Copyright Protection for Video Game Programs and Audiovisual Displays; and - Substantial Similarity and the Scope of Audiovisual Copyrights for Video Games

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COPYRIGHT PROTECTION FOR VIDEO GAME PROGRAMS AND AUDIOVISUAL DISPLAYS; AND—SUBSTANTIAL SIMILARITY AND THE SCOPE OF AUDIOVISUAL COPYRIGHTS FOR VIDEO GAMES

By Theodore J. Grabowski, Jr. *

1. INTRODUCTION

"You got another quarter?" "Here's $5.00, go get me some change." "What do you mean, no? I've almost got the pattern down. I'm into the big points now. I've got to make 100,000 points. Don't you understand? 100,000 points."

Pathetic. Another victim of PAC-MAN fever; a DONKEY KONG goner;1 terminal video.

What is even more distressing about this scenario is that the video game that is being fed quarters is what is unaffectionately known in the video-gaming industry as a "knock-off"—a counterfeit. The computer program stored within the electronic interior of the pirated video game's console is an identical copy of the program developed for and placed inside a major manufacturer's copyrighted video game. The video "poacher" has electronically pried open the memory chips (ROMs, RAMs, or EPROMs)2 of a fully licensed and copyrighted video game; has through reverse engineering3 removed the results of

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1. PAC-MAN is a trademark of Midway Mfg. Co.; DONKEY KONG is a trademark of Nintendo of America, Inc.

2. There are basically three types of memory devices used in video games. ROM, or Read Only Memory; RAM, or Random Access Memory; and EPROM or Erasable, Programmable, Read Only Memory. Each serves the same basic purpose of storing the computer program that interacts with the player to produce the sights and sounds of the video game. Stern Electronics, Inc. v. Kaufman, 669 F.2d 852, 854 n.1 (2d Cir. 1982).

3. Reverse engineering is the practice of disassembling a product in order to copy its components or design. J. Pooley, Trade Secrets 21 (1982). In the video game context reverse engineering often involves dumping the contents of the memory chips containing the program into the memory of a computer. A computer may then be used to analyze the contents
countless hours of programming; and has made the duplicate memory
chips that serve as the nerve centers for the counterfeit video games.

Copyright law to the rescue. Atari, Inc., Midway Manufacturing,
Inc., Stern Electronics, Inc., and Williams Electronics, Inc., the major
forces in the battle against video game piracy, have resorted to the
copyright infringement action in their struggle to keep knock-offs from
munching into their market shares. Beginning with Stern Electronics,
Inc. v. Kaufman, the courts have addressed a series of arguments for
and against copyright protection for video games that are as exotic as
the technology that makes video games possible.

One line of cases, comprising the bulk of video game litigation to
date, has been directed at the blatant copying that occurs in a knock-

of the video game memory chips in order to program duplicate chips. See Tandy Corp. v.

4. Owners or licensees of exclusive rights in, respectively, PAC-MAN (home and
arcade versions), Scramble, and Defender. Scramble is a trademark of Stern Electronics,
Inc.; Defender is a trademark of Williams Electronics, Inc.

5. Intellectual property law offers the following means of protecting computer and
video game software and hardware:

Trade secret law is most frequently associated with protecting software and hardware
from industrial espionage and defecting employees. See generally Pooley, supra note 3. See
generally Root, Protecting Computer Software in the 80's, 8 Rut. Computer & Technology L.
Rev. 205 (1981). See also Gilbume & Johnston, Trade Secret Protection For Software Gener-

Patent law has been used to protect hardware features but has yet to be applied exten-
sively to computer programs. But cf., Moskowitz, Patentability of Software Related Inven-

Copyright law has been the principal means of protecting both the audiovisual display
and the underlying computer program of videogames. See Kramsky, Video Games: Scoring
Points in the Copyright Wars, 5 L.A. Law Mag. No. 8, at 8 (Nov. 1982). Written computer
programs are copyrightable as literary works. See M. Nimmer, 1 Nimmer On Copyright,

Unfair competition and trademark laws issues are frequently involved in video game
infringement cases. Game titles are often appropriated along with the video game pro-
(PAC-MAN); see also Midway Mfg. Co. v. Bandai-America, Inc., 546 F. Supp. 125, 155 (D.


Galaxian; motion for preliminary injunction granted), aff'd, No. 82-1607, slip op. (7th Cir.
preliminary injunction granted), aff'd, 669 F.2d 852 (2d Cir. 1982); Williams Elecs., Inc. v.
Artic Int'l, Inc., 685 F.2d 870 (3d Cir. 1982) (DEFENDER; final injunction order aff'd);
25,409 (E.D.N.Y. May 28, 1982) (Donkey Kong; injunction issued); In the Matter of Certain
off. Since in a knock-off there is no doubt that the statutory require-
ment of "copying" has been satisfied, these cases have simply asked
whether video games can be copyrighted at all.

Fewer in number, but greater in significance for copyright law, is a
line of cases which do not involve such obvious and complete copying.
In these cases a creative pirate (or, as an accused infringer might phrase
it—"a good faith imitator of ideas") has changed elements of the game
display. New characters may have been added; a maze or spaceships
may have been redesigned. These cases have asked: What aspects of a
video game will be accorded copyright protection? and: When is a
video game so similar to an already copyrighted video game that it will
be considered an infringement of the copyrighted game?

This note will explore both lines of cases. It will conclude by ex-
ploring the effect that different tests of substantial similarity may have
on the way a trier of fact decides a video game infringement case.

II. ARE VIDEO GAMES COPYRIGHTABLE?

Video games are the result of the marriage of familiar audio-visual
technology—a TV screen and speakers—with the thumb nail sized
miracle of microelectronics—the silicon chip. The microprocessor and
supporting memory chips are essentially the same components that can
be found in the new generation of home and business computers.


8. To establish an infringement a plaintiff must prove ownership of a valid copyright and "copying" by the defendant. See 3 M. Nimmer, supra note 5, at § 13.01, at 13-3. Since direct evidence of copying is rarely available, circumstantial evidence of copying based on evidence that the defendant had access to the copyrighted work and that the defendant's work is substantially similar to plaintiff's work will permit a finding of copying. N. Boorstyn, Copyright Law § 10.12 (1981). Access to the plaintiff's work is rarely contested since access can be inferred where the product is easily available, or where the two works are so striking similar that an inference of access is inevitable. Id. at § 10.13. This inference of access may be rebutted by evidence of independent creation and lack of access. See id. The real issue in establishing copying circumstantially, is that of demonstrating substantial similarity. Id. at § 10.14. Substantial similarity is explored in the second half of this note.


10. Common elements in both personal computers and video games are the
In the case of a video game, a program is written and then stored into a series of memory chips on a printed circuit board inside the video console. Another chip, the microprocessor, uses the program stored in memory in conjunction with commands that it receives from the player through “joysticks” and buttons to create the images and sounds of the video game. It is the presence of what are essentially computer components that has forced the courts to consider a series of novel arguments for keeping the efforts of the video poachers outside the reach of the traditional copyright infringement suit.

A. The Problem of Enforcing Computer Program Copyrights Against Non-Identical Copying

Although copyright protection through registration as a literary work is available for computer programs, software copyrights have some serious drawbacks. One drawback is that only the particular expression of the program is protected by the copyright. That is, only the specific pattern and sequence of specific program instructions is protected. Just as there is more than one way to add two numbers to get for example, the number 10 (5+5, 2+8, 6+4, 9+1, etc.), there are countless ways to write a computer program to accomplish any given task.

If a programmer copyrights a computer program, he is only copyrighting one of the many ways that the program could have been written. All that needs to be done to avoid a finding of copyright infringement is to change the program to an equivalent non-copyrighted pattern and sequence of program instructions.

B. Audiovisual Copyrights for Video Games

1. Video Games, Computer Program Copyrights, and Audiovisual Works

This potential obstacle to the effective enforcement of computer

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11. Id. at 872.
12. See supra note 5.
13. Another drawback involves the question of the copyrightability of object code or machine language. This issue is taken up later in this note.
15. Id.
16. Id.
programs copyrights threatened to spill over into the video-arcades in *Stern Electronics, Inc. v. Kaufman.* A month after Stern introduced "Scramble," its missiles and spaceships game, Omni Video Games. Inc. began marketing a game that was virtually identical to Scramble in sight and sound effects. In opposition to a charge of copyright infringement Omni advanced an argument that had been successful in the past in thwarting computer program copyright infringement actions. Omni argued that Konami Industry Co., Ltd., the licensor to Stern, was only entitled to copyright the written computer program stored in the video game's memory. Had the court accepted this argument, it would have been hard pressed to find a copyright infringement since Konami, through its sub-licensee Stern, had not obtained a copyright for the underlying computer program.

Further, even if Stern had copyrighted the program, copyright protection would have extended only to the specific programming statements and structure that the original creators of Scramble had chosen to incorporate into their program to produce the audio and video display. If Omni had changed enough of these statements—and rearranged the overall structure of the program—then Stern would not have been able to demonstrate a sufficient "copying" to establish an infringement. Despite the fact that the different statements would have produced an audiovisual display with virtually identical sights and sounds, there would have been no infringement.

Stern and Konami, anticipating that a successful knock-off could be made by changing the underlying program—the "literary work," had instead registered the sights and sounds of Scramble as an audiovisual work. This was accomplished by submitting a video tape recording taken of Scramble in play to the United States Copyright Office. Konami believed that this form of registration would provide Scramble with protection against unauthorized duplication analogous to that extended tapes, phonograph recordings and films under the 1976 Copyright Act.

17. 669 F.2d 852 (2d Cir. 1982) (order granting preliminary injunction granted).
18. *Id.* at 854-55.
20. 669 F.2d at 855.
21. *Id.*
23. 669 F.2d at 855.
2. Satisfying the 1976 Copyright Act: Fixation

Before the court could accept this analogy, it addressed Omni's contention that the visual and audio displays in Scramble were neither "fixed" nor "original" and so did not fall under the protection of the 1976 Copyright Act which provides:

Copyright protection subsists . . . in original works of authorship fixed in any tangible medium of expression, now known or later developed, from which they can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device. Works of authorship include the following:

(1) literary works;

. . .

(6) motion pictures and other audiovisual works;\(^25\)

Additionally:

A work is "fixed" in a tangible medium of expression when its embodiment in a copy or phonorecord, by or under the authority of the author, is sufficiently permanent or stable to permit it to be perceived, reproduced, or otherwise communicated for a period of more than a transitory duration.\(^26\)

Omni's argument rested on the observation that the audiovisual display is different each time the game is played and is therefore not "fixed."\(^27\) The display varies depending on how the player manipulates the buttons or joysticks. Omni argued that this seeming lack of a fixed sequence of images and sounds keeps video games from satisfying the fixation requirement of the Copyright Act.\(^28\)

The *Stern* court was not moved by this argument.\(^29\) Instead of

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\(^27\) 669 F.2d at 856.

\(^28\) *Id.*

\(^29\) The Seventh Circuit recently came to a similar conclusion when it compared video games to news programs and their thematically related textual displays ("teletext") which are transmitted on the same television signal but broadcast on different television channels. The court found that these two displays constituted a single audiovisual work and that the
focusing on the differences between individual plays on the game, the court chose to concentrate on the many aspects of the sights and sounds that remained constant between plays:

No doubt the entire sequence of all the sights and sounds of the game are different each time the game is played, depending on the route and speed the player selects for his spaceship and the timing and accuracy of his release of his craft’s bombs and lasers. Nevertheless, many aspects of the sights and the sequence of their appearance remain constant during each play of the game. These include the appearance (shape, color, and size) of the player’s spaceship, the enemy craft, the ground missiles and fuel depots, and the terrain over which (and beneath which) the player’s flies, as well as the sequence in which the missile bases, fuel depots, and terrain appears.  

3. Originality

Next, Omni argued that the work was not an “original work of authorship.” Since the player’s participation produced a display that was different for each play, Omni argued that each play was an original work. 

Because the videotape on file with the Copyright Office recorded only one possible sequence of play, and since each play is different, Omni claimed that Konami secured copyright protection for only the sequence of play on file. The court dismissed this argument by again emphasizing that the similarities outweighed the differences and that the videotape on file covered any variations that might result from player participation. 

4. Denouement

With the rejection of these two arguments, Stern became the first federal appellate court to conclude that a video game’s repetitive sequence of images is copyrightable as an audiovisual work. Scramble was vindicated.

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Footnotes:
30. 669 F.2d at 856.
31. Id.
32. Id.
33. Id.
34. Id. See also Williams Elecs., Inc. v. Artic Int’l, Inc., 685 F.2d 870 (3d Cir. 1982).
35. 669 F.2d at 857.
C. The Copyrightability of Video Game Programs in Rom


The most recent argument for keeping video games outside the protection of the copyright laws was advanced in Williams Electronics, Inc. v. Artic International, Inc. Unlike Stern Electronics, Inc., Williams Electronics, Inc. did not simply register the audiovisual display of their “Defender” game; they registered the underlying program as well. While emphasizing the computer-like aspects of video games, and after making the same fixation argument that Omni made in Stern, Artic added new fuel to the controversy over the copyrightability of video games when it contended that a copyright for a video game program is not infringed upon when the program is transferred from one memory device to another.

A short time after William’s “Defender” game became popular, Artic’s “Defense Command” made its appearance. In both Defender and Defense Command, spaceships and aliens do battle with human-like characters. The two game’s characters and spaceships were virtually identical in shape, size, and color—as was the manner of movement and interaction between game elements.

Not only were the audiovisual displays virtually identical in the two games, but the video game programs in the two games were virtually identical as well—imbedded copyright notice and all. Williams was the first case to ask whether copyright protection could be used to protect the underlying video game program as well as the audiovisual display.

In Williams the alleged infringer had made only minimal efforts to avoid infringement by slightly changing the computer program. Since it was clear that Artic had directly duplicated the program from

36. 685 F.2d 870 (3d Cir. 1982).
37. Id. at 874.
38. Id. at 872-77.
39. See supra note 27 and accompanying text.
40. 685 F.2d at 876.
41. Id. at 872.
42. Id. Blatant video pirates rarely go through the trouble of changing the underlying computer program. A buried copyright notice often shows up in the computer program listing of the pirating chip, flagging the blatant knock-off. See 3 M. Nimmer, supra note 8, at § 13.03[c].
43. Williams also sought to enforce its audiovisual copyright using several of the arguments that had been successful in Stern Elecs., Inc. v. Kaufman, 669 F.2d 852 (2d Cir. 1982). See 685 F.2d at 873.
44. Id. at 876 n.6.
the Defender game, Artic argued that the program transferred from the original to the ersatz video game was in a form that was not copyrightable. In other words, Artic was arguing that by duplicating the copyrighted computer program from William’s chips to its own chips, Artic was not making a “copy” and therefore one element of the test for infringement had not been met.

2. The Object Code Dilemma

a. unintelligibility

As with all video games, Artic’s chips contained “object code.” Object code or “machine language” is the language which computers use to execute their most fundamental electronic functions. It consists of electronic pulses recorded on a magnetic medium—such as a ROM chip, which are symbolically represented as ones and zeroes—the basic language of electronic computers. Object code is to be contrasted with source code—programs written in high level languages such as BASIC, PASCAL and COBOL—languages which must be translated into object code before the computer can execute the program.

The problem with object code is that since it is unintelligible to human beings and is not intended as a medium of communication to human beings, some case law has denied, and some legal commentators have argued against, copyright protection for object code. Artic argued that since its chips contained only object code they could not be deemed copies for infringement purposes.

b. an expansive reading of “copy”

The Williams court refused to follow this trend and opted instead for an expansive reading of “copy” under the Copyright Act as applied

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45. Id.
46. See supra note 8.
47. 685 F.2d at 876. Artic also raised the argument that ROMs are utilitarian objects and are therefore not copyrightable. The Williams court concluded that it is not the ROM itself that is the subject of the copyright but the program and audiovisual display that are embodied in the chips. Id. at 874-75.
48. Id. at 876-77 n.7-8.
49. Id.
50. Id.
53. 685 F.2d at 877.
to object code fixed in a ROM.\textsuperscript{54} The court stated that congressional intent called for "an expansive interpretation of the terms "fixation" and "copy" which encompass technological advances such as those represented by the electronic devices in this case."\textsuperscript{55} The court, in effect, conferred copyright status to object code contained in ROM.\textsuperscript{56}

\section*{D. Conclusion}

It appears clear then, that despite the apparent absence of a fixed audiovisual display, and despite the presence of ROMs containing object code programs, video game manufacturer's will continue to obtain and enforce audiovisual and program copyrights.

The question now becomes: What is the scope of video game audiovisual copyrights? That is, what specific subject matter depicted in the audiovisual display of a video game will be copyrightable?

\section*{III. The Scope of Video Game Audiovisual Copyrights \section*{A. Introduction}}

Although video games have been classified as audiovisual works, the elements and structure of a video game are clearly different from those elements found in the other major member of the audiovisual work category—motion pictures.

Are video games miniature movies? Are they player controlled cartoons? Are they mini-stories with all the customary elements of a literary work such as characters and a plot? Each of these categories have become associated with its own set of analytic concepts for determining whether there has been a copyright infringement.\textsuperscript{57}

\begin{itemize}
\item The Seventh Circuit has recently distinguished Apple by emphasizing that Apple dealt solely with computer programs and not with audiovisual works fixed in computer programs. Midway Mfg. Co. v. Artic Int'l, Inc., No. 82-1607, slip op. (7th Cir. 1983) (available June 16, 1983, on LEXIS, PATCOP Library, Cases file). While this is an accurate assessment as to the copyrightability of audiovisual displays, it begs the question raised in Williams of the separate copyrightability of video game programs as embodied in ROM. It will be interesting to see how this conflict between Tandy and Williams on one hand and Apple on the other develops. In any event, audiovisual displays would be copyrightable even if the underlying programs were not. Stern Elecs., Inc. v. Kaufman, 669 F.2d 852, 857 (2d Cir. 1982).
\item 685 F.2d at 877 n.8 and accompanying text.
\item Id.
\item See generally Berman & Boxer, Copyright Infringement of Audiovisual Works and Characters, 52 S. Cal. L. Rev. 315 (1979).
\end{itemize}
As we will soon see, the courts have borrowed concepts from both motion picture and literary copyright analysis in order to ferret out the protectable from the non-protectable in video games.58

Further, the specific procedural framework that the circuit courts have developed for applying these concepts will be shown to determine whether the concepts are applied at all. That is, certain versions of what has been termed the “bifurcated test of substantial similarity” will be shown to, in effect, prevent the trier of fact from separating the protectable from the non-protectable in their determination of whether the plaintiff has copied from the defendant’s work.59

B. Copying, Substantial Similarity, and The Ordinary Observer Test

As was seen in the instances of blatant, identical copying, a prima facie case of copyright infringement can be made out when the plaintiff shows that he has satisfied the ownership and registration requirements of the Copyright Act and that a requisite “copying,” demonstrated by the virtually identical audiovisual displays, has occurred.60

“Copying,” however, is not as easily shown when the allegedly infringing game is not virtually identical to the copyrighted game.61 When an infringing game is not virtually identical to the copyrighted game, the plaintiff must rely on circumstantial evidence to establish a sufficient copying.62 Circumstantial evidence sufficient to sustain a finding of copying in the video game context is produced when the plaintiff proves that the defendant had access to the original game and that the two games are “substantially similar.”63

This is where things get muddy—but interesting. The traditional test for determining substantial similarity, variously known as the “ordinary observer” or “audience test,”64 is whether an ordinary observer’s spontaneous and immediate reaction to the works, “without any aid or suggestion or critical analysis by others” would lead him to conclude that the copy constitutes an improper appropriation of the copyrighted work.65

The traditional ordinary observer test is based on a reasonable

58. See infra notes 71-90 and accompanying text.
59. See infra notes 108-16 and accompanying text.
60. See supra note 7 for a list of cases.
61. See supra note 9 for a list of cases.
63. Id.
65. Harold Lloyd Corp. v. Witner, 65 F.2d 1, 18 (9th Cir. 1933).
fear. The fear is, that if the trier of fact hears expert testimony or evidence that analytically dissects or lists the dissimilarities of the works, spontaneity will be lost. Without spontaneity the trier of fact will be guided more by the disparities that he would otherwise be disposed to overlook than by the overall "concept and feel of the work."\textsuperscript{66}

Professor Nimmer has indicated however that "unfortunately, there will be numerous instances when the ordinary observer is simply not capable of detecting real appropriation without first making a critical comparison of the two works."\textsuperscript{67} Moreover, this formulation of the ordinary observer test gives insufficient emphasis to the fact that a single work may contain a combination of protectable and non-protectable elements.\textsuperscript{68} The term "mixed work" will be used to describe this hybrid of protectable and non-protectable elements.

This "critical comparison" that Professor Nimmer refers to has come to describe not only the dissection and analysis that occurs in examining the clearly protectable elements of a work,\textsuperscript{69} but also to the dissection and analysis that occurs in the application of such copyright concepts as the "idea-expression dichotomy," "sc\'enes à faire," and the "idea-expression unity"—copyright concepts which separate the protectable from the non-protectable elements of a copyrighted work.\textsuperscript{70}

In both instances, the "critical comparison" involves a level of analysis and dissection which seems at first blush inimical to the spontaneity demanded by the traditional ordinary observer test. Instead, as we will see, copyright theory demands that the ordinary observer be allowed to balance analysis and dissection against spontaneity during a substantial similarity determination.

It is this effort to achieve a critical balance between analysis and spontaneity that should be at the heart of the substantial similarity test.

First, we will take a closer look at some of the concepts that are essential to copyright analysis. Next, we will look at the current state of the substantial similarity test, and determine whether any of the circuit courts have achieved the critical balance between spontaneity and analysis.

\textsuperscript{66} 3 M. Nimmer, \textit{supra} note 64, at § 13.03[E][2]. \textit{See also} Peter Pan Fabrics, Inc. v. Martin Weiner Corp., 274 F.2d 487, 489 (2d Cir. 1960).

\textsuperscript{67} 3 M. Nimmer, \textit{supra} note 64, at § 13.03[E][2] (emphasis added).

\textsuperscript{68} \textit{See infra} notes 115-16, and accompanying text.

\textsuperscript{69} \textit{See M. Nimmer, \textit{supra} note 66.}

\textsuperscript{70} \textit{See Midway Mfg. Co. v. Bandai-America, Inc., 546 F. Supp. 125, 138-39 (D. N.J. 1982); \textit{See also id. at 153 n.40.}
C. Isolating the Protectable Elements

Before the trier of fact can make a substantial similarity analysis as to the appropriation of protectable elements they must understand three concepts that go to the heart of video game copyright law: the idea-expression dichotomy; the idea-expression unity; and scènes à faire.

1. The Idea-Expression Dichotomy

The idea-expression dichotomy is another way of stating the axiom that copyright law protects the expression of ideas, and not ideas themselves. For example, anyone is free to draw and publish their own conception of what a mouse should look like. Copyright does not protect the idea of "mouse." "If the only similarity between plaintiff's and defendant's works is that of the abstract idea, there is an absence of substantial similarity and hence no infringement results." Copyright law will however protect the original, creative, and artistic expression that produced "Mickey Mouse."

Every video game can be explained in abstract terms. PAC-MAN is in simple, abstract terms, a maze game involving pursuit char-

72. 672 F.2d at 615.

There is no litmus paper test by which to apply the idea-expression distinction; the determination is necessarily subjective. As Judge Learned Hand said, "obviously, no principle can be stated as to when an imitator has gone beyond copying the 'idea', and has borrowed its 'expression.' Decisions must therefore inevitably be ad hoc." Peter Pan Fabrics, 274 F.2d at 489. Courts and commentators nevertheless have developed a few helpful approaches. In Nichols v. Universal Pictures Corp., 45 F.2d 119, 121 (2d Cir. 1930), cert. denied, 282 U.S. 902 (1931), Judge Hand articulated what is now known as the "abstractions test":

Upon any work . . . a great number of patterns of increasing generality will fit equally well, as more and more of the incidents will fit equally well, as more and more of the incidents are left out. . . . [T]here is a point in this series of abstractions where they are no longer protected, since otherwise the playwright could prevent the use of his "ideas," to which, apart from their expression, his property is never extended. Nobody has ever been able to fix that boundary, and nobody ever can. . . .

As respects plays, the controversy chiefly centers upon the characters and sequence of incident, these being the substance. (citations omitted). This "test" has proven useful in analyzing dramatic works, literary works, and motion pictures, where the recurring patterns can readily be abstracted into very general themes.
acters and a main character that tries to accumulate points by gobbling up dots. "Asteroids" is a spaceship versus spaceship war game with meteor obstacles thrown in for dramatic effect. These are the ideas behind the games and as such are in the public domain. In *Atari, Inc. v. Williams Electronics, Inc.* the District Court for the Eastern District of California indicated:

> There is nothing protectable under the copyright laws as to the "Pac-Man" game itself, and the laws do not protect the strategy of a player symbol being guided through a maze appearing to gobble up dots in its path while being chased through the maze by several opponents. Further, the unprotectable idea includes the rules, strategy, and progress of play of the "Pac-Man" game.\(^7\)

While ideas are not copyrightable, particular expressions of video game ideas are. A case in point is *Midway Manufacturing Co. v. Dirkschneider.* In *Midway* the court found that Midway Manufacturing Co's copyright on the video game "Galaxian" was not an attempt to monopolize the "very idea of a video-game in which alien ships break away from a convoy to attack a defender ship."\(^7\)

The court found that Galaxian was an audiovisual expression of various game ideas. The expression included the distinctive color and design of the space ships and other players, as well as the sounds that accompanied the playing of the game.\(^8\)

2. The Idea-Expression Unity

The "idea-expression unity" rule dictates that where the idea and expression of the idea are indistinguishable, a copyright will only provide protection against identical copying.\(^8\) The frequently cited example involved a plaintiff who held a copyright on a pin, encrusted with jewels, and made in the shape of a bee. Any expression of the idea of a bee pin would result in a piece of jewelry where the idea and expres-

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\(^7\) A further refinement of the "abstractions test" termed the "patterns test", was developed by Professor Chafee in Chafee, *Reflections on the Law of Copyright*, 45 Colum. L. Rev. 503 (1945).


\(^7\) \(\text{Id.}\) at 17,386.


\(^7\) \(\text{Id.}\) at 480.

\(^7\) \(\text{Id.}\) at 480.

\(^8\) Herbert Rosenthal Jewelry Co. v. Kalpakian, 446 F.2d 738 (9th Cir. 1971); see also N. Boorstyn, *supra* note 8, at § 10:14.
sion are virtually indistinguishable. Since the expression of a bee pin provides nothing new or additional over the idea of a bee pin, any expression of the idea would necessarily produce a substantially similar expression.82

The idea-expression unity rule was considered and found inapplicable in *Atari, Inc. v. Amusement World, Inc.* 83 Atari sought to enjoin the manufacture and distribution of "Meteors" a game which Atari claimed had its inspiration in Atari's game, "Asteroids."84 Both games involve a player commanded spaceship that tries to maneuver around meteors and enemy ships.85 The court found that the idea of a video game in which the player shoots his way through a barrage of space rocks is an idea that is sufficiently general as to permit more than one form of expression. Atari's "Asteroids" audiovisual copyright was therefore not limited to protection against identical copying only.86

3. *Scènes à Faire*

The third copyright concept which the trier of fact may consider in making a substantial similarity determination is that of *scènes à faire*.87 *Scènes à faire* is a concept from the context of literary copyrights and refers to "incidents, characters, or setting which are as a practical matter indispensable, or at least standard, in the treatment of a given topic."88

82. 446 F.2d 738.
84. Id. at 224.
85. Id.
86. Id. at 229.
87. Although there has been some recent criticism of the *scènes à faire* doctrine, Note, *Copyright Infringement: An Argument for the Elimination of the Scenes a Faire Doctrine*, 5 Comm/Ent L.J. 147 (1982), the *scènes à faire* doctrine is particularly well suited to separating the protectable from the non-protectable elements in games in general, and video games in particular. *Atari, Inc. v. Amusement World, Inc.*, 547 F. supp. 222, 228-29 (D. Md. 1981).

In applying the *scènes à faire* doctrine to game rules the First Circuit Court of Appeals in *Morrissey v. Procter & Gamble Co.*, 379 F.2d 675, 678-79 (1st Cir. 1967) noted:

> When the uncopyrightable subject matter is very narrow, so that the "topic necessarily requires, if not only one form of expression, at best only a limited number, to permit copyrighting would mean that a party or parties, by copyrighting a mere handful of forms, could exhaust all possibilities of future use of the substance. In such circumstances it does not seem accurate to say that any particular form of expression comes from the subject matter. However, it is necessary to say that the subject matter would be appropriated by permitting the copyrighting of its expression. We cannot recognize copyright as a game of chess in which the public can be checkmated.

*See also* Affiliated Hospital Products, Inc. v. Merdel Game Manufacturing Co., 513 F.2d 1183, 1188-89 (2d Cir. 1975); Durham Industries, Inc. v. Tomy Corp., 630 F.2d 905, 914-15 (2d Cir. 1980).

For example, the following incidents would not be copyrightable in mystery novel: The butler as the one-who-did-it; a bumbling detective; chase scenes; a group confrontation scene where all the suspects are brought together for the final showdown.\textsuperscript{89}

In \textit{Amusement World}, for example, the court found that the similar expressions simply could not be avoided in any version of the basic idea of a video game in which a player fights his way through space rocks and enemy spaceships.\textsuperscript{90}

4. Putting It All Together

Illustrating all three concepts is \textit{Atari, Inc. v. North American Philips Consumer Electronics Corp.}\textsuperscript{91} Atari, Inc. and Midway Manufacturing sought to enjoin North American from distributing a PAC-MAN look alike, K.C. Munchkin. Both PAC-MAN and K.C. Munchkin involve maze games where the central player controls characters that try to consume as many “dots” and “pursuit characters” as possible before the central character is himself consumed by pursuit characters.\textsuperscript{92}

The court found that the idea behind PAC-MAN was that of a primarily unprotectible maze game. The idea behind PAC-MAN is not copyrightable.\textsuperscript{93} But unlike the bee pin, PAC-MAN may be accorded copyright protection because the idea of PAC-MAN and the expression of PAC-MAN are distinguishable.\textsuperscript{94} The games shapes, sizes, colors, and sounds add something new and additional over the abstract idea of a maze game.\textsuperscript{95} PAC-MAN therefore was not limited by the idea-expression unity rule which would have limited copyright protection to virtually identical copying only.\textsuperscript{96}

In PAC-MAN, while the maze design, scoring table, and dots were sufficient expressions to fall outside the idea-expression unity rule, the court found that they were such standard game devices that they should be treated as \textit{scènes à faire} and would receive protection from


\textsuperscript{91} 672 F.2d 607, 616 (7th Cir. 1982), cert. denied, 103 S. Ct. 176 (1982).

\textsuperscript{92} Id. at 610-13.

\textsuperscript{93} Id. at 617.

\textsuperscript{94} Id.

\textsuperscript{95} Id.

\textsuperscript{96} Id.
virtually identical copying only.97

The aspects of PAC-MAN that are not scènes à faire are PAC-MAN, the pursuit ghosts, the special sounds used to accompany the characters movements, and the special movements of the characters. The characters are wholly fanciful and their use does not inevitably flow from the concept of a maze chase game.98

K.C. Munchkin was substantially similar to PAC-MAN. The Munchkin gobbler had the same relative size as PAC-MAN. It had the same V-shaped mouth and distinctive gobbling action accompanied by sounds. The pursuit ghosts were virtually identical to the PAC-MAN counterparts. Finally, the court observed that in the capture sequence, "both games, moreover, express the role reversal and 'regeneration' process with such similarity that an ordinary observer could conclude only that North American copied plaintiff's PAC-MAN."99

D. Modifications of the Ordinary Observer Test: The Circuit Breakdown

Responding to the inadequacies of the traditional ordinary observer test, at least three federal circuits have formulated their own tests of substantial similarity. Each test is an attempt to reconcile the need for a spontaneous ordinary observer—undistracted by "any particular impressions of similarity found by examining the two works"101—with the analytic concepts which have been developed to separate out the protectable from the non-protectable elements of a given work.102

1. Arnstein v. Porter: Introducing the Bifurcated Test

The first major modification of the non-analytic ordinary observer test was made by the Second Circuit in Arnstein v. Porter.103 Arnstein's bifurcated test of substantial similarity attempted to retain the spontaneity of the ordinary observer test while allowing for analysis and dissection by dividing the issue of substantial similarity into two separate elements.104

If there is evidence of access and similarities exist, then

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97. Id.
98. Id. at 617-18.
99. Id.
100. See supra notes 67-68 and accompanying text.
101. See supra note 66.
102. See supra notes 71-90 and accompanying text.
103. 154 F.2d 464 (2d Cir. 1946).
104. See 3 M. Nimmer, supra note 64, at § 13.03[E][3].
the trier of fact must determine whether the similarities are sufficient to prove copying. On this issue, analysis (‘dissection’) is relevant, and the testimony of experts may be received to aid the trier of fact. . . . If copying is established, then only does there arise the second issue, that of illicit copying (unlawful appropriation). On that issue . . . the response of the ordinary lay hearer (or observer), accordingly, on that issue, dissection and expert testimony is irrelevant.105

One problem with the original Arnstein formulation was that it did not explain the difference between “copying” and “illicit copying.” The Second Circuit later indicated that illicit copying is “merely an alternative way of formulating the issue of substantial similarity.”106 This circularity of language was finally interpreted as evidence of the Second Circuit's merger of the Arnstein bifurcated test into a single pronged lay-ordinary observer test for substantial similarity.107

Still, the present Second Circuit test seemingly goes beyond the traditional ordinary observer test by implicitly allowing the trier of fact to apply dissection and analysis in service of separating the protectable ideas from the non-protectable expressions.108

Despite the seeming demise of the bifurcated test in the Second Circuit, modified versions of the Arnstein two-step live on in the Ninth and Third Circuits.

2. The Ninth Circuit Test

The Ninth Circuit Court of Appeals, in Sid & Marty Krofft Television Productions, Inc. v. McDonald's Corp.109 created a bifurcated test based upon the idea-expression dichotomy.110

Under Krofft, the first step, termed the “extrinsic test,” is to determine whether the general ideas contained in the two works are substantially similar.111 The test is termed “extrinsic” because the determination turns “not on the responses of the trier of fact, but on

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105. 154 F.2d at 468.
106. Ideal Toy Corp. v. Fab-Lu, Ltd., 360 F.2d 1021 (2d Cir. 1966).
109. 562 F.2d 1157 (9th Cir. 1977): hereinafter cited as Krofft.
110. Id. at 1164.
111. Id.
specific criteria which can be listed and analyzed." It must be emphasized, however, that it is only idea similarity that is in issue under the extrinsic test.

The second step under Krofft, termed the "intrinsic test," focuses on the protectable elements of the work—the expressions. The question under the "intrinsic test" is whether an ordinary observer, without the aid of expert testimony, analysis, or dissection, would decide that "there is substantial similarity in the expressions of the ideas so as to constitute infringement." The intrinsic test has been appropriately termed the "gut-reaction" test. The second prong of the Krofft test is basically the traditional non-analytic ordinary observer test.

As we will see, under the ordinary observer prong of the Ninth Circuit's Krofft test, the trier of fact is unnecessarily limited to a non-analytic "gut-response" which limits the trier of fact's ability to make an informed decision as to the substantial similarity of protectable elements.

This flaw in the Krofft test becomes especially apparent once it is realized that video game displays are "mixed works." A single video display will contain a mixture of protectable and non-protectable elements. Non-protectable elements such as scoring tables and mazes will be mixed in with protectable elements such as cartoon characters and specific character movements.

Further, the Krofft analysis does not allow for the fact that video game displays are similar to movies in that it would be impossible for
the court to make a preliminary separation of the expressions from the ideas, and then allow the trier of fact to consider only the expressions. This separation would destroy the essential character of the audiovisual work—a character which is determined by the interaction of the separate aural and visual elements.118

3. The Third Circuit Test

The Third Circuit in *Universal Athletic Sales Co. v. Salkeld*,119 while not basing its bifurcated test on the idea-expression dichotomy, retained the separation of analytic and non-analytic review.120 In the first step the trier of fact may resort to analysis and dissection to determine whether the defendant has copied the plaintiff’s work.121 In the second step, the trier of fact must “concentrate upon the gross features rather than an examination of minutiae” to determine whether “the copying went so far as to constitute improper appropriation.”122 Under *Universal*, both elements involve a finding of substantial similarity;123 the main difference between the two forms of substantial similarity being the extent to which analysis is permitted.124

Recently, the Third Circuit, in *Midway Manufacturing Co. v. Bandai-America, Inc.*,125 recognized and articulated the need for dissection and analysis under both prongs of its bifurcated test. In other words, the Third Circuit has recognized that a pure “gut-reaction” or non-analytic ordinary observer test is both practically and theoretically unworkable. “Although dissection is disfavored on the issue of substantial similarity going to appropriation, the ordinary observer test

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120. See id. at 907.
121. Id.
122. Id. at 908-09.
123. Id. at 907.
124. Id. at 907-09. After stating that “when attempting to demonstrate improper appropriation via the second form of substantial similarity, however, dissection and expert testimony are irrelevant,” the court goes on to itself analyze and dissect the works in question. Id. at 908-09. As was finally articulated in *Midway Mfg. Co. v. Bandai-America, Inc.*, 546 F. Supp. 125, 153 n.40 (D. N.J. 1982), the court was implicitly advancing a balancing test where the trier of fact may analyze and dissect in the second prong of the test. When the trier of fact actually decides whether there is an appropriation they must decide spontaneously, qua ordinary observer. While psychologically this may be a subtle test to apply, it is the only test that appears consistent with copyright theory. See infra notes 123-28 and accompanying text.
must descend into details where necessary to distill the protectable elements from the work." 126

In Bandai-America the Third Circuit reviewed the influence of Universal and expressed its awareness of the subtle balancing act that is required in a determination of substantial similarity:

In the Universal Athletic case, the Third Circuit was dealing solely with the type of substantial similarity which goes to the appropriation issue since it accepted the district court's finding that there had been copying. The Third Circuit noted that it was "difficult to explain all the points of similarity and dissimilarity between the works without going into great detail." Presumably, going into such details would be impermissible on this branch of the substantial similarity inquiry. This quote and the one above perhaps indicate the Third Circuit's awareness that its decision puts a trial court in the very delicate position of having to identify sufficiently similarities between two works to justify a finding of appropriation without simultaneously making the identification impermissably detailed so as to constitute forbidden "dissection". Perhaps the Third Circuit's teaching in this connection is simply, as it states, that a court should focus upon the gross features rather than examine minutiae when determining substantial similarity for appropriation purposes. This court will proceed on the assumption that this is the ultimate meaning of the Universal Athletic case and will attempt to walk the fine line between the permissable and impermissable in its comparison of the works before it. The delicacy of this inquiry is compounded by the fact that numerous courts have observed, determinations of copyright infringement are largely made on an ad hoc basis, the test for infringement necessarily being vague and seemingly arbitrary. 127

While the Third Circuit has yet to explicitly renounce the artificial separation of analytical dissection from spontaneity under its ordinary observer test, it has done so implicitly. The Third Circuit has come the closest to adopting an ordinary observer test that consciously balances the importance of critical analysis and dissection of protectable and non-protectable elements against the importance of spontaneity and

127. Id. at 138 (citations omitted, emphasis added).
the overall feel of a work.\textsuperscript{128}

\textbf{E. Practical Consequences of the Circuit Split: "Gut-Reactions" versus the "Balancing Test"}

The critical question posed by the circuit split is not whether a bifurcated test is preferable to a single-pronged ordinary observer test. Although the choice of a single-pronged test over a bifurcated test will have certain procedural consequences,\textsuperscript{129} this factor will not in itself be determinative of whether a trier of fact will be reasonable in its finding of substantial similarity—or lack thereof.

What \textit{is} determinative, is whether the trier of fact is afforded the opportunity to consider the protectable expressions separately from the non-protectable ideas of the work.

The test for predicting whether a given work will be found substantially similar to another work under a balancing approach to the ordinary observer test which appears to be most faithful to both spontaneity and copyright theory appears to be this: Describe the game in as abstract terms as possible. This process will define the abstract, non-protectable idea which will serve as the basis for producing the expressions. In PAC-MAN it was the idea of a maze chase. Next, consider only those expressions which are not essential to the expression of this type of game or video games in general. The inevitable expressions, the \textit{scènes à faire}: score-keeping devices and maze designs for example—must be virtually identical in the two games to sustain a finding of substantial similarity.

Once the non-essential expressions are isolated in the minds of the trier of fact, then these distilled expressions may serve as the basis for a determination of substantial similarity or lack thereof. These expressions are the residue that the trier of fact may then focus on and react to in as spontaneous a manner as is psychologically possible while at the same time remaining conscious of the distinction between the protectable and non-protectable elements of the work. During this entire

\textsuperscript{128} While not specifically articulating the need for a balancing test, the Seventh Circuit has recognized the necessity of dissection during the ordinary observer test:

\begin{quote}
When the alleged infringing work is not a duplicate of the copyrighted work, a determination of whether protected elements have been taken requires a close analysis of differences and similarities between the two works. E. Kitch \& H. Perlman, Legal regulation of the Competitive Process 665 (2d Ed. 1979). This type of analysis often is necessary to reach a general, subjective conclusion regarding substantial similarity.
\end{quote}

\textsuperscript{129} See 3 M. Nimmer, \textit{supra} note 64, at § 13.03[E][3].
process the trier of fact must remember that while their conclusion should be based on the work as a whole, it is the "total concept and feel" of the protectable elements only that must be dispositive of whether the works are substantially similar.

It would follow from a balancing test that a game which modified the scènes à faire elements of PAC-MAN to avoid a charge of identical copying, and completely changed the cast of characters, sounds and characteristic movements of the characters would not be found to infringe on the PAC-MAN audiovisual copyright. While similarities between the two game's scènes à faire elements would be striking, the jury would be made sufficiently aware of the non-protectable elements of the display so that their conclusions would be based principally upon a consideration of the protectable expressions—the non-substantially similar characters, movements, and sounds.

A trier of fact who had been instructed to balance the analytical separation of expressions from ideas against the need for spontaneity would properly conclude that the works were not substantially similar.

Under the same facts, the trier of fact in a court that does not allow for analysis during the ordinary observer examination would be inclined to find infringement even in those instances where the only appropriation has been an appropriation of non-protectable elements such as scènes à faire.

Essentially, a bifurcated or single-pronged test that recognizes the importance of a balance between "spontaneity" and "analysis" during the ordinary observer examination is essential to the substantial similarity analysis. Otherwise, conceptual consistency is lost.

F. Conclusion

If the trier of fact ever gets to examine the works,131 he must be made aware of the fact that the display may contain non-protectable elements such as scènes à faire. The trier of fact is under a duty to make his assessment of the work based on a consideration of the protectable elements of the work as distilled from the non-protectable elements. As recognized by the Third Circuit, this will invariably require some dissection and analysis. It may even require an enumeration of the protectable elements as contrasted with the non-protectable.

Under any other test, a finding of substantial similarity may be

130. See Roth Greeting Cards v. United Card Co., 429 F.2d 1106, 1110 (9th Cir. 1970).
131. See supra note 111.
based more on a "gut-response" to the work's non-protectable elements than on a subtle balancing of the protectable against the non-protectable. Further, the balancing should be conducted in such a way that it remains clear to the trier of fact that analysis should not outweigh spontaneity. The subtle balancing and analytic sophistication required by this version of the ordinary observer test cannot be an excuse for a court's failure to recognize the practical and logical consistency of such a balancing test.

Now can I have some more quarters?