The Game of Clones

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I. INTRODUCTION

Video game creators have sought intellectual property protection from the very beginning. In 1947, Thomas T. Goldsmith, Jr. and Estle Ray Mann filed a United States patent for “Cathode-Ray Tube Amusement Device” which simulated a World War II radar display and allowed players to attempt to hit targets on screen using knobs.1 The first home consoles appeared in 1972, and since then, the video game industry has grown to a $24.75 billion dollar industry in 2011.2 The huge increase in revenues has resulted in increased incentives to protect intellectual property rights of video games.

With success comes imitation. Almost from the beginning, successful games produced copycats.3 In the last few years, with the proliferation and availability of apps through digital distribution channels such as Apple’s App Store, many game developers found that their video games have been “cloned,” cannibalizing sales and causing consumer confusion.4 For small

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3 Pong, WIKIPEDIA, http://en.wikipedia.org/wiki/Pong (last visited Dec. 28, 2012) (“Pong quickly became a success and is the first commercially successful video game…. Soon after its release, several companies began producing games that copied Pong’s gameplay….”).

“indie” developers especially, the countless clones, knock-offs, or copycats have been a “source of vexation.” While legal remedies are available, the cost and uncertainty of lawsuit deters many small game developers from pursuing enforcement of their intellectual property rights. Even big game developers and publishers are victims of clones, as evidenced by the ongoing litigation between EA and Zynga.

Different legal protections are available against game clones. In United States, there are four broad sources of intellectual property law protection: patents, copyrights, trademarks, and trade secrets. Because “games exist at the boundary of intellectual property law,” different intellectual property law may protect different aspects of video games. Video games are a type of computer program, and because computer programs are patentable subject matter, video games are likewise patentable. Patent law can also protect additional aspects of video games that are typically not part of computer programs, such as gameplay methods, and game mechanics.

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Copyright law also protects different aspects of programs as literary works,\textsuperscript{12} including source codes and object codes.\textsuperscript{13} This protection applies to video games as well. Video games also contain different elements not commonly found in other software, including visual images, sounds, story, character, and other audiovisual aspects, that are protectable under copyright law.\textsuperscript{14} Copyright law, however, does not protect “idea” or “system,”\textsuperscript{15} and some aspects of games can “fall within at least one definition of ‘systems.’”\textsuperscript{16}

Clones typically contain the same exact gameplay from games they copy.\textsuperscript{17} Gameplay methods may fall under patentable subject matter, and are not protected by trademark, trade secret, or copyright law.\textsuperscript{18} However, a better understanding of gameplay methods may lead to greater copyright law protection of some forms of gameplay methods. Indeed, some commentators think that “the appropriate level of abstraction of the game mechanics and gameplay” will be “critical” in fighting clones.\textsuperscript{19} Part II will explain these video gameplay concepts such as gameplay, game mechanics and level design. Part III will explain why copyright protection of game concepts is preferable to patent protection. Part IV will examine


\textsuperscript{13} Williams Electronics, Inc. v. Artic Intern., Inc., 685 F.2d 870, 876-77 (3rd Cir. 1982) (holding that both source code and object code of a video game are protectable by copyright law).

\textsuperscript{14} Lee, Entertainment and Intellectual Property Law § 16:3; Bruce E. Boyden, Games and Other Uncopyrightable Systems, 18 Geo. Mason L. Rev. 439, 440 (2011) (“[W]hile games per se are not copyrightable, most of their constituent elements are….”).

\textsuperscript{15} 17 U.S.C. § 102(b) (2012).

\textsuperscript{16} Bruce E. Boyden, Games and Other Uncopyrightable Systems, 18 Geo. Mason L. Rev. 439, 442 (2011).

\textsuperscript{17} See, e.g., Spry Fox, LLC v. LOLApps, Inc., 2012 U.S. Dist. LEXIS 153863, 19 (W.D. Wash. Sept. 18, 2012)

\textsuperscript{18} Thomas Connors, High Score? Subject Matter Patentability of Video Gameplay Methods After In Re Bilski, 30 U. La Verne L. Rev. 517, 519 (2009)

the two recent cases between game intellectual rights holders and clone game developers, *Tetris Holdings v. Xio Interactive* and *Spry Fox v. LOLApps*, that seem to expand copyright protection to gameplay aspects. Finally, Part V will present level design as a gameplay element that can be protected by copyright law.

II. GAMEPLAY, MECHANICS, AND LEVEL DESIGN

Games are hard to define.20 One court has clumsily defined video games as computer programs that display on a television “cartoons in which some of the action is controlled by the player.”21 Gameplay, likewise, is also an ambiguous concept that has been defined in many different ways.22 One definition of gameplay is the “formalized interaction that occurs when players follow the rules of a game and experience its system through play.”23 Gameplay can also be defined as the “overall experience of playing a video game and is distinct from factors like graphics and sound.”24

The concept of gameplay is closely related to game mechanics, which are the “sets of rules in a game that are intended to produce an enjoyable game experience.”25 The difference between gameplay and game mechanics can be illustrated in the sport of golf. The mechanics of

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21 See *Stern Electronics, Inc. v. Kaufman*, 669 F.2d 852, 853 (2d Cir. 1982).


golf includes all the rules, number of strokes for par on a given hole, different clubs that are available, different types of terrain, effects of wind and slope, and etc. The basic gameplay consists of hitting to ball into a hole and the experience of the player as he interacts with the game mechanics.

Furthermore, gameplay is closely related to game level design, which is the discipline in game development that involves creation of levels, locales, stages, missions, or terrains. In the sport of golf, for example, the design of a course would dictate how the golfer would play on it. For example, a course that has a narrow fairway would require the player to have a greater precision. In video games, level design has a profound impact on gameplay as well. Entire video game genre has been developed around a single level design, such as the multiplayer online battle arena.

Unlike game mechanics, level designs are expressive elements that fall under copyright protection for several reasons. Much as a novel or a movie, video game level design may present the story to players. Video games require player input, and it may present the story in a


27 For example, level design would have an impact on level flow, intensity ramping, variety, and training. Mike Stout, Learning From the Masters: Level Design in the Legend of Zelda, Gamasutra (Jan. 3, 2012), http://www.gamasutra.com/view/feature/134949/learning_from_the_masters_level_.php.

28 Examples of multiplayer online battle arena include games such as League of Legends, Heroes of Newerth, and Dota 2, which are all based around one single level. WIKIPEDIA, http://en.wikipedia.org/wiki/Multiplayer_online_battle_arena (last visited Dec. 28, 2012).


linear or non-linear fashion. By contrast, a novel or a movie will have a strictly linear sequence of the way the reader or the audience perceives the story.\textsuperscript{31} For a video game, the player’s actions within the game may alter the storyline, allowing the player to make different choices in each play-through to experience different outcomes.\textsuperscript{32} Level designs also frequently require architectural elements,\textsuperscript{33} and architecture designs are expressions protected by copyright law.\textsuperscript{34}

Gameplay, game mechanics, and game level design all have different intellectual property right protection implications. Gameplay methods and game mechanics are protected by patent law.\textsuperscript{35} Game mechanics, however, are clearly not protected by copyright.\textsuperscript{36} On the other hand, level design may be protected by copyright law.\textsuperscript{37} The boundaries between gameplay, mechanics and level design are not always clear-cut; various aspects of a video game can be characterized as gameplay, game mechanics, or level design.\textsuperscript{38} Level design, as with “[a]lmost

\begin{itemize}
\item \textsuperscript{31}Tim Schafer, another legendary game designer, discusses branching or nonlinearity in games, as opposed to linear story model found in movies. Cecilia Pearce, \textit{Game Noir – A Conversation with Tim Schafer}, GAME STUDIES (May 2003), http://www.gamestudies.org/0301/pearce/.
\item \textsuperscript{34}17 U.S.C. § 102(a)(8) (2012).
\item \textsuperscript{35}See supra notes 3-4.
\item \textsuperscript{36}Tetris Holding, LLC v. Xio Interactive, Inc., 863 F.Supp.2d 394, 404 (D.N.J., 2012) (“The game mechanics and the rules are not entitled to protection.”)
\item \textsuperscript{37}Micro Star v. Formgen Inc., 154 F.3d 1107, 1112 (9th Cir. 1998).
\end{itemize}
all expressive elements of a game[,] are related in some way to the rules and functions of game play.“39 For aspects of gameplay that can be characterized as either mechanics or design, as either functional or expressive, both patent and copyright protection may be available. Part III will compare the benefits of copyright protection over patent protection.

III. BENEFITS OF COPYRIGHT OVER PATENT PROTECTION OF VIDEO GAMEPLAY METHODS

Compared to copyright protection, patent protection “remains one of the strongest form of intellectual property rights,” and it also “protects against independent creation,” giving the patent holder a monopoly over the patented invention.40 Patents, prima facie, seem to offer a better protection than copyrights. However, when comparing the protection afforded by patent and copyright law, the nature of the video game industry must be considered. Although the video game industry changes fast,41 many games require more than a year to create.42 On average, utility patents require around three years and four months from filing to allowance.43

42 The first playable version of the game should be completed twelve to eighteen months before release. Heather Maxwell Chandler, The Game Production Handbook 245 (2d ed. 2009). See also Video Game Development, WIKIPEDIA, http://en.wikipedia.org/wiki/Video_game_development (last visited Dec. 28, 2012) (“Mainstream games are normally funded by a publisher and take several years to develop.”).
Taking advantage of provisional patent application, developers can have “provisional rights at the same time as [their] game release” if they “time it right.”

However, there are benefits to copyright protection over patent protection. Copyright protection lasts a lot longer than patent protection. While the duration of copyrights typically last for the life of the author plus seventy years, patents last twenty years from filing date. Even given the fast-changing nature of the industry, some games remain popular well after twenty years, although most games become obsolete over that time. Perhaps more importantly for small indie game developers, copyright protection is “cheap and straightforward,” and “may be the easiest way to protect” intellectual property rights in video games. Moreover, copyright protection is automatic upon creation, and a simple registration with the U.S. Copyright Office preserves the right to pursue infringement claims.


In addition, most game developers feel that “[t]he ‘spirit of innovation’ works best when there is a free market of ideas, and consumers are better off if video games are not patented.” Many in the video game industry argue that gameplay patents have been “too broad” and “[rob] the industry of future development and simultaneously [facilitate] expensive litigation.” On the other hand, courts have acknowledged that “wholesale” copying is a copyright infringement, and many game developers feel that clones that mimic other video games are equivalent to stealing.

In summary, from the game developers’ perspective, copyright protection may be preferable to patent protection based on the ease of obtaining protection, the duration of that protection, and because copyright protects against clones. Patents, on the other hand, may sometimes be too broad and hamper the spirit of innovation in the video game industry. Video game developers therefore would like to expand coverage of copyright protection and lessen the coverage of patent protections. Part IV will examine two recent cases against cloned games which can be interpreted to have expanded copyrights into the domain of patent protection.

IV. EXPANSION OF COPYRIGHT PROTECTION IN RECENT CASES


A. **Tetris Holdings v. Xio Interactive**

Xio Interactive, the plaintiff, developed a multiplayer game for the iPhone called “Mino,” which “admittedly used Tetris as inspiration.” Xio copied much of the rules of Tetris after it found that the rules were not patented. The court reiterated that game mechanics are “ideas” and not copyrightable, while other elements are expressions and are copyrightable.

Various courts have “found audiovisual display of a video game to be expression.” Although the definition of gameplay excludes graphics and sounds, the Tetris court found that gameplay or different aspects of gameplay may still be copyright protected as expression. Specifically, the court held that some “expressive elements” that are “related to a game rule or game function” may be copyrightable.

The court also found that in previous video game cases the “characters’ motions and actions” were found to be copyrightable. Although “characters’ motions and actions” are closely tied to gameplay and game mechanics, the court noted that previous case was silent on “whether there were functional similarities or whether these expressive elements were related to

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58 Id. at 399.

59 See id. at 404.


61 See supra text accompanying note 24.

62 Tetris Holding, LLC v. Xio Interactive, Inc., 863 F.Supp.2d 394, 404-05 (D.N.J., 2012). The opinion also discusses the merger doctrine and scènes à faire. “[E]xpression is not protected only when it is integral or inseparable from the idea or the function under the doctrines of merger or scènes à faire.” Id.

63 “This District also analyzed Pac–Man and found the following to be protected by copyright: the characters, the sequences and arrangements of the graphics, the characters' motions and actions, the musical theme, and the introductory cartoon sequence.” Tetris Holding, LLC v. Xio Interactive, Inc., 863 F.Supp.2d 394, 407 (D.N.J., 2012) (citing Midway Mfg. Co. v. Bandai–America, Inc., 546 F.Supp. 125, 152 (D.N.J.1982) ). This case also discusses Galaxian, and the “look and feel of the character and how they move and act” are copyrightable expressions. Id.
the game rules.” Though the court stated that “the idea of a game is expressed, in part, through its rules,” the court characterized the rules of Tetris as “abstract ideas” and not copyrightable, and thus explicitly rejected expanding the scope of copyright to the game rules themselves.

In the infringement analysis of Xio’s game, the court seemed to protect expressions closely related to gameplay concepts and even gameplay mechanics. The court relied on the “total concept and feel” test that captures the “flow of the game as a whole,” which may include expressions that are closely related to functional gameplay aspects. For example, the way the Tetris pieces “move, rotate, fall, and behave,” “the dimension of the playing field, the display of ‘garbage’ lines, the appearance of ‘ghost’ or shadow pieces, the display of next piece to fall, the change in color of the pieces when they lock with the accumulated pieces” were all found to be copyrightable expressions in Tetris, and all of which were closely tied to gameplay and game mechanics.

B. Spry Fox v. LOLApps

This case involved another copycat game. Spry Fox, the plaintiff, developed the game “Triple Town” on mobile devices, while LOLApps, the defendant, made “Yeti Town” on other platforms. Spry Fox had initially developed the game and approached LOLApps to develop a port for it on a different platform. LOLApp agreed, and they worked together to create the port,

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65 Id.
66 Id.
67 The court was unsure whether some of these features are expressions of the rules of Tetris. However, the court held that even if these expressions are related to the rules of Tetris, Xio copied the look and feel and thus infringed. Id.
but LOLApp cancelled their agreement and went ahead with their own game. Spry Fox brought suit, and in this opinion the court denied the motion to dismiss by LOLApps in regards to the copyright infringement.

Unlike the *Tetris* case, the court here relied less on the visual aspects of the game, and admitted that “actually playing” the games would be better than even the visual screenshot comparison. Such statements imply that the comparison of gameplay is the most effective comparison for the purposes of copyright infringement analysis.

The court held that the idea behind the game was “that of a hierarchical matching game,” and that this idea was not copyrightable. The court also listed several elements in the game there were not copyrightable such as points, currency, and marketplace, due to the scènes à faire exception. Additionally, the court held that “functional” elements of the game, such as the grid size, were not copyrightable either.

The court seemed to at least consider expanding copyright protection to game mechanics when it held that “rules of the game are entitled to (at best) thin protection.” The court seemed to recognize that “[a] game designer could … make expressive choices in presenting the rules of play.” Although the court had not explicitly stated that the “object hierarchy” mechanic in the game was an expressive element, some commentators had argued that the court had placed such

69 See supra Part IV(A).


71 Id. at 12.

72 Id. at 13.

73 Id.

74 Id. at 17.
game mechanics within copyright protection.\textsuperscript{75} The court also in passing stated that even some “unprotectable elements” can be entitled to limited copyright protection, such as protection of “original selection and arrangement.”\textsuperscript{76} Therefore, the court had left the option open for gameplay aspect to be copyrightable if it is a selection and arrangement of underlying gameplay elements.

In summary, the Spry Fox opinion may have expanded copyright protection to gameplay aspects, if not explicitly game mechanics. In fact, some commentators have opined that this ruling “nudges copyright a little further toward protecting game mechanics.”\textsuperscript{77} Others have opined instead that the court relied on the similarity of the user interface.\textsuperscript{78}

V. FURTHER EXPANSION OF COPYRIGHT PROTECTION TO LEVEL DESIGN

The two cases in the previous section suggest that some gameplay mechanics or expressions closely related to mechanics are copyrightable. Specifically, level design may be copyrightable although it is closely tied to game mechanics.\textsuperscript{79}

For the simplest levels found in \textit{Pac-Man}, the Seventh Circuit held that the maze designs were unprotected not because of “functional commonalities” but because they are scènes à faire


\textsuperscript{76} \textit{Id.} at 19-20.


\textsuperscript{79} See supra Part II.
that receives only very thin copyright protection from identical copying.\textsuperscript{80} However, possible level designs in modern 3D video games have far surpassed the limited possibilities of Pac-Man maze designs.\textsuperscript{81} A previous case on a karate game stated that more constraints on visual depictions should result in thin copyright protection, and the court partially relied on the constraints of the video game hardware and the limited range of expression afforded by such constraints.\textsuperscript{82} Due to the exponential growth the hardware capabilities, today’s game levels can be far more intricate with a wide range of design choices, and therefore should enjoy a greater copyright protection.

Even the more primitive designs may deserve copyright protection based on the impact it has on gameplay. In the Tetris case,\textsuperscript{83} the dimension of the playing field was held to be part of copyrightable expression since the plaintiff could have chosen numerous other dimensions.\textsuperscript{84} On the other hand, the six-by-six grid in Spry Fox was not held to be a copyrightable expression,\textsuperscript{85} due to the fact that the grid size is functional and not an expressive choice.\textsuperscript{86} Showing a surprisingly relevant understanding of gameplay, the court held that “[a] grid that is too small would make the game trivial; a grid that is too large would make it pointless.”\textsuperscript{87}

\textsuperscript{80} Atari, Inc. v. North American Philips Consumer Elecs. Corp., 672 F.2d 607, 616 (7th Cir.1982).


\textsuperscript{82} Data East USA, Inc. v. Epyx, Inc., 862 F.2d 204 (9th Cir. 1988).

\textsuperscript{83} \textit{See supra} Part IV(A).


\textsuperscript{85} \textit{See supra} Part IV(B).


\textsuperscript{87} \textit{Id.} at 15-16.
As an alternative, level designs may be protected through the theory of “original selection and arrangement” of even the “unprotected elements.”\(^8\) In a case involving the classic PC shooter Duke Nukem-3D which addressed derivative rights in copyright,\(^9\) the Ninth Circuit held that the new user-created maps copy protectable expressions from the original game. If, therefore, there are protectable expressions in parts of a level, then level design will be a selection and arrangement of protected elements. As yet another theory of copyright protection, level design is also protectable expression because it is part of the story and setting.\(^90\)

VI. CONCLUSION

In conclusion, the scope of copyright protection in video games can be expanded with a proper understanding of different gameplay concepts. Game developers have actually preferred copyrights to patents, and with the two recent cases, courts have opened to door to possible protection of at least some game mechanics and other gameplay aspects.

As a precaution, copyright protection should not be expanded even further to include all game mechanics. Such expansion would lead to game companies owning whole genres of games for over a century.\(^91\) But expanding copyright protection to include game level design should deter game clones.

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\(^8\) *Id.* at19-20.

\(^9\) Micro Star v. Formgen, Inc., 154 F.3d 1107 (9th Cir. 1998).

\(^90\) See supra text accompanying notes 29-34; Spry Fox, LLC v. LOLApps, Inc., 2012 U.S. Dist. LEXIS 153863, 13-14 (W.D. Wash. Sept. 18, 2012) (“A video game … has elements of plot, theme, dialogue, mood, setting, pace, and character…. These objective elements of expression are within the scope of … copyright.”).