

# GAMING THE SYSTEM: VIRTUAL WORLDS AND THE SECURITIES MARKETS

Caroline Bradley<sup>1</sup>

Virtual worlds (VWs)<sup>2</sup> raise two important questions for securities regulation.<sup>3</sup> First: to what extent do real world (RW) rules of securities regulation apply to the issuance of “securities” in virtual worlds?<sup>4</sup> Second, should securities regulators be

---

<sup>1</sup> Professor of Law, University of Miami School of Law, PO Box 248087, Coral Gables, FL, 33124, [cbradley@law.miami.edu](mailto:cbradley@law.miami.edu); <http://www.blenderlaw.com> . I would like to acknowledge the University of Miami School of Law’s support for the writing of this article. © Caroline Bradley 2007. All rights reserved.

<sup>2</sup> See, e.g., Richard A. Bartle, *DESIGNING VIRTUAL WORLDS* 1 (2004) (“Virtual worlds are places where the imaginary meets the real.”).

<sup>3</sup> This version of the paper focuses on US securities regulation. Virtual worlds operate transnationally so that they implicate issues of securities and financial regulation in many different jurisdictions. Despite efforts to harmonise principles of securities regulation through IOSCO (the International Organisation of Securities Commissions), systems of financial regulation have different criteria for application in different jurisdictions. IOSCO’s web site is at <http://www.iosco.org> . For a discussion of IOSCO’s Principles of Securities Regulation see, e.g., Katherina Pistor, *The Standardization of Law and Its Effect on Developing Economies*, 50 AM. J. COMP. L. 97, 116-120 (2002). Much of the activity described in this paper would be vulnerable to being characterised as gambling. See, e.g., Jack M. Balkin, *Law and Liberty in Virtual Worlds*, 49 N.Y.L. SCH. L. REV. 63, 77 (2004-5) (“suppose that a virtual world contains a casino in which players can win in game currency. If the currency is freely transferable into dollars, the game offers an end-run around online gambling restrictions.”); Ian MacInnes, *Property Rights, Legal Issues, and Business Models in Virtual World Communities*, 6 ELECTRONIC COMMERCE RESEARCH 39-56, 48 (2006). In 2007, Linden, the developer of Second Life, announced that it was banning gambling in Second Life. See *Wagering In Second Life: New Policy*, (Jul. 25, 2007) available at <http://blog.secondlife.com/2007/07/25/wagering-in-second-life-new-policy/>.

<sup>4</sup> This first question assumes a distinction between VVs and the real world which some commentators challenge. See, e.g., Thomas Malaby, *Beyond Play: A New Approach to Games*, 2 GAMES AND CULTURE 95-113, 97 (2007) (“What we must realize is that the older and still extant marginalization of games and its contemporary, almost utopian treatments are actually two sides of the same coin; they both follow from an exceptionalist position: that games are play and therefore set apart. This perspective allows some to hold games at arm’s length from what matters, from where “real” things happen, whereas others cast them as potential utopias promising new transformative possibilities for society but ultimately

concerned that player-inhabitants in virtual worlds who invest in virtual securities may develop false expectations about RW securities markets?<sup>5</sup>

MMORPGs (massively multiplayer online role-playing games), also sometimes known as virtual worlds,<sup>6</sup> are providing new venues for entrepreneurial activity. In some virtual worlds such as Azeroth (the World of Warcraft (WoW))<sup>7</sup> and New Eden (Eve Online),<sup>8</sup> the player-inhabitants fight battles and explore and undertake quests.<sup>9</sup> In Second Life,<sup>10</sup> player-inhabitants can buy, develop and sell virtual real estate including residential developments, clubs, and shopping malls.<sup>11</sup> Player-inhabitants buy and sell items which are useful in-game, even where such transactions are prohibited by game

---

just as removed from everyday experience.”)

<sup>5</sup> These questions are related to more general questions about the relationship between technological change and financial regulation. See, e.g., Caroline Bradley, *Information Society Challenges to Financial Regulation*, 37 U. TOL. L. REV. 307 (2005-2006).

<sup>6</sup> Different commentators use different terms to describe these phenomena. Edward Castronova prefers the term “synthetic worlds”. Edward Castronova, *SYNTHETIC WORLDS* (2005). Note that Richard Bartle distinguishes between virtual worlds and games. Richard Bartle, *Virtual Worldliness*, in Jack M. Balkin & Beth Simone Noveck eds., *THE STATE OF PLAY: LAW, GAMES AND VIRTUAL WORLDS* (2006) (Balkin & Noveck) 31-54, at 34.

<sup>7</sup> See <http://www.worldofwarcraft.com/>. For a description of WOW, see, e.g., Nicolas Ducheneaut, Nick Yee, Eric Nickell & Robert J. Moore, *Building an MMO With Mass Appeal: A Look at Gameplay in World of Warcraft*, 1 GAMES AND CULTURE 281-317 (2006).

<sup>8</sup> See <http://www.eve-online.com/>.

<sup>9</sup> On the hero’s quest (or journey), see, e.g., Bartle, *supra* note 2 at 434-443; Tanya Krzywinska, *Blood Scythes, Festivals, Quests, and Backstories: World Creation and Rhetorics of Myth in World of Warcraft*, 1 GAMES AND CULTURE 383-396, 385-6 (2006). This paper does not address serious games. [Define.] Some online games (although mostly not virtual worlds) have educational objectives. Economists use simulated markets to teach their students about economic theories and to study market behavior. High school students learn math through games. Other games are designed to teach people about financial management or investing. On serious games, see, e.g., [].

<sup>10</sup> See <http://secondlife.com/>.

<sup>11</sup> On economic activity in Second Life, see, e.g., S. Papagiannidis, Michael Bourlakis & Feng Li, *Making Real Money in Virtual Worlds: Mmorpgs and Emerging Business Opportunities, Challenges and Ethical Implications in Metaverses*, TECHNOLOGICAL FORECASTING & SOCIAL CHANGE (2007), doi:10.1016/j.techfore.2007.04.007.

rules.<sup>12</sup> The sale transactions may be completed in-game or in the real world, and they may generate profits either in game currency or in RW currencies.<sup>13</sup> Players join together to combine their efforts, and they may share the proceeds of the joint enterprise.<sup>14</sup> Estimates of trade in items for RW currency in MMORPGs have ranged from \$30 to over \$100 million each year.<sup>15</sup>

Some player-inhabitants of virtual worlds participate in the worlds exclusively for entertainment. But even in online games or virtual worlds which are intended as entertainment some player-inhabitants are involved in economic activity, and player-inhabitants may perceive this economic activity as a form of entertainment. One type of virtual world employment is “farming,” which involves playing repetitively to generate items which can be sold to player-inhabitants who would prefer to avoid the repetitive activity.<sup>16</sup> Farming is commonly outsourced to lower wage economies.<sup>17</sup> Still other

---

<sup>12</sup> See, e.g., Gregory Lastowka & Dan Hunter, *Virtual Worlds: A Primer*, in Balkin & Noveck, *supra* note 6, pp. 13-28, at 17.

<sup>13</sup> For a suggestion that developers of games which allow trading must think seriously about the risks involved, see, e.g., MacInnes, *supra* note 3, at 41 (“Developers are creating marketplaces. They need to understand economic theory and practice in the areas of money supply, inflation, input / output models, and arbitrage. They also need to ensure that their systems have a similar level of security to those of banks, particularly if the business model chosen explicitly recognizes that virtual property has real world value.”)

<sup>14</sup> Cf. David R. Johnson, *How Online Games May Change the Law and Legally Significant Institutions*, 49 N.Y.L. SCH. L. REV. 51, 57 (2004-5) (“Shares in the resulting proceeds are not necessarily securities (within the legal meaning of that term), because they do not depend for their value solely on the actions of others”).

<sup>15</sup> See, e.g., Edward Castronova, *Real Products in Imaginary Worlds*, HARV. BUS. REV. 19 (May 2005).

<sup>16</sup> See, e.g., David Barboza, *Ogre to Slay? Outsource It To Chinese*, NY Times, Section A, Col. 2, P. 1 (Dec. 9, 2005) (“from Seoul to San Francisco, affluent online gamers who lack the time and patience to work their way up to the higher levels of gamedom are willing to pay the young Chinese here to play the early rounds for them.”); Constance Steinkuehler, *The Mangle of Play*, 1 GAMES AND CULTURE 199-213, 203 (2006).

<sup>17</sup> See, e.g., *id.* (describing gold farming in China). Commentators have noted the racist connotations of linking a criticised activity with China. Cf. Samira Guennif & Valérie Revest, *Social Structure and Reputation: the NASDAQ Case Study*, 3 SOCIO-ECON. REV. 417, 422 (2005) (“Market

player-inhabitants seem to believe that their in-game and game-related activities constitute a mix of value-generation and consumption of entertainment.<sup>18</sup>

Developers of some virtual worlds seek to emphasize entertainment rather than economic activity, leading them to deny that players have any property rights in VW items, and also to try to restrict the ability of players to transact in VW items outside the VW.<sup>19</sup> In contrast, other VW developers emphasize the economic potential in their worlds, either because in-game economic activity is a form of entertainment<sup>20</sup> or because the VW may provide a way to make a living.<sup>21</sup> For example, the Second Life website boasts of “business opportunities,” described as “in-world business occupations which Residents founded and currently run, and make part or all of their real life living from.”<sup>22</sup> The list of occupations includes casino operator, lottery operator, and

---

makers who deviated from the convention were derisively said to create a ‘Chinese market.’”)

<sup>18</sup> On the idea that online games blur distinctions between work and play, see, e.g., Nick Yee, *The Labor of Fun: How Video Games Blur the Boundaries of Work and Play*, 1 GAMES AND CULTURE 68-71 (2006); Celia Pearce, *Productive Play: Game Culture From the Bottom Up*, 1 GAMES AND CULTURE 17-24 (2006).

<sup>19</sup> See, e.g., Steinkuehler, *supra* note 16, at 204-5.

<sup>20</sup> See, e.g., Mike Molesworth & Janice Denigri-Knott, *Digital Play and the Actualization of the Consumer Imagination*, 2 GAMES AND CULTURE 114-133 (2007) (describing and analyzing the prevalence of consumption in virtual spaces from WoW to eBay); Cory Ondrejka, *Escaping the Gilded Cage: User Created Content and Building the Metaverse*, 49 N.Y.L. SCH. L. REV. 81, 84 (2004-5) (“The Sims allows the player to control the lives of a number of virtual Sims who go about their day attempting to find happiness. Part of their happiness comes from the possessions their homes are filled with, so purchasing items like better chairs and stereo equipment is a focal point of the game.”).

<sup>21</sup> It is not clear that this is in fact realistic. See, e.g., Nick Denton, *Virtual World’s Supposed Economy is a ‘Pyramid Scheme’*, (Jan. 23, 2007) at <http://valleywag.com/tech/second-life/virtual-worlds-supposed-economy-is-a-pyramid-scheme-230813.php>

<sup>22</sup> See <http://secondlife.com/whatis/businesses.php>. See also, e.g., Andrew Herman, Rosemary J. Coombe, & Lewis Kaye, *Your Second Life? Goodwill and the Performativity of Intellectual Properties in On-Line Games*, 20 CULTURAL STUDIES 184, 185 (2006) (“the developers of Second Life...declared that they were prepared to recognize the value of the creative contributions that gameplayers made to the virtual worlds that they, as developers, otherwise controlled. From that moment forward, all players of the game would be granted intellectual property rights in their creations both within the game space and in ‘real life’. This was a radical departure for the online gaming industry, where nearly all End User License

advertiser. RW businesses have established locations in Second Life,<sup>23</sup> and Second Lifers have used the VW as a means for developing products they can exploit in the RW.<sup>24</sup>

When player-inhabitants join together to improve their joint prospects of success they describe their joint operations as guilds,<sup>25</sup> or even as corporations.<sup>26</sup> The guilds and corporations adopt rules regulating the relationships between their members. And, not only do member-managed firms appear in virtual worlds, but there are also “IPOs” and “Stock Exchanges.”<sup>27</sup> Game developers permit, and even encourage, player-

---

Agreements (EULA) and Terms of Service (TOS) require players to sign over their intellectual property rights in order to enter into the virtual space of the game.”)

<sup>23</sup> Although *cf.* Alana Semuels, *Virtual Marketers Have Second Thoughts about Second Life*, L.A. TIMES (Jul. 14, 2007) available at <http://www.latimes.com/technology/la-fi-secondlife14jul14,1,5037271.story?track=rss>; Allison Fass, Sex, Pranks and Reality, FORBES (Jul. 2, 2007) at [http://www.forbes.com/forbes/2007/0702/048\\_print.html](http://www.forbes.com/forbes/2007/0702/048_print.html).

<sup>24</sup> See, e.g., Thomas Malaby, *Parlaying Value: Capital in and Beyond Virtual Worlds*, 1 GAMES AND CULTURE 141-162 (2006).

<sup>25</sup> See, e.g., James Grimmelmann, *Virtual Worlds as Comparative Law*, 49 N.Y.L. SCH. L. REV. 147, 170-174 (2004-05) (discussing VW guilds). VWs may provide varying degrees of support for guilds. For example, “WoW provides very little support for guilds “out of the box.” The only game-based tools available are a guild roster and a reserved guild chat channel accessible to all members. Any formal organization beyond this has to come from the players themselves.” Dmitri Williams, Nicolas Ducheneaut, Li Xiong Yuanyuan Zhang, Nick Yee & Eric Nickell, *From Tree House to Barracks: the Social Life of Guilds in World of Warcraft*, 1 GAMES AND CULTURE 338-361, 354 (2006). People may also participate in Vws in less formal “pick-up groups” or PUGs.

<sup>26</sup> In Eve Online, organisations which would be described in other VWs as guilds are known as corporations.

<sup>27</sup> See, e.g., Robert Bloomfield, What in the World is a Fictional Securities Exchange?, (Jun. 29, 2007) posted to Terranova at [http://terranova.blogs.com/terra\\_nova/2007/06/what-in-the-wor.html](http://terranova.blogs.com/terra_nova/2007/06/what-in-the-wor.html). There are many other examples of phenomena that describe themselves as virtual stock exchanges or markets. Some of these markets allow investors to trade movie stars, other well-known people, and brands. See, e.g., Hollywood Stock Exchange at <http://www.hsx.com/> and Xmoo at <http://www.xmoo.com/index.aspx>. Other websites allow for fantasy trading so that investors can practise trading without any investment of real money. See, e.g., <http://www.howthemarketworks.com/trading>. The Virtual Stock Market at <http://stock.mitanshu.com/> claims to be able to deliver customers to advertisers. See <http://stock.mitanshu.com/advertise.php>.

inhabitants to speculate in shares in these virtual world "corporations."<sup>28</sup>

Without meaning to, the player-inhabitants, and in some cases the designers, of MMORPGs are blurring distinctions between RW and virtual world financial markets. For example, player-inhabitants exchange game currencies for RW currencies. Often these transactions merely seem to be incidents of the games, but at least one Second Life player-inhabitant has suggested that his/her experience of foreign exchange trading between Linden dollars and US dollars persuaded him/her to try foreign exchange trading in real life.<sup>29</sup> In 2007, Project Entropia announced an auction of virtual banking licenses, and subsequently issued licenses to 5 successful bidders.<sup>30</sup> In 2005 Wells Fargo announced that it was developing an island in Second Life (Stagecoach Island) which would help young adults to learn about financial literacy.<sup>31</sup>

---

<sup>28</sup> For example, when CCP Games, the developer of Eve Online, announced that it had appointed an "in-world lead economist," Hilmar Pétursson, CCP's CEO, stated: "EVE Online may be set in the future, but the skills needed to play are rooted in the real world of today. Players operate vast corporations whose shares are traded in-game among players so economic strength and agility is key to their success. Just as entrepreneurs and executives rely on real-world economic indicators, EVE Online players need timely information and analysis of the in-game economy." CCP Games Press Release, EVE Online Appoints In-World Economist, (June 26, 2007) available at [http://www.ccpgames.com/press/press\\_releases.asp?pressReleaseID=34](http://www.ccpgames.com/press/press_releases.asp?pressReleaseID=34).

<sup>29</sup> Post of Scion Altera to Oanda FX Message Board (Jul. 18, 2005) at [http://www2.oanda.com/cgi-bin/msgboard/ultimatebb.cgi?ubb=get\\_topic;f=16;t=004316;p=1](http://www2.oanda.com/cgi-bin/msgboard/ultimatebb.cgi?ubb=get_topic;f=16;t=004316;p=1) ("I originally started trading on the Gaming Open Market (<http://www.gamingopenmarket.com>) and figured that if I could fund my coffee addiction with my profits from playing Second Life, that would be great. I still trade on GOM, but I got so addicted to trading that I had to try it out for real. I traded a few demo accounts with various companies, read as many books as I could find, and someone from GOM referred me to Oanda. Now I'm trading live with about \$200 because that's about all I'm willing to risk at the moment. Ideally, I'd like to keep increasing my account size (by depositing money in it, not purely by trading) until I can live off the profits. My other motivation is that I just graduated from college and live off contract programming work. I would much rather trade forex full time.")

<sup>30</sup> See Entropia Universe, *Virtual Banking Licenses For Sale*, (2007) at <http://www.entropiauniverse.com/en/rich/6357.html> ; Entropia Universe, Virtual World Entropia Universe Issues First Ever Virtual Banking Licenses for \$400,000 (May 8, 2007) at <http://www.marketwire.com/2.0/release.do?id=733216&sourceType=1>.

<sup>31</sup> Wells Fargo, Press Release, *Wells Fargo Introduces Stagecoach Island – Industry's*

Securities regulators need to be able to distinguish between game play and the sort of financial investment that is subject to the securities laws. Investment promoters should not be able to avoid the application of the securities laws by describing an investment opportunity as a game: the Stock Generation case<sup>32</sup> illustrates this problem. The need to distinguish between true game activity and investment activity is not likely to go away. As virtual world securities issuance increases in volume it only becomes more attractive for fraudsters to try to present their scams as games. Thus it may be necessary to draw clear distinctions between true game activity and the promotion of investment opportunities. Yet, in virtual worlds it may not be easy to draw clear distinctions as player-inhabitants may consider that their investments in virtual world securities have mixed characteristics of gaming and investment.

In addition to the questions about whether and when the securities laws should apply to virtual world securities issuance, there are issues about what rules should apply. Where virtual world securities are in fact used as vehicles for fraud it could be appropriate to impose fraud liability under the securities laws on those who sell the securities. On the other hand, real-world securities law registration requirements would not apply easily to virtual securities because of the very significant differences between the underlying economic activity in the real and virtual worlds.

There are two possible approaches to these issues of how the securities laws should apply to virtual investments. One approach would involve treating virtual world securities as securities but developing a registration exemption. The characteristics of virtual world securities investment suggest that two criteria would be particularly appropriate. One criterion would involve focusing on the amount of the player's investment -- because virtual world securities investments are likely to involve relatively small (RW) values. Another would focus on the player's sophistication -- and, perhaps, here sophistication in gaming should be

---

*First Virtual Reality Online Game to Help Young Adults with Financial Literacy* (Sept. 15, 2005) available at [https://www.wellsfargo.com/wf/press/20050914\\_StagecoachIsland?year=2005](https://www.wellsfargo.com/wf/press/20050914_StagecoachIsland?year=2005). Stagecoach Island is currently an Activeworlds game and is accessible from <http://blog.wellsfargo.com/StagecoachIsland/>.

<sup>32</sup> *SEC v. SG Ltd.*, 265 F.3d 42 (1<sup>st</sup> cir 2001). See also *infra* at p. [].

as relevant as sophistication in investment.

A second approach would be to establish conditions under which virtual world securities would not be treated as RW securities at all, thus eliminating fraud liability under the securities laws as well as the requirement for registration. In order for this approach to be appropriate, the virtual worlds should develop in-world protections for defrauded player-inhabitants. A range of different approaches might develop, ranging from clear disclaimers of liability through reputation and trust certification systems to dispute resolution mechanisms: virtual investors could choose which types of protection they preferred.<sup>33</sup> The idea that virtual worlds might develop a variety of self-regulatory (and non-regulatory) mechanisms for addressing issues of fraud opens up possibilities for empirical research.

Neither of these proposals, however, deals with the possibility that virtual securities markets may condition prospective investors into false expectations about real securities markets. RW financial institutions are trying to develop good will among young game players. At the same time these financial institutions claim to be educating young consumers about financial responsibility. Here, without clear statutory mandates for investor education, securities regulators are much more constrained in what they can do. Solving this problem is more difficult than working out how RW securities rules might apply (or not apply) to VW securities. In particular, children are major consumers of computer games, and children may be particularly vulnerable to in-game propaganda. If children of ten years of age and younger become accustomed to making decisions about investments on the Neopets Stock Market,<sup>34</sup> a market where securities prices

---

<sup>33</sup> Cf. Caroline Bradley & A. Michael Froomkin, *Virtual Worlds, Real Rules* 49 N.Y.L.Sch. L Rev 103 (2004/2005).

<sup>34</sup> Neopets is at <http://www.neopets.com/>. The Neopets Stock Market is currently described as a game which can be played. See <http://neopets.com/stockmarket.phtml> (Login required) However, the game does emulate some features of RW securities practices. For example, the following "boring disclaimer": "Certain statements in this announcement, including statements concerning our plans, intentions and expectations, contain "forward-looking statements" within the meaning of the Securities Act of Year 1 as amended. Forward-looking statements are based on the opinions and estimates of management at the time the statements are made and are subject to certain risks and uncertainties that could cause actual results to

seem to change randomly rather than on the basis for the demand for the securities or their underlying value, how will these children behave when they become investors in the RW?

Virtual worlds are both delinked from physical territories, and linked to geography through their player-inhabitants. For example, CCP Games, the company responsible for developing Eve Online, is headquartered in Iceland, but there are over 100,000 player-inhabitants who live around the world. As a result, as well as raising issues for domestic securities regulators virtual worlds also raise issues and perhaps solutions for transnational regulation.

## **BUSINESS ORGANIZATION IN VIRTUAL WORLDS**

From medieval fantasy worlds to worlds which are designed to mimic features of the RW, virtual worlds incorporate economic transactions by design or by player choice. Many RW businesses have established their presence in Second Life,<sup>35</sup> but even medieval fantasy virtual worlds have generated external

---

differ materially from those anticipated in the forward-looking statements. The words "believe," "expect," "intend," "anticipate," variations of such words and similar expressions identify forward-looking statements but their absence does not mean that the statement is not forward-looking. These statements are not guaranties of future performance and are subject to certain risks, uncertainties and assumptions that are difficult to predict. Readers are cautioned not to place undue reliance on these forward-looking statements that speak only as of the date of this announcement. Factors that could affect Achyfi Enterprises's actual results include, among others, the factors described in Achyfi Enterprises's filings with the Neopian Securities and Exchange Commission, including its Quarterly Report on Form 10-Q for the quarter ended the month of Eating, Year 2. Achyfi Enterprises undertakes no obligation to update publicly any forward-looking statements to reflect new information, events or circumstances after the date of this release or to reflect the occurrence of unanticipated events.". See <http://neopets.com/stockmarket.phtml?type=news> (The same language appeared on visits on June 27, 2007 and August 6, 2007 (copy on file with author)).

<sup>35</sup> See, e.g., the listing on the Joe Peterson PhD/Second Life blog at [http://www.ebusiness-newcastle.com/blog/?page\\_id=45](http://www.ebusiness-newcastle.com/blog/?page_id=45); Business Communicators of Second Life at [http://freshtakes.typepad.com/sl\\_communicators/](http://freshtakes.typepad.com/sl_communicators/). Advertisers seek to market their products through video games in order to reach potential customers who do not see television advertising. See, e.g., Microsoft Press Release, Microsoft to Acquire In-Game Advertising Pioneer Massive Inc. (May 4, 2006) *available at*

economic transactions in the RW.<sup>36</sup> Player-inhabitants exchange RW currency for virtual world currencies in order to play, and sometimes they want to realise virtual world value and convert it to RW currency.<sup>37</sup> Richard Bartle has suggested that commodification of games may ultimately undermine the games.<sup>38</sup> Nevertheless, games have become commoditised.<sup>39</sup> Workers, particularly workers who live in RW low wage economies, are employed to generate virtual world currencies and items which players wish to purchase.<sup>40</sup> Many player-inhabitants of virtual worlds (who are not employed as farmers) see their involvement in the world as an economic activity.<sup>41</sup> But most player-inhabitants of

---

<http://www.microsoft.com/presspass/press/2006/may06/05-04MassiveIncPR.mspix>;  
<http://www.millionsofus.com/about.php>.

<sup>36</sup> For example, IGE describes itself as “a diversified service provider operating the world’s largest secure network of buying and selling sites for massively multiplayer online game (MMOG) virtual currency and assets on the Internet”. See <http://www.ige.com/about>.

<sup>37</sup> The developers of Project Entropia urge: “Join people from around the globe who use the Entropia Universe currency, the PED, to develop their characters everyday on the untamed planet of Calypso. The unique and secure Real Cash Economy allows you to transfer your accumulated PED back into real world funds.” See <http://www.entropiauniverse.com/en/rich/5000.html>. See also, e.g., MindArk PE AB, Annual Report 2005, 6, available at [http://www.mindark.com/docs/reports/MindArk\\_AR\\_ENGx.pdf](http://www.mindark.com/docs/reports/MindArk_AR_ENGx.pdf) (“If you’ve bought a sword for 100 PED and later sell it for 150 PED (since the sword has become a rare item and now commands a higher value) you can choose to have the monies exchanged to 15 US Dollars and deposited into your real world bank account.”)

<sup>38</sup> See, e.g., Richard A. Bartle, *Virtual Worldliness: What the Imaginary Asks of the Real*, 49 N.Y.L. SCH. L. REV. 19, 36 (2004-5) (“The out-of-context sale of one object is not going to make a lot of difference in itself...The *accumulation* of out-of-context sales, however, does make a difference. Unchecked, eventually it tips the scales and the virtual world flips from being a hero’s journey world to being a world with no hero’s journey.”)

<sup>39</sup> Edward Castronova has written extensively about economic activity in virtual worlds. See, e.g., Castronova, *supra* note 6, at 161-204.

<sup>40</sup> See, e.g., the Wikipedia entry for farmer (gaming) at [http://en.wikipedia.org/wiki/Gold\\_farming](http://en.wikipedia.org/wiki/Gold_farming); Tony Walsh, *Invasion of the Gold Farmers*, (Dec. 9, 2005) available at [http://www.secretlair.com/index.php?/clickableculture/entry/invasion\\_of\\_the\\_gold\\_farmers/](http://www.secretlair.com/index.php?/clickableculture/entry/invasion_of_the_gold_farmers/) (“When playing a game is your job, is it still a game?”).

<sup>41</sup> Cf. Julian Dibbell, *PLAY MONEY* (2006).

virtual worlds have objectives which are not mainly economic or not exclusively economic.<sup>42</sup> In virtual worlds some people engage in economic activity as a form of entertainment. In this way virtual worlds resemble real life (RL): some people choose to engage in activities for entertainment that others engage in to earn a living. For example, President George W. Bush enjoys clearing brush at his ranch in Texas.<sup>43</sup> Dealers and non-dealers participate as purchasers in antique auctions.<sup>44</sup>

Inhabitants of virtual worlds join together for their mutual benefit to enhance their playing experience and even to profit from their mutual ventures. The successful completion of quests often requires the application of different skills so that players need to collaborate to succeed. This social aspect of virtual worlds is a characteristic that appeals to player-inhabitants.<sup>45</sup>

Different terms are used to describe player joint ventures in different worlds. Player-inhabitants in Azeroth “assume the roles of Warcraft heroes as they explore, adventure, and quest across a vast world”<sup>46</sup> and work together in

---

<sup>42</sup> Games vary. Thus Knights of Tranquillity, a guild in World of Warcraft states: “A philanthropic spirit is encouraged. The next time you find a nice doodad, that another member could benefit from, please consider them first. Gold is relatively meaningless in the end-game, but the better equipped we are as a guild, means that we’ll be able to take on more difficult challenges.” See Knights of Tranquillity Guild Charter at <http://www.merlock.net/forum/index.php?topic=7.0> . Cf. supra note 37.

<sup>43</sup> See, e.g., the pictures at [http://www.whitehouse.gov/news/releases/2002/08/images/20020809-1\\_ranch3-515h.html](http://www.whitehouse.gov/news/releases/2002/08/images/20020809-1_ranch3-515h.html).

<sup>44</sup> See, e.g., C. Eddie Palmer & Craig J. Forsyth, *Antiques, Auctions, and Action: Interpreting and Creating Economic Value*, 39 JOURNAL OF POPULAR CULTURE 234–259, 245 (2006). Cf. Gretchen M. Hermann, *Haggling Spoken Here: Gender, Class, and Style in US Garage Sale Bargaining*, 38 JOURNAL OF POPULAR CULTURE 55-81, 68 (2004) (“Some shoppers, men more often than women, bargain on everything that they purchase because of the “sport” of it, ego aggrandizement, control, and/or sheer compulsion.”)

<sup>45</sup> See, e.g., James Grimmelman, *Virtual Worlds as Comparative Law*, 49 N.Y.L. SCH. L. REV. 147, 170 - 174 (2004-5) (discussing guilds as social groups). Within Eve Online, the Fairtrade Syndicate is designed as a collaborative social network. Members make financial contributions to and may borrow money from the syndicate. See [http://www.chaosrealm.net/fts/?page\\_id=6/#shell](http://www.chaosrealm.net/fts/?page_id=6/#shell) (last visited Jul. 9, 2007).

<sup>46</sup> <http://www.worldofwarcraft.com/info/beginners/index.html>.

“guilds”.<sup>47</sup> Although in the early stages of involvement in a virtual world player/inhabitants can participate as individuals, as the player progresses she may wish to join a guild to improve her experience, and larger guilds may have advantages over smaller guilds.<sup>48</sup> In New Eden, player-inhabitants explore space through “corporations”, which “are groups of players joining together for a common goal or purpose, much like guilds or clans in other games.”<sup>49</sup> Player organizations vary in size, and they may merge to increase their size.<sup>50</sup> Some guilds persist over time, operating in different virtual worlds at different times.<sup>51</sup>

---

<sup>47</sup> See, e.g., Grimmelmann, *supra* note 45 at 170 (“Every major game has some variant on the guild concept.”)

<sup>48</sup> See, e.g., Williams et al., *supra* note 25 at 346 (“the most common reason to seek a particular guild type out was to accomplish game goals. This is a powerful case of the game mechanic influencing social decisions with unintended consequences. This pattern nearly always involved players of small guilds seeking to join a raiding guild. Without membership in one of these large (and often exclusive) groups, a player cannot have access to the game’s most challenging content and most rewarding “loot.”)

<sup>49</sup> [http://www.eve-online.com/faq/faq\\_06.asp](http://www.eve-online.com/faq/faq_06.asp). Not all players want to operate through these “corporations”. For example, see the Codex of the Fairtrade Syndicate at [http://www.chaosrealm.net/fts/?page\\_id=6](http://www.chaosrealm.net/fts/?page_id=6) (“FTC is not a corporation in any real meaning. It will, as the name suggest, only be a shell who plays the following roles and them only: Let those who for some reason currently don’t want to join a regular player or npc-corp to be in an alternative constellation that captures the FTS spirit. Allowing FTS members who want to operate POS:es, have a common hangar and other similar functions that EVE doesn’t let us to accomplish unless we pretend to have a corp.”)(last visited Jul. 9, 2007).

<sup>50</sup> See, e.g., the Mission Statement of Xanteeous Corporation at <http://www.shawngray.ca/xanteeous/main.html> (“As the universe has expanded, more and more corporations reach out into the abyss, only to find themselves lost and powerless. Xanteeous strives to gather these corporations under one umbrella: The Xanteeous Corporation. By dissolving the other corporations, and absorbing their membership, Xanteeous will become a well-rounded and powerful corporation worthy of the place it is carving in the universe”) (last visited Jul. 9, 2007).

<sup>51</sup> See, e.g., Order of the Rose-Croix Guild Charter, at <http://order-of-the-rose-croix.com/information/GuildCharter.asp> (“The Order of the Rose-Croix is a mature and friendly guild that has been active in many online games since October 2001. During our existence, we have striven to forge a guild that that would stand out among other guilds, not by sheer size of numbers, but by the quality of the players in the guild, and their commitment to helping others in-game whether they are a part of the guild or not. The guild has also defined itself as a haven for

Virtual world guilds and other social organisations develop their own formal and informal rules. Guilds often have simple charters which set out the guild rules.<sup>52</sup> Other guilds have more complex rule systems.<sup>53</sup> One issue guilds need to address is how to share “dkp”s (dragon kill points or dungeon kill points) among guild members.<sup>54</sup> Mechanisms for sharing dkps try to ensure that those whose efforts produce dkps benefit from their efforts in ways that are similar to profit sharing arrangements between partners.<sup>55</sup> In the RW, people who carry on business for profit with others as co-owners become their partners.<sup>56</sup> Partners are agents for each other in the normal course of the business activity they carry

---

gamers of all ages but particularly those gamers who prefer a more relaxed, fun and casual guild. Although we are very strict with our ethics in-game, we only do so to ensure that members are safe to play in an environment that fosters a friendly, family feel.”) (last visited Jul. 9, 2007).

<sup>52</sup> See, e.g., the Harmony of Souls Guild Charter at <http://www.harmonyofsouls.org/static.php?page=static060307-121019> (last visited Jul. 9, 2007).

<sup>53</sup> See, e.g., the Holodek Guild Charter at <http://www.holo-dek.com/guild/charter.html> (last visited Jul. 9, 2007).

<sup>54</sup> See, e.g., Grimmelmann, *supra* note 45 at 156 (“Every game has a property rule on the spoils of killing monsters embodied in its software.”); Torill Elvira Mortensen, *WoW Is the New MUD: Social Gaming From Text to Video* 1 GAMES AND CULTURE 397-413, 404 (2006) (“The DKP system rewards attendance and participation in raids for complex, hard-to-master areas in WoW. These raids are from 20 to 40 persons as opposed to the regular 5-person groups, and all players need to cooperate as a unit, filling the different tasks for which their character is most suited. To encourage participation, reliability, and group cooperation, the raid groups need a system for rewards. This system also functions as a system for splitting up the loot: You earn points by participating in a raid and doing your part of the work, you spend points by bidding on the loot that is dropped by the monsters overcome by the raid group. This way, a diligent player has more of a chance at winning a good piece of equipment than a more casual player, and although not always considered fair, the system attempts to reward those who are willing and eager to play by the rules of the other players, and it acts as a social stabilizer.”)

<sup>55</sup> See, e.g., [http://en.wikipedia.org/wiki/DKP\\_\(point\\_system\)](http://en.wikipedia.org/wiki/DKP_(point_system)) (describing different methods for allocating dkps among guild members).

<sup>56</sup> The rule is that “the association of two or more persons to carry on as co-owners a business for profit forms a partnership, whether or not the persons intend to form a partnership.” See Florida Statutes (2006) § 620.8202(1) (enacting Revised Uniform Partnership Act (RUPA) § 202(a)).

on together,<sup>57</sup> and their actions can give rise to liability in contract and tort for their partners.<sup>58</sup> Partnership is the default form of business organisation, the only business form that people can set up without formality, or even without really thinking about the legal consequences of their actions.<sup>59</sup> Unfortunately, this default business form brings with it the risk of unlimited personal liability for one's partners' actions.

If player-inhabitants of a virtual world are carrying on business together they may be partners as a matter of law. Joining a guild to slay monsters in a medieval fantasy type world, even where guild members share kill points and even where the guild sells excess items does not seem to be the sort of activity that should give rise to unlimited liability for acts of other members of the guild (even within the context of the guild's normal activities). And in the context of such games there is as yet no great risk of RW legal liability for actions within the game. However, in other virtual worlds with different characteristics the legal picture may be more complex. In games such as Second Life, if people collaborate in writing code which they intend to exploit commercially their actions seem much closer to RW business activity than collaborating to slay monsters.

At either end of a spectrum it is possible to imagine joint activity in a virtual world which clearly does not look like activity which makes the participants partners for the purposes of real world partnership law and joint activity which has such a close resemblance to the sort of activity which constitutes a partnership in the real world that the participants must be treated as partners from the perspective of RW partnership law. At some point between those end points is a line which would separate partnerships from non-partnerships.<sup>60</sup>

---

<sup>57</sup> See, e.g., Florida Statutes (2006) § 620.8301 (enacting RUPA § 301).

<sup>58</sup> See, e.g., Florida Statutes (2006) § 620.8306 (enacting RUPA § 306).

<sup>59</sup> See, e.g., William Draper Lewis, *The Uniform Partnership Act*, 24 YALE L.J. 617, 621 (1915) ("there is one matter connected with partnership which legislation cannot make certain. By no human ingenuity would a Partnership Act which does not abolish common law partnerships enable the person who reads it to tell in every supposable case whether there is or is not a partnership.")

<sup>60</sup> Cf. Gunther Teubner, *Rights of Non-Humans? Electronic Agents and Animals as New Actors in Politics and Law*, 33 J. L & Soc 497, 501 (2006) ("it is the market that constructs firms as collectives").

One possible solution to this potential problem would be to exclude the possibility of creation of partnership in virtual worlds by contract. Partnership statutes tend to preclude the restriction of third party rights in partnership agreements,<sup>61</sup> so a provision contained in an individual guild's charter would not affect the rights of non-members of the guild. However, an agreement which bound all player-inhabitants in a virtual world, and which precluded the creation of partnership relationships by purely in-world conduct, would seem not to raise the same issues. Only those who agreed to such a term would be bound by it, and they would not therefore be third parties for the purposes of partnership statutes.

Such an exclusion would be consistent with the approach that VW developers take to the drafting of EULAs (end user licensing agreements). EULAs and TOSs (terms of service) which regulate the relationships between player-inhabitants in VWs and VW developers tend to be written to exclude the application of much RW law (although the exclusions are mostly directed to protecting the position of VW developers rather than players).<sup>62</sup> EULAs purport to restrict the rights of players but may recognise that all of the restrictions may not be effective in all jurisdictions. For example, dispute resolution provisions are likely to be drafted in the interests of game developers rather than of players. The World of Warcraft EULA provides that disputes which are not resolved informally may be submitted to binding arbitration by either side.<sup>63</sup> The EULA excludes the possibility of class actions and representative actions.<sup>64</sup> Disputes between

---

<sup>61</sup> See, e.g., Florida Statutes (2006) § 620.8103(2)(j) (enacting RUPA § 103(b)(10)) ("The partnership agreement may not:...Restrict rights of third parties under this act.")

<sup>62</sup> See, e.g., Andrew Jankowich, *Eulaw: the Complex Web of Corporate Rule-Making in Virtual Worlds*, 8 TUL. J. TECH. & INTELL. PROP. 1, 5 (2006) ("Virtual worlds operate under their own systems of private laws which often deviate sharply from those of the physical world.") Cf. Robert L. Hale, *Law Making by Unofficial Minorities*, 20 COLUM. L. REV. 451, 456 (1920) ("The substitution of law for anarchy, or more accurately, of responsible for irresponsible government, is quite as necessary in the adjustment of the worker's relations with those to whom he pays his dollar as in the adjustment of his relations with those from whom he earns it.")

<sup>63</sup> World of Warcraft End User License Agreement, clause 14, at <http://www.worldofwarcraft.com/legal/eula.html> (last visited Jul. 9, 2007).

<sup>64</sup> *Id.* at clause 14(c).

Blizzard (WoW's developer) and players resident outside the US are to take place in Los Angeles.<sup>65</sup> Some disputes may be taken to court, most likely by the developer.<sup>66</sup> EULAs may recognise that all of their provisions may not be effective in all jurisdictions.<sup>67</sup> Eve Online's Terms of Service state that the game is intended only for the use of Icelanders,<sup>68</sup> although many of the players are based outside Iceland, the game's developer announced that it was recruiting employees who would work in the US and China as well as in Iceland,<sup>69</sup> and the Eve Online website provides links to fan sites around the world.<sup>70</sup>

Prospective players of an online game have no real choice with respect to these EULAs.<sup>71</sup> Sometimes it may be difficult for prospective players to identify

---

<sup>65</sup> *Id.* at clause 14(e). Game developers are not alone in using this type of clause. See, e.g., Myriam Gilles, *Opting out of Liability: the Forthcoming, Near-total Demise of the Modern Class Action*, 104 MICH. L. REV. 373, 391-400 (2005) (describing the development of arbitration-linked collective action waivers).

<sup>66</sup> See World of Warcraft EULA, *supra* note 63, at clause 14(d) ("Exceptions to Informal Negotiations and Arbitration. You and Blizzard agree that the following Disputes are not subject to the above provisions concerning informal negotiations and binding arbitration: (1) any Disputes seeking to enforce or protect, or concerning the validity of, any of your or Blizzard's intellectual property rights; (2) any Dispute related to, or arising from, allegations of theft, piracy, invasion of privacy or unauthorized use; and (3) any claim for injunctive relief.")

<sup>67</sup> See, e.g., *id.* at clause 14(f) ("For our customers who purchased a license to the Game in, and are a resident of, Canada, Australia, Singapore, or New Zealand, other laws may apply if choose not to agree to arbitrate as set forth above, and in such an event, shall affect this Agreement only to the extent required by such jurisdiction. In such a case, this Agreement shall be interpreted to give maximum effect to the terms and conditions hereof.")

<sup>68</sup> Eve Online Website Terms of Use Agreement, available at <http://www.eve-online.com/pnp/termsfuse.asp> ("The Web Site is controlled and operated by CCP, hf. from its offices in Reykjavik, Iceland and is intended for Icelandic users only. CCP, hf. makes no representation that the materials on the site are appropriate or available for use in other locations. If you access the Web Site from any non-Icelandic territory, you do so at your own risk and are responsible for compliance with any local laws.") (last visited Jul. 9, 2007).

<sup>69</sup> CCP Press Release, CCP Creates 100 Jobs For Game Developers (Mar. 9, 2007) available at [http://www.ccpgames.com/press/press\\_releases.asp?pressReleaseID=29](http://www.ccpgames.com/press/press_releases.asp?pressReleaseID=29).

<sup>70</sup> See <http://www.eve-online.com/>.

<sup>71</sup> See, e.g., Jankowich, *supra* note 62, at 9.

the terms of the EULA before they commit to it.<sup>72</sup> Even if a prospective player can find the EULA, its complexity may render it incomprehensible.<sup>73</sup> If a person wants to live in Azeroth, she must agree to WOW's EULA. But the choice to live in Azeroth will be determined as much by those she wants to live and explore with as by the terms of the EULA.<sup>74</sup>

The general question of how RW laws apply to VWs has provoked a growing literature, much of which focuses on aspects of property law,<sup>75</sup> including intellectual property law,<sup>76</sup> and criminal law.<sup>77</sup> Some commentators advocate maintaining rigorous separations between VWs and the RW in order to minimise the impact of RW law.<sup>78</sup> But others wish to avoid such strict separation, seeing virtual worlds as environments ideally suited to the development of new types of

---

<sup>72</sup> See, e.g., Jankowich, *supra* note 62, at 12-16.

<sup>73</sup> See, e.g., *id.* at 16- 20.

<sup>74</sup> Greg Lastowka and Dan Hunter have raised this issue with respect to exit. See F. Gregory Lastowka & Dan Hunter, *The Laws of the Virtual Worlds*, 92 CAL. L. REV. 3, 62 (2004) ("Is the option of virtual exit real if it entails giving up family, friends, property, society, and your very form?") Cf. Williams et al., *supra* note , at 346 ("most small guilds represent strong real-world bonds that have extended into WoW rather than formed there. Roughly 75% of small guilds featured some founding unit of real-life friends or family.")

<sup>75</sup> See, e.g., Joshua Fairfield, *Virtual Property*, 85 BOSTON L. REV. 1047 (2005); Yochai Benkler, *There Is No Spoon*, in Balkin & Noveck, *supra* note 6, at 180-186. Commentators have also focused on questions of how tort law applies in virtual worlds. See, e.g., Bettina M Chin, *Regulating Your Second Life: Defamation in Virtual Worlds*, 72 BROOK. L. REV. 1303 (2007).

<sup>76</sup> See, e.g., Mia Garlick, *Player, Pirate or Conducer? A Consideration of the Rights of Online Gamers*, 7 YALE J. L. & TECH. 1 (Spring 2004-2005); Woodrow Barfield, *Intellectual Property Rights in Virtual Environments: Considering the Rights of Owners, Programmers and Virtual Avatars*, 39 AKRON L. REV. 649 (2006).

<sup>77</sup> See, e.g., F. Gregory Lastowka & Dan Hunter, *Virtual Crime*, in Balkin & Noveck, *supra* note 6, at 121-136.

<sup>78</sup> See, e.g., Edward Castronova, *The Right to Play*, 49 N.Y.L. SCH. L. REV. 185, 204 (2004-5) (arguing for a legal regime for games which would allow certain games to avoid the application of RW rules on condition that a strict separation were maintained between the synthetic economy and the RW economy); Jack M. Balkin, *Law and Liberty in Virtual Worlds*, in Balkin & Noveck, *supra* note 6, 86-117, at 107-113 (discussing Castronova's proposed "statutes of intertation").

entrepreneurial activity.<sup>79</sup> But many commentators in both groups are intrigued by the idea that virtual worlds might be somehow insulated from real world law.<sup>80</sup> A decade ago, David Johnson and David Post argued that cyberspace challenged the law's application by reference to territory,<sup>81</sup> and arguments for the insulation of virtual worlds from real world law are a logical extension of the idea of cyberspace as a jurisdiction. And in some ways, it is more credible to think of virtual worlds as their own jurisdictions, in part because they are much

---

<sup>79</sup> See, e.g., Johnson, *supra* note 14; Ondrejka, *supra* note 20.

<sup>80</sup> See, e.g., David R. Johnson, *The New Visual Literacy: How the Screen Affects the Law*, in Balkin & Noveck, *supra* note 6, 245-256, at 246 ("We may soon take it for granted that the act of visiting a particular online space corresponds to submission to the special rules that apply to actions in that context, just as we understand that traveling to another country subjects us to its local laws.") This idea may seem particularly attractive because virtual worlds operate across jurisdictions; Steinkuehler, *supra* note 16, at 211 ("...we might consider the legal regulation of games as not merely a matter of intellectual property rights (or the whole host of other legal issues that arise in the context of the Internet) but also perhaps as the philosophical and ethical issue of self-governance of societies that inhabit virtual kingdoms that are corporate owned but player constituted.") Cf. Ralf Michaels & Nils Jansen, *Private Law Beyond the State? Europeanization, Globalization, Privatization*, 54 AM. J. COMP. L. 843, 872 (2006) ("It is especially the relative independence from government traditionally enjoyed by private law that makes it a likely candidate for the supranational situation without a government. Such a rebirth of autonomous private law is reminiscent of the autonomous private law of 19th-century liberalism, but it differs in a crucial way. Then, the autonomy was possible because a strong state was willing and able to grant this autonomy. Now, the monolithic state that could grant this autonomy has given way to a multitude of public and private actors, and the new autonomy of private law takes place not in the presence and under the protection of a state but rather in, and due to, its absence" (footnote omitted).)

<sup>81</sup> See David R. Johnson & David Post, *Law and Borders: The Rise of Law in Cyberspace*, 48. STAN. L. REV. 1367, 1370 (1996) ("Cyberspace radically undermines the relationship between legally significant (online) phenomena and physical location. The rise of the global computer network is destroying the link between geographical location and: (1) the *power* of local governments to assert control over online behavior; (2) the *effects* of online behavior on individuals or things; (3) the *legitimacy* of a local sovereign's efforts to regulate global phenomena; and (4) the ability of physical location to give *notice* of which sets of rules apply. The Net thus radically subverts the system of rule-making based on borders between physical spaces, at least with respect to the claim that Cyberspace should naturally be governed by territorially defined rules.")

more like places than web sites are.<sup>82</sup> Some people choose to spend large amounts of their waking lives in virtual worlds and they may see themselves as citizens of those worlds. At the same time as game developers have been working on establishing virtual worlds, others have worked on establishing their own micronations,<sup>83</sup> with or without claiming rights in respect of physical territories, claiming to exercise rights of self-determination.<sup>84</sup> One of the better known of these micronations is Sealand,<sup>85</sup> which is based on a fortress in the North Sea. However, in order for micronations to be recognised as states in international law, they must overcome the traditional requirement for territory and also obtain recognition by existing states.<sup>86</sup> There are no established criteria for such recognition, which is arguably a political, rather than a legal, matter.<sup>87</sup> And, even were a micronation to be recognised as a state in international law, its ability to function independently of the views of other states would be limited.

Claims that virtual worlds (rather than micronations) should be recognised as self-governing enterprises tend to be based in domestic law rather than in international law. The term “guild” itself tends to suggest a self-governing body,<sup>88</sup>

---

<sup>82</sup> See, e.g., *supra* note 2.

<sup>83</sup> [Lonely Planet Guide]

<sup>84</sup> See, e.g., Ruth Wedgwood, *Cyber-Nations*, 88 KY. L.J. 957 (1999-2000).

<sup>85</sup> See <http://www.sealandgov.org/>. In 2006 Sealand suffered a serious fire which raised some doubts about its future. See <http://www.sealandgov.org/About.html>. For a story written before the fire, see Simson Garfinkel, *Welcome to Sealand. Now Bugger Off*, *Wired Magazine*, Issue 8/07 (Jul. 2000) available at [http://www.wired.com/wired/archive/8.07/haven\\_pr.html](http://www.wired.com/wired/archive/8.07/haven_pr.html).

<sup>86</sup> See, e.g., Wedgwood, *supra* note 84.

<sup>87</sup> See, e.g., *id.* at 963.

<sup>88</sup> Guilds regulated the conduct of their members. Much recent scholarship describes or advocates a resurgence of *lex mercatoria* or *law merchant* to govern transnational business. See, e.g., Gunther Teubner, *GLOBAL LAW WITHOUT A STATE* (1997); Robert D Cooter, *Decentralized Law for a Complex Economy: The Structural Approach to Adjudicating the New Law Merchant*, 144 U. PA. L. REV. 1643 (1996). Cf. Edward Manson, *The City of London Chamber of Arbitration*, 9 L.Q.R. 86, 87 (1893) (“Business men want, not only celerity and cheapness, but to make their own law for themselves, as they have done before.”) But, for more critical views, see Stephen E. Sachs, *From St. Ives to Cyberspace: the Modern Distortion of the Medieval ‘Law Merchant’*, 21 AM. U. INT’L L. REV. 685, 690-694 (2006) (challenging the romantic view of the medieval law merchant and arguing that rather than the merchants of St. Ives regulating themselves they were

but one that operates within a state. Edward Castronova analogises his idea of intertation to the recognition of corporations.<sup>89</sup> He proposes that states should enact statutes of intertation, which would recognise the ability of virtual worlds to regulate themselves. At this point it is clear that the idea of intertation is very different from incorporation: corporation statutes may recognise that incorporated businesses have an existence separate from their owners, and limit the liability of those owners to the corporation's creditors, but corporations do not have general immunity to a state's general laws.<sup>90</sup> Arguing that virtual worlds should be regarded as self-governing entities is a little like making such an argument for a club on the basis that a group of people spends a lot of time there and it would be inconvenient if they had to pay attention to the laws of the jurisdiction in which the club was based.<sup>91</sup>

States do recognise a range of self-governing bodies which operate within their territories and subject to their ultimate control.<sup>92</sup> And it would be possible to carve out some scope for virtual worlds to regulate themselves by means of a statutory regime.<sup>93</sup> However, unlike virtual worlds, the application of statutes is

---

subject to the authority of the King and of the Abbey of Ramsey) ; Anna Di Robilant, *Genealogies of Soft Law*, 54 AM. J. COMP. L. 499, 526 (2006) ("It is noteworthy that the romance of the *lex mercatoria* is a myth subject to cyclical revivals in different cultural and historical contexts.")

<sup>89</sup> See, e.g., Edward Castronova, *The Right to Play*, in in Balkin & Noveck, *supra* note 6, 68-85, at 68. Cf. Balkin, *supra* note 78.

<sup>90</sup> Cf. Joshua Fairfield, *Anti-Social Contracts: The Contractual Governance of Online Communities*, 17 (July 2007) available at SSRN: <http://ssrn.com/abstract=1002997> ("The difficulty with governing every aspect of online communities solely by reference to the law of contract is that contract law is often the wrong tool for the job. At some risk of getting ahead of the analysis, here is the conclusion: Contracts most efficiently and effectively govern positive asymmetric trades among limited numbers of parties, whereas the majority of community legal relationships rely on one-to-many negative reciprocal trades.")

<sup>91</sup> [Unincorporated associations. Gambling in clubs]

<sup>92</sup> See, e.g., John Braithwaite & Peter Drahos, *GLOBAL BUSINESS REGULATION*, 28, (2000) ("The last two decades of the twentieth century saw the rise of a 'new regulatory state', where states do not so much run things as regulate them or monitor self-regulation. Self-regulatory organizations frequently become more important than states in the epistemic communities where debates over regulatory design are framed.")

<sup>93</sup> Cf. Castronova, *supra* notes 16 and 89.

limited by territorial jurisdiction.<sup>94</sup> States could agree to mutual recognition of virtual worlds established in other jurisdictions, but we are a long way from that point. Some commentators have argued that contracts can function more effectively across borders than regulation does.<sup>95</sup>

The question of whether and to what extent it is possible to provide for insulation from liability by contract is not new. As a normative matter, some commentators argue that business people should be free to contract for the rules that they wish to apply to their activities.<sup>96</sup> However, in practice, attempts to contract around potential liability may conflict with a particular jurisdiction's public policy. Linden Labs' banning of gambling in 2007 is a recognition of this reality.<sup>97</sup> Fiduciary duties may trump contractual exclusions of liability. For example, although participants in syndicated loans typically contract to exclude the application of fiduciary duties to their relationships, there are risks that courts will not uphold the exclusions in all circumstances.<sup>98</sup> Courts may decline to give effect to contracts which purport to limit liability for fraud.<sup>99</sup> Statutes may provide that exclusions of liability are effective if they are not unreasonable,<sup>100</sup> or they

---

<sup>94</sup> Some statutes do have some extraterritorial effects, but as a general principle statutes operate within territorial jurisdictions.

<sup>95</sup> See, e.g., Norman S. Poser, *The Stock Exchanges of the United States and Europe: Automation, Globalization and Consolidation*, 22 U. PA. J. INT'L ECON 497, 538 (2001) ("These are not rules promulgated by a government agency, but by contractual arrangements among the participants. This suggests that self-regulation has the ability to finesse the problems of national sovereignty and differing legal systems that stand in the way of developing and enforcing common governmental regulatory standards.")

<sup>96</sup> See, e.g., Cooter, *supra* note 88, at 1646 ("..Efficiency requires that as economies develop, the enforcement of custom in business communities becomes more important relative to the regulation of business.")

<sup>97</sup> See *supra* note 1.

<sup>98</sup> See, e.g., Gavin R. Skene, *Arranger Fees in Syndicated Loans - A Duty to Account to Participant Banks?*, 24 PENN ST. INT'L L. REV. 59 (2005).

<sup>99</sup> See, e.g., *Abry Partners V, LP v F&W Acquisition LLC* 891 A.2d 1032, 1064 (Del. Ch. 2006) (Vice Chancellor Strine) ("To the extent that the Stock Purchase Agreement purports to limit the Seller's exposure for its own conscious participation in the communication of lies to the Buyer, it is invalid under the public policy of this State.")

<sup>100</sup> See, e.g., Florida Statutes (2006) § 620.8103(2) (enacting RUPA § 103(b)) ("The

may prohibit or condition the waiver of the rights they grant.<sup>101</sup> The federal securities laws are among the statutes whose protection may not be waived.<sup>102</sup>

At this point virtual worlds are not reliably insulated from real world laws, especially where issues of the public policy of one or more states are involved, and securities regulation is one of the relevant areas where virtual worlds may run up against strong considerations of public policy.<sup>103</sup> The following section of the paper describes some of the financial and investment activity in which player-inhabitants of virtual worlds engage.

### **INVESTMENT AND FINANCIAL ACTIVITY IN VIRTUAL WORLDS<sup>104</sup>**

Although guilds may strictly speaking (and in the absence of disclaimers in VW EULAs) sometimes constitute partnerships in the RW, “corporations” in Eve Online are not corporations in the RW. Although many commentators argue that corporations are essentially contractual in nature, as a practical matter corporations can only be created by licence from states. David Johnson has

---

partnership agreement may not: (d) Eliminate the duty of loyalty ..., but: 1. The partnership agreement may identify specific types or categories of activities that do not violate the duty of loyalty, if not manifestly unreasonable.”) See also, e.g., Mark J. Loewenstein, *Fiduciary Duties and Unincorporated Business Entities: in Defense of the "Manifestly Unreasonable" Standard*, 41 TULSA L. REV. 411 (2006).

<sup>101</sup> See, e.g., Douglas G. Baird, *Discharge, Waiver, and the Behavioral Undercurrents of Debtor-Creditor Law*, 73 U. CHI. L. REV. 17, 18 (2006) (“For the most part, the law does not second-guess deliberate, well-considered decisions. But legal rules can prevent us from making decisions that are impulsive or unreflective. Legal rules protect us from ourselves by insisting that legal formalities accompany decisions where we are prone to make systematic misjudgments. These formalities force us to pause and consider what we are doing.”)

<sup>102</sup> Securities Act of 1933, 15 U.S.C. §77n (“Any condition, stipulation, or provision binding any person acquiring any security to waive compliance with any provision of this subchapter or of the rules and regulations of the Commission shall be void.”); Securities Exchange Act of 1934, 15 U.S.C. § 78cc(a) (“Any condition, stipulation, or provision binding any person to waive compliance with any provision of this chapter or of any rule or regulation thereunder, or of any rule of an exchange required thereby shall be void.”)

<sup>103</sup> In recent years securities regulators have increased their efforts to co-operate across borders in order to fight securities and investment fraud.

<sup>104</sup> Much of the financial activity in and around virtual worlds involves banking and currency exchange transactions which are outside the scope of this paper.

argued persuasively before the Vermont legislature that it would be desirable to encourage people to form virtual corporations.<sup>105</sup> However, at present, the corporations that exist in VVs are mostly either RW corporations seeking publicity or virtual entities that have only slight claims to be regarded as corporations.

VV IPOs and stock exchanges have only a surface similarity to RW IPOs and exchanges.<sup>106</sup> The documentation made available to prospective investors is generally much less detailed than RW documentation, although it may be modeled on RW documentation, for example describing risk factors.<sup>107</sup> Although virtual stock exchanges may have “listing rules”, these rules bear little resemblance to real world listing rules. For example, the criteria for listing on the World Stock Exchange (WSE) in Second Life include a requirement of “Advanced knowledge of the English Language”.<sup>108</sup> The WSE does encourage prospective investors to pay attention to the risk factors noted in the prospectus.<sup>109</sup> And the WSE makes it clear that the securities it lists are not

---

<sup>105</sup> Cf. Testimony of David R. Johnson Regarding H-458 Before the House Commerce Committee Of the Vermont Legislature (Apr. 4, 2007) *available at* [http://cairns.typepad.com/iilp/2007/05/johnson\\_testifi.html](http://cairns.typepad.com/iilp/2007/05/johnson_testifi.html).

<sup>106</sup> For a suggestion that Nasdaq has contemplated establishing a presence in Second Life, *see, e.g.,* Adam Reuters, *Nasdaq Boss Ponders Second Life Stock Exchange*, (May 8, 2007) *available at* <http://secondlife.reuters.com/stories/2007/05/08/nasdaq-boss-ponders-second-life-stock-exchange/>.

<sup>107</sup> *See, e.g.,* the “Prospectus” for BNT: Brautigan & Tuck Holdings on the website of Allinvest International Exchange (AVIX) at <http://www.allinvestfinancial.com/symbol/BNT/profile> (last visited Jul. 11, 2007) (including among the risk factors identified “RL Governments tax SL commerce: US congress is holding hearings, and even some fools in SL want RL government regulation rather than community self-regulatory agencies.”)

<sup>108</sup> Listing Rules of the World Stock Exchange (WSE) in Second Life at <http://www.wselive.com/info/rules> . The WSE merged with the Metaverse Stock Exchange in 2007. Marvel Ousley, *Two Stock Exchanges Merge in SL* (Feb. 13, 2007) at <http://www.slenn.com/article/merger-marvel/>.

<sup>109</sup> *See* WSE, Terms of Service, at <http://www.wselive.com/info/tos> (last visited Jul. 11, 2007) (“Before deciding to invest in a Second Life group acting as a virtual company, you should read and understand the companies entire Prospectus and in particular, in considering their prospects, you should consider the assumptions underlying the Directors’ financial forecasts and the risk factors that could affect The Company performance. You should carefully consider these

registered in the real world.<sup>110</sup> On the other hand, WSE's online presentation is much more sophisticated than that of AVIX, another Second Life exchange,<sup>111</sup> which may lead prospective investors to feel they can safely place more trust in WSE.<sup>112</sup> WSE tries to limit market manipulation. For example, the Listing Rules state that "The Managing Director cannot buy or sell any shares in the company without approval by the WSE."<sup>113</sup>

Despite the thinness of the disclosures they make, the Second Life issuers do present themselves as having real business plans to take advantage of opportunities in Second Life.<sup>114</sup> These business plan descriptions may seem overblown, but the main stream media have been hyping Second Life for some time, reproducing stories about how much money can be made in virtual worlds.<sup>115</sup> At the same time, it would be hard to avoid reading about financial

---

factors in light of your personal circumstances (including financial and issues under the Terms of Service for Second Life by Linden Labs) and seek advice from your professional adviser before deciding whether to invest. Investing in a company involves risks. See 'Risk Factors' for a discussion of certain risks that you should consider before deciding to invest in a company.")

<sup>110</sup> *Id.*

<sup>111</sup> See <http://www.alleninvestfinancial.com/>.

<sup>112</sup> See also the Virtual Commerce Exchange at <http://www.virtualcommercecenter.com/index.aspx>.

<sup>113</sup> WSE Listing Rules, *supra* note 108. See also the WSE Constitution at <http://www.wselive.com/info/constitution>, which states that the WSE "requires that the internal management of any company listed on WSE must be governed by the Constitution". The Constitution prohibits insider trading and state that directors must adhere to the Hope Capital virtues which can be found at <http://www.wselive.com/info/virtues>.

<sup>114</sup> See, e.g., the BNT Prospectus, *supra* note 107 ("Our primary business focus right now is real estate development. We intend to use the bulk of capital raised to purchase 23 sims, which will be subdivided and sold off, building a new private continent, and extending our infrastructure through it. B&T has historically been able to earn significantly in excess of 100% profits on its cost of land and tier, which is the reason for its phenomenal growth. B&T does this by offering a top notch sim environment to people at market competitive prices, and plowing all profits earned to date back into more land/sims. Unlike other companies that rely on often unverifiable claims as to earnings, the public can visually see B&T grow, by the number of sims it buys and builds into its continent. Every new round of sim buying will be determined, in size and timing, by the profitability of B&T in the stage before it.")

<sup>115</sup> See, e.g., Steve Rose, *Buy! Buy! Buy!*, The Guardian, (Jul. 9, 2007) available at

scandals in Second Life,<sup>116</sup> so there is a strong argument that the reasonable participant in Second Life should be on notice that investments in Second Life enterprises are rather different from investments in RW enterprises.<sup>117</sup>

Those who issue securities in VWs and those who facilitate such issues rely on disclaimers and on the idea that selling virtual securities in what is really a game does not fall within the scope of real world securities laws. For example, Luke Connell of the WSE is reported to have said: “There’s no difference between this and going to a gaming parlor, paying money to a machine that lets you play pretend stocks, and if you win you get paid back tokens, which someone might then buy from you.”<sup>118</sup> On the other hand, the message is not entirely consistent. The same article reports Luke Connell to have said: “The World Stock Exchange is a stock market simulator in a virtual world that uses the same terminology that you find in real life and that provides education on how to buy and sell shares. You buy shares in a company and the shares can go up or down depending on market sentiment. So everything is simulated to replicate real life.”<sup>119</sup>

The next section of the paper discusses arguments for treating these virtual securities as securities for the purposes of federal securities regulation in

---

<http://technology.guardian.co.uk/news/story/0,,2121880,00.html> (“It is a boom-town like no other in history. In less than four years, Second Life, the virtual metropolis where anyone can become a “cyber citizen” simply by logging on, has grown from nothing to a city four times the area of Manhattan, frequented by nearly eight million people. Its population is spiralling and real-estate prices are going through the roof as its virtual land is sold to users for Linden dollars, which can now actually be exchanged for US dollars.”)

<sup>116</sup> See, e.g., Bloomfield, *supra* note , including comments to the posting.

<sup>117</sup> For a discussion of the biases which may interfere with investors’ ability to make rational investment decisions, see, e.g., Donald C. Langevoort, *Taming the Animal Spirits of the Stock Markets: a Behavioral Approach to Securities Regulation*, 97 NW. U.L. REV. 135 (2002). See also, e.g., David S. Scharfstein & Jeremy C. Stein, *Herd Behavior and Investment*, 80 AM. ECON. REV. 465-479 (1990). Some authors suggest rational explanations for behaviors such as herding. See, e.g., Jonathan E. Alevy, Michael S. Haigh & John A. List, *Information Cascades: Evidence from a Field Experiment with Financial Market Professionals*, 62 J. FIN. 151 (2007).

<sup>118</sup> *Virtual Stock Exchange Opens in Second Life*, (Mar. 16, 2007) available at [http://wallstreetandtech.com/blog/archives/2007/03/virtual\\_stock\\_e.html](http://wallstreetandtech.com/blog/archives/2007/03/virtual_stock_e.html).

<sup>119</sup> *Id.*

the US.

## **DO REAL-WORLD SECURITIES LAWS APPLY TO VIRTUAL SECURITIES?**

The definitions of what is a security for the purposes of the federal securities laws are expansive.<sup>120</sup> These definitions include both specific terms, and terms which are more general. It should not be possible to avoid the application of the statutes by calling something which is really a security by a different name. So, for example, calling something which is really a security a “game token” would not exclude the application of the statutes.<sup>121</sup> If a person purports to sell “stock” they are presumed to be selling a security unless what they are selling truly does not have the characteristics of stock.<sup>122</sup> The following

---

<sup>120</sup> See, 15 U.S.C. § 77b (a)(1) (“The term “security” means any note, stock, treasury stock, security future, bond, debenture, evidence of indebtedness, certificate of interest or participation in any profit-sharing agreement, collateral-trust certificate, preorganization certificate or subscription, transferable share, investment contract, voting- trust certificate, certificate of deposit for a security, fractional undivided interest in oil, gas, or other mineral rights, any put, call, straddle, option, or privilege on any security, certificate of deposit, or group or index of securities (including any interest therein or based on the value thereof), or any put, call, straddle, option, or privilege entered into on a national securities exchange relating to foreign currency, or, in general, any interest or instrument commonly known as a “security”, or any certificate of interest or participation in, temporary or interim certificate for, receipt for, guarantee of, or warrant or right to subscribe to or purchase, any of the foregoing.”) For an argument that mandatory securities regulation is sometimes excessively costly, see, e.g., James C. Spindler, *IPO Liability and Entrepreneurial Response*, 155 U. PA. L. REV. 1187 (2007).

<sup>121</sup> Cf. *SEC v. W.J. Howey Co.*, 328 U.S. 293, 298 (1946) (“The term “investment contract” is undefined by the Securities Act or by relevant legislative reports. But the term was common in many state “blue sky” laws in existence prior to the adoption of the federal statute and, although the term was also undefined by the state laws, it had been broadly construed by state courts so as to afford the investing public a full measure of protection. Form was disregarded for substance and emphasis was placed upon economic reality.”). See also, e.g., *Warfield v. Alaniz*, 453 F. Supp. 2d 1118, 1125 (D. Ariz. 2006) (“Here, although the GCA’s were denominated as “charitable gift annuities,” the investors’ funds were pooled in a “common enterprise” with the expectation that Mid-America’s management of the funds would result in profits to the investors. As this Court held previously, regardless of whether Mid-America called its financial instruments “charitable gift annuities,” they were in fact investment contracts.”)

<sup>122</sup> *United Housing Foundation, Inc. v. Forman*, 421 U.S. 837, 850 (1975) (“the name given to an instrument is not dispositive.”)

discussion focuses on the investment contracts category within the definition of security as it is possible that a court might accept that even something described as “stock” in a “prospectus” did not really have the characteristics of stock for the purposes of the securities laws.<sup>123</sup> Such “stock” might still risk being characterised as a security because it involved an investment contract.

Securities must be registered<sup>124</sup> unless a transaction exemption applies. Investors who purchase unregistered securities have the right to rescind their agreements to buy the securities and the sellers are at risk of being subject to enforcement proceedings.

The term “investment contract” in the definition of a security covers situations where a person invests money in a common enterprise where the profits expected to be made come from the efforts of others.<sup>125</sup> In *SEC v. Howey* the SEC brought enforcement proceedings relating to a scheme where investors were encouraged to buy land in Florida together with service contracts whereby the land was leased to a service company which operated citrus groves. The investors paid over their money with the expectation of sharing in the profits of the citrus groves. The Supreme Court said:

“...all the elements of a profit-seeking business venture are present here. The investors provide the capital and share in the earnings and profits; the promoters manage, control and operate the enterprise. It follows that the arrangements whereby the investors' interests are made manifest involve investment contracts, regardless of the legal terminology in which such contracts are clothed. The investment contracts in this instance take the form of land sales contracts, warranty deeds and service contracts which respondents offer to prospective investors. And respondents' failure to abide by the statutory and administrative rules in making such offerings, even though the failure result from a bona fide mistake as to the law, cannot be sanctioned under the Act.”<sup>126</sup>

---

<sup>123</sup> [LLC case].

<sup>124</sup> See § 5 of the Securities Act of 1933, 15 U.S.C. § 77e.

<sup>125</sup> *Id.* at 298-9. These criteria are known as the Howey test.

<sup>126</sup> *Id.* at 300.

The Supreme Court also noted that most of the investors were not resident in Florida,<sup>127</sup> but in “distant localities”.<sup>128</sup>

Interests in partnerships are considered to be securities under the *Howey* test if the partners have no real involvement in the business, because they have no expertise in business, or have no legal right or real ability to exercise control over the business.<sup>129</sup> Interests in limited partnerships are generally presumed to be securities because of the control rights assigned to the general partner, and a control arrangement in a general partnership which resembles normal arrangements in a limited partnership would tend to imply that the interests are securities.<sup>130</sup> Sale and lease-back agreements relating to pay-phones have been held to be investment contracts even where the agreements promised a fixed rate of return (rather than a share of profits).<sup>131</sup>

Investments in virtual corporations seem to share many of the characteristics of agreements which have been characterised as constituting securities. However, the securities laws are designed to control financial investments rather than games. Regulators and courts could adopt various approaches to determining whether the securities laws apply to an investment in the context of a game. They could exclude all game “investments” from the definition of a security, or they could decide to include game investments with particular characteristics. As one of the, often implicit, criteria for designation as a security is whether or not the agreement is part of a scheme to defraud

---

<sup>127</sup> *Id.* at 296.

<sup>128</sup> *Id.* at 299. Cf. *SEC v. Merchant Capital, LLC*, 483 F.3d 747, 755-763 (11<sup>th</sup> Cir. 2007) (“Compounding the legal difficulty in removing Merchant, the investors in an individual partnership were geographically dispersed, with no preexisting relationships. Howey found it significant that the interests in that case were offered “to persons who reside in distant localities.”)

<sup>129</sup> See, e.g., *Williamson v. Tucker*, 645 F.2d 404, 423 (5<sup>th</sup> Cir. 1981) (“one would not expect partnership interests sold to large numbers of the general public to provide any real partnership control; at some point there would be so many partners that a partnership vote would be more like a corporate vote, each partner’s role having been diluted to the level of a single shareholder in a corporation. Such an arrangement might well constitute an investment contract.”)

<sup>130</sup> See, e.g., *SEC v. Merchant Capital, LLC*, supra note , at 755-763.

<sup>131</sup> *SEC v. Edwards*, 540 U.S. 389 (2004)

people,<sup>132</sup> frauds involving virtual corporations are likely to be characterised as involving securities.<sup>133</sup>

Where the sale of virtual securities is not carried out as part of a scheme to defraud, there are a number of reasons for doubting whether the virtual securities are securities under the securities laws. Although much of the recent case law focuses on the common enterprise and profits from the efforts of others aspects of the *Howey* test, these are not really issues in the case of sales of securities in IPOs in Second Life, which are presented to prospective investors as having the sort of pooling and management characteristics associated with investments in real life IPOs. Where guilds charge guild members a fee for joining and for the chance to participate in guild profits, the guild membership would, in contrast, look much more like the sort of participation in a general partnership that would not be treated as a security.

In the case of virtual securities it is arguable that the investment of money criterion under *Howey* is problematic. Virtual world investments are made using virtual currencies, which may, or may not, be treated as equivalent to money. Perhaps more critical is the question whether virtual world investments are really investments for the purposes of the *Howey* test or whether the fact that they are made in the course of a game excludes them automatically from being treated as investment contracts.

Excluding all game investments from the protection of the securities laws could have the undesirable effect of encouraging fraudsters to describe their investment scams as games in order to avoid SEC enforcement action. One example of such a scam is the Stock Generation case.<sup>134</sup> The operators of the StockGeneration website claimed to operate a “fantasy investment game” in

---

<sup>132</sup> See, e.g., *Howey*, supra note 121, at 299 (noting that the term investment contract “embodies a flexible rather than a static principle, one that is capable of adaptation to meet the countless and variable schemes devised by those who seek the use of the money of others on the promise of profits.”)

<sup>133</sup> There is an uncomfortable circularity here. Frauds are more likely to be treated as involving securities than non frauds., and where a fraud is committed involving a security special fraud rules apply. See, e.g., §10(b) of the Securities Exchange Act of 1934, 15 U.S.C. § 78j(b).

<sup>134</sup> *SEC v. SG Ltd.*, 265 F.3d 42 (1<sup>st</sup> cir 2001).

which they offered:

on-line denizens an opportunity to purchase shares in eleven different "virtual companies" listed on the website's "virtual stock exchange." SG arbitrarily set the purchase and sale prices of each of these imaginary companies in biweekly "rounds," and guaranteed that investors could buy or sell any quantity of shares at posted prices. SG placed no upper limit on the amount of funds that an investor could squirrel away in its virtual offerings.<sup>135</sup>

The operators lured 800 US investors to put their money into the scheme.<sup>136</sup> The SEC brought actions against the operators for breaches of the federal securities laws. The District Court took the view that the operators' characterisation of the scheme as a game was conclusive:

SG labeled their website as a game from the outset. While it is true that participants in the "virtual exchange" parted with their money in the hope of doubling it through SG's promotion of the website and payments by other participants, such activity does not make the "virtual shares" securities. All transactions were in the context of a game. Although participants were looking for financial gain, no investment vehicle was involved. The scenario more closely resembled gambling than an investment in securities.<sup>137</sup>

The district court also distinguished other cases where pyramid schemes had been found to involve securities on the basis that the cases involved "commercial dealings within a business context -- not a game".<sup>138</sup>

The First Circuit took a different view, saying that:

Contrary to the district court's view... this locution does not translate into a dichotomy between business dealings, on the one hand, and games, on the other hand, as a failsafe way for determining

---

<sup>135</sup> *Id.* at 44. SG Ltd. was a Dominican corporation. *Id.* Investors' moneys were paid into bank accounts in Latvia and Estonia. *Id.* at 45. Other related companies also involved in the scheme were formed in Belize. *SEC v. SG Ltd.*, 142 F. Supp. 2d 126, 128 (D. Mass. 2001).

<sup>136</sup> *SEC v. SG Ltd.*, 265 F.3d 42, 45.

<sup>137</sup> *SEC v. SG Ltd.*, 142 F. Supp. 2d 126, 130 (D. Mass. 2001).

<sup>138</sup> *Id.* at 131.

whether a particular financial arrangement should (or should not) be characterized as an investment contract...As long as the three-pronged Howey test is satisfied, the instrument must be classified as an investment contract...Once that has occurred ... It is.. immaterial whether the promoter depicts the enterprise as a serious commercial venture or dubs it a game.<sup>139</sup>

The risk of abuse recognised in the Stock Generation case means that regulators will need to decide how to distinguish between true game activity and the promotion of investment opportunities. And if virtual world securities issuance becomes more common, more fraudsters may decide to take advantage of virtual worlds to carry out investment scams. Drawing the line between game activity and investment is especially complex in the context of virtual worlds if player-inhabitants think that investments in virtual world securities are both gaming and investment.<sup>140</sup> Even in real life, speculation often seems to combine aspects of entertainment and investment, or at least a willing undertaking of risk.<sup>141</sup>

Related to the idea that frauds are caught by the securities laws is another factor which may be relevant to the issuance of virtual securities. Case law on the application of the definition of a security will often focus on whether the purchasers of the interests in question are sophisticated or not. So, for example, in *SEC v. Edwards*, the Supreme Court noted that the pay-phone contracts were

---

<sup>139</sup> *SEC v. SG Ltd.*, 265 F.3d 42, 47.

<sup>140</sup> Cf. Andrew W. Lo & Dmitry V. Repin, *The Psychophysiology of Real-Time Financial Risk Processing*, 14 J. OF COGNITIVE NEUROSCIENCE 323-339, 332 (2002) (“there is considerable anecdotal evidence that subjects involved in professional trading activities perform very differently depending on whether real financial capital is at risk or if they are trading with “play” money.”)

<sup>141</sup> Cf. Edward Manson, *The Reform of Company Law*, 11 L.Q.R. 346, 350-351 (1895) (“Some recipients of a prospectus may rely on the names of the directors, others on the recommendation of a friend or a broker; what the many go by is that hope which springs eternal, and which before and since Pope's and Campbell's time has told many a flattering tale. They put their money on an attractive speculation- to win a premium, not as an investment- just as they would take a ticket in a lottery or put down a five franc at roulette. To say this is not to extenuate misstatements by directors, but only to point the truth that the supposed victims of directors' villainy are in fact victims of their own carelessness or cupidity, and as such are not entitled to have the law wrested for their behoof, or the sword of justice specially sharpened for their redress.”)

presented as involving low risks, which made them particularly attractive to vulnerable investors.<sup>142</sup> Loan participations, which tend to be sold to sophisticated investors, are generally not treated as securities.<sup>143</sup> In contrast, promissory notes sold by brokers to their customers are likely to be treated as securities.<sup>144</sup> Player/inhabitants of virtual worlds could find that they do not benefit from the protections of the securities laws because courts decide that they do not fit easily in the category of vulnerable investors who need the protection of the securities laws. On the other hand, there is some evidence to suggest that those investors who are most confident about their ability to make financial decisions may be at greater risk of being scammed than those who adopt a more cautious approach.<sup>145</sup>

If the securities laws do apply to virtual world securities issuance, there is a further issue of what rules should apply. The expense of registration would tend to eliminate non-fraudulent issues of virtual securities.<sup>146</sup> Moreover, real-world securities law registration requirements would not apply easily to virtual securities

---

<sup>142</sup> *SEC v. Edwards*, supra note 131, at 394 (“investments pitched as low-risk (such as those offering a “guaranteed” fixed return) are particularly attractive to individuals more vulnerable to investment fraud, including older and less sophisticated investors.”).

<sup>143</sup> Interests in loans are securities if they fall under the definition of a “note”. The seminal case on the interpretation of the word “note” is *Reves v Ernst & Young*, 494 U.S. 56 (1990). In *Banco Espanol de Credito v. Security Pacific National Bank*, 973 F.2d 51 (2d Cir 1992), cert. denied at 509 U.S. 903 (1993) the Second Circuit held that loan participations were not securities, taking account of the *Reves* criteria, including the fact that the loan participations were sold in a limited solicitation to sophisticated institutions. *Id.* At []. See also Federal Reserve Board (Fed), the Federal Deposit Insurance Corporation (FDIC), The Office of the Comptroller of the Currency (OCC), and the Office of Thrift Supervision (OTS), Interagency Statement on Sales of 100% Loan Participations (Apr. 10, 1997) available at <http://www.occ.treas.gov/ftp/bulletin/97-21a.pdf>.

<sup>144</sup> See, e.g., *Stoiber v SEC* 161 F.3d 745 (DC Cir.1998); *McNabb v SEC* 298 F.3d 1126 (9<sup>th</sup> Cir. 2002).

<sup>145</sup> Cf., Brad M. Barber & Terrance Odean, *Online Investors: Do the Slow Die First?*, 15 REV. OF FIN. STUD. 455-487 (2002) (online investors may be over confident). People seem to assess risk in different ways at different times. See, e.g., Paul Slovic, Melissa L. Finucane, Ellen Peters & Donald G. MacGregor, *Risk as Analysis and Risk as Feelings: Some Thoughts about Affect, Reason, Risk and Rationality*, 24:2 RISK ANALYSIS 311 (2004)

<sup>146</sup> On the expense of securities registration, see, e.g., Alan R Palmiter, *Toward Disclosure Choice in Securities Offerings*, 1999 COLUM. BUS. L. REV. 1, 12.

because of the very significant differences between the underlying economic activity in the real and virtual worlds. There are two possible regulatory solutions to the problem of uncertainty as to whether and when investments in virtual securities are securities under the federal securities laws. One solution would be to develop criteria to distinguish between virtual securities which are not treated as securities under the securities laws and those which are. The other would be to define registration exemptions for virtual securities, which could leave in place fraud remedies where these would be appropriate. Either solution would require careful thought about how to distinguish between financial activity which should be subject to securities regulation and financial activity which is just a game. The following section of the paper addresses this issue.

## **GAMES AND REAL LIFE**

In many ways, organized financial markets are virtual rather than real. In contrast to markets for physical goods, markets for financial assets are markets in rights. In stock markets traders buy and sell rights to share in the profits of entities which exist as a matter of law, but have no physical existence.<sup>147</sup> It is often not possible to define with any certainty what it is that a particular corporation does. And what corporations do in the 21<sup>st</sup> century is very different from the classic model of making widgets. Whereas investors originally looked for a return on their investment in a voyage to the East Indies, or planned to share in the fees for use of a bridge, they now frequently invest in conglomerate enterprises which engage in a diverse range of activities. Very many corporations' businesses involve the production and sale of entertainment, information, and services which are intangible, although they may be very profitable. Even for non-financial corporations, financial transactions may be a significant source of revenue.<sup>148</sup>

Markets for derivative financial instruments are even further removed from the physical domain. Rather than buying shares in a company, investors may

---

<sup>147</sup> See, e.g., Castronova, *supra* note 78, at 186-188 (2004-5) (discussing corporations as fictional persons).

<sup>148</sup> Cf. Greta R. Krippner, *The Financialization of the American Economy*, 3 SOCIO-ECONOMIC REV. 173 (2005) (identifying the growing importance of finance in the US economy.).

decide to buy options to acquire those shares at a particular price at a particular time in the future, or they may transact in futures, which require them to buy or sell the security at a fixed price at a particular time in the future. Financial institutions develop securities which are described as “synthetic”.<sup>149</sup>

Trading behavior in the financial markets is also changing. In the past traders on financial markets used to meet in coffee houses<sup>150</sup> and on the streets<sup>151</sup> to make their trades. Increasingly traders in the financial markets trade through screens and interact with other traders at a distance rather than on the floor of a financial exchange.<sup>152</sup>

In some ways the organized financial markets resemble online games.<sup>153</sup> Financial institutions use “persistent group chat” for communication between groups<sup>154</sup> in the same way that guilds communicate by voice while raiding.<sup>155</sup>

---

<sup>149</sup> See, e.g., ISDA, Comments to the SEC Re: Asset-Backed Securities, Releases Nos. 33-8518; 34-50905; File No. S7-21-04 (Mar. 8, 2005) *available at* <http://www.isda.org/speeches/pdf/SEC-Letter-03-08-05.pdf> (“ISDA assumes “synthetic securities” to mean capital market instruments whose payment profile is linked, typically by virtue of a derivative instrument, to the credit or other performance of one or more entities or obligations, the issuer of which instruments is not required to own such underlying obligations.”)

<sup>150</sup> See, e.g., David Kynaston, *THE CITY OF LONDON. VOL 1*, 16 (1994) (noting the London Stock Exchange’s origins in the coffee houses of Change Alley.)

<sup>151</sup> AMEX was originally known as the Curb Exchange because of its physical location. Robert Sobel, *AMEX: A HISTORY OF THE AMERICAN STOCK EXCHANGE, 1921-1971*.

<sup>152</sup> See, e.g., Caitlin Zaloom, *Ambiguous Numbers: Trading Technologies and Interpretation in Financial Markets*, 30(2) *AMERICAN ETHNOLOGIST* 258-272, 265 (2003) (“In a sharp break from the complex information system in the pit, where fathers and sons, friends and allies pass information through tightly controlled networks, the screen displays the market in simple terms available to the eyes of any trader with access to it.”)

<sup>153</sup> See, e.g., Caitlin Zaloom, *The Productive Life of Risk*, 19 *CULTURAL ANTHROPOLOGY* 365-391, 367 (2004) (traders’ “market engagements are significant social games, a form of “deep play” in the heart of capitalism.”) Cf. Christophe Schinckus, *The Financial Simulacrum: the Consequences of the Symbolization and the Computerization of the Financial Market*, *THE JOURNAL OF SOCIO-ECONOMICS* (2007) doi:10.1016/j.socec.2006.12.067 (2<sup>nd</sup> page: “the new “consumer-oriented” dimension of the financial market tends to favor a “symbolic evolution” of the financial reality where financial markets are more and more presented as a game that we have to play if we want to be “in”.)

<sup>154</sup> See e.g., mindSHIFT, description of Products and Services at

Like games, the markets have rules (although the enforcement mechanisms may be different). Some traders derive entertainment, even excitement, from trading. Traders take risks,<sup>156</sup> and they sometimes describe their involvement in the financial markets as if they were participating in violent activity.<sup>157</sup> But whereas violence in WoW remains on screen, traders in the RW may engage in actual physical violence.<sup>158</sup> And the financial markets have a significant impact on the real world. Transactions in the financial markets affect what people have to pay for financial and real assets. Sound financial markets can have a positive impact on economic growth.<sup>159</sup> But financial markets are also open to the criticism that they function as casinos, and much of the trading on financial markets makes little contribution to the real economy.

Participants in real world financial markets sometimes suggest that what

---

[http://www.mindshift.com/products/products\\_financial.htm](http://www.mindshift.com/products/products_financial.htm) (“One of the most exciting communications mediums since email, persistent group chat is increasingly a must-have for financial institutions.

This solution is the only hosted enterprise Instant Messaging (IM) with persistent group chat to include not only logging of chat and IM communications, but also the options of integrated shipment, archival, surveillance, and discovery of those communications. The solution fully meets the needs of any financial services company, regardless of size or which regulatory authority it falls under.”)

<sup>155</sup> Participants in VWs use voip systems such as Ventrilo. See, e.g.,

<http://www.ventrilo.com/applications.php> (“Ventrilo can be used for home / personal applications like talking to friends and family, or playing organized online games where Voice Comm can make them more exciting and productive”) and requirements for joining Wolfenrecon, a corporation in Eve Online, at <http://www.wolfenreconeveonline.com/join.html>.

<sup>156</sup> See, e.g., Zaloom, supra note 153, at 366.

<sup>157</sup> See, e.g., Karin Knorr Cetina & Urs Bruegger, *Global Microstructures: The Virtual Societies of Financial Markets*, 107 AMERICAN JOURNAL OF SOCIOLOGY 905-950, 939-40 (2002) (reporting traders descriptions of incurring losses using language referring to physical harm.)

<sup>158</sup> See, e.g., Zaloom, supra note 153, at 380 (“The volatile atmosphere of the trading floor also links risk taking with fighting. Trading often erupts into brutal matches of shoving and swearing, joining together literal and symbolic violence.”)

<sup>159</sup> See, e.g., Committee to Review the Structure of Securities Regulation in Canada (Wise Persons Committee), *It's Time*, 4 (December 2003) available at <http://www.wise-averties.ca/reports/WPC%20Final.pdf> (“A sound and progressive financial system, of which capital markets are a critical component, is a key driver of long-term economic growth.”)

they do resembles playing a game. David Einhorn, a hedge fund manager who came 18<sup>th</sup> in the World series of Poker in 2006 said: “Both poker and investing are games of incomplete information”.<sup>160</sup>

Online games are now beginning to resemble the financial markets in a number of different ways. Financial markets may be part of what makes a virtual world interesting to its inhabitants. Financial markets develop outside the virtual worlds to help inhabitants in virtual worlds realize profits from their playing or to obtain virtual world currency without working in world to acquire it. And in some games player-inhabitants establish banks<sup>161</sup> and stock markets. Player-inhabitants of virtual worlds take advantage of lacunae in the code or rules much as participants in the financial markets engage in arbitrage.

An important reason for the regulation of the financial markets is the desire to ensure that investors have confidence to trust their funds to the markets. Policy-makers do not have the same need to maintain confidence in virtual worlds. However, desires to control gambling, on-screen violence, or money-laundering could easily be invoked to justify increased regulation and/or enforcement of existing rules with respect to virtual worlds.

Securities regulators who wished to carve out a space for self-regulation for virtual world securities have two main options, as noted above: developing a registration exemption for virtual world securities issuance, or establishing criteria whereby virtual securities would not be considered to be securities at all under the securities laws.

For various reasons existing registration exemptions may not apply to the issuance of virtual securities. Regulation A<sup>162</sup> exempts small offerings from registration, and the amounts of money raised through virtual securities issuance would fit easily within the limit of US \$5m. However, the Regulation A exemption is only available to entities organised under the laws of a state or territory in the

---

<sup>160</sup> Jenny Anderson, *Hedge Fund Manager Who Plays His Cards Right*, N.Y. TIMES, C1 (Aug. 11, 2006).

<sup>161</sup> See, e.g., James Grimmelmann, *When Virtual Banks Fail*, (Aug. 26, 2006) at <http://www.laboratorium.net/archives/WhenVirtualBanksFail.html> (analysing collapse of the Eve Intergalactic Bank).

<sup>162</sup> 17 C.F.R. § 230.251 ff.

US or Canada or in the District of Columbia, which has its principal place of business in the US or Canada. Both Regulation A and Regulation D<sup>163</sup> impose information requirements on securities issuers.

An alternative to a registration exemption would be to establish conditions under which virtual world securities would not be treated as RW securities at all, thus eliminating fraud liability under the securities laws as well as the requirement for registration. However, it would be desirable for the exemption to be conditioned on virtual worlds developing in-world protections for defrauded player-inhabitants. A range of different approaches could develop, ranging from clear disclaimers of liability through reputation and trust certification systems to dispute resolution mechanisms, and virtual investors could choose which types of protection they preferred.<sup>164</sup> The idea that virtual worlds might develop a variety of self-regulatory (and non-regulatory) mechanisms for addressing issues of fraud opens up possibilities for empirical research.

## **VIRTUAL WORLD INVESTORS IN REAL WORLD MARKETS**

This paper has sought to argue that it may be difficult to distinguish between entertainment and investment, and that the distinction matters for securities regulation. In this section of the paper I argue that any blurring of the line between entertainment and investment matters not just in the context of specific transactions, but also in the context of the player/investor's future conduct. If people carry over into real life expectations and behaviors they have developed in VWs, and which do not coincide with expectations and behaviours which are appropriate to real world investing, they may incur real losses. In some respects Second Life IPOs mimic real world IPOs, but in other ways they are very different.<sup>165</sup>

Research suggests that when people assess risks they do so using mixtures of emotional and rational reasoning, and even that the combination of

---

<sup>163</sup> 17 C.F.R. § 230.501 ff.

<sup>164</sup> Cf. Caroline Bradley & A. Michael Froomkin, *Virtual Worlds, Real Rules* 49 N.Y.L.Sch. L Rev 103 (2004/2005).

<sup>165</sup> See *supra* page [].

emotions and rationality is essential to good decision-making.<sup>166</sup> However, it is also true that investors' perceptions of risk can be manipulated.<sup>167</sup> In addition, people's understandings of risk are affected by their social context.<sup>168</sup>

There is a danger that virtual securities markets may cultivate false expectations about real securities markets among player-inhabitants of a VW.<sup>169</sup> Children are major consumers of computer games, and children may be

---

<sup>166</sup> See, e.g., Paul Slovic, Melissa L. Finucane, Ellen Peters & Donald G. MacGregor, *Risk as Analysis and Risk as Feelings: Some Thoughts about Affect, Reason, Risk and Rationality*, 24:2 RISK ANALYSIS 311, 321 (2004) ("We cannot assume that an intelligent person can understand the meaning of and properly act upon even the simplest of numbers such as amounts of money or numbers of lives at risk, not to mention more esoteric measures or statistics pertaining to risk, unless these numbers are infused with affect. "); Carmen Keller, Michael Siegrist & Heinz Gutscher, *The Role of the Affect and Availability Heuristics in Risk Communication*, 26:3 RISK ANALYSIS 631 (2006). Cf. Lo & Repin, *supra* note , at 332 ("the most successful traders seem to trade based on their intuition about price swings and market dynamics, often without the ability (or the need) to articulate a precise quantitative algorithm for making these complex decisions.") Although cf. Baba Shiv, George Loewenstein & Antoine Bechara, *the Dark Side of Emotion in Decision-making: When Individuals with Decreased Emotional Reactions Make More Advantageous Decisions*, 23 COGNITIVE BRAIN RESEARCH 85-92, 86 (2005) (patients with focal brain damage may "make more advantageous decisions than normal subjects when faced with [certain] positive expected value gambles").

<sup>167</sup> See, e.g., Elke U. Weber, Niklas Siebenmorgen & Martin Weber, *Communicating Asset Risk: How Name Recognition and the Format of Historic Volatility Information Affect Risk Perception and Investment Decisions* , 25:3 Risk Analysis, 597, 605 (2005) ("perceptions of asset risk were more strongly influenced by manipulations known to influence respondents' emotional reactions, whereas judgments of future asset volatility were more strongly influenced by variables known to influence respondents' cognitive reactions.")

<sup>168</sup> See, e.g., Jeffrey R. Masuda & Theresa Garvin, *Place, Culture, and the Social Amplification of Risk*, 26:2 RISK ANALYSIS 437, 438 (2006) ("psychological, social, and institutional factors influence risk perceptions and behavior through a network of socially mediated communication channels. These communication channels can be either formal, such as the media, public relations campaigns, and community meetings, or informal, such as word-of-mouth interaction within social networks."); Elisabeth Engelberg & Lennart Sjöberg, *Money Obsession, Social Adjustment, and Economic Risk Perception*, THE JOURNAL OF SOCIO-ECONOMICS (2007) doi:10.1016/j.socec.2007.01.005.

<sup>169</sup> On cultivation theory and virtual worlds, see, e.g., Dmitri Williams, *Virtual Cultivation: Online Worlds, Offline Perceptions*, 56 J. OF COMMUNICATION 69-87 (2006).

particularly vulnerable to in game experiences and even propaganda. Children who have experienced “investing” on the Neopets Stock Market<sup>170</sup> may end up thinking that real world securities markets are just another game.

Multilateral agencies and domestic regulators are increasingly focusing resources on developing investor education programmes.<sup>171</sup> Without education, consumers often make bad decisions about money: they may suffer from unrealistic optimism<sup>172</sup> or other cognitive biases. Policy-makers hope to teach consumers how to make better decisions. Government-sponsored investor education programmes use a range of strategies from developing investor education in schools<sup>173</sup> to using cartoons<sup>174</sup> and comics<sup>175</sup> and serious games.<sup>176</sup>

---

<sup>170</sup> See *supra* note 34.

<sup>171</sup> See, e.g., OECD, *IMPROVING FINANCIAL LITERACY: ANALYSIS OF ISSUES AND POLICIES* (2005); Financial Services Authority, *Towards a National Strategy for Financial Capability*, (2003) available at [http://www.fsa.gov.uk/pubs/other/financial\\_capability.pdf](http://www.fsa.gov.uk/pubs/other/financial_capability.pdf); James Fanto, *We're All Capitalists Now: The Importance, Nature, Provision and Regulation of Investor Education*, 49 CASE W. RES. L. REV. 105-180 (1998).

<sup>172</sup> See, e.g., Sha Yang, Livia Markoczy & Min Qi, *Unrealistic Optimism in Consumer Credit Card Adoption*, 28 J. OF ECON. PSYCHOLOGY 170-185 (2007).

<sup>173</sup> See, e.g., Financial Services Authority, *Creating a Step Change in Schools* (Jul. 2006) available at [http://www.fsa.gov.uk/pubs/other/step\\_change.pdf](http://www.fsa.gov.uk/pubs/other/step_change.pdf).

<sup>174</sup> In 2005 the UK's Financial Services Authority introduced a “Mortgages Laid Bare” website featuring cartoons of strategically covered naked people. See, Financial Services Authority, *FSA Bares All in New Mortgage Website for Consumers* (Oct. 26, 2005) available at <http://www.fsa.gov.uk/Pages/Library/Communication/PR/2005/111.shtml>. The website was at <http://www.mortgageslaidbare.info> and may be accessed via the Wayback Machine at <http://www.archive.org/web/web.php>.

<sup>175</sup> In 2006, the Canadian Securities Administrators began a campaign to educate Canadians about saving and investing using characters in the This is Your Life comic strip. The website was at [www.thisisyourlife.ca](http://www.thisisyourlife.ca). See Canadian Securities Administrators, *Canadian Securities Administrators Announce “This Is Your Life” Contest Winners*, (Jan. 4, 2007) available at [http://www.csa-acvm.ca/html\\_csa/news/07\\_01\\_this\\_is\\_your\\_life.htm](http://www.csa-acvm.ca/html_csa/news/07_01_this_is_your_life.htm). Federal Reserve Banks in the US use comic books as tools for economics education. See, e.g., *WISHES AND RAINBOWS*, available at <http://www.bos.frb.org/education/pubs/wishes.pdf> and its accompanying teacher's manual, *THE ROAD TO ROOTA*, available at <http://www.bos.frb.org/education/pubs/roota.pdf>.

<sup>176</sup> Central Banks sponsor monetary policy games. See, e.g., the Reserve Bank of New Zealand's Monetary Policy Simulation Game at <http://www.rbnz.govt.nz/education/0116902.html>;

Games and comics are intended as formats for the communication of serious information which are more accessible than other types of publication. A 2006 Report of the Federation of American Scientists argued for increased use of serious games in education, while recommending further research on the use of games in education.<sup>177</sup> The Report states:

Digital natives want learning experiences that parallel the exciting and engaging digital formats in which they routinely participate. Yet, most instruction is still “tell and test”, in which students take in information passively from reading and lectures, reciting it back in the form of work sheets, reports, and tests. Commercial games are vivid and action oriented, compared to teachers in classrooms using chalkboards. Given these contrasts, educational games might improve students’ attitudes about learning even difficult subjects, including those who are not attracted to studying mathematics and science.<sup>178</sup>

Investor education programmes emphasize rationality, and aim to encourage investors to be more rational about making investment decisions. At the same time, investors are tempted to be less rational by communications which encourage them to take risks with money.<sup>179</sup>

Organizations in the private sector also promote investor education resources, including online resources.<sup>180</sup> Ernst & Young has developed an online

---

the Bank of Finland’s Monetary Policy Game at [http://www.rahamuseo.fi/english/multi\\_politiikka.html](http://www.rahamuseo.fi/english/multi_politiikka.html).

<sup>177</sup> Federation of American Scientists, *Harnessing the Power of Video Games for Learning*, (2006) *available at* <http://fas.org/gamesummit/Resources/Summit%20on%20Educational%20Games.pdf>.

<sup>178</sup> *Id.* at 17. *Cf.* Justin Peters, *World of Warcraft*, *Slate* (Jun. 27, 2007) *available at* <http://www.slate.com/id/2169019/> (“When does a game stop being a game and turn into an assignment? Can a game still be called a game if it isn’t any fun?”)

<sup>179</sup> [daytrading websites].

<sup>180</sup> For example, see Columbia Management’s young investor website at <http://www.younginvestor.com/>. Many non-governmental organizations belong to the Alliance for Investor Education. See <http://www.investoreducation.org/members.cfm>.

game called Moneyopolis to educate young people about money.<sup>181</sup> Moneyopolis does not really feel much like a game, as it dresses up math problems in a game format.<sup>182</sup> In contrast, Wells Fargo has ventured into VWs, establishing Stagecoach Island (SI), which claims to allow visitors to “explore the island and its hidden secrets, connect with friends and make new ones, and at the same time learn smart money management.”<sup>183</sup> Wells Fargo seeks to develop good will among young game players, while claiming to be educating young consumers about financial responsibility. But it is not hard to experience SI without learning much about money management.<sup>184</sup> For one thing, SI is not very realistic. For example, it was only in July 2007 that SI announced that it proposed to introduce jobs, and one of the proposed jobs was “Rock Star”.<sup>185</sup>

Most VWs which are oriented to young people encourage them to develop their interest in consumption. VWs developed by owners of very visible brands, such as Barbie<sup>186</sup> and Disney<sup>187</sup> use the VWs to reinforce the RW brands and sell RW merchandise. Other VWs such as Club Penguin<sup>188</sup> and Neopets<sup>189</sup> also sell their own merchandise. Visitors to Club Penguin can acquire puffles to move

---

<sup>181</sup> See <http://www.moneyopolis.com/new/home.asp>.

<sup>182</sup> The game feels a little like Math Blaster.

<sup>183</sup> See [http://blog.wellsfargo.com/StagecoachIsland/what\\_is\\_SiC.html](http://blog.wellsfargo.com/StagecoachIsland/what_is_SiC.html) (Last visited Jul. 17, 2007).

<sup>184</sup> The Blog for the game does include postings on money (as well as other rather preachy postings). See, e.g., *Graduation and Beyond*, Cassie’s Blog (Jun. 26, 2007) at [http://blog.wellsfargo.com/StagecoachIsland/2007/06/graduation\\_and\\_beyond.html](http://blog.wellsfargo.com/StagecoachIsland/2007/06/graduation_and_beyond.html); *The Yummies Vs. The Health*, Cassie’s Blog (Jul. 6, 2007) at [http://blog.wellsfargo.com/StagecoachIsland/2007/07/the\\_yummies\\_vs\\_the\\_health.html](http://blog.wellsfargo.com/StagecoachIsland/2007/07/the_yummies_vs_the_health.html).

<sup>185</sup> Money Grows On Trees, Cassie’s Blog (Jul. 12, 2007) at [http://blog.wellsfargo.com/StagecoachIsland/2007/07/money\\_grows\\_on\\_trees\\_1.html](http://blog.wellsfargo.com/StagecoachIsland/2007/07/money_grows_on_trees_1.html).

<sup>186</sup> <http://www.barbiegirls.com/home.html> .

<sup>187</sup> [http://vmk.disney.go.com/vmk/en\\_US/index?name=VMKHomePage](http://vmk.disney.go.com/vmk/en_US/index?name=VMKHomePage).

<sup>188</sup> <http://www.clubpenguin.com/>. In August 2007, the Walt Disney Company announced that it was acquiring Club Penguin. Walt Disney Company Press Release, The Walt Disney Company Acquires Club Penguin (Aug. 1, 2007) available at [http://corporate.disney.go.com/news/corporate/2007/2007\\_0801\\_clubpenguin.html](http://corporate.disney.go.com/news/corporate/2007/2007_0801_clubpenguin.html).

<sup>189</sup> <http://www.neopets.com/>.

around with them in the VW and can buy puffle toys at the Club Penguin shop.<sup>190</sup> To the extent that SI shares the focus on consumption which seems to be a characteristic of social space VWs it would seem to be encouraging irresponsible, rather than responsible, money management practices.

## **CONCLUSION**

VW financial activity raises a number of issues for RW financial regulators as well as for player-inhabitants of VWs and academic researchers who focus on VWs. This paper argues that under current rules some VW financial transactions are transactions in securities, and are therefore subject to registration requirements and fraud liability under the securities laws. An exemption regime would be desirable to distinguish between game activity with a financial theme and scams. Beyond this technical question the paper raises a question for future research of whether and how VW financial activity affects players' expectations and behaviour in RW financial markets.

---

<sup>190</sup> <http://www.clubpenguin.com/clubpenguinshop/index.html>.