presence and Flow: Ill-Fitting Clothes for Virtual Worlds”, (2007) 10(3) *Techné: Research in Philosophy and Technology* 39-54.

⁵³ M Lombard and T Ditton “At the Heart of it All: The Concept of Presence”, (2004) 3(2) *Journal of Computer-Mediated Communication*, available at <http://onlinelibrary.wiley.com/doi/10.1111/j.1083-6101.1997.tb00072.x/full> (accessed 02 Dec 14).

⁵⁴ *Ibid*, at 15.

⁵⁵ G Lastowka, see note 10 above, at 46.

⁵⁶ See J Hughes, “The Philosophy of Intellectual Property” (1988) 77 *Georgia Law Journal* 287-366; B. Hugenholtz, “Copyright and freedom of expression in Europe” in N. Elkin-Koren and N. Netanel (eds), *The Commodification of Information* (The Hague: London: Kluwer Law International, 2002) 239-264, at 240-241; P. Rigamonti “The Conceptual Transformation of Moral Rights” (2007) 55 *Am. J. Comp. L.* 67-122, at 98.

⁵⁷ C Cifrino, see note 41 above, at 16, G Lastowka, see note 10 above, at 176-177.

⁵⁸ G Lastowka and D Hunter, see note 1 above, at 65-66.

⁵⁹ W Erlank, see note 1 above, at 175-177.

relationships to others” (for example blood, body parts, and personal data).⁶⁰ This objection is particularly applicable to avatars as property when the rich relation between the players and their avatar is borne in mind, but is less applicable to less personal VWs items such as swords, castles, or houses.

To conclude, personhood theories could potentially serve as a good basis for justifying virtual property in the second and third level of code in VWs: Those closely related to the player’s personality, items and creations. The application of this theory, as demonstrated above, is not without difficulties and dilemmas however and would not always serve the interests of the players.

3.2.3. *Utilitarian theory*

Amongst the theories used in this paper, utilitarian theory is least applicable to virtual property in the second layer virtual assets. The main problem here would be in the usefulness of virtual property for society and real world non-players. Such an approach would potentially conflict with the felicific calculus principle of utilitarianism which seeks “the greatest good for the greatest number”.⁶¹

Lastowka and Hunter, however, would not agree with this assertion, claiming that in-game assets from the utilitarian perspective do not need to be useful for society but only useful and valuable for the individuals engaging in creating and improving these assets. Therefore, for them, if the society (the VW) is perceived as aggregation of individuals (players), then the utilitarian concept could perhaps be used. According to this view a recognition of virtual property would reward users for their efforts and incentivise them to create further and develop VWs.⁶² An example for this could be found, for example, in the exponential growth of Second Life users after its developer Linden labs changed their terms of service and promised players ownership their creations .⁶³

On the contrary however it can be argued that players are already incentivised to create and that one of the major factors why they chose to join a particular VW is creation. Property in

⁶⁰ See J Penner, *The Idea of Property in Law* (Oxford: Clarendon Press; New York: Oxford University Press, 1997) at 126.

⁶¹ J Bentham, *An Introduction To The Principles Of Morals And Legislation* (first ed. 1789, J.H. Burns & H.L.A. Hart (eds)., Athlone Press, 1970) at 12-13.

⁶² See W M Landes and R A Posner, *The Economic Structure of Intellectual Property Law*, (Cambridge, Mass.: Harvard University Press, 2003); “An Economic Analysis of Copyright Law” (1989) 18 *Journal of Legal Studies* 325-363, at 326; S. Leung, “The Commons and Anticommons in Intellectual Property” (2010) *The UCL Journal of Law and Jurisprudence* 16-28; S. Kieff, “Property Rights and Property Rules for Commercializing Inventions”(2001) 85 *Minnesota Law Review* 697-754, E W Kitch, “The Law and Economics of Rights in Valuable Information”, (1980) 9 *Journal of Legal Studies* 683-723.

⁶³ R Vacca “Viewing Virtual Property Ownership through the Lens of Innovation” (2008) 76 *Tennessee Law Review* 33-64.

virtual assets would therefore probably not make much difference. Being in VWs already potentially results in economic benefits for the players as players can exchange their virtual assets for real money in many VWs, known as Real Money Trading (RMT).

RMT includes two main components: One that takes place within the game and is in accordance with the End User Licence Agreements (EULAs)⁶⁴; and a second which takes place outside the game and beyond the EULA's provisions. The players can trade and make money from the sale of virtual assets on online auctions within or out with the VW, although some of the VWs expressly ban the use of external auctions (e.g. World of Warcraft – see Blizzard's World of Warcraft EULA). For instance, in 2006 Anshe Chung accumulated more than one million dollars in virtual assets, becoming the first millionaire of the popular VW Second Life.⁶⁵ In December 2009, a person known as “Buss Erik Lightyear” paid \$330,000 to own a virtual space station in Planet Calypso, a MMORPG.⁶⁶ This latter game allows exchanges between virtual currency and real dollars at a fixed exchange rate of 10 PED (virtual currency) to \$1 US dollar.⁶⁷ Overall, Wu estimates that the market for virtual goods in the U.S. exceeded \$3 billion in 2012 and “is expected to grow briskly in later years.”⁶⁸ In 2013 Linden Labs reported 1.2 million daily transactions for virtual goods and a total of \$3.2 billion worth of transactions in the Second Life Economy.⁶⁹ However, it is still unclear whether there could be a further explosion in the numbers of VWs users and their transactions, provided that virtual property is recognised.

The incentives argument therefore works much better for the developers. Creating and maintaining a VW can be a very profitable business deal as they can earn revenue from a range of different sources – subscriptions, virtual sale commission, purchase of land and other features included.⁷⁰ In order to achieve this, understandably, they need to have a

⁶⁴ The EULA is a software license between the developer and the user (and generally drafted by the developer) that governs the relationship between these two parties. The EULA is generally presented as a graphical computer window that pops up when the [user] of the software begins running the program. The user is then presented with the terms of the license, and must click a button indicating that she has read and accepted those terms. The software will only begin running if the user agrees to the EULA. (see *ibid*, at 43)

⁶⁵ R Hof, “Second Life's First Millionaire” (2006) *Businessweek Online*, available at http://www.businessweek.com/the_thread/techbeat/archives/2006/1/lsecond_lifes_fi.html (accessed 02 Dec 14).

⁶⁶ M Schramm “Man buys virtual space station for 330k real dollars” (2010) *Joystiq* available at <http://www.joystiq.com/2010/01/02/man-buys-virtual-space-station-for-330k-real-dollars/> (accessed 03 Dec 14).

⁶⁷ S Brennan, “Crystal Palace Space Station auction tops 330,000 US dollars” (2009) *Joystiq* available at <http://massively.joystiq.com/2009/12/29/crystal-palace-space-station-auction-tops-330-000-us-dollars/> (accessed 03 Dec 14).

⁶⁸ S Wu “Digital Afterlife: What Happens to Your Data When You Die?” (2013) at 1, available at <http://dataedge.ischool.berkeley.edu/2013/pdf/digital-afterlife-white-paper.pdf> (accessed 03 Dec 14).

⁶⁹ See <http://secondlife.com/corporate/affiliate/?lang=it-IT> (accessed 03 Dec 14).

⁷⁰ For Blizzard's profits, see e.g. E Makuch “Activision Blizzard profits hit \$1.1 billion in 2012” (2013) *Gamespot*, available at <http://www.gamespot.com/articles/activision-blizzard-profits-hit-11-billion-in->

significant user base, one which may be incentivised perhaps by virtual property rights.⁷¹ In addition, they need to have their rights in the first layer virtual assets in order to prevent free riding on their creations.

The free riding arguments (arguments against allowing an individual to obtain benefits from someone else's investment, preventing them to recoup costs) are also somewhat applicable to the second layer in the sense that the VWs, as a society, take advantage and become more attractive for new users with these creations profiting the developers in turn.⁷² Another imaginable scenario is free riding of other players, replicating and copying other player's creations.

Free riding, however, as noted by Lemley for IP rights, might even be desirable in the case of VWs, as there is much less need to internalise negative externalities. Similarly to the case of IP, negative externalities are less prominent here in comparison with the tangible property as consumption by many players is desirable given that this enriches the society and culture of VWs.⁷³ Also, the lack of scarcity in virtual worlds means that free-riding would not result in serious detriment as the developers could make more resources available to players.

Conversely, one of the arguments *contra* the use of this justification for virtual property is the allocation reason. According to this view, utilitarian theories could be used to oppose the creation of property rights in VW since these would decrease the welfare of VWs' owners and other users by giving property to individuals and creating, effectively, *the tragedy of anticommons*; a situation where individuals would be able to prevent the use of virtual property and which would result in unwanted underuse of virtual worlds by players.⁷⁴ Lastowka and Hunter reply to these arguments by saying that they do not consider the justification for allocation but rather for the creation of property rights in virtual goods, and that that it should not be the case that property shouldn't exist in VWs just because it is not properly allocated. This can be corrected, for instance, by the courts.⁷⁵ This response does not however address the objection adequately. Rather, the nature of VWs and the layer approach

2012/1100-6403613/ (accessed 02 Dec 14); or for Linden Labs see J Reahard "Linden Lab's Second Life 'extremely profitable,' company looking to expand" (2012) *Massively by Joystiq*, available at <http://massively.joystiq.com/2012/03/15/linden-labs-second-life-extremely-profitable-company-looking/> (accessed 02 Dec 14).

⁷¹ Statistics about the MMORPGs market show that in 2013 there were approximately 20 million subscribers, and that the peak in terms of numbers of subscribers was in 2011, at close to 23 million. See *TotalSubs*, MMOData.net, <http://users.telenet.be/mmodata/Charts/TotalSubs.png> (accessed 03 Dec 14).

⁷² W Landes and R Posner, see note 62 above; M. A Lemley "Property, Intellectual Property, and Free Riding" (2005) 83 *Texas Law Review* 1031-1089, at 1059-1060.

⁷³ M Lemley *Ibid*, at 1059-1060.

⁷⁴ See M A Heller "The Tragedy of the Anticommons: Property in the Transition from Marx to Markets Reviewed" (1998) 111(3) *Harvard Law Review* 621-688.

⁷⁵ G Lastowka and D Hunter, see note 1 above, at 59-60.

would prevent underuse, as the first layer belongs to the developers and the rights in the second one are derived from this ownership.

In summary, all the leading normative arguments for propertisation provide on the one hand some support for recognising virtual property. On the other hand however, these theories encounter many difficulties as elaborated above. The layer structure of virtual worlds does though allow for more creative solutions based on these theories. One of these solutions is virtual worlds usufruct, which is explored in the concluding part of this paper.

3.3. *Features of property vs virtual property*

After having discussed the potential normative justifications of virtual property it is next necessary to look at the features of both property and property objects and in order to identify whether virtual property and second layer virtual assets share these features.

The leading analysis of virtual property and its features for this purpose is that of Fairfield. He lists three major criteria, or features of property, borrowing from the law and economics literature.⁷⁶ These main features are: rivalrousness, permanence and interconnectedness. Castronova *et. Al.* use the same features as those inherent in the physical objects⁷⁷ in their attempt to define and justify virtual property. Some authors also identify further features (such as scarcity⁷⁸, or secondary markets; and value-added-by-users.).⁷⁹ The analysis in the following section will add tangibility to this list as it is both an important feature of property historically and is still retained as such by some jurisdictions (England, for instance).

3.3.1. *Tangibility*

A potential problem that any argument in favour of virtual property in second and third layers would encounter is their alleged lack of tangibility. This problem would not necessarily be as significant for civil law countries, as these do generally recognise property in intangibles; either in their civil code, like France;⁸⁰ or by establishing a separate category of constitutional property, like Germany.⁸¹ This could however be more difficult for the English common law

⁷⁶ C Hess and E Ostrom, *Understanding knowledge as a commons from theory to practice*, (Cambridge, Mass.; London: MIT, 2007) at 9, 352; D.L. Weimer and A.R. Vining, *Policy analysis* (5th ed. Boston: Longman, 2011) at 72.

⁷⁷ “Virtual Worlds are virtual because they are online, but they are worlds because there is some physicality to them.” E Castronova, see note 48, above.

⁷⁸ Some authors however claim that scarcity is artificially created, coded, and usually for the reasons of provider’s economic benefits. G Lastowka, see note 10 above, at 135; W Erlank, see note 1 above, at 270-271.

⁷⁹ C Blazer “The Five Indicia of Virtual Property” (2006) 5 *Pierce Law Review* 137-161, at 139.

⁸⁰ J Bell et. al. *Principles of French law* (2nd ed. Oxford ; New York: Oxford University Press, 2008) at 27.

⁸¹ M. J. Raff *Private Property and Environmental Responsibility: A Comparative Study of German Real Property Law* (The Hague; New York: Kluwer Law International, 2003).

system which refuses to consider intangibles as property in at least some cases (information) but which does decide to recognise it in others, e.g. IP.⁸²

The intangibility of second layer virtual assets (intangible at least for the purpose of the classical legal definitions, lacking real world tangibility or corporeality due to consisting of code), would therefore present an obstacle for recognising virtual property in English common law. Fewer issues would emerge in the US law, as the courts have been mostly ready to recognise property in intangibles (for instance, fresh news).⁸³

Taking this point even further, it can be suggested that this layer does not even have to be considered intangible at all. Second layer virtual assets are tangible for an avatar and, if the level of immersion in the VW is very high, then they could consequently be tangible for the player as well.⁸⁴ This is, however, a novel argument which at the moment is highly unlikely to be accepted in the English courts.

3.3.2. *Rivalrousness*

The analysis will further be based on the features identified by Fairfield in his seminal work on virtual property (2005). The first feature he identifies is rivalrousness; that the consumption cannot be common for a rivalrous resource and so one person's possession and consumption physically excludes other pretenders to the same resource.⁸⁵

Fairfield thus discusses the possibility of applying the traditional concept of property, designed for chattels rather than intellectual property, to virtual property that mimics the real and offline (namely layer two virtual assets in our classification). He distinguishes between the computer software code, designed as non-rivalrous and protected by IP at layer 1, and other type of rivalrous code, which are "designed to act more like land or chattel than ideas".⁸⁶ If one person controls it, the others cannot.

⁸² See important cases about the propertisation of information, *Exchange Telegraph co. Ltd v. Gregory and Co* [1896] 1 QB 147; *Oxford v. Moss* [1978] 68 Cr. App.R. 181; or generally see N Palmer and P Kohler "Information as Property" in E McKendrick and N Palmer (eds), *Interests in goods* (London: Lloyd's of London Press, 1993) 187-206. The US common and statute law is more ready to recognise property in different types of intangibles (e.g. fresh news). The doctrine of misappropriation is of a proprietary character, as established in *International News Serv. v. Associated Press*, 248 U.S. 215, 250 (1918); see commentary in R Y Fujichaku "The Misappropriation Doctrine in Cyberspace: Protecting the Commercial Value of "Hot News" Information" (1998) 20 *University of Hawaii Law Review* 421-476.

⁸³ *International News Services v. Associated Press* 284 US 215 (1918); D G Baird, "Common Law Intellectual Property and the Legacy of *International News Service v. Associated Press*" (1983) 50 *University of Chicago Law Review* 411-429; E J Sease "Misappropriation is Seventy-Five Years Old; Should We Bury It or Revive It?" (1994) 70 (4) *North Dakota Law Review* 781-808.

⁸⁴ W Erlank, see note 1 above, at 287-288.

⁸⁵ C Hess and E Ostrom, see note 76 above, at 9, 352.

⁸⁶ *Ibid*, at 1101.

Rivalrousness is therefore a physical quality of an object, different from the idea of exclusivity which refers to an individual's power to control the use of an object.⁸⁷ Other commentators used the term exclusivity as a synonym for rivalrousness.⁸⁸ This is however wrong, and Fairfield therefore rightly notes that exclusivity is a function of rivalrousness and a quality that can be assigned to non-rivalrous objects by law or technology (for instance IP creations and DRM).

It is important to note in this regard his observation that this code is rivalrous because it is made that way and that this is a constituent part of the Internet.⁸⁹ Examples of this code are domain names, URLs, websites, email accounts, and VW items. Fairfield also warns of the confusion in trying to fit all intangibles in a category of non-rivalrous objects⁹⁰. Other authors who support his stance in relation to the virtual property and rivalrousness are Horowitz,⁹¹ Blazer⁹² and Westbrook.⁹³

Critics claim to the contrary that virtual property and virtual assets are inherently non-rivalrous in nature. Nelson, for instance, disputes claims of rivalrousness, or rather exclusivity, of virtual goods and using the same examples – URLs and emails – claims that the alleged owner cannot control this property to the exclusion of others. According to the contract that a user concludes to acquire these the developer retains the ability to control the resources. Similarly, Glushko argues that the ease of copying code in the case of any digital property would also undermine an argument of virtual property exclusivity.⁹⁴

These authors have however again confused the notions of exclusivity, which is an economic and legal feature and which relates to the rights conferred by contracts or property, and that of rivalrousness which is a purely physical feature. Even if a provider retains the exclusive control over a virtual resource the fact that only one user can, arguably, physically experience it means that the resource is indeed rivalrous.

In summary therefore, rivalrousness is a feature of second level virtual property. The problem with this feature is its unstable nature, as it only exists if it has been created in that form by

⁸⁷ D L Weimer and A R Vining, *Policy analysis* (5th ed. Boston: Longman, 2011) at 72.

⁸⁸ T J Westbrook "Owned: Finding a Place for Virtual World Property Rights" (2006) 3 *Michigan State Law Review* 779-812.

⁸⁹ J Fairfield "Virtual Property" (2005) 85 *Boston University Law Review* 1047-1102, at 1053-1054.

⁹⁰ *Ibid*, 1063

⁹¹ S J Horowitz, see note 40 above.

⁹² C Blazer, see note 79 above.

⁹³ T J Westbrook, see note 88 above.

⁹⁴ B Glushko "Tales of the (Virtual) City: Governing Property Disputes in Virtual Worlds" (2007) 22(507) *Berkman Technology Law Journal* 251-257.

the developer. However, this should not be an issue since, ultimately, VWs are unstable too and would not exist if they were not created as such by developers. Indeed, players and many theorists (including this author) still accept the VWs as such claiming that, however unstable and peculiar places they may be, they still represent replicas of the real world. In addition, even if we were to accept that VW items are not rivalrous in nature this would still not be a decisive point in favour of discarding protection as precedence exists for other non-rivalrous resources – specifically IP resources – to still be protected like, or similarly to, property.

3.3.3. *Permanence*

Permanence or persistence of VWs and in-game assets is another disputed feature, present in the case of physical property and also disputed in the case of IP. Castronova defines persistence as the feature of VWs which enables them to “continue to run whether anyone is using [them] or not.”⁹⁵ Fairfield, like Castronova, argues that code is persistent since “it does not fade after each use, and it does not run on one single computer.”⁹⁶ The code of a VW can be accessed from a variety of devices and it is located (and persists) on the servers of service providers. Thus, according to these commentators, this quality of code makes it analogous to physical objects.⁹⁷

However, this code can be accessed and modified anytime by the developer presenting an important weakness to this argument. Similarly, Erlank notes that its permanence depends on the cooperation of the developers, who can make the virtual property disappear at any time.⁹⁸ Chein warns therefore that VWs are ephemeral and dynamic environments and virtual property can be lost “at the accidental flick of a power switch”.⁹⁹ Cifrino also notes the potential risks posed by the obsolescence of VW business models, giving the example of the City of Heroes VW which ceased operations in 2012 after eight years.¹⁰⁰

Another issue related to the potential disappearance of VWs is the lack of interoperability between software in different VW.¹⁰¹ When user’s account has been restricted or terminated by one developer it cannot therefore be moved to another. There have been some efforts

⁹⁵ E Castronova, see note 48 above.

⁹⁶ J Fairfield, see note 89 above.

⁹⁷ T J Westbrook, see note 88 above, at 782-783.

⁹⁸ W Erlank, see note 1 above, at 275.

⁹⁹ A. Chein “A Practical Look at Virtual Property” (2006) 80 *St John's Law Review* 1059-1090, at 1077.

¹⁰⁰ C Cifrino, see note 41 above, at 23-24.

¹⁰¹ B Glushko, see note 94 above, at 512; J W Nelson “The Virtual Property Problem: What Property Rights in Virtual Resources Might Look Like, How They Might Work, and Why They are a Bad Idea” (2010) 41 *McGeorge Law Review* 281-309.

towards making property in one VW compatible with the software of another VW but until this is implemented the quality of permanence remains rather dubious.¹⁰²

Lastowka and Hunter claim that temporality is a weak argument against virtual property. They use the examples of lease or usufruct, both of which are property interests recognised in common law that are nonetheless time-limited. Due to its time-limited protection (i.e. 70 years post-mortem in the EU and US) intellectual property also serves as another similar example.¹⁰³ Therefore, while the issue of the lack of permanence in the second and third layer virtual assets could serve as a solid argument against virtual property in the classical conceptions of property this does not necessarily exclude proposing some other proprietary models for protecting virtual assets similar to IP.

3.3.4. *Interconnectedness*

Fairfield also argues that another VW quality is interconnectivity, analogous to this characteristic of objects in the real world (as player can experience the connected world; they can interact with each other and the VW).¹⁰⁴ Like Castronova¹⁰⁵, Fairfield argues that “code can be made interconnected, so that although one person may control it, others may experience it.” As Erlank notes, if there was no interconnectivity in VWs, players would be able to experience only their own property, which is contrary to the fundamental idea of VWs.¹⁰⁶

However, code is not necessarily interconnected as not all computer systems can run all the code without necessary adjustments and, furthermore, we have a problem of interoperability as seen in the discussion on permanence in the section above.¹⁰⁷

In summary, second level virtual assets (according to Abramovich’s categorisation) potentially possess all the important physical characteristics of typical “real world” object (i.e. rivalrousness, permanence, interconnectedness). However, these features are very peculiar in the case of VWs as they depend on the developers and their behaviour; whether

¹⁰² For more about these efforts, see R Vacca, see note 63 above, at 22; D Terdiman, “Tech Titans Seek Virtual-World Interoperability” (2007) *CNET News*, available at: http://news.cnet.com/Tech-titans-seek-virtual-world-interoperability/2100-1043_3-6213148.html (accessed 02 Dec 14) (noting the status of converting VWs to interoperability); Virtual World Interoperability, <http://VirtualWorldinterop.wikidot.com/start> (accessed on 02 Dec 14) (summarising the results of the 2007 Virtual Worlds Interoperability Community Summit).

¹⁰³ G Lastowka and D Hunter, see note 1 above, at 55-56.

¹⁰⁴ J Fairfield, see note 89 above.

¹⁰⁵ Interconnectivity (they ‘exist on one computer but can be accessed remotely (i.e., by an internet connection) and simultaneously by a large number of people.’) E Castronova, see note 48 above.

¹⁰⁶ W Erlank, see note 1 above, at 246.

¹⁰⁷ T J Nelson, see note 101 above, at 17.

they make these items in such a way that they possess the relevant features. In addition, virtual assets lack tangibility which is one of the prerequisites of property in some jurisdictions.

Nevertheless, if we look at the VWs as such their characteristics and if we recognise their nature, importance and value that they hold for players one cannot simply discard any kind of protection for the players and their assets. It is argued in this paper that the most sensible approach to resolve this tension would be a compromise solution; one which would recognise certain proprietary rights of the players and yet which would recognise the fact that these rights depend on the first level code of the developer's system and software.

4. Allocation of virtual assets ownership

Before proposing a solution, the current model of ownership in VWs, the allocation of property will be analysed. Most developers in practice curtail the possibilities for players to assert any virtual property rights in their second level virtual assets. Moreover, even where developers envisage some kind of player's property rights in their EULAs (e.g. Second Life), these rights are very limited and can barely be categorised as property at all.

The solution to rectify this imbalance is potentially available in the form of consumer protection. However, due to the special character of VWs and the areas that these contracts aim to regulate, consumer protection laws do not prove very helpful. Allocation of ownership, IP and other rights in VWs is established through contracts. VWs contracts come in the form of click wrap licences (End User Licence Agreements – EULAs; Terms of Service – ToS; rules of conduct; and other policies)¹⁰⁸ and the effects of these contracts are widely disputed. They leave little or no freedom for the user and give no other choice apart from agreeing or declining in the entirety, the latter effectively amounting to refusing to take part in the game.¹⁰⁹ The most common model contained in these contracts at the moment is that the developer claims all property and IP rights¹¹⁰ associated with the VW. Indeed Blizzard, the World of Warcraft developer, expressly excludes the grant of any property rights for users in assets created or traded in the game, in addition to forbidding transfers of accounts (S. 4 and 5 World of Warcraft EULA).

Second Life and Linden Labs, conversely, used to give relatively extensive rights in content created by the users. Initially, Linden labelled these rights as property but, in response to

¹⁰⁸ See e.g. Blizzard "World of Warcraft - End User License Agreement" (2009) World of Warcraft available at <http://www.worldofwarcraft.com/legal/eula.html> (accessed 03 Dec 14).

¹⁰⁹ W Erlank, see note 1 above; T Pistorius "Click-Wrap and Web-Wrap Agreements" (2004) 16 *SA Merc LJ* 568-576; M A Lemley "Terms of Use" (2006) 91 *Minnesota Law Review* at 459-483.

¹¹⁰ Jankowich conducted a survey of 48 VWs, confirming these assertions: See note 27 above.

Bragg v. Linden Research, Inc.,¹¹¹ they later changed their terms to grant IP right only.¹¹² They also deny property rights in their virtual currency (Linden dollars) and property rights in the land that users can buy in Second Life, reminding the user instead of the limited licence that they are granted.¹¹³ Moringiello argues that, Linden deceives its users in this regard as it effectively promises something that resembles the bundle of rights in land – i.e. property – and then takes it back by the way of the terms of service.¹¹⁴ As Erlank rightly notes, even the recognised rights are rather illusory, as Linden limits their scope to the game and refuses any liability or compensation in the case of damage or loss of this property.¹¹⁵ Nevertheless, he also reasonably opines that by insisting on regulating and limiting virtual property, the developer does at least implicitly recognise the existence of virtual property.¹¹⁶

On the other hand, Linden also grants themselves a non-exclusive licence in players' creations, the scope of which has been widened even more recently to the displeasure of many players of Second Life.¹¹⁷ Also, their EULA has caused Linden Labs to be involved in the most important court cases about VWs and virtual property in the western world.

The first and most famous VWs case is that of *Bragg v. Linden Research, Inc.*¹¹⁸ In this case Marc Bragg sued the owners of Second Life, Linden Research, after they expelled him from the online community and reclaimed his virtual assets, “effectively confiscating all of the virtual property and currency that he maintained on his account” (which at the time held roughly \$2,000 in real-world money on account). Linden Lab expelled Marc Bragg claiming

¹¹¹ 487 F. Supp. 2d 593, 612 (E.D. Pa. 2007)

¹¹² Linden Lab. “Second Life Residents to Own Digital Creations.” (2003) *Press Release* Available at <http://creativecommons.org/press-releases/entry/3906> (accessed 03 Dec 14); Second Life Terms of Service, December 15, 2010, title 7, and especially “7.6 Linden Lab owns Intellectual Property Rights in and to the Service, except all User Content”, Available at <http://secondlife.com/corporate/tos.php?lang=en-US> (accessed 03 Dec 14) and commentary in R Vacca, see note 63 above; A B Steinberg “For Sale--One Level 5 Barbarian for 94,800 Won: The International Effects of Virtual Property and the Legality of Its Ownership” (2009) 37 *Georgia Journal of International and Comparative Law* 381-416; J. Gong “Defining and Addressing Virtual Property in International Treaties” (2011) 17 *Boston University Journal of Science & Technology Law* 101-140.

¹¹³ See sec. 4.8. Second Life ToS available at <http://lindenlab.com/tos> (accessed 04 Dec 14).

¹¹⁴ J M Moringiello “Towards a System of Estates in Virtual Property” (2007) *Widener Law School Legal Studies Research Paper No. 08-22*; *Cyberlaw Security & Privacy*, Sylvia Mercado Kierkegaard (ed), International Association of IT Lawyers, available at <http://ssrn.com/abstract=1070184> (accessed 03 Dec 14).

¹¹⁵ Second Life ToS part 9., or part XVII World of Warcraft EU ToS/part 12 US; W Erlank, see note 1 above, at 102.

¹¹⁶ W Erlank, see note 1 above, at 112.

¹¹⁷ M Korolov “Outrage grows over new Second Life terms” *Hypergrid Business*, Sep 30 2013 available at <http://www.hypergridbusiness.com/2013/09/outrage-grows-over-new-second-life-terms/> (accessed 03 Dec 14) or SecondLife® Content Creators Survey on Linden Lab TOS Issue <http://toytalks.weebly.com/1/archives/09-2013/1.html> (accessed 03 Dec 14).

¹¹⁸ See note 111 above.

that he had violated their Terms of Service by improperly buying in game land at an auction. Second Life moved to compel arbitration according to the terms of its service agreement.

Bragg, however, argued that the contractual terms between Bragg and Second Life were unconscionable because the service agreement assumed too much power and was unreasonably biased against the user. The court on this point confirmed that the terms of service were unconscionable in relation to the arbitration clause and knocked down the mandatory arbitration clause.¹¹⁹ They focused on the fact that there was an element of surprise due to hidden or missing terms, as there was no notice of the serious expense and inconvenience to the plaintiff that participation in the arbitration would entail. The court stated that the terms therefore left plaintiff with no effective remedy.¹²⁰

Californian law was applied in the analysis of the contract, and the court noted that to find unconscionability in California, it must find both procedural and substantive unconscionability.¹²¹ It found both elements and concluded that the arbitration clause was thus unconscionable.¹²² This case was however not decided on the issue of virtual property: The property claim was initially brought up by Bragg, who asserted that his in-game assets were in fact his property, but the court, unfortunately, did not discuss it. Virtual property, as demonstrated earlier, therefore still remains at the level of academic debates.

More recently in the case of *Evans et al v. Linden Research, Inc. et al*¹²³ a group of Second Life users complained that they had purchased virtual items and/or virtual land and had later had their accounts unilaterally terminated or suspended by Linden. These players claimed to

¹¹⁹ Unconscionable terms are those deemed to be extremely unfair and oppressive, invalidating a contract. To succeed on a claim of unconscionability, a party must prove both that the contract terms unreasonably favor the other party and that a ‘gross inequality of bargaining power’ exists that leaves the claiming party with no meaningful choice as to the terms of the agreement. The court considers the reasonableness of the terms under the commercial standards used at the time of the contract's formation. Unconscionable terms are those ‘so extreme as to appear unconscionable according to the mores and business practices used at the time.’ see N. Kutler “Protecting Your Online You: A New Approach to Handling Your Online Persona after Death” (2011) 26 *Berkeley Technology Law Journal* 1641-1670; *Williams v. Walker-Thomas Furniture Co.*, 350 F.2d 445, 449 (D.C. Cir. 1965); *Carnival Cruise Lines, Inc. v. Shute*, 499 U.S. 585, 600-01 (1991)

¹²⁰ S Hetcher “User-Generated Content and the Future of Copyright: Part Two - Agreements Between Users and Mega-Sites” (2008) 24 *Santa Clara Computer & High Technology Law Journal* 829-867, at 836.

¹²¹ *Bragg* at 605 (‘The procedural component can be satisfied by showing (1) oppression through the existence of unequal bargaining positions or (2) surprise through hidden terms common in the context of adhesion contracts. The substantive component can be satisfied by showing overly harsh or one-sided results that “shock the conscience.”’ (citing *Comb v. PayPal, Inc.*, 218 F.Supp.2d 1165, 1172 (N.D. Cal. 2002) and at 606 (‘The critical factor in procedural unconscionability analysis is the manner in which the contract of the disputed clause was presented and negotiated.’ (citing *Nagrampa v. MailCoups, Inc.*, 469 F.3d 1257, 1282 (9th Cir. 2006)); (‘When the weaker party is presented the clause and told to “take it or leave it” without the opportunity for meaningful negotiation, oppression, and therefore procedural unconscionability, are present.’ (citing *Nagrampa*, 469 F.3d at 1282)).

¹²² *Bragg v. Linden Research, Inc* see note 1110 above at 611.

¹²³ No. C-11-01078 DMR United States District Court, N.D. California. November 20, 2012.

own their virtual assets and were unhappy that they were not compensated for the value of the virtual land, items, and/or currency in their accounts. In addition, the plaintiffs claimed that Linden had made false representations when it came to the ownership of virtual land and virtual items and had wrongfully confiscated these items from the class members they sought to represent.¹²⁴ Linden disputed the claimed ownership in virtual assets but did recognise however IP rights in general in users' creations and copyright in particular.¹²⁵ The central issue was again the fairness and validity of the contract provisions about suspension of accounts and users compensation.

Again, there was no decision in respect of virtual property in *Evans*. The case was settled and Linden agreed to return up to 100% of the U.S. dollar balances to the PayPal accounts of the plaintiffs; up to 100% of the Linden dollar balances in class members' accounts; to pay two Linden dollars per square meter of virtual land held by class members; and to pay \$15 per class member to his or her PayPal account or, alternatively, to allow the class members to attempt to sell their virtual items on the Second Life Marketplace with Second Life's commission on the sales waived.¹²⁶ This example might illustrate Linden's attitude and concerns over virtual property through their willingness to compensate the users instead of proceeding with a case which might find some kind of property in virtual items and land.

Even the "liberal" VWs/games seem to be replicating these EULAs. An example of this is STEAM, an entertainment platform for distributing many different games including VWs. This very successful platform is considered to be user-friendly, open-source to an extent and an alternative to the traditional business models.¹²⁷ Valve, the owner of STEAM, created a very restrictive EULA (in its Subscriber Agreement), resembling closely those of the other VWs. Therefore, apart from IP rights,¹²⁸ player ownership of their creations and the virtual money contained in their wallets¹²⁹ is limited, non-transferable, and subject to a wide licence

¹²⁴ *Evans et al v. Linden Research, Inc. et al*, Hr'g Tr. 27:12-28:11.

¹²⁵ *Evans et al v. Linden Research, Inc. et al* Hr'g Tr. 37:7-10; 39:17-24; 53:15-24.

¹²⁶ See the confirmation of settlement in *Evans et al v. Linden Research, Inc. et al* No. C-11-01078 DMR, United States District Court, N.D. California. October 25, 2013

¹²⁷ A Wawro "Steam now has over 75 million active accounts." (2014) *Gamasutra* available at http://www.gamasutra.com/view/news/208667/Steam_now_has_over_75_million_active_accounts.php (accessed 03 Dec 14); STEAM "Steam & Game Stats" (2014) available at <http://store.steampowered.com/stats/> (accessed 03 Dec 14).

¹²⁸ STEAM Subscriber Agreement, sec 6, available at http://store.steampowered.com/subscriber_agreement/ (accessed 03 Dec 14).

¹²⁹ *Ibid*, part C.

taken by the provider, Valve Corporation.¹³⁰ Valve has been criticised for banning a user under these terms who, contrary to the EULA, attempted to sell his STEAM account.¹³¹

Following the above analysis, it could be argued, as many authors indeed do, that the contracts are *prima facie* unfair.¹³² The reasonable remedy for this would therefore be to challenge their unfair or unconscionable provisions in courts using consumer protection laws.¹³³

Is consumer protection law helpful? At the level of the EU, *Directive 2011/83/EU of the European Parliament and of the Council of 25 October 2011 on consumer rights* would apply¹³⁴. This Directive, implemented in the UK in the form of *The Consumer Contracts (Information, Cancellation and Additional Charges) Regulations 2013 (No. 3134)*, encompasses contracts regarding digital content including games (See recital 19 of the Directive). Additionally, at the UK level *The Unfair Terms in Consumer Contracts Regulations 1999* would potentially apply if we recognise that users do act like consumers when purchasing the licence to use software to enter the VW. According to these Regulations, terms that would be potentially deemed as invalid are, for example, terms limiting the liability of the developer, reserving the right to terminate or modify terms discretionary and without notice, and arbitration clauses etc..¹³⁵

While both the UK and EU legislation, however, apply to issues such as the provision of information to consumers, rights of withdrawal, liability, delivery and passing of risk they do not address the issues of property rights as the subject matter of a contract cannot be considered unfair and is out with the scope of this legislation.¹³⁶ As a result these laws could apply to the parts of the contracts regulating sale of the licence for using software (the first layer of VWs) but the second and third layers are players' creations and would not therefore fall within the definition of goods and services found in the consumer protection laws: They are not goods nor services sold by the developers.

¹³⁰ *Ibid*, s. 6 A.

¹³¹ A Webster "Steam user violates subscriber agreement, loses \$1,800 in games" (2011) *Ars Technica* available at <http://arstechnica.com/gaming/2011/03/steam-user-violates-subscriber-agreement-loses-1800-in-games/> (accessed 03 Dec 14).

¹³² A E Jankowich, see note 27 above, at 50.

¹³³ P Riley, see note 8 above, at 907.

¹³⁴ Official Journal L 304, 22/11/2011 P. 0064 – 0088; This Directive replaces, as of 13 June 2014, *Directive 97/7/EC on the protection of consumers in respect of distance contracts and Directive 85/577/EEC to protect consumer in respect of contracts negotiated away from business premises*.

¹³⁵ Schedule 2 of the Regulation lists non-exhaustively terms that might be regarded unfair.

¹³⁶ See *The Unfair Terms in Consumer Contracts Regulations 1999*, S. 6. (2); or Rec. 51. *Directive 2011/83/EU of the European Parliament and of the Council of 25 October 2011 on consumer rights*; also the EU does not interfere with property rights of the member states: art 345 of the *Treaty on the Functioning of the European Union* (Consolidated version 2012), OJ C 326, 26.10.2012.

Alternatively, the application of a piece of legislation that refers to unfair terms in any contract (and not just consumer contracts) could be considered: the *UK Unfair Contract Terms Act 1977*. Application of this Act however does not extend to contracts dealing in any way with IP and includes within its scope exclusion and limited contract clauses only.¹³⁷ Similar, though much more limited protection can be found in California in the US, mandated through the *Consumers Legal Remedies Act (2006)*. This legislation includes the prohibition of the previously discussed unconscionable provisions in the contract.¹³⁸

So far, VWs contracts have not been challenged much in the US and UK courts. In fact, in the UK, there is no such a case at the time of writing. The US case law is more developed, and the *Bragg* and *Evans* courts did find certain provisions of the contracts unfair (relating to jurisdiction and account suspension). Nevertheless, the court's deliberations on the property rights have been quite accidental and have been carried out in the context of discussing the main legal issues of a case. Therefore, court cases should not be relied upon to come in and resolve the issue of virtual property any time soon. Even if more cases do appear the outcome, at least in the US, might not be beneficial for the players.¹³⁹

To conclude, VW contracts at the moment deny the players virtual property rights in their creations and VW items. However, the courts have occasionally attempted to address the balance via doctrines of unfairness in contracts offering a potential solution. In principle however, the question of creating and/or recognising proprietary rights and interests in VWs is not an issue that can be regulated by contracts but rather is one of the general laws of property/IP. In addition, an attempt to applying consumer protection law to VWs EULAs and the allocation of property therein is contrary to the views of many authors mentioned in the subsequent section and their viewpoint that VWs are not just games and their players not just users but rather active participants, citizens, and residents of the world.

5. *Constitutionalisation of VWs*

In addition to the function of contracts in allocating ownership of virtual assets they also have another important function: governance of the VWs. This section aims to demonstrate this significance and to explore how these contracts in essence resemble real world constitutions.

¹³⁷ Unfair Contract Terms Act 1977, Schedule 1 sec. 1

¹³⁸ California Civil Code §§ 1750 et seq.

¹³⁹ See B J Gilbert "Getting to Conscionable: Negotiating Virtual Worlds' End User License Agreements without Getting Externally Regulated" (2009) 4 *Journal of International Commercial Law and Technology* 238-251, at 242, or generally see S Randall, "Judicial Attitudes Toward Arbitration and the Resurgence of Unconscionability" (2004) 52 *Buffalo Law Review* 185-224; on the unconscionability and Californian law see P J Quinn, see note 14 above; see also A Chein, see note 99 above.

Contracts in VWs are an effective and significant regulatory tool in VWs,¹⁴⁰ giving users usually only a “take it or leave it” option as mentioned in the section above.¹⁴¹ Using mainly contracts VW developers have retained “omniscient and godlike” powers when it comes to controlling and regulating the behaviours and interest of players; turning them into their subjects.¹⁴²

Lastowka compares this order to a feudal order under which sovereigns have almost unlimited rights over their vassals and act as governors of a separate jurisdiction, with a separate economy and governed by a distinct body of law.¹⁴³ Jankowich coined a useful term for this regulation: “EULAw”, characterised it as “non-negotiated, infinitely modifiable, proprietor-friendly regulation”.¹⁴⁴ This is not a new phenomenon though, as a similar situation exists for all the standard-terms contracts. What makes these contracts different is the substance that they attempt to regulate in their provision – different issues that are not susceptible to contractual regulations.

The rules of EULAs and ToS govern both the legal and environmental aspects of VWs such as etiquette, game rules, player conflicts, in-game crimes, privacy policies, business policies, real world law of contracts, property, IP, and dispute resolution.¹⁴⁵ In this way the contracts are also hybrid contract/property documents, granting the players, in some cases, limited property/IP rights in their creations (e.g. Second Life) and exceeding the principle of privity of contracts (their binding nature between the parties only) or, in civil law terms, *in personam* nature.¹⁴⁶ Therefore, these contracts create pseudo-property, pseudo-torts, pseudo-criminal and pseudo-constitutional systems.

Apart from the *ex-ante* rule making by contract, the providers also have a very strong mechanism of enforcement through code (both software and architecture) by restricting access to the world *ex post*. The providers have abilities to change the worlds in any way they wish; to change its landscape, design functionalities and the player’s abilities (what can and cannot be done in a certain world, who can join the world and who needs to be expelled for example).¹⁴⁷ As noted by Mayer- Schönberger and Crowley, one of the most effective

¹⁴⁰ A E Jankowich, see note 27 above; V Mayer- Schönberger and J R Crowley, see note 26 above; G Lastowka, see note 10 above; J M Balkin “Virtual Liberty: Freedom to Design and Freedom to Play in Virtual Worlds” (2004) 90(8) *Virginia Law Review* 2043–2098.

¹⁴¹ A E Jankowich, see note 27 above, at 6.

¹⁴² W Erlank, see note 1 above, at 75-76, 79; A E Jankowich, see note 27 above.

¹⁴³ G Lastowka, see note 10 above, at 195.

¹⁴⁴ A E Jankowich, see note 27 above, at 9.

¹⁴⁵ *Ibid*, at 10.

¹⁴⁶ J Fairfield, see note 8 above, at 429,451.

¹⁴⁷ J M Balkin, see note 139 above, at 2049.

methods of enforcement for the breach of EULAs provision is expulsion, as users incur significant costs when forced to leave the world both in social terms (lost social capital, friends, built reputation, and ties with their avatar) and financial (lost monthly subscription fees and loss of all virtual property).¹⁴⁸ They therefore rightly label VWs as “the most Lessigian of all spaces of online interaction.”¹⁴⁹ Erlank agrees going even further, claiming that “there is no room for manoeuvre when a player gets to deal with the program code”.¹⁵⁰

No matter how powerful code is in restricting players’ behaviour it has not been used pervasively to regulate all the possible relations within VWs. Rather, for some of the controversial issues a preferred regulatory modality has been contracts.

Contracts accompanied with code, therefore, are the main governing modalities of VWs. Effectively, through contracts, developers often regulate issues that in real world could not be thus regulated; creating different quasi-legal regimes. Mayer- Schönberger and Crowley characterise this phenomenon as *constitutionalisation* of VWs.¹⁵¹ Similarly, Suzor notes the constitutional tensions in VW regulation. He argues for a reconceptualisation and evaluation of this framework and the application of rule of law principles to this private law, EULA-based, regulation.¹⁵²

The phenomenon of *constitutionalisation* could be seen as a consequence of VWs being “places” with their own social interactions and culture, mimicking in this sense the real-world.¹⁵³ The social significance and features of VWs have indeed been studied by many economists, anthropologists, psychologists, computer scientists and lawyers who have embarked the task of explaining different social phenomena within VWs.¹⁵⁴ All these

¹⁴⁸V Mayer- Schönberger and J R Crowley, see note 26 above, at 1791-1792.

¹⁴⁹ Referring to Lessig’s modalities of regulation of cyberspace and the prominence of code (Internet architecture): L. Lessig, *Code, version 2.0* (New York: Basic Books, 2006).

¹⁵⁰ W Erlank, see note 1 above, at 65; J T L Grimmelmann “Virtual worlds as Comparative Law” (2004) 49 *New York Law School Law Review*, 147-184, at 174; K E Deenihan “Leave Those Orcs Alone: Property Rights in Virtual Worlds” (2008) available at <http://ssrn.com/abstract=1113402> (accessed 02 Dec 14), at 5.

¹⁵¹ According to them, this process started when in 2003 Linden decided to recognise players’ IP rights in Second Life, resulting in these rights being subjected to the real-world legislation at least in the IP rights domain. See Mayer- Schönberger and Crowley, see note 26 above, at 1809-1810; Linden Labs, see note 112 above.

¹⁵² N Suzor “The role of the rule of law in virtual communities” (2010) 25 *Berkeley Technology Law Journal* 1817-1886.

¹⁵³ G Lastowka, see note 10 above, at 10, 46.

¹⁵⁴ An interesting example in the field of culture are films created in the VWs and shared elsewhere later (e.g. on YouTube), called machinimas. In relation to VW communities, a recent empirical longitudinal study tested social ties within the MMOPG Everquest II: see C Shen, P Monge and D Williams, “The Evolving Virtual Relationships: A Longitudinal Analysis of Player Social Networks in a Large MMOG” (2011) available at <http://dx.doi.org/10.2139/ssrn.1929908> (accessed 03 Dec 14). In addition, Tactical Language Project, developed at the University of Southern California Center for Research in Technology for Education, teaches language

individual, social and economic characteristics of VW encourage writers to claim that the worlds have “significance above and beyond their importance in the game context.”¹⁵⁵ Therefore “VWs are online places where games are usually played”.¹⁵⁶ VWs are qualitatively different from other kinds of games and from real world social interaction because of the unique interplay of their features; especially the fact that these interactions happen in an environmentally peculiar 3D world.

The physicality, or *environmentality* of VWs is devised in order to either mimic real worlds quite realistically or to create imaginary, graphic, 3D environments that enhance users experience and immersion.¹⁵⁷ Consequently, there is a much richer potential for creation and building in VWs in comparison with, for instance, social networks. The option and tools for creation are much more limited on social networks as a result of their web-based interface and lack of physicality. Therefore, any comparison in the size of user base or implications that the user might have encounter, when migrated to social networks, issues of inadequate analogy as the experience and reasons for joining these different platform are, at the moment,¹⁵⁸ very different.

To conclude, is it clear that the present form of regulation of contracts and code is inadequate and insufficient to regulate VWs and the relationships between the players and providers of

using virtual environments in order to teach students language within a cultural context: J Fairfield, see note 8 above, at 1061. The worlds can be a site of rich political debates and campaigns, e.g. Second Life internal elections or see J Wagner “Au to New World *The Election Comes to Second Life*”, Posting of Notes, available at <http://secondlife.blogs.com/nwn/2004/04/theelectionco.html> (accessed 03 Dec 14); 2008 Hilary Clinton’s Second Life campaign: See D Holloway “Hillary Clinton flirts with Second Life” July 11, 2007, Crikey, available at: <http://www.crikey.com.au/2007/07/11/hillary-clinton-flirts-with-second-life/> (accessed 03 Dec 14) or M Reverte, YouTube video, “QG Second Life d’ Hillary Clinton” 05 June 2008 available at <http://www.youtube.com/watch?v=iCyRL1Bp-Y> (accessed 03 Dec 14). See Reuters “Sweden first to open embassy in Second Life” (2007) available at <http://www.reuters.com/article/2007/05/30/us-sweden-secondlife-idUSL3034889320070530>; there are 10 embassies in total, see <http://www.redcentricplc.com/virtual-worlds/> (accessed 03 Dec 14). They can have education purposes, see M Oliver and D Carr “Learning in virtual worlds: Using communities of practice to explain how people learn from play” (2009) 40(3) *British Journal of Educational Technology*, 444–457. VWs can also be used for military purposes, see M Wertheim “Virtual Camp Trains Soldiers in Arabic, and More” (2004) N.Y. Times, available at <http://www.nytimes.com/2004/07/06/science/virtual-camp-trains-soldiers-in-arabic-and-more.html?pagewanted=all&src=pm> (accessed 03 Dec 14). Therapists also use them to treat patients with Asperger’s Syndrome, see J Fairfield, see note 8 above, at 1059.

¹⁵⁵ A Chein, see note 99 above, at 1069.

¹⁵⁶ G Lastowka, see note 10 above, at 119; Bartle, see note 52 above.

¹⁵⁷ W Erlank, see note 1 above, at 51-52.

¹⁵⁸ This might change in the future, as Facebook aims to introduce environmentality and 3D physicality. This way, Facebook aims to mimic VWs, recognising advantages and desirability of these worlds. See Zuckerberg announcing Facebook’s acquisition of Oculus VR, the leader in virtual reality technology, M Zuckerberg Facebook post, 25 March at 22:30 available at <https://www.facebook.com/zuck/posts/10101319050523971> (accessed 04 Dec 14).

them as the outcomes are often arbitrary and ad hoc.¹⁵⁹ These quasi-constitutions are thus unsuitable and there is a definite need for more certainty and accountability. Recognising the features of VWs – their distinct character and place-like qualities – it is necessary to provide for a better legal and regulatory regime to protect their citizens.¹⁶⁰

6. Property alternatives

The analysis has so far been normative and theoretical with reference to the law. In the subsequent sections however the analysis will become more doctrinal with the aim of reflecting legally the peculiar nature of VWs. It is argued here that virtual property and full ownership, for the reasons identified when discussing virtual property justifications and features above, is not an adequate solution. Such an approach would be prejudicial to the interests of either the players or the developers in turn. We therefore need more nuanced solutions that could serve as a compromise between these.

A number of proposals have already experimented with property interests other than full ownership. They come in the forms of lesser proprietary rights, derived from another person's full ownership. In civil law systems these rights are known as servitudes (real – following an immovable property; and personal – attached to a person, allowing him to enjoy a property of another).¹⁶¹ In common law, lesser proprietary rights are usually only attached to immovables (real property), and are represented by easements or freehold covenants.¹⁶²

It is argued that these rights can serve best to take into account the fact that the interests and rights of the players are based on someone else's property (namely the first layer; the developer's code and servers). Notwithstanding the global reach of VWs, the proposals will experiment with both civil and common law concepts to try and identify commonalities and strike the best balance. It is not asserted here, however, that these concepts should or can be merged or borrowed from in either of the real world jurisdictions. The proposal is limited to VWs as separate, peculiar places.

¹⁵⁹ A E Jankowich, see note 27 above; G Lastowka, see note 10 above; W Erlank, see note 1 above; J Fairfield, see note 8 above; E Castronova, see note 48 above; Their approach has been followed by this author in E Harbinja "Virtual worlds players – consumers or citizens?" (2014) 3(4) *Internet Policy Review* available at: <http://policyreview.info/articles/analysis/virtual-worlds-players-consumers-or-citizens> (accessed 04 Dec 14).

¹⁶⁰ G Lastowka, see note 10 above; E Castronova, see note 48 above.

¹⁶¹ Bell, see note 80 above, at 289-290; E. Steiner *French Law: A Comparative Approach* (Oxford; New York: Oxford University Press, 2010) at 389-390.

¹⁶² M Dixon, *Modern Land Law*, 7th ed. (London: Routledge, 2010) at 267-268, 313.

6.1. *Virtual easement*

An interesting proposal comes from Slaughter who, analysing benefits and drawbacks of introducing a property or contractual regime for VWs, comes up with the concept of “virtual easement.” He claims that this servitude would feature many beneficial aspects: transferability (from one user to another, in life and on death); longevity (for as long as the user invests time and/or money and the VW exists); liability (no property remedies); *in rem* nature (except for the liability rule which is *in personam*); and *numerus clausus* (finite number of iterations).¹⁶³

This theory appears as a rather original and good compromise between the rights of users and those of the service providers. However, the flexibility it offers could be perceived as a possible source of uncertainty for the players, since different service providers could chose different terms to their detriment. This is usually not the case with servitudes in the real world, especially in civil law systems, where certainty of property rights is considered as an ultimate aim.¹⁶⁴

Similarly, the system of easements (the common law counterpart of the civil law servitudes) has been argued for by Lastowka in his later work.¹⁶⁵ He sees it as the best solution as both the players and virtual world owners are interested in something that depends, essentially, on one tangible thing: the servers owned by the providers. Therefore, in order to enable rights on the top of this ownership interest it is necessary to introduce lesser rights for the benefit of VW inhabitants.¹⁶⁶ He does not however suggest what features this model could have.

A similar solution was offered by Fairfield, in his later work.¹⁶⁷ Under the model he proposes, the licence agreement would also recognise covenant-style interests or servitude of the users.¹⁶⁸ The problem with easements, covenants and leaseholds would be that, by definition, these interests are related to land, immovable property.¹⁶⁹ In order to apply them therefore

¹⁶³ J Slaughter “Virtual Worlds: Between Contract and Property” (2008) *Yale Student Scholarship Papers*. Paper 62, at 48 available at http://digitalcommons.law.yale.edu/student_papers/62 (accessed 04 Dec 14).

¹⁶⁴ This principle permeates legal writings referring to civilian systems, their mandatory rules for property and rigidity, as van Erp notes: ‘As a result, property law became rather petrified legal area, rooted in a desire for legal certainty.’ S Van Erp “Comparative Property Law” in R Zimmermann and M Reimannk (eds), *The Oxford Handbook of Comparative Law* (Oxford: Oxford University Press, 2006) at 1044.

¹⁶⁵ G Lastowka, see note 10 above, at 127.

¹⁶⁶ *Ibid.*

¹⁶⁷ J Fairfield “Anti-Social Contracts: The Contractual Governance of Virtual Worlds” (2008) 53 *McGill Law Journal* 427-476.

¹⁶⁸ *Ibid.*, at 451-457.

¹⁶⁹ See e.g. C Van Der Merwe and A L Verbeke (eds), *Time Limited Interests in Land* (Cambridge: Cambridge University Press, 2012); or Restatement Third, Property (Servitudes) § 4.6. Restatement Third, Property (Servitudes) § 1.1 Restatement Third, Property (Servitudes) § 1.2

we would have to use the somewhat inadequate analogy between land and the developer's server systems.

6.2. *Intangible usufruct*

Another solution is suggested by Veloso, who introduces the concept of "intangible usufruct". He asserts that this is a good solution for the practical reason that it avoids one-sided arguments and thus aims to provide a way out of the unfair contracts while still respecting the developer's interests.¹⁷⁰

He proposes three rules to govern the relations established by usufruct. First, that the developer should be considered the owner and, by virtue of contract, should provide for the right to use and the right to the fruits of such use for the user. These rights are alienable, and when bundled together should form a virtual property right.¹⁷¹ Second, the developer may undertake any works and any improvements or diminution on virtual property and/or the VW, but under the condition that such acts are not exercised arbitrarily where they cause a diminution in the value of the usufruct or otherwise prejudice the right of the user.¹⁷² Thirdly, if the VW is terminated the players are considered to have returned their virtual property to the developer thereby absolving him from any complaint that might arise.

This approach appears reasonable and the solution in this paper will build upon this proposal to develop it more in detail, especially in relation to the issue of transmissibility and to take into the account the different conceptions of servitudes (usufruct) between legal systems.

6.3. *Proposal: VWs usufruct*

Usufruct is a civil law concept, and does not have to pertain to immovables; it can be created over both movable and immovable property.¹⁷³ It essentially entitles a person to the rights of use of and to the fruits on another person's property.

The problem of using this concept for VWs, arguably, would be its application to the common law systems as similar concepts in these systems (easements, liferent) which apply to immovable property (or real property in English law) have very different effects in terms of duration, use, transfer etc.. Nevertheless, even though it could be argued that it is not clear whether life estate in common law (the concept resembling usufruct most) is applicable to

¹⁷⁰ M G Veloso III "Virtual Property Rights: A Modified Usufruct of Intangibles" (2010) 82(4) *Philippine Law Journal* 37-87.

¹⁷¹ *Ibid*, at 73.

¹⁷² *Ibid*, at 74.

¹⁷³ J McClean "The Common Law Life Estate and the Civil Law Usufruct: A Comparative Study" (1963) 12(2) *International & Comparative Law Quarterly* 649-667.

movables,¹⁷⁴ McClean argues that there is no actual difference in substance between these two.¹⁷⁵ In addition, in a mixed legal system such as Scotland an arguably compromising interest already exists; *liferent*, as the right to use other's property for life.¹⁷⁶

Now, returning to the initial premise that VWs are worlds of a particular kind and that protection of their players' virtual items has both not been regulated so far and does not seem to fit within the current conceptions of property, it seems reasonable to suggest a compromise solution which creates, in essence, a new legal concept that is peculiar to the VWs. This does not mean, of course, that the worlds are not still subject to the other relevant real world legislation.

A potential new model would be a combination of Slaughter's virtual easement and Veloso's intangible usufruct, under the term of "VWs usufruct". Features of this would include: the right to use; to transfer items; to exclude other users (if applicable, according to the nature of the world); longevity (for the life of the user or as long as he continues to play); liability with limitations in cases of VWs improvements and justified termination; and *in rem* nature (good against the whole world). This concept would pertain to the second level virtual assets. The focus here will be on the implications of this concept to the transmission on death.

7. Transmission on death

Currently, virtual assets are only subject to a contractual right. Contractual rights and personal contracts however will be discharged on death unless there is an opposite provision in the contract.¹⁷⁷ As all contracts expressly exclude survivability, the transmission on death of VW assets is under the current regime impossible.

Most legal commentators who have analysed transmission of digital assets on death did not discuss VWs separately and gave rather vague ideas about transmission of virtual assets. The rare exception is Truong. She proposed that the developers retain ownership in virtual assets,

¹⁷⁴ C Van Der Merwe and A L Verbeke, see note 175 above.

¹⁷⁵ J McClean, see note 179 above, at 667.

¹⁷⁶ G L Gretton and A J M Steven *Property, Trusts and Succession*, (2nd ed. Haywards Heath: Bloomsbury Professional, 2013) at 323, W J Dobie *Manual of the Law of Liferent and Fee in Scotland*, (1892 ed, Edinburgh: W. Green & Son, 1941) at 1-2.

¹⁷⁷ Principle '*Actio personalis moritur cum persona*' in *Beker v Bolton* (1808) 1 Camp. 439; 170 ER 1033, revised by *The Law Reform (Miscellaneous Provisions) Act 1934* c. 41 (as amended), which revised the rule mandating that all personal rights will survive against and for the benefit of the estate, with the only exception of defamation and claim for bereavement; for a commentary about the contracts and succession see A R Mellows, *The Law of Succession* (4th ed, London: Butterworths, 1983) at 295-296; B Nicholas, *The French Law of Contract* (2nd ed, Oxford: Clarendon Press; New York: Oxford University Press, 1992) 29-30; M L Levillard "France" in D. J. Hayton (ed), *European Succession Laws* (2nd ed., Bristol: Jordans, 2002) 219; for Germany see K Kuhne et al. "Germany" in Nicholas, *ibid*, at 244-257.

but lease these assets to the players. She, however, confuses lease with licence and proposed something that does not really suit the nature of virtual assets discussed in this paper.¹⁷⁸

For transmission, conversely, Truong proposed that the courts honour the wishes of players to convey value of virtual assets where these are expressed. Otherwise, if the players fail to do so, the contract will be the default position.¹⁷⁹ This mechanism would mean that the players would be able “to transfer the non-monetary value of their virtual property to their immediate family members”,¹⁸⁰ but that they would only be able to transfer the whole account and not any individual item of monetary value due to the conflicting interest with the providers.

This solution is quite contradictory, as it proposes non-monetary transfer so as to abide by the contractual agreements and avoid conflict but at the same time violates the contractual provisions of non-transferability. Therefore, the mere aim it wishes to achieve is contradicted by the solution proposed.

It is proposed here that second level assets are, however, more complex and that their transmission would depend on the commercial value of these assets. Thus, since usufruct would terminate on death the personal representative would be required to assess whether any of these rights could be monetised on the recognised auction sites and then, by accessing the account (as generally envisaged by the US Uniform Law Commission in the *Draft Fiduciary Access To Digital Assets Act*)¹⁸¹, they would sell these rights and transfer the monetary value to the player's heirs. This way, the heirs would not access the account, and therefore avoid violating many EULAs, but would still benefit from any monetary interests produced therein. This solution would however need to be enacted by relevant legislation in the individual jurisdictions (e.g. in the US, provisions from the *Draft Fiduciary Access to Digital Assets Act* to be enacted by the state laws; relevant legislation in the UK and other European countries).

¹⁷⁸ O Y Truong “Virtual Inheritance: Assigning More Virtual Property Rights” (2009) 21(3) *Syracuse Science & Technology Law Report* 57-86.

¹⁷⁹ *Ibid.*, at 80.

¹⁸⁰ *Ibid.*

¹⁸¹ ‘Unless otherwise provided by the court or the will of a decedent, a personal representative of the decedent may access:

(1) the content of an electronic communication sent or received by the decedent only if the electronic-communication service or remote-computing service is permitted to disclose the content under the Electronic Communications Privacy Act, 18 U.S.C. Section 2702(b) [as amended];

(2) the catalogue of electronic communications sent or received by the decedent; and

(3) any other digital asset in which the decedent at death had a right or interest.’ National Conference of Commissioners on Uniform State Laws, *Draft Fiduciary Access to Digital Assets Act*, s. 3, June, 2014 Drafting Committee Meeting, available at http://www.uniformlaws.org/shared/docs/Fiduciary%20Access%20to%20Digital%20Assets/2014am_ufadaa_draft.pdf (accessed 03 Dec 14).

8. Conclusion

This paper assessed the nature, features and importance of VWs in relation to the rights of their players and, more specifically, the transmission of the players' interests in VWs accounts on death. The analysis tackled the concept of virtual property, its potential justifications and its features. It also discussed the current state of allocation of property in VWs, arguing that the features of VWs and their peculiar nature deserve reflection in EULAs as the quasi-constitutions of VWs.

Recognising the conflicting interests of the developer and players, the paper proposes a compromise solution in the form of virtual usufruct. In relation to post-mortem transmission, it is suggested that any monetary interests originating from a player's account should be extracted and passed on.

Finally, it is worth noting that the solution here is in the form of a principle, without going into the technical details of succession law. Rather, the aim of this paper is to provide some guidance on approach based on the analysis of the previous literature on virtual property and taking into account the EULAs provisions and special features of VWs.