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ARTICLES

FIBER OPTIC FOXES: VIRTUAL OBJECTS AND VIRTUAL WORLDS THROUGH THE LENS OF *PIERSON V. POST* AND THE LAW OF CAPTURE

*John William Nelson**

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I. INTRODUCTION

You hack and slash your way across the field before you. Foes fall by your sword, your arrows, and your magic. As you continue onward, you stop by the bodies of the fallen to search for magical items and powerful weapons. Finally, you find the sword you need.

Time and effort went into finding your new sword. No other player may use your sword unless you consent. When you log off of the game and walk away from your computer, the sword remains. It will be there when you log back on.

Who owns the sword you found? Who owns the armor your character wears? Who owns the virtual gold coins your character can access? Who owns your character?

Virtual worlds are becoming more successful.¹ Worlds such as World of Warcraft, EVE Online, and Second Life boast hundreds of thousands to millions of subscribers all forming vibrant, online communities.² Questions about the ownership status of the objects and characters in these worlds arise as they become more and more popular and as the lines between reality and virtual become increasingly blurred.³

First, this Article examines whether traditional common law property rights can extend to the virtual objects found in virtual worlds. Virtual

1. See, e.g., Leila Abboud, *Playing on Web: Dungeons & Dragons*, WALL ST. J., Mar. 1, 2006, at A13A (describing briefly, how online games are “one of the fastest-growing parts of the market for games played on personal computers . . .”); Seth Schiesel, *In a New Merger, Evidence of How Much the Gaming World Has Changed*, N.Y. TIMES, Dec. 5, 2007, at E3 (discussing the importance of Blizzard Entertainment, a Vivendi subsidiary, in the merger between Activision and Vivendi; the name of the new company will be Activision Blizzard); Emily Steel, *Avatars at the Office—More Companies Move Into Virtual World ‘Second Life’; Ugly Bosses Can Be Models*, WALL ST. J., Nov. 13, 2006, at B1 (describing how more companies are building virtual offices in Second Life; especially those in media related areas such as marketing).

2. World of Warcraft claims over 9 million subscribers. Press Release, Blizzard Entm’t, *World of Warcraft Surpasses 9 Million Subscribers Worldwide* (July 24, 2007), available at <http://www.blizzard.co.uk/press/070724.shtml>. EVE Online claims over 200,000 subscribers. See Press Release, EVE Online, *CCP Announces EVE Online: Trinity Launch Date* (Mar. 12, 2007), available at <http://www.eve-online.com/pressreleases/default.asp?pressReleaseID=38>. Second Life claims 2 million “residents.” Linden Lab, *I’ll See Your Million . . . and Raise You a Million*, Second Life Blog, Dec. 14, 2006, <http://blog.secondlife.com/2006/12/14/ill-see-your-million-and-double-that>. Some question Second Life’s numbers. See Daniel Terdiman, *Counting the Real ‘Second Life’ population*, CNET NEWS.COM, Jan. 3, 2007, http://www.news.com/Counting-the-real-Second-Life-population/2100-1043_3-6146943.html.

3. See Phil Lee, *Opinion*, LAWYER, May 16, 2005, at 14.

objects are viewed through the lens of *Pierson v. Post*⁴ and the laws of property acquisition, followed by an overview of policy arguments behind extending property rights to virtual objects. The discussion concludes by arguing that the common law of property should not be extended to virtual objects.

Second, the effects of contract law on virtual objects and virtual worlds are examined. Contract laws are compared to property laws in an effort to understand confusions between obligation and ownership, and how these confusions effect the debate. Finally, contract law is suggested as a better paradigm for the allocation of resources in virtual worlds.

II. CAPTURING FOXES: THE ACQUISITION OF PROPERTY (“QUI PRIOR EST TEMPORE POTIOR EST JURE.”)

Property interests necessarily depend upon the acquisition of property. Property rights in tangible objects are often acquired through the dominion and control of objects. *Pierson v. Post*, one of the most well-known property cases, deals with the rules of property acquisition through the law of capture.⁵

In *Pierson*, the property in question was a fox.⁶ Post, a foxhunter, complete with a retinue of hounds, flushed a fox on communal property.⁷ Post chased the fox for a considerable time until Pierson intervened by killing and capturing the fox before Post.⁸

Both the majority and dissent in *Pierson* recognize the principal that dominion over an object creates a property interest.⁹ The contention lies in how to determine when this dominion and control occurs.¹⁰ Three solutions are proposed: a clear rule of capture,¹¹ a resolution in accordance with the custom of sportsmen,¹² and some form of recognition of Post’s effort in flushing and pursuing the fox, a “noxious beast” that is “hostem humani generis” and better off dead.¹³ In the end, the clear rule of capture prevails.¹⁴

4. *Pierson v. Post*, 3 Cai. R. 175 (N.Y. Sup. Ct. 1805).

5. *See id.* at 177-78.

6. *Id.* at 177.

7. *Id.*

8. *Id.*

9. *See id.* at 178; *see also id.* at 181 (Livingston, J., dissenting).

10. *See id.*

11. *Id.* at 179.

12. *Id.* at 180 (Livingston, J. dissenting).

13. *Id.* at 180-82.

14. *Id.* at 179.

The fundamental consideration in *Pierson* is the level of control and dominion either party possesses over the fox.¹⁵ Actual corporal possession of the fox is sufficient for a property interest to attach, but bodily seizure is not required.¹⁶ A pursuer may obtain a property interest in a fox by mortally wounding the animal and continuing pursuit.¹⁷ By doing so, the pursuer has manifested an intent to possess the fox, he has deprived the fox of its natural liberty, and “brought [the fox] within his certain control.”¹⁸

Pierson applies the rule of capture in order to determine when someone gains a property interest.¹⁹ *Pierson* emphasizes dominion and control in order to determine when property is captured.²⁰ Two comparably classic property cases highlight this approach: *Ghen v. Rich*²¹ and *Ohio Oil Co. v. Indiana*.²²

In *Ghen v. Rich*, a whaler used a bomb-lance to kill a fin-back whale.²³ When killed in this manner, fin-back whales sink to the bottom of the ocean, floating back to the surface after one to three days.²⁴ The lances used to kill the whales are marked by their owners in order to identify the whale's killer.²⁵ When the whale is found, the finder, in accordance with custom, informs the whalers who then send the whale's killers, identified by their lances, to retrieve the whale's bounty.²⁶

The whale in *Ghen* was found washed ashore but, rather than return it to its killer, the whale's finder sold the whale at auction.²⁷ The whale's killer sued for the property rights to the whale based upon whaling customs.²⁸ The district court sided with the whale's killer and awarded damages in their favor.²⁹

Ghen relies upon the dominion exercised over a *fera naturae* through mortal wounds.³⁰ As *Pierson* did in *Pierson v. Post*,³¹ the whalers in *Ghen*

15. *See id.* at 178.

16. *Id.*

17. *Id.*

18. *Id.*

19. *See id.* at 178.

20. *Id.*

21. *Ghen v. Rich*, 8 F. 159, 160-62 (D. Mass. 1881).

22. *Ohio Oil Co. v. Indiana*, 177 U.S. 190, 203-05 (1900).

23. *Ghen*, 8 F. at 160.

24. *Id.* at 159.

25. *Id.* at 160.

26. *Id.*

27. *Id.*

28. *Id.* at 160.

29. *Id.* at 162.

30. *See id.* at 160-61.

31. *Pierson v. Post*, 3 Cai. R. 175, 178 (N.Y. Sup. Ct. 1805).

deprived the whale of its natural liberty through a mortal wound.³² Further, the identification mark on the lance striking the blow manifested the whalers' intent to possess the whale.³³ The *Ghen* whalers, however, lacked the ability to bring the whale into their certain control.³⁴ Indeed, the record indicates some whales are never located after their death, floating out to open sea rather than washing ashore.³⁵

Still, two of the three considerations in *Pierson* are present in *Ghen*: the ability to exercise control through mortal wounds and the manifest intent to possess the whale.³⁶ Additionally, *Pierson* contemplates the possibility that control may not occur as a result of interference by others.³⁷ Remember, "actual bodily seizure is not indispensable to acquire right to . . . [possession of] . . . wild beasts."³⁸ *Ghen* implies that the third consideration in *Pierson*, bringing the wild beast within one's certain control, was met through the operation of commercial whaling customs.³⁹

Ohio Oil Co. applies the law of capture to fugitive resources rather than wild animals.⁴⁰ In *Ohio Oil Co.*, the Court scrutinized the takings implications of an Indiana statute prohibiting the owners of oil and gas wells from allowing natural gas to escape into the air without capture in a "proper receptacle."⁴¹ The defendant, *Ohio Oil Co.*, claimed the statute violated the Fourteenth Amendment by depriving it of liberty and property without due process of law.⁴²

The Supreme Court analogizes natural gas and oil resources to animals *feroe naturoe*.⁴³ Animals *feroe naturoe*, the Court explains, "belong to the negative community" – subject to capture by all, and held in common by the public, and in trust by the state.⁴⁴ In contrast to animals *feroe naturoe*, the right to reduce fugitive resources to possession does not rest with the public, but is exclusive to the owners in fee of the surface of the earth circumscribing the gas or oil field.⁴⁵ The Court recognized, however, that

32. See *Ghen*, 8 F. at 160.

33. See *id.* at 160-61.

34. *Id.* at 159-60.

35. *Id.* at 160.

36. See *id.* at 160-61.

37. See *Pierson v. Post*, 3 Cai. R. 175, 178 (N.Y. Sup. Ct. 1805).

38. *Id.*

39. See *Ghen*, 8 F. at 162.

40. See *Ohio Oil Co. v. Indiana*, 177 U.S. 190, 203-05 (1900).

41. *Id.* at 191-92.

42. *Id.* at 200. Defendants also alleged denial of equal protection of the laws, but the Court focused on the due process aspect of the claim. See *id.* at 199.

43. *Id.* at 204.

44. *Id.* at 208-09.

45. *Id.* at 209.

property rights in oil or gas do not exist until the resources are captured and reduced to possession.⁴⁶ While the owners in fee of the surface may have a right to drill wells in order to attempt to capture the resources, these owners do not have a property interest in the resources themselves until successful capture occurs.⁴⁷ In other words, the acquisition of fugitive resources depends on the control and dominion one has over those resources.⁴⁸

Common law in the United States has a long tradition of recognizing the creation of a property interest beginning when one has dominion and control over the property.⁴⁹ Dominion and control provides a clear method of determining the property rights of individuals.⁵⁰ Without this clear rule for the acquisition of property, one runs into the difficulty Justice Livingston experienced in his dissenting opinion in *Pierson*.⁵¹ Without a clear rule, courts must determine how much effort, how much time, and how close to capture and control a person must be in order to acquire a property interest in a thing.⁵² Courts in the United States have consistently avoided the difficulty of balancing each of these considerations by adopting the clear rule of property acquisition found in *Pierson*.⁵³

III. FIBER OPTIC FOXES: DOMINION AND CONTROL OVER VIRTUAL OBJECTS IN VIRTUAL WORLDS

Although the boundaries between reality and virtual reality are blurring, virtual objects are not tangible.⁵⁴ It is tempting to analogize

46. *Id.*

47. *Id.* at 205.

48. *See id.* at 209.

49. *See Pierson v. Post*, 3 Cai. R. 175, 178 (N.Y. Sup. Ct. 1805) (finding dominion and control occurring when a fox hunter captures or mortally wounds and continues to chase the fox); *Ghen v. Rich*, 8 F. 159, 162 (D. Mass. 1881) (finding dominion over a whale to occur when the whale is killed and marked in accordance to whaling customs); *Ohio Oil Co.*, 177 U.S. at 209 (possession of property rights in natural gas occur only after capture).

50. *See Pierson*, 3 Cai. R. at 178.

51. *See id.* at 180-81 (Livingston, J., dissenting) (Livingston struggled with the “knotty point” of when a property interest should occur; after examining the various authorities cited by counsel for either party, Livingston felt “great difficulty” in determining how much effort in chasing the fox would grant a property interest).

52. *Id.*

53. *See id.* at 178 (applying a clear rule of capture to fox hunting); *Ghen*, 8 F. at 162 (applying a clear rule of capture to whale hunting through the use of whaling customs); *Ohio Oil Co.*, 177 U.S. at 209 (applying a clear rule of capture to the possession of fugitive resources).

54. Tangible, “1. [h]aving or possessing physical form; CORPOREAL. 2. [c]apable of being touched and seen; perceptible to the touch; capable of being possessed or realized.” BLACK’S LAW

virtual objects to tangible property since the goal of a virtual world is often to simulate the real world as closely as possible. However, when we apply the rules of property acquisition used for tangible property to virtual objects in virtual worlds, the inherent differences between the two become more clear.

Pierson, Ghen, and Ohio Oil Co. outline the law of property acquisition through capture, with dominion and control of the property emerging as the key to recognizing disputed rights in it.⁵⁵ In *Pierson*, dominion and control is exerted through mortal wounds or capture.⁵⁶ Dominion and control is exerted in the same way in *Ghen*.⁵⁷ *Ohio Oil Co.* finds dominion and control asserted through the capture of fugitive resources.⁵⁸

Unlike the fox in *Pierson*, the whale in *Ghen*, and the natural gas in *Ohio Oil Co.*, users of virtual worlds are unable to exert dominion and control over virtual objects. The inability of a virtual world user to exert dominion and control over a virtual object is an inherent and important difference between a virtual object and its tangible counterpart. The common law of property acquisition through capture cannot apply to virtual objects because of this distinction.

When John Locke picks up an apple he has appropriated it “to himself.”⁵⁹ The apple is not subject to the dominion and control of any person other than Locke.⁶⁰ Under the common law rule of capture, as long as the apple is a fugitive resource, a resource existing in the commons, John Locke has acquired a property interest over the apple.⁶¹

The apple is tangible; however, Locke’s dominion and control over the apple does not depend upon it being tangible. Rather, Locke’s dominion and control depend on his ability to exclude others from using the apple. This ability to exclude others is an inherent element of property rights.⁶²

DICTIONARY 1494 (8th ed. 2004).

55. See *Pierson*, 3 Cai. R. at 178.

56. See *id.*

57. See *Ghen*, 8 F. at 160-61.

58. See *Ohio Oil Co.*, 177 U.S. at 209.

59. JOHN LOCKE, TWO TREATISES OF CIVIL GOVERNMENT 130 (Dent ed. 1966) (1689) (“He that is nourished by . . . the apples he gathers from the trees in the wood, has certainly appropriated them to himself.”).

60. See *id.* (removing the apple from nature removes it from the commons and “excludes the common right of other men”).

61. See *Pierson*, 3 Cai. R. at 177-78.

62. See *Kaiser Aetna v. United States*, 444 U.S. 164, 176 (1979) (the right to exclude is “one of the most essential sticks in the bundle of rights that are commonly characterized as property”). Thomas W. Merrill argues the right to exclude is more than just one of a bundle of sticks, but is rather the *sine qua non* of property. Thomas W. Merrill, *Property and the Right to Exclude*, 77 NEB. L. REV. 730, 730 (1998).

When a virtual John Locke picks up a virtual apple, it is less clear whether he has appropriated it to his virtual self. The nature of virtual Locke's ability to control and dominate his virtual apple depends first upon the rules of the virtual world. These rules often make virtual Locke's interest in the apple subject to the dominion and control of the game staff and system administrators. These "superusers"⁶³ may have the power to take virtual Locke's apple. They may change virtual Locke's apple into a virtual acorn. Worse, they may pull the plug on virtual Locke's entire world, deleting the apple, the acorn, and virtual Locke himself.

Unlike the tangible John Locke, with his tangible apple, the virtual John Locke lacks the ability to assert dominion and control over his virtual apple. Virtual Locke's ability to control and dominate the apple is subject to the supervisor's control. Virtual Locke cannot exclude supervisors from exercising control or dominion over his apple. This lack of dominion and control conflicts with the common law rule of property acquisition as found in *Pierson, Ghen*, and *Ohio Oil Co.* Consequently, the common law of property does not extend to virtual objects in virtual worlds.

IV. CAPTURING FIBER OPTIC FOXES: SHOULD PROPERTY RIGHTS EXTEND TO VIRTUAL OBJECTS IN VIRTUAL WORLDS?

While the common law of property does not extend to virtual objects in virtual worlds, new legislation or judicial rulings may extend the rules of property to virtual objects. Should the common law of property be extended to virtual objects? Dr. Richard Bartle, for one, does not believe so.⁶⁴

When it comes to virtual worlds, Bartle is an innovator and leader in the field. Bartle, along with a friend, created the program MUD.⁶⁵ MUD stands for Multi-User Dungeon.⁶⁶ MUD is considered by many to be the

63. Superusers are just what their name implies: super users (or, superiorly-situated users). In a computer system, including a virtual game, there are regular accounts and non-regular accounts. Those non-regular accounts with greater access and powers than regular accounts are called "superusers." For instance, "[o]n a UNIX system, the *superuser* is a privileged account with unrestricted access to all files and commands." ALEEN FRISCH, *ESSENTIAL SYSTEM ADMINISTRATION* 5 (2d. ed. 1995). In a virtual world, such a superuser may be able to add or delete accounts, items, monsters, and characters.

64. Richard Bartle, *Virtual Worldliness: What the Imaginary Asks of the Real*, 49 N.Y. LAW SCHOOL L. REV. 19, 37 (2004).

65. *Id.* at 20.

66. *Id.*

first virtual world.⁶⁷ All virtual worlds owe a great deal to MUD, both in design and concept.⁶⁸

Bartle has written extensively on the subject of virtual worlds.⁶⁹ As a pioneer and game developer, he has a unique perspective on the creation, running, and maintenance of virtual worlds. He argues that virtual worlds should be allowed to choose whether or not they will become commodified.⁷⁰ Bartle fears legal regulation will lead to virtual world commodification.⁷¹

To Bartle, virtual worlds have three fundamental characteristics: the game conceit,⁷² the freedom to evolve,⁷³ and the support of the hero's journey.⁷⁴ Commodification's greatest danger is its ability to breach the game conceit.⁷⁵ Bartle argues that "[c]ommodification brings reality into virtuality."⁷⁶ He explains that "the game conceit evaporates upon contact with this much reality."⁷⁷

Forced commodification removes the ability of developers to protect the game conceit. This, in turn, harms the ability of the virtual world to

67. For more on the history of MUD, see Summary MUD History, http://www.livinginternet.com/d/di_major.htm (last visited Mar. 30, 2009).

68. Keith Stuart, *MUD, PLATO and the Dawn of MMORPGs*, THE GUARDIAN, July 19, 2007, http://blogs.guardian.co.uk/games/archives/2007/07/19/mud_plato_and_the_dawn_of_mmorpgs.html ("The thing is, though, that even if the likes of Oubliette did count as a virtual world, they had pretty well zero effect on the development of today's virtual worlds. Follow the audit trail back from World of Warcraft, and you wind up at MUD.").

69. See, e.g., Richard Bartle, *Out of this World*, FINANCIAL WORLD (July 2006), https://www.financialworld.co.uk/Archive/2006/2006_07jul/Features/virtual_economies/virtual_worlds/7024-print.cfm; Richard Bartle, *Pitfalls of Virtual Property* (The Themis Group, White Paper, 2004), available at <http://mud.co.uk/richard/povp.pdf>; RICHARD BARTLE, *DESIGNING VIRTUAL WORLDS* (2003); Richard Bartle, *Bad Ideas for Multiplayer Games*, THE CURSOR, at 10-11, Summer & Fall 1998, available at <http://www.mud.co.uk/richard/tesf98.htm>. Bartle's curriculum vitae may be found at <http://mud.co.uk/richard/cv.htm> (last visited Mar. 30, 2009).

70. Bartle, *supra* note 64, at 43.

71. See *id.* at 33-39.

72. A conceit is "an organizing theme or concept." MERRIAM-WEBSTER'S COLLEGIATE DICTIONARY 257 (11th ed. 2003). Bartle uses conceit in this manner. In the game conceit, "some freedoms must be willingly given up for a time in order that new freedoms can be experienced during that time." Bartle, *supra* note 64, at 23.

73. Unlike most game worlds, "[v]irtual worlds are continually evolving." Bartle, *supra* note 64, at 27. Virtual worlds unable to change will become "stale, dated, dominated by exploits and . . . [their] gameplay . . . [will] become completely disjointed." *Id.*

74. The hero's journey allows users to "explore their identity." Bartle, *supra* note 64, at 30. For more discussion on the hero's journey, see *id.* at 30 n.29 (citing JOSEPH CAMPBELL, *THE HERO WITH A THOUSAND FACES* (1949)).

75. Bartle, *supra* note 64, at 35.

76. *Id.*

77. *Id.*

evolve. It would be difficult for new content to be added if a developer's choices were subject to property interests.⁷⁸ If it is difficult for a virtual world to evolve, it will also be difficult for the world to support a hero's journey. Players will be unable to explore their identities in the virtual world if the world is unable to expand and create new content.

Bartle believes the loss of a developer's freedom to protect these three characteristics will result in the "end of virtual worlds as we know them (and, worse, as we might yet have known them)."⁷⁹ Commodification is not itself the problem.⁸⁰ Rather, forced commodification through legal regulation is the danger.⁸¹ However, not everybody shares Bartle's fear of commodification.

Professor Joshua A.T. Fairfield believes virtual property "that is designed to act like real world property should be regulated and protected like real world property."⁸² Fairfield contends that some virtual property is rivalrous, persistent, and interconnected in nature.⁸³ He argues this kind of virtual property shares the essential characteristics of real world property.⁸⁴ Since these kinds of virtual property share the legally relevant characteristics of real world property, he argues that "the common law of property [is] an obvious possible source of law for these resources."⁸⁵

However, virtual objects in virtual worlds are neither rivalrous, persistent, nor interconnected. Fairfield's arguments depend on virtual property possessing these three characteristics.⁸⁶ Since virtual objects in virtual worlds do not possess these characteristics, the common law of property is not the obvious source of law for virtual objects in virtual worlds.

Rivalrousness requires the ability of a property owner to own and control the property to the exclusion of others.⁸⁷ Fairfield provides URLs⁸⁸ and email addresses as examples of virtual properties possessing rivalrous characteristics.⁸⁹ However, you do not have the inherent ability to own or

78. *See id.* at 27-28.

79. *Id.* at 43.

80. *See id.*

81. *See id.*

82. Joshua A.T. Fairfield, *Virtual Property*, 85 B.U. L. REV. 1047, 1048 (2005).

83. *Id.* at 1053.

84. *Id.*

85. *Id.* at 1064.

86. *See id.* at 1053.

87. *See id.* at 1049 n.3.

88. URL stands for Uniform Resource Locator. URLs are website addresses, such as www.google.com or www.microsoft.com. DOUGLAS DOWNING ET AL., *DICTIONARY OF COMPUTER AND INTERNET TERMS* 488 (6th ed. 1998).

89. Fairfield, *supra* note 82, at 1054.

control your URLs or email addresses.⁹⁰ It is the terms of service agreed to by you, the user, and the company providing the email account or URL that creates the ability to control these resources.⁹¹ Through these contractual rights you gain the ability to exclude others from controlling resources.

Unlike the users of URLs and email addresses, users of virtual worlds are not provided the right to exclude others from using their virtual objects through contract. Superusers in virtual worlds can exert dominion and control over the virtual objects possessed by other users in the virtual world. In fact, most of the end user license agreements and terms of service contracts for these virtual worlds explicitly deny any property rights in virtual objects found in the virtual world.⁹²

Emails are also used by Fairfield as an example of virtual property possessing the persistence characteristic.⁹³ He focuses on code that “does not fade after each use, and . . . does not run on one single computer.”⁹⁴ Emails, he says, do not cease to exist “[w]hen an email account owner turns her laptop off.”⁹⁵ Here, Fairfield appears to misunderstand how email systems work.

Fairfield is correct that in many modern email systems the messages do not disappear when an account owner turns off their laptop. Google’s Gmail service is an example of one such email system.⁹⁶ However, the code for these services runs only on Google’s Gmail system, and the persistence it provides is illusory.⁹⁷

90. For instance, Google expressly retains all proprietary rights in the services it provides, such as Gmail email, and further expressly warns that the service may not be accurate, reliable, free from error, uninterrupted, or secure. Google Terms of Service, <http://www.google.com/accounts/TOS?hl=en> (last visited Mar. 30, 2009).

91. Google allows a user certain rights in using its services. For example, Google’s Terms of Service expressly states that Google will not claim any intellectual property rights over content submitted to Google’s services by a user. Conversely, the user must agree to allow Google to use the content in limited ways (such as improving its searches or placing ads in Gmail). This is part of the contractual bargain between the user and Google. See Google Terms of Service, *supra* note 90.

92. See World of Warcraft Terms of Use (TOU) ¶ 4, <http://www.worldofwarcraft.com/legal/termsofuse.html> (last visited Mar. 30, 2009) (claiming all rights and title in World of Warcraft accounts and virtual objects as the property of Blizzard Entm’t, the game’s creator); *but see* Second Life Terms of Service ¶ 3.2, <http://secondlife.com/corporate/tos.php> (last visited Mar. 20, 2009) (providing as follows: “[y]ou retain copyright and other intellectual property rights with respect to Content you create in Second Life, to the extent that you have such rights under applicable law.”).

93. Fairfield, *supra* note 82, at 1054

94. *Id.*

95. *Id.*

96. Google’s Gmail, <http://www.gmail.com> (last visited Mar. 30, 2009).

97. “Code,” as used here, is another word for computer software. Computer software is

Google's Gmail system runs on Google's email servers. It does not run on the account owner's laptop. The account owner is merely accessing Google's email servers while using the Gmail service. The Gmail account may be accessible from multiple computers, but the account code is only being run on the Gmail server infrastructure. There is a fundamental difference between running code on your computer, with your hardware and your Internet connection, versus accessing another person's computer to run code that uses their hardware and their Internet connection.

Still, Fairfield correctly points out that current technology allows email accounts, such as Gmail, to possess a greater amount of persistence.⁹⁸ Computer storage technology allows more and more digital information to be stored. The storage of this information is more and more reliable. Digital information, however, is impermanent in nature.

Despite the best efforts by information technology specialists, the loss of digital information continues unabated. Email backups have been lost to power failures and hardware failures.⁹⁹ Of particular note here, virtual worlds have, on occasion, been rolled back to previous states of existence as a result of bugs in software code.¹⁰⁰ These rollbacks necessarily result in the loss of acquired virtual objects.¹⁰¹

nothing more than computer code executed by a computer.

98. Fairfield, *supra* note 82, at 1054.

99. See Evan Hansen, *Hotmail Incinerates Customer Files*, CNETNEWS.COM, June 3, 2004, http://www.news.com/Hotmail-incinerates-customer-files/2100-1038_3-5226090.html (reporting on problems with lost emails on Microsoft's popular Hotmail service); Michael Arrington, *Gmail Disaster: Reports of Mass Email Deletions*, TECHCRUNCH, Dec. 28, 2006, <http://www.techcrunch.com/2006/12/28/gmail-disaster-reports-of-mass-email-deletions> (detailing reports of lost emails on Google's popular Gmail service).

100. Game companies do not publicize problems such as rollbacks. Consequently, only anecdotal evidence gleaned from posts made by the users of these games can be provided. The author has personally experienced rollbacks in *Ultima Online* and *World of Warcraft*. For anecdotal stories from other users, see posting of hagrin, *Re: Fun game While It Lasted.*, to Slashdot.org, <http://games.slashdot.org/comments.pl?sid=156322&cid=13104679> (July 19, 2005, 12:47 EST) (reply to Slashdot article titled *World of Warcraft Duping Bug Found*, Slashdot.org, July 19, 2005, <http://games.slashdot.org/article.pl?sid=05/07/19/1644250&from=rss>) (mentioning virtual world rollbacks in *Asheron's Call*, *EverQuest* (EQ), and *Ultima Online* (UO) "of up to 3 days worth of gameplay"); and posting of Kinka, *Server Rollback. Deleted Badges. No restore?!*, to World of Warcraft Forums, <http://forums.worldofwarcraft.com/thread.html?topicId=3168511546&sid=1> (Nov. 30, 2007, 15:11 EST). The developers of *Second Life* posted a "Post-Mortem" of the deployment of new server code, including rollbacks. *Second Life 1.18.5 Server Deploy Post-Mortem*, *Second Life Blogs*, <http://blogs.secondlife.com/community/features/blog/2007/11/13/second-life-1185-server-deploy-post-mortem> (Nov. 13, 2007, 19:27 EST).

101. See Kinka, *supra* note 100.

Interconnectivity is another characteristic lacking in virtual objects. Virtual objects may appear to possess the characteristic of interconnectivity at first glance. After all, people connect to virtual worlds using the Internet, which is an interconnected collection of computers.¹⁰² Still, there are significant limits to the interconnected nature of virtual objects.

The interconnectedness of a virtual object is highly dependent upon its virtual world. People in EVE Online cannot use the virtual weapons of World of Warcraft. Someone in EverQuest cannot use the virtual real estate in Second Life.¹⁰³ Further, someone using an older computer, or a computer using an unsupported operating system, may not be able to experience virtual objects because they are unable to access the virtual world.¹⁰⁴

Virtual objects in virtual worlds are neither rivalrous, persistent, nor interconnected. The common law of property is, thus, not well-suited to the peculiarities of virtual objects in virtual worlds. Because of this, courts and legislatures should not extend the common law of property to protect virtual objects.

V. CONVERTING FOXES: PROBLEMS APPLYING PROPERTY LAWS TO VIRTUAL WORLDS

An examination of likely scenarios reveals the inherent problems with extending common law rules of property to virtual worlds. Each test case below is designed to simulate a genuine virtual world experience. These test cases are examined using the two types of property protections most likely to be applicable in a virtual world setting: trespass to chattel and the law of conversion.

102. DOWNING ET AL., *supra* note 88, at 239-40.

103. EVE Online and EverQuest are virtual fantasy worlds. See EVE Online, <http://www.eveonline.com> (last visited Mar. 30, 2009); EverQuest, <http://www.everquest.com> (last visited Mar. 30, 2009); EverQuest II, <http://www.everquest2.com> (last visited Mar. 30, 2009).

104. The hardware requirements for accessing the World Wide Web are significantly less than the requirements for accessing most virtual worlds. Compare Mozilla Firefox 2 Web Browser System Requirements, <http://www.mozilla.com/en-US/firefox/system-requirements-v2.html> (last visited Mar. 30, 2009), with World of Warcraft System Requirements, <http://www.worldofwarcraft.com/info/faq/technology.html> (last visited Mar. 30, 2009), EVE Online System Requirements, http://www.eve-online.com/faq/faq_07.asp (last visited Mar. 30, 2009), and Second Life System Requirements, <http://secondlife.com/corporate/sysreqs.php> (last visited Mar. 30, 2009).

Trespass to chattel involves the intentional interference with another's personal property.¹⁰⁵ Descended from the writ *trespass de bonis asportatis*,¹⁰⁶ this tort involves all interferences with personal property¹⁰⁷—from complete destruction,¹⁰⁸ to mere damage,¹⁰⁹ to use without permission.¹¹⁰

The law of conversion, descended from the law of *trover*,¹¹¹ differs from trespass to chattel in one important aspect. Conversion results in the compulsory purchase of the property item in question.¹¹² This means that in a conversion case, when the property is available, the original owner does not have to take it back.¹¹³ Rather, the owner can force the person who took the property to pay its full value.¹¹⁴ This compulsory purchase also limits the scope of conversion. A claim of conversion will not exist for the mere alteration of property;¹¹⁵ rather, the alteration must be material.¹¹⁶

Below, these common law principles are applied to virtual world scenarios.

A. Weapon Attribute Changes

An account holder's character defeats a mighty monster. The character gains a magical sword as a reward. This sword has specific attributes that make the sword the most powerful weapon in the game. This new-found power shifts the balance of power against other players. The effects of the sword's attributes are tweaked because of this, making the sword less effective.¹¹⁷

105. RESTATEMENT (SECOND) OF TORTS §§ 217, 222 (1965).

106. W. PAGE KEETON ET AL., PROSSER AND KEETON ON TORTS § 14 (5th ed. 1984).

107. *See id.*

108. *Brittain v. McKay*, 23 N.C. 265 1 Ired. 265 (N.C. 1840) (holding that severing a corn crop from the stalks to prevent purchaser from taking possession is a trespass to purchaser's chattel).

109. *Post v. Munn*, 4 N.J.L. 61, 1 Southard 61, (N.J. 1818) (damaging a fishing net is a trespass to chattel).

110. *See Penfolds Wines Pty. Ltd. v. Elliot* (1946) 74 C.L.R. 204 (Austl.), available at http://www.austlii.edu.au/au/cases/cth/high_ct/74clr204.html (Australian case stating that the unauthorized use of a chattel is a trespass).

111. KEETON ET AL., *supra* note 106, § 15 (trover often concerned cases where "the finder of lost goods did not return them, but used them himself").

112. *Id.*

113. *Id.*

114. *Id.*

115. *Id.* (citing *Simmons v. Lillystone*, (1853) 155 Eng. Rep. 1417 (U.K.)).

116. *Id.*

117. World of Warcraft provides a "changelog" listing all of the changes made in each patch,

If the common law of property is extended to this virtual sword, these tweaks have altered the user's property, or chattel. Both trespass to chattel and conversion may apply here.¹¹⁸ The question is whether the change materially altered the user's property.¹¹⁹ Either way, the game's creator may be liable for either the loss in value of the sword, or for the entire value of the sword.¹²⁰

This level of protection restrains the ability of the creators of a virtual world to seek balance. Whereas the user's powerful sword might keep its power, unintentional side effects of the sword's attributes might render another player, or an entire class of players, powerless against the user's sword. The harm this restraint produces for the virtual world, and for other users of the world, is greater than the benefit this type of property protection grants the individual user.

B. Character Attribute Changes

Sometimes it is more than the attributes of an item that are changed in order to rebalance a virtual world. Character attributes¹²¹ may be changed in order to redress an unbalancing and unintentional effect in a game.¹²² When an account holder's character is changed, and the character now behaves in a different way, what kind of recourse would property law provide in this instance?

Assuming property laws are extended to protect characters in a virtual world, once again the laws of trespass to chattel and conversion apply.¹²³ Whether conversion is the appropriate remedy depends on whether the change was material in nature.¹²⁴ Regardless, as in the previous example,

or update, of the game. Item changes are included in this changelog. See Current Patch Notes, <http://www.worldofwarcraft.com/patchnotes/> (last visited Apr. 7, 2008).

118. See KEETON ET AL., *supra* note 106, §§ 14, 15.

119. See *id.* § 15 (conversion requires substantial damage resulting in a material change).

120. See *id.* §§ 14, 15.

121. Character attributes are nearly a term of art in roleplaying games and virtual worlds. Mechwarrior 1st Edition described character attributes as "a number representing a character's relative development in four physical and mental areas: Body (Body), Dexterity (DEX), Learning Ability (LRN), and Charisma (CHA)." MECHWARRIOR: THE BATTLETECH ROLEPLAYING GAME 9 (L. Ross Babcock III, 1st ed. 1986). Character attributes are often used as base numbers to determine relative skill in different areas. See *id.* at 9-11.

122. Changelogs, or patch notes, often include descriptions of changes to character or class attributes. See Current Patch Notes, *supra* note 117.

123. See generally KEETON ET AL., *supra* note 106, §§ 14, 15.

124. *Id.* § 15.

there is a possibility of the game's creators being liable for altering the world and devaluing a user's character.¹²⁵

C. *Accidental Item or Character Deletions*

Accidental deletions of accounts or items occur.¹²⁶ These can occur through server failure or server rollbacks.¹²⁷ Virtual objects are impermanent and subject to software, hardware, and administrative failures. If property law protections are extended to accounts and account items in a virtual world, accidental deletions will result in a claim for conversion or for trespass to chattel.¹²⁸

It is important to note here that in a claim for conversion, the party held liable must pay the value of the lost item.¹²⁹ So in this test case, a user may seek the monetary value of any items or characters he lost even though the company may be willing to reinstate a character with similar attributes and items. After all, conversion allows a plaintiff to force the defendant to buy their lost or materially damaged property.¹³⁰ This leaves the company who created the game with potential monetary liability, regardless of whether they are willing to restore the account to its previous state.

D. *Hacked Accounts*

Judicial action may be applicable for accounts that are hacked, particularly where the owner used safe practices in servicing his account.¹³¹ Accounts may be hacked by malicious software bugs and other illicit methods that circumvent security procedures.¹³² Items are often transferred from the hacked account to another account in these circumstances.¹³³ In some cases, the characters themselves are transferred to a new account — essentially being “stolen.”¹³⁴

Conversion and trespass to chattel also apply here. This situation is one of the most emotional experiences faced by an account owner. The identity

125. *See generally id.* §§ 14, 15.

126. *See, e.g., supra* notes 99-100.

127. *Id.*

128. *See generally* KEETON ET AL., *supra* note 106, §§ 14, 15.

129. *Id.* § 15.

130. *See id.*

131. *See* Daniel Terdiman, *No End in Sight to Hacking of 'WoW' Accounts*, CNETNEWS.COM, Apr. 10, 2007, http://www.news.com/No-end-in-sight-to-hacking-of-WoW-accounts/2100-1043_3-6174704.html.

132. *Id.*

133. *Id.*

134. *Id.*

built by the owner through playing his characters over many hours has been stolen. A lack of property laws protecting virtual objects in virtual worlds and the accounts people use to access these worlds often prevents police from being able to investigate and prosecute cases.¹³⁵

Problems arise, however, in applying property protections even in these traumatic cases. The liable party here is the person who hacked the account.¹³⁶ Hackers of this type are, by their very nature, illicit actors. This type of person is difficult to track. While it would be satisfying to be able to sue a thief for conversion, the likelihood of it occurring is remote. Therefore, conversion and trespass to chattels are not reliable remedies for hacked accounts. Since these remedies are unreliable, no benefit will be gained by extending property protections to virtual objects in order to provide these remedies.

E. Conversion Through Conversion

Virtual world creators will suffer conversion through conversion from the extension of the common law of property to virtual objects. Each of the test cases above result in issues arising from the lack of control the account holder truly has over his account, his characters, and their items. In order to extend property laws to virtual objects, account holder control over these objects will necessarily have to be expanded at the expense of the virtual world's creators.

Limitations may be placed upon a virtual world creator's ability to modify accounts once an account holder gains a property right to his character. Creators will also face limitations on their ability to modify the game world itself – losing the ability to change user weapons, equipment, and buildings. The creator may also be required to expend hardware resources in order to avoid trespassing upon an account holder's rights.

This expansion will effectively subsume, or convert, the tangible and intellectual property owned by the virtual world's creator into a newly created commons.¹³⁷ Conversion through conversion is the way that the

135. According to Blizzard's Terms of Use, an account holder owns no property right in his account, the account's characters, or the characters' items. Therefore, an account holder cannot bring a theft charge. *See World of Warcraft Terms of Use (TOU)*, *supra* note 92, ¶¶ 4, 7 (paragraph 4 claims all rights and title in World of Warcraft accounts and virtual objects as the property of Blizzard Entm't, the game's creator; paragraph 7 also claims all rights and property interests in a World of Warcraft account are owned by Blizzard Entm't).

136. *See generally* KEETON ET AL., *supra* note 106, §§ 14, 15 (liability rests with the individual who intentionally interfered with another's chattel).

137. Virtual commons means virtual space that is owned by one person, here the virtual world's creator, but is subject to the rights of use of another, the account holder. *See* BLACKS LAW

property laws of conversion and trespass to chattel will reduce the ability of a virtual world's creator to control his property. The reduction results in the creator's property functioning as a virtual commons.¹³⁸

An extension of property law into virtual worlds may reach back into the tangible world, dragging tangible property, as well as federally protected intellectual property, into a virtual commons. Control of the hardware and software composing these virtual worlds is co-opted by the property interests of the individual users. This destroys the game conceit¹³⁹ and destroys the property interests of the game's creator.

VI. TAMING FIBER OPTIC FOXES: CONTRACT LAW AND VIRTUAL OBJECTS

Value can attach to something whether or not we choose to call it property. Grey markets exist selling virtual world currency, items, and characters. These markets have created value from non-property items. Where there is value, there is also an instinct to protect the value. However, extending property law protections to these items injects tangible property into a virtual commons. Consequently, the law of contract may best serve these speculative markets.

Virtual items sold on these grey markets are the essence of speculation. Many games do not extend property rights to users for their game currency, characters, or items.¹⁴⁰ The value created by these grey markets arises from a contractual promise between the seller and buyer to transfer the item.

This contractual value is based on the promise itself. No property exchanges hands since neither party possesses or owns the items in question. This is akin to buying a quitclaim deed for a bridge in Brooklyn – you'd have more rights to the title of the bridge than the seller of the quitclaim, but the seller had no such rights to begin with. Still, in these markets, value attaches to the promise itself, not to the item. This value is

DICTIONARY, *supra* note 54, at 291 (“common . . . 1. [a] legal right to use another person's property, such as an easement. . . ; 2. [a] tract of land set aside for the general public's use.”).

138. The problems with commons are famously described in Garrett Hardin's essay, *The Tragedy of the Commons*. See generally Garrett Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1243 (1968).

139. Bartle, *supra* note 64, at 35 (“the game conceit evaporates upon contact with . . . reality.”).

140. See World of Warcraft Terms of Use (TOU), *supra* note 92 (paragraph 4 claims all rights and title in World of Warcraft accounts and virtual objects as the property of Blizzard Entm't, the game's creator; paragraph 7 also claims all rights and property interests in a World of Warcraft account are owned by Blizzard Entm't).

the essence of contract law; no property exchanges hands, for no property is possessed, but there is an exchange of promises and a contractual remedy if those promises are breached.

A. *Contract Law Versus Property Law Generally*

The Restatement Second of Contracts defines a contract as a “promise or a set of promises for the breach of which the law gives a remedy, or the performance of which the law in some way recognizes as a duty.”¹⁴¹ In contrast, the introductory note to the Restatement of Property narrowly confines its discussion to the “legal relations between persons with respect to a thing.”¹⁴² Central to property is the tangible object, or thing.¹⁴³ Central to contract law is the exchange of promises.¹⁴⁴

Access to virtual worlds is granted through the purchase and maintenance of a user account.¹⁴⁵ This account is an exchange of promises between the user and the company running the virtual world. The user agrees to pay the company for his access. In turn, the company promises to grant him access.

This is a commitment between the user and the company for future behavior.¹⁴⁶ In a virtual world, virtual objects rely upon future commitments by the world’s creator to maintain the servers, fix broken code, and ensure access is granted to accounts. In contrast, the tangible world does not rely or depend upon a future commitment to maintain Locke’s apple or acorn.

B. *Obligation Versus Ownership*

Obligation is not the same as ownership. The commitment between the user and the company running a virtual world creates obligations.¹⁴⁷ The user is obliged to pay the company for access to the virtual world. Upon receiving payment, the company is obliged to grant the user access to the virtual world. This exchange of promises does not create a property interest in the virtual world. The user does not own the account nor the

141. RESTATEMENT (SECOND) OF CONTRACTS § 1 (1981).

142. RESTATEMENT (FIRST) OF PROPERTY § 1 Introductory Note (1936).

143. *See id.*

144. RESTATEMENT (SECOND) OF CONTRACTS § 1 (1981).

145. *See World of Warcraft Terms of Use (TOU), supra note 92.*

146. *See E. ALLAN FARNSWORTH, CONTRACTS § 1.1 (4th ed. 2004).*

147. An obligation is a “legal or moral duty to do or not do something.” BLACKS LAW DICTIONARY, *supra* note 54, at 1104. The user’s duty is to pay for access to the virtual world. The company’s duty is to provide access once the user has paid.

access accompanying it, but rather the company is obliged to grant him the account and its access through the promissory exchange.

A simple example can help explain the distinction. Parker loans Smith money. Smith, a debtor, defaults on the debt. Parker's claim for the debt is founded in contract law as a promissory exchange.¹⁴⁸ One common misconception is that the claim arises out of the creditor's property.¹⁴⁹ At the heart of this misconception is the legally incorrect notion that Parker is due *his* money, the money he loaned Smith. In fact, Parker is due the money he is *owed*; it is not *his* money, for he does not possess it or control it. The debt is merely a promise of repayment. Similarly, when Parker deposits money in a bank, he may incorrectly refer to this money as "my money," rather than as the bank's obligation to him.¹⁵⁰

Blurring the subtle boundaries between obligation and ownership is a common error.¹⁵¹ This error creates a misconception of obligation, equating it with ownership rather than a duty imposed by a contractual promise.¹⁵² Fairfield's arguments concerning whether virtual objects should be afforded common law property protections is an example of this error.

Fairfield approaches virtual objects as though they are tangible.¹⁵³ Because of the increased persistence, security, and similarities of virtual objects to tangible objects, Fairfield argues that the common law of property should be used to provide consumers protection.¹⁵⁴ In regards to contract law, Fairfield argues that property law will reduce the frustration cost of third parties who must search for information about contracts between two parties.¹⁵⁵

The reality of virtual objects is glossed over by Fairfield. Virtual objects depend upon an exchange of promises for maintenance. Each virtual world account requires maintenance independent of another user's

148. FARNSWORTH, *supra* note 146, § 1.1 (the law of contracts is "concerned primarily with exchanges because . . . courts have generally been unwilling to enforce a promise unless the promisee has given the promisor something in return for it") (alterations in original).

149. *Id.* § 1.3 ("[i]t has even been suggested that a breach by the debtor is regarded as a wrong with respect to the creditor's property, that the . . . claim is founded . . . on what the creditor owns.").

150. *See id.*; *see also* FREDERIC W. MAITLAND, *THE FORMS OF ACTION AT COMMON LAW* 31 (A.H. Chaytor & W.J. Whittaker eds., Cambridge Univ. Press 1997) (1936) (a "vast gulf . . . to our minds divides the 'Give me what I own' and 'Give me what I am owed'"); *see* FARNSWORTH, *supra* note 146, § 1.3.

151. *See id.*

152. *See id.* § 1.3.

153. Fairfield, *supra* note 82, at 1049-50.

154. *See id.* at 1048-1052.

155. *See id.* at 1052.

account. The willing acceptance of these maintenance obligations through contract allows virtual worlds and objects to function and flourish as they do.

In addition, exclusionary issues are moot since a virtual object, or a virtual world, can be accessed simultaneously by many people. This non-exclusivity removes the frustration cost Fairfield is concerned about. To use Fairfield's own illustration,¹⁵⁶ a virtual watch may be used by multiple people at the same time and to the exclusion of no one.

The user of a virtual world does not possess or control a virtual object any more than Parker possessed or controlled the money he loaned Smith.¹⁵⁷ Similarly, a Gmail user does not possess or control his Gmail account.¹⁵⁸ Rather, Google possesses and controls the account by virtue of owning the hardware and software running the account, as well as paying for the Internet connections that allow Google's server to communicate with the user. While the email user may have certain rights to his account, the obligations Google accepted as to the account should not be confused with an ownership interest.

C. Contract Law as the Most Efficient Allocator of Resources

Extending property law to virtual objects creates a conversion through conversion.¹⁵⁹ Property law protections will result in the property of a virtual world's creator entering the commons. This creates a maintenance burden upon the virtual world's creator. Accordingly, while the interests of the account holder – or consumer – have increased protections, the interests of the owners of actual, tangible property – the virtual world's creators – have become subject to the commons.

In contrast, contract law efficiently allocates resources used in virtual worlds. First, a conversion through conversion does not necessarily occur through a contractual relationship.¹⁶⁰ In other words, the computers running the virtual world, the network connections linking it to the Internet, and the intellectual property associated with it are not injected into a virtual commons.

156. *See id.*

157. *Supra* Part IV.

158. Paragraph 9 of the Gmail Terms of Service vests "all legal right, title and interest in and to the Services" with Google. Google Terms of Service, *supra* note 90.

159. *Supra* Part V.E.

160. This does not remove the possibility of conversion through conversion, but merely removes the necessity. Voluntary subjection to a commons may occur through contractual agreements, but it is not forced through property protections. *See* Second Life Terms of Service, *supra* note 92, ¶ 3.2.

At the same time, virtual world creators may choose to subject themselves to a commons through contractual terms. This choice illustrates a second reason why contract law is the most sufficient allocator of resources in a virtual world setting. Freedom to contract is a vital part of a free market economy.¹⁶¹ A virtual world creator's ability to determine the extent and scope of its users' in-world property rights – a significant business decision which presumptively incorporates the operations of its user-consumers and the practices of competing virtual worlds – is an essential component of this freedom of contract. As Bartle recognized, this paradigm of voluntary commodification may very well prove indispensable to the viability of the virtual world industry.¹⁶²

The flexibility granted through contract law allows both the account holder and virtual world creator to allocate resources efficiently. The account holder may choose to terminate his account in order to spend the resources in maintaining it elsewhere. In addition, the virtual world's creator may choose to grant expansive property rights,¹⁶³ limited property rights,¹⁶⁴ or no property rights whatsoever to account holders.¹⁶⁵

Unlimited horizons are a third reason why contract law more efficiently allocates the resources of a virtual world than an extension of property law would allow. Unlike tangible property, virtual worlds and virtual objects are non-exclusive and non-rivalrous in nature.¹⁶⁶ Multiple people may possess the same object. Multiple people may inhabit the same space.

161. Anthony T. Kronman & Richard A. Posner, *THE ECONOMICS OF CONTRACT LAW, Introduction 1-2* (1979) (“[t]he principle that voluntary exchange should be freely permitted in order to maximize value is frequently summarized in the concept . . . of ‘freedom of contract.’”).

162. See Bartle, *supra* note 64, at 43-44 (describing “uninvited commodification” as “unfair to those developers and players who do not want it, . . . self-defeating . . . , [and] ultimately lead[ing] to its own strangulation”).

163. One example is the granting of some form of ownership right in a user's account, characters, and items possessed by characters in the virtual world. See *Second Life Terms of Service*, *supra* note 92, ¶ 3.2 (providing as follows: “[y]ou retain copyright and other intellectual property rights with respect to Content you create in Second Life, to the extent that you have such rights under applicable law.”).

164. In contrast to expansive rights, the virtual world creator may choose to grant some form of ownership right solely in the account, allowing the account holder more protection (as compared to no rights) hacking, theft, or deletion.

165. Granting no rights provides the virtual world's creator the flexibility to alter the world as necessary without having to consider effects on the rights of account holders. This is the most common approach. See *World of Warcraft Terms of Use (TOU)*, *supra* note 92 (paragraph 4 claims all rights and title in *World of Warcraft* accounts and virtual objects as the property of Blizzard Entm't, the game's creator; paragraph 7 also claims all rights and property interests in a *World of Warcraft* account are owned by Blizzard Entm't).

166. *Supra* Part IV.

More significant than exclusivity, however, is the expansive nature of virtual worlds. While there is certainly an outer-bound for the size of a virtual world, the nature of the worlds allows more objects and more room to be added as needed.¹⁶⁷ This expansive nature of the virtual world itself, coupled with the non-exclusivity of virtual objects and virtual space, creates unlimited horizons. Freedom to contract allows parties to the contract to efficiently allocate the resources required to sustain these unlimited horizons in a manner specifically tailored to their unique situation.

VII. CONCLUSION

Virtual objects in virtual worlds are not rivalrous, persistent, or interconnected. In addition, the users of virtual worlds are unable to possess dominion and control over virtual objects. A user's dominion and control are subject to the dominion and control of the virtual world's creators. Accordingly, the common law of property should not be extended to protect rights in virtual objects within virtual worlds.

Extending the common law of property to virtual objects and virtual worlds deprives those who own the hardware and software running virtual worlds of the right to control their own property. Such an extension results in conversion through conversion – the property interests of the virtual world's creator, the hardware and intellectual property supporting the world, become subject to a new virtual commons. This removes the freedom of virtual world creators to design worlds of their own imaginings. In addition, it will have a chilling effect on the creation of new virtual worlds.

Value in virtual worlds and virtual objects derive from contractual obligation. This value is based upon promissory exchange rather than possession or control of any thing, virtual or otherwise, making contract law the most appropriate source of protections for this value. Contract law is also the most efficient allocator of resources for the maintenance of virtual worlds. Freedom to contract between virtual world creators and users will ensure that resources for maintaining the unlimited horizons allowed by virtual worlds will be efficiently allocated.

Modern day Posts hunting the creatures of a virtual world like World of Warcraft face new realities. Where Post never achieved corporeal possession of the fox he hunted, a virtual Post can be protected by game mechanics. For instance, in World of Warcraft the question of who can

167. See Bartle, *supra* note 64, at 27-30 (“[v]irtual worlds are continually evolving.”).

claim the rewards from killing a monster are determined automatically. The first person or group to damage a monster “tags” the monster and gains the reward.¹⁶⁸

These game mechanics are functions of an imaginary, virtual world. The mechanics could just as easily be different – they are designed at the whim and desire of a game’s developers. The ability to create worlds with rules different from the real world is a fundamental characteristic of virtual worlds.¹⁶⁹ The creator of a virtual world may decide to allow Post to have the fox, or the creator may want Pierson to have the fox. Instead of either of these solutions, the creator may wish to allow Post and Pierson to fight over the fox.

Any conceived or yet-to-be conceived solution is available to the creator, and this is the power of virtual worlds. Regulating virtual worlds by applying the common law of property will destroy this game conceit,¹⁷⁰ thus destroying one of the fundamentals of virtual worlds. As Bartle suggested, this will end the power of virtual worlds to provide new realities, realities that, as of yet, we do not know.¹⁷¹ Such a loss will be a true tragedy.

168. World of Warcraft Monster Basics, http://www.worldofwarcraft.com/info/basics/monster_basics.html (last visited Dec. 13, 2007).

169. See Bartle, *supra* note 64, at 23.

170. See *id.* at 35.

171. See *id.* at 43.