

# Nonobviousness as an Element of Copyrightability? (Or, Is the Jewel in the Lotus a Cubic Zirconia?)

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## INTRODUCTION

In late June 1990, Judge Robert E. Keeton of the United States District Court for the District of Massachusetts decided a case that is certain to become one of the most important in computer copyright jurisprudence, *Lotus Development Corp. v. Paperback Software International*.<sup>1</sup> In his opinion Judge Keeton summarized the development of computer copyright litigation in the United States. He also articulated what he interpreted to be the fundamental principles of copyright as they apply to computer software. The opinion provided a reasoned and scholarly jurisprudential blueprint for resolving a number of computer copyright issues. The *Lotus* decision, however, espoused one doctrine which, if followed, threatens to change copyright law in a manner that could undermine many of the advances that artists, authors, and computer programmers have won through statutory changes. These changes include the 1976 Copyright Act,<sup>2</sup> the Berne Implementa-

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<sup>1</sup> 740 F. Supp. 37 (D. Mass. 1990).

<sup>2</sup> The 1976 Copyright Act, Pub. L. No. 94-553, title I, 90 Stat. 2541 (codified as amended in scattered sections of 17 U.S.C. (1988 & Supp. I 1989)) [hereafter 1976 Act], took effect on January 1, 1978, culminating more than twenty years of legislative efforts. The prior law, the 1909 Copyright Act, Act of Mar. 4, 1909, ch. 320, 60 Stat. 1075 (codified as 17 U.S.C. by the Act of July 30, 1947, ch. 391, 61 Stat. 652), had fallen out of step with the copyright protection afforded in many other countries

tion Act,<sup>3</sup> and the Visual Artists Rights Act.<sup>4</sup>

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throughout the world. The 1976 Act favors authors, artists, and computer programmers in many ways. For example, under the 1976 Act: (1) copyright protection, as a general rule, lasts for the author's lifetime plus an additional fifty years thereafter, 17 U.S.C. § 302(a); (2) authors have the right to terminate any transfer of copyright ownership after thirty-five years, 17 U.S.C. § 203(a)(3); (3) United States copyright protection is based on a unified body of federal law (i.e., the 1976 Act), and current federal law now preempts any copyright-equivalent protections that states and the common law had provided prior to the 1976 Act, 17 U.S.C. § 301(a); and (4) copyright is now considered a "bundle of rights" rather than an indivisible whole. H.R. REP. NO. 1476, 94th Cong., 2d Sess. 61 (1976), *reprinted* in part in 17 U.S.C. § 106 (1988), Historical and Revision Notes [hereafter HOUSE REPORT].

<sup>3</sup> On October 31, 1988, President Reagan signed the Berne Convention Implementation Act, which became effective on March 1, 1989. Pub. L. No. 100-568, 102 Stat. 2853 (codified as amended in scattered sections of 17 U.S.C. (1988)). The United States thus became the eightieth Berne Convention signatory. This new law abolished the notice requirements in the 1976 Act. The notice requirements had mandated that three things appear on all visually perceptible copies of an author's work: (1) either the copyright symbol (©), the word "Copyright," or the abbreviation "Copr."; (2) the year of the work's first publication; and (3) the author's name. 17 U.S.C. § 401(b)(1) (1988); *compare* 17 U.S.C. § 401(a) (1988) (stating that "a notice of copyright as provided by this section *may* be placed on publicly distributed copies") (emphasis added) *with* 17 U.S.C. § 401(a) (1982) (stating that "a notice of copyright as provided by this section *shall* be placed on *all* publicly distributed copies") (emphasis added).

Under the Berne Convention, notice appearing on copies of the work remains helpful to persons seeking to enforce copyright through litigation. The new section 401(d) provides:

If a notice of copyright in the form and position specified by this section appears on the published copy or copies to which a defendant in a copyright infringement suit had access, then no weight shall be given to such a defendant's interposition of a defense based on innocent infringement in mitigation of actual or statutory damages . . . .

17 U.S.C. § 401(d).

Even under the new law, however, a United States citizen must register a copyright prior to filing suit for copyright infringement. A registration certificate still stands as *prima facie* evidence of a valid copyright in infringement litigation. 17 U.S.C. § 410(c). Lastly, a plaintiff may still recover statutory damages and attorneys' fees from a defendant if the plaintiff has registered the work within three months after its first publication. 17 U.S.C. § 412.

<sup>4</sup> Visual Artists Rights Act, Pub. L. No. 101-650, 104 Stat. 5089, title VI (codified in scattered sections of 17 U.S.C. (1990)). For over one hundred years, many European countries have recognized the concept of *droit moral*,

In the midst of his discussion of the copyrightability of computer programs, Judge Keeton addressed the idea-expression dichotomy.<sup>5</sup> He formulated an analysis for determining copyrightability that involves four distinct component concepts:

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an artist's rights of integrity, attribution, disclosure, and withdrawal. For an excellent introduction to this concept see Dan Rosen, *Artists' Moral Rights: A European Evolution, An American Revolution*, 2 CARDOZO ARTS & ENT. L. J. 155 (1983); see also Edward J. Damich, *A Critique of the Visual Artists Rights Act of 1990*, 14 NOVA L. REV. 407 (1990); Robert A. Gorman, *Federal Moral Rights Legislation: The Need for Caution*, 14 NOVA L. REV. 421 (1990); John H. Merryman, *The Refrigerator of Bernard Buffet*, 27 HASTINGS L.J. 1023 (1976); Jack A. Cline, Note, *Moral Rights: The Long and Winding Road Toward Recognition*, 14 NOVA L. REV. 435 (1990).

Moreover, on December 1, 1990, President Bush signed the Visual Artists Rights Act of 1990, which became effective June 1, 1991. This act amends the 1976 Act by securing some moral rights for authors. Specifically, this act provides that an author of a work of visual art:

- (1) shall have the right —
  - (A) to claim authorship of that work, and
  - (B) to prevent the use of his or her name as the author of any work of visual art which he or she did not create;
- (2) shall have the right to prevent the use of his or her name as the author of the work of visual art in the event of a distortion, mutilation, or other modification of the work which would be prejudicial to his or her honor or reputation; and
- (3) . . .
  - (A) to prevent any intentional distortion, mutilation, or other modification of that work which would be prejudicial to his or her honor or reputation, and any intentional distortion, mutilation, or modification of that work is a violation of that right, and
  - (B) to prevent any destruction of a work of recognized stature, and any intentional or grossly negligent destruction of that work is a violation of that right.

Pub. L. No. 101-650, § 603(a), 104 Stat. 5089, 5128-29 (codified at 17 U.S.C. § 106A (1990)). See also Edward J. Damich, *The Visual Artists Rights Act of 1990: Toward a Federal System of Moral Rights Protection for Visual Art*, 39 CATH. U. L. REV. 945 (1990); Jane C. Ginsburg, *Copyright in the 101st Congress: Commentary on the Visual Artists Rights Act and the Architectural Works Copyright Protection Act of 1990*, 14 COLUM.-VLA J.L. & ARTS 477 (1990).

<sup>5</sup> *Lotus*, 740 F. Supp. at 53-59. In *Baker v. Selden*, 101 U.S. 99 (1879), the United States Supreme Court held that copyright law protects an author's descriptions of an idea but not the idea itself. *Id.* at 104 ("[T]heir essence consists only in their statement. This alone is what is secured by the copyright."). This principle has become axiomatic in United States copyright law. It is now codified in the 1976 Act, which provides: "In no case does copyright protection for an original work of authorship extend to any idea, procedure, process, system, method of operation, concept,

originality, functionality, obviousness, and merger.<sup>6</sup> Using these concepts as a foundation, he then derived a doctrinal model for deciding whether any given manifestation that is fixed in a tangible medium of expression<sup>7</sup> constitutes an uncopyrightable idea, an uncopyrightable expression, or a copyrightable expression.<sup>8</sup> Keeton's doctrinal model, the new "*Lotus* Idea-Expression Test," is a useful model that should provide much needed guidance for the bench and bar in trying to resolve the frequently litigated idea-expression problem. Nevertheless, Judge Keeton's decision departed from copyright precedent in one significant respect: his analysis insisted that an expression must be nonobvious in order to be copyrightable. Such a rule of nonobviousness threatens to elevate the standard of copyrightability higher than is justified under the present statutory framework.

Nine months later, Justice Sandra Day O'Connor, writing for a unanimous court, again raised the issue of nonobviousness as an

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principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work." 17 U.S.C. § 102(b).

Countless cases and articles have discussed the idea-expression problem. See, e.g., *Whelan Assocs., Inc. v. Jaslow Dental Lab., Inc.*, 797 F.2d 1222, 1234 (3d Cir. 1986), *cert. denied*, 479 U.S. 1031 (1987); *Apple Computer, Inc. v. Franklin Computer Corp.*, 714 F.2d 1240, 1252-54 (3d Cir. 1983), *cert. dismissed*, 464 U.S. 1033 (1984); *Sid & Marty Krofft Television Prods., Inc. v. McDonald's Corp.*, 562 F.2d 1157, 1163 (9th Cir. 1977); *Herbert Rosenthal Jewelry Corp. v. Kalpakian*, 446 F.2d 738, 741-42 (9th Cir. 1971); *Nichols v. Universal Pictures Corp.*, 45 F.2d 119, 121 (2d Cir. 1930); *Nash v. CBS, Inc.*, 691 F. Supp. 140, 141 (N.D. Ill. 1988); Amy B. Cohen, *Copyright Law and the Myth of Objectivity: The Idea-Expression Dichotomy and the Inevitability of Artistic Value Judgments*, 66 IND. L.J. 175 (1990); Daniel J. Fetterman, *The Scope of Copyright Protection for Computer Software: Exploring the Idea/Expression Dichotomy*, 36 COPYRIGHT L. SYMP. (ASCAP) 1 (1990); John K. Halvey, *A Rose by Any Other Name: Computer Programs and the Idea-Expression Distinction*, 35 COPYRIGHT L. SYMP. (ASCAP) 1 (1989); Eric W. Petraske, *Non-Protectible Elements of Software: The Idea/Expression Distinction is Not Enough*, 29 IDEA 35 (1988); Edward Samuels, *The Idea-Expression Dichotomy in Copyright Law*, 56 TENN. L. REV. 321 (1989); Peter G. Spivack, Note, *Does Form Follow Function? The Idea/Expression Dichotomy in Copyright Protection of Computer Software*, 35 UCLA L. REV. 723 (1988). See also generally 1 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 2.03[D] at 2-34 to -34.1 (1991) [hereafter NIMMER].

<sup>6</sup> *Lotus*, 740 F. Supp. at 58-59.

<sup>7</sup> Under the 1976 Act, "Copyright protection subsists . . . in original works of authorship fixed in any tangible medium of expression . . ." 17 U.S.C. § 102(a).

<sup>8</sup> *Lotus*, 740 F. Supp. at 59-62.

element of copyrightability in *Feist Publications, Inc. v. Rural Telephone Service Corp.*<sup>9</sup> Unfortunately, *Feist* only added to the confusion rather than resolving it.<sup>10</sup> This Article seeks to clarify the confusion that resulted from the discussions of nonobviousness in *Lotus* and *Feist*.

Part I examines the *Lotus* decision in general.<sup>11</sup> Part I also explores in detail both Judge Keeton's four-part idea-expression analysis and his new doctrinal model for analyzing and resolving the idea-expression question.<sup>12</sup> Finally, Part I reviews precisely what Judge Keeton held to be "obvious" in the *Lotus* case.<sup>13</sup> Part II evaluates Judge Keeton's reliance on *E.H. Tate Co. v. Jiffy Enterprises, Inc.*,<sup>14</sup> the case that he cited for the proposition that nonobviousness is an element of copyrightability.<sup>15</sup> Part III explores the concept of obviousness in patent law, a field of intellectual property related to copyright.<sup>16</sup> Part IV reviews Justice O'Connor's discussion of nonobviousness, creativity, and originality in *Feist*.<sup>17</sup> This Part also considers two possible interpretations of the *Lotus* nonobviousness standard for copyrightability.<sup>18</sup> The Article concludes by recommending that, if courts choose to

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<sup>9</sup> 111 S. Ct. 1282 (1991). *Feist* is not likely to be remembered as a case establishing that nonobviousness is or should be a condition for copyrightability. Instead it will be remembered as the case that overturned the "sweat of the brow" or "industrious collection" doctrine in copyright law. For many years, the sweat of the brow doctrine had stood for the proposition that one's right to secure a copyright in a compilation is based on the effort that went into collecting the information, rather than whether the materials collected consist in whole or in part of materials in the public domain or otherwise evidence either literary skill or originality. See *Jeweler's Circular Publishing Co. v. Keystone Publishing Co.*, 281 F. 83, 88 (2d Cir. 1922), *cert. denied*, 259 U.S. 581 (1921) (cited in *Feist*, 111 S. Ct. at 1291, as the classic statement of the doctrine). See also *Leon v. Pacific Tel. & Tel. Co.*, 91 F.2d 484 (9th Cir. 1937) (putting together and publishing a telephone directory is an expensive and complicated endeavor that requires ingenuity, skill, and research; those who produce such a work are entitled to copyright protection based on the effort and skill expended in their endeavor); NIMMER, *supra* note 5, § 3.04 at 3-22.

<sup>10</sup> See *infra* notes 175-201 and accompanying text.

<sup>11</sup> See *infra* notes 19-63 and accompanying text.

<sup>12</sup> See *infra* notes 64-91 and accompanying text.

<sup>13</sup> See *infra* notes 84-91 and accompanying text.

<sup>14</sup> 16 F.R.D. 571 (E.D. Pa. 1954).

<sup>15</sup> *Lotus*, 740 F. Supp. at 59; see *infra* notes 92-111 and accompanying text.

<sup>16</sup> See *infra* notes 112-154 and accompanying text..

<sup>17</sup> See *infra* notes 175-201 and accompanying text.

<sup>18</sup> See *infra* notes 202-08 and accompanying text.

embrace nonobviousness as an element of copyrightability, they should equate it with the accepted copyright element, originality.

## I. THE *LOTUS* DECISION

### A. Background

The *Lotus* decision actually concerned the first phase of a copyright infringement case involving two competing computer programs, the plaintiff's "Lotus 1-2-3" (1-2-3) and the defendants' "VP-Planner."<sup>19</sup> The plaintiff, Lotus Development Corporation (Lotus), claimed that the defendants, Paperback Software International and Stephenson Software Limited (referred to collectively as Paperback), had copied both literal and nonliteral elements of 1-2-3.<sup>20</sup> Paperback apparently denied that it had copied any of 1-

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<sup>19</sup> *Lotus*, 740 F. Supp. at 42. Congress defines "computer program" as "a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result." 17 U.S.C. § 101. The National Commission on New Technological Uses of Copyrighted Works (CONTU) recommended that Congress adopt this definition. Congress established CONTU in 1974. Act of Dec. 31, 1974, Pub. L. No. 93-573, title II, 88 Stat. 1873. One of CONTU's tasks was to research the relationship between computers and copyright law and to provide Congress with proposed changes to the 1976 Copyright Act. 88 Stat. 1873 at § 201(c). CONTU issued its Final Report on July 31, 1978. CONTU recommended that Congress include this definition of "computer program" in § 101 of the 1976 Act. In 1980, Congress added CONTU's recommended definition. Act of Dec. 12, 1980, Pub. L. No. 96-517, § 10, 94 Stat. 3015, 3028.

Judge Keeton's opinion divided computer programs into two types: operating systems and application programs. *Lotus*, 740 F. Supp. at 43. He identified both Lotus's and Paperback's programs as application programs, which he defined as "programs that permit a [computer] user to perform some particular task such as word processing, database management, or spreadsheet calculations, or that permit a user to play video games." *Id.* The programs at issue in this case, 1-2-3 and VP-Planner, are called "integrated" application programs because they support other applications such as database management and graphics creation. *Id.*

<sup>20</sup> See *Lotus*, 740 F. Supp. at 43-46. The literal elements of a computer program are those elements written in some form of computer programming language or code. *Id.* at 43. Judge Keeton focused on two types of literal elements; namely, object code and source code. Object code is written in "machine language," the lowest level programming language. It is expressed in binary form (using only zeros and ones), is peculiar to the particular microprocessor and central processing unit being addressed, and can be executed directly by the computer's central processing unit without being translated from its binary expression. *Id.* at 43-44.

Source code is a set of statements or instructions written in a high-level

2-3's literal elements,<sup>21</sup> but admitted that it had modelled VP-Planner's nonliteral elements on 1-2-3's nonliteral elements.<sup>22</sup>

Lotus developed its spreadsheet program in the early 1980s.<sup>23</sup> Its 1-2-3 program was designed to use fully the memory and screen display capacities of IBM's then newly-introduced Per-

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programming language, such as FORTRAN, COBOL, BASIC, or Pascal. Each high-level programming language comprises sets of complex symbolic names and complex syntactical structures that provide greater flexibility than machine language can provide to the person developing the program. A source code program must be translated into object code before it can have any effect on a computer. *Id.* at 44. Whether they are expressed as source code or object code, the literal elements of a computer program fit Congress's definition of "computer program." *See supra* note 19.

Unlike the literal elements of programs, which can be printed on paper, the nonliteral elements of computer programs are not readily represented tangibly. *Lotus*, 740 F. Supp. at 46. The nonliteral elements of computer programs include the overall organization of the program, the structure of its command system, and the presentation of information on the screen. *Id.* As a general rule, courts now recognize that the screen displays of computer programs are copyrightable. *See* *Manufacturers Technologies, Inc. v. Cams, Inc.*, 706 F. Supp. 984, 990-98 (D. Conn. 1989). For more detailed treatments of the copyrightability of screen displays and user interfaces see Michael B. Bixby, *Synthesis and Originality in Computer Screen Displays and User Interfaces: The "Look and Feel" Cases*, 27 WILLAMETTE L. REV. 31 (1991), Gregory C. Damman, *Copyright of Computer Display Screens: Summary and Suggestions*, 17 W. ST. U. L. REV. 31 (1989), Jeffrey R. Benson, Note, *Copyright Protection for Computer Screen Displays*, 72 MINN. L. REV. 1123 (1988), Ginamarie A. Gaudio, Comment, *Manufacturers Technologies, Inc. v. Cams, Inc.—The Legal Fiction Created by a Single Copyright Registration of a Computer Program and its Display Screens*, 65 NOTRE DAME L. REV. 536 (1990), Lawrence M. Kaplan, Note, *Screen Displays Are Proper Subject Matter for Copyright Protection*, 1988 U. ILL. L. REV. 757 (1988), Laurie Z. Kullby, Note, *The Copyrightability of Computer Program Screen Displays*, 10 HASTINGS COMM. & ENT. L.J. 859 (1988), Anastasia Polek, Comment, *Back to the Basics: Copyright Protection for Computer Display Screens*, 2 SOFTWARE L.J. 373 (1988).

Judge Keeton's opinion mentions several different descriptions of nonliteral elements such as the program's "'user interface,'" its "'structure, sequence and/or organization,'" its "'look and feel,'" and its "'total concept and feel.'" *Lotus*, 740 F. Supp. at 55 (citations omitted). Throughout this article, the phrase "nonliteral elements" includes all of these other designations.

<sup>21</sup> *See Lotus*, 740 F. Supp. at 45-46. Although Judge Keeton never directly states either the particular claims that Lotus made or the defendants' responses, the tenor of the opinion and the absence of textual evidence to the contrary support the view that the defendants denied copying any of 1-2-3's source code or object code.

<sup>22</sup> *Id.*

<sup>23</sup> *Id.* at 65-66.

sonal Computer ("PC").<sup>24</sup> Prior to the introduction of 1-2-3, the publishers of VisiCalc, the first commercially successful spreadsheet program for microcomputers, had adapted it for use on the IBM PC without taking advantage of the PC's expanded capabilities.<sup>25</sup> By designing its program with the IBM PC in mind, Lotus was able to capture an enormous share of the spreadsheet software market.<sup>26</sup>

At the same time that Lotus was developing 1-2-3, Dr. James Stephenson, the founder of the defendant Stephenson Software Limited, had reached similar conclusions about the limitations of existing spreadsheet software. He had begun to develop his own spreadsheet program in January 1982.<sup>27</sup> Dr. Stephenson first saw Lotus's 1-2-3 program in operation in February 1983, after he had already completed the initial menu structure for his own program.<sup>28</sup> He continued work on his program throughout 1983 and entered into a publishing agreement with the founder of the defendant Paperback Software International, Adam Osborne, in December 1983.<sup>29</sup>

Paperback continued to work on improving VP-Planner in 1984. By autumn, however, Lotus had established itself as the market leader and Paperback decided that VP-Planner would have to be compatible with 1-2-3 to be commercially successful.<sup>30</sup> Paperback believed that the only way to achieve such compatibility would be to conform the arrangement of menus and the names of commands in VP-Planner to those of 1-2-3.<sup>31</sup> This conformity, Paperback reasoned, would allow those who had created spreadsheets or data files using 1-2-3 to transfer their work to VP-Planner without reformatting the work or retraining themselves to use

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<sup>24</sup> *Id.* at 65-66.

<sup>25</sup> *Id.* at 65. VisiCalc was originally developed for use on the Apple II microcomputer. *Id.* The Apple II had a limited number of assignable function keys on its keyboard as well as limited memory and limited screen display capacity. *Id.* When VisiCalc's publishers rewrote VisiCalc for the IBM PC, they made only minor changes in the program and did little to take advantage of the PC's larger memory, greater screen display capacities, and expanded keyboard. *Id.*

<sup>26</sup> *See id.* at 66.

<sup>27</sup> *Id.* at 68.

<sup>28</sup> *Id.*

<sup>29</sup> *Id.* at 68-69.

<sup>30</sup> *Id.* at 69.

<sup>31</sup> *Id.* (quoting Dr. Stephenson's Affidavit at ¶ 117).



Paperback's program.<sup>32</sup> Consequently, Paperback converted VP-Planner into a program more like 1-2-3 and began marketing it as a "workalike for 1-2-3."<sup>33</sup>

Paperback admitted that it had used the nonliteral elements of 1-2-3 extensively and liberally in developing VP-Planner.<sup>34</sup> It vigorously denied, however, that it had infringed Lotus's copyright. Rather, Paperback insisted that it had merely copied ideas from 1-2-3 and that Lotus's ideas were not copyrightable.<sup>35</sup>

The parties agreed to a phased trial with the first phase being tried to the bench.<sup>36</sup> During the first phase, the court was to resolve two issues of law and fact. First, the court had to determine whether the elements of 1-2-3 that Paperback admitted copying were copyrightable. Only if Paperback copied material that was protectable under the copyright laws could the court find it liable for copyright infringement. In determining the copyrightability issue, the court would thus also determine the second issue to be addressed during the first phase: whether Paperback could, as a matter of law, be liable for copyright infringement.<sup>37</sup> The parties reserved two issues for the jury to determine as matters of fact during the second phase of the trial. First, the jury was to determine whether Paperback copied any protected expression from 1-2-3. Second, the jury was to determine whether Paperback copied either 1-2-3's source code or its object code.<sup>38</sup>

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<sup>32</sup> *Id.*

<sup>33</sup> *Id.* Paperback's instruction manual for VP-Planner stated, "'VP-Planner is designed to work like Lotus 1-2-3, keystroke for keystroke. . . . VP-Planner's worksheet is a feature-for-feature workalike for 1-2-3. It does macros. It has the same command tree. It allows the same kind of calculations, the same kind of numerical information. Everything 1-2-3 does, VP-Planner does.'" *Id.* at 69-70 (quoting VP-Planner manual).

<sup>34</sup> *See id.* at 45-46.

<sup>35</sup> *See id.* For a more in-depth discussion of the noncopyrightability of ideas, see *supra* note 5 and *infra* notes 52, 65, 75-90 and accompanying text.

<sup>36</sup> *Lotus*, 740 F. Supp. at 42.

<sup>37</sup> *Id.*

<sup>38</sup> *Id.* at 42. Paperback admitted that it had copied many of Lotus's nonliteral elements, specifically Lotus's command structure and sequence, and most of 1-2-3's menus. *See id.* at 45-46, 68-69. It also admitted that it had tried to make VP-Planner look as much like 1-2-3 as possible. *See id.* at 68-69. Lotus claimed that copying those elements amounted to copyright infringement. *See id.* at 45-46, 68-69. Paperback argued that what it had copied was not copyrightable because the only properly copyrightable subject matter in a computer program is the literal expression (the source

## B. Copyrightability of Computer Programs

### 1. Overview

Pursuant to Rule 52(a) of the Federal Rules of Civil Procedure, Judge Keeton's opinion on the first phase of the trial established his central findings of fact and conclusions of law.<sup>39</sup> Judge Kee-

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and object code). *Id.* at 45, 47. Paperback thus asserted that it had not infringed Lotus's copyright in 1-2-3. *Id.*

For this reason, the first phase of the trial was confined to the question of the copyrightability of what Paperback had admitted copying. *See id.* at 42. The parties expressly reserved for a jury determination whether Paperback had copied nonliteral elements (meaning any nonliteral elements that Paperback had not already admitted copying) or literal elements of 1-2-3.

<sup>39</sup> *Id.* "Rule 52 applies to any civil action tried without a jury or with an advisory jury, save for the exceptions and limitations stated in Rule 81." 9 CHARLES A. WRIGHT & ARTHUR R. MILLER, FEDERAL PRACTICE AND PROCEDURE § 2573 (1971). According to Rule 81, the Rules "do not apply to . . . proceedings in copyright under Title 17, U.S.C., except in so far as they may be made applicable thereto by rules promulgated by the Supreme Court of the United States." FED. R. CIV. P. 81(a)(1).

From 1909 until 1948, the United States Supreme Court issued special rules of practice for copyright infringement actions pursuant to the limited rulemaking power conferred on the Court by Section 25(e) of the Copyright Act of 1909. These rules, the Copyright Rules, may be found following 17 U.S.C. § 501. 4 CHARLES A. WRIGHT & ARTHUR R. MILLER, FEDERAL PRACTICE AND PROCEDURE § 1018 n.3 (2d ed. 1987). When the Copyright Act of 1909 became Title 17 of the United State Code in 1947, Section 25(e) became 17 U.S.C. 101(f). In 1948, however, Congress repealed Section 101(f), Act of June 25, 1948, ch. 646, 62 Stat. 869, as unnecessary in light of the Rules Enabling Act of 1934, 28 U.S.C. § 2072, and the broad rulemaking powers Congress had conferred upon the Court over all civil actions in the federal district courts. 4 WRIGHT & MILLER, *supra*, § 1018 n.2.

By its Order of June 5, 1939, 307 U.S. 652, the Supreme Court amended Copyright Rule 1 to provide that the Federal Rules of Civil Procedure would apply in infringement suits and appeals except to the extent that they are inconsistent with the Copyright Rules. *Id.* § 1016 n.6, § 1018. Between the effective date of the adoption of the original Federal Rules of Civil Procedure and the date on which the Supreme Court's Order amending Copyright Rule 1 became effective, several courts had already applied the new Federal Rules of Civil Procedure in copyright infringement actions, notwithstanding the restrictive language of Rule 81. *Id.* § 1018 nn.4-5. Three of the four cases Wright & Miller cite for this point were decided in the Second Circuit, which has long been considered the pre-eminent circuit with regard to copyright law; the fourth case came from the District Court for Massachusetts. *See id.*

Wright & Miller cite two cases as supporting the assertion that Rule 52 clearly applies to copyright cases. 9 WRIGHT & MILLER, *supra*, § 2573 n.23 (citing *Kochtitzky v. John A. Denie's Sons Co.*, 153 F.2d 520 (6th Cir. 1946));

ton perceived that the case presented one central question for the district court: What is the scope of copyrightability for computer programs?<sup>40</sup> At the outset, he recognized the fundamental problem: "The expression of an idea is copyrightable. The idea itself is not. When applying these two settled rules of law, how can a decisionmaker distinguish between an idea and its expression?"<sup>41</sup> In addition, Keeton identified several related issues: "(1) whether and to what extent plaintiff's spreadsheet program, Lotus 1-2-3, is copyrightable, (2) whether defendants' VP-Planner was, on undisputable facts, an infringing work containing elements substantially similar to copyrightable elements of 1-2-3, and (3) whether defendants' proffered jurisdictional and equitable defenses are meritorious."<sup>42</sup>

In his attempt to answer all of these questions, Judge Keeton undertook a monumental task: a restatement of the law of computer copyright. First, he cogently summarized what computers are and how they function, what software is and what it does, and what distinguishes the literal elements in computer software from the nonliteral.<sup>43</sup> Next, he considered whether the case raised any constitutional questions. He determined that the question was not whether Congress has the constitutional power to confer

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Sawyer v. Crowell Publishing Co., 142 F.2d 497 (2d Cir. 1944), *cert. denied*, 323 U.S. 735 (1944)). One of these, *Kochtitzky*, says nothing about copyright or the application of the Federal Rules of Civil Procedure in copyright cases. In *Kochtitzky*, plaintiffs sought a declaratory judgment of the defendant's obligations under a requirements contract for the sale of sand and gravel. *Kochtitzky*, 153 F.2d at 521. After hearing testimony from both parties' witnesses, the district court filed comprehensive findings of fact, brief conclusions of law, and a final judgment adverse to the plaintiffs based on those findings and conclusions. *Id.* Plaintiffs apparently appealed on the ground that the district court had erred by including among its findings of fact the court's interpretation of the contract, which should have been deemed a conclusion of law and filed as such. *See id.* at 522. Plaintiffs also apparently asserted that the district court's conclusions of law were too general to be anything more than general statements of abstract principles. *See id.* at 522-23.

The Sixth Circuit held that the informality of the district court's conclusions of law was immaterial because the findings of fact clearly revealed the court's rationale for its judgment. *Id.* at 523. Nowhere in its opinion does the Sixth Circuit refer to the applicability of the Federal Rules of Civil Procedure to copyright cases.

<sup>40</sup> *See Lotus*, 740 F. Supp. at 42.

<sup>41</sup> *Id.*

<sup>42</sup> *Id.*

<sup>43</sup> *Id.* at 42-46.

copyright protection for nonliteral elements of computer programs (it clearly does),<sup>44</sup> but whether Congress had in fact exercised that power.<sup>45</sup>

Judge Keeton then analyzed the statutory history of twentieth century copyright law and the judiciary's interpretation of the law.<sup>46</sup> He determined that Congress did not intend to deal with computer programs any differently than any other copyrightable subject matter.<sup>47</sup> He concluded that the most basic concept of copyright law is that copyright protection extends only to original works of authorship.<sup>48</sup> Judge Keeton expressly recognized, however, that "originality" in copyright law merely means that a work must have been independently created.<sup>49</sup>

Judge Keeton next noted that computer programs are included

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<sup>44</sup> *Id.* at 46.

<sup>45</sup> *Id.*

<sup>46</sup> *Id.* at 46-54.

<sup>47</sup> *See id.*

<sup>48</sup> *Id.* at 47-48. *See also* 17 U.S.C. § 102(a) (1988) ("Copyright protection subsists . . . in original works of authorship . . .").

<sup>49</sup> *Lotus*, 740 F. Supp. at 47-48 (citations omitted). "Originality" in copyright law is an especially difficult concept. Most cases and commentators agree, however, that copyright originality, at the very least, involves independent creation. *See, e.g.*, *Feist Publications, Inc. v. Rural Tel. Serv. Co.*, 111 S. Ct. 1282, 1288-89 (1991); *L. Batlin & Son, Inc. v. Snyder*, 536 F.2d 486, 487-88, 490 (2d Cir. 1976), *cert. denied*, 429 U.S. 857 (1976) (citations omitted).

The *Batlin* court noted that "[o]riginality is . . . distinguished from novelty; there must be independent creation, but it need not be invention in the sense of striking uniqueness, ingeniousness, or novelty, since the Constitution differentiates 'authors' and their 'writings' from 'inventors' and their 'discoveries.'" *Batlin*, 536 F.2d at 490. The *Batlin* court further stated that "[o]riginality means that the work owes its creation to the author and this in turn means that the work must not consist of actual copying." *Batlin*, 536 F.2d at 490 (citing *Alfred Bell & Co. v. Catalda Fine Arts, Inc.*, 191 F.2d 99 (2d Cir. 1951); *Runge v. Lee*, 441 F.2d 579 (9th Cir. 1971), *cert. denied*, 404 U.S. 887 (1971)).

Judge Keeton stated:

[T]he designation "original" is not intended to be limited to works that are novel or unique. Rather, the word "original," which was "purposely left undefined" by Congress, refers to works that have been "independently created by an author," regardless of their literary or aesthetic merit, or ingenuity, or qualitative value.

*Lotus*, 740 F. Supp. at 48 (citations omitted). *See also* NIMMER, *supra* note 5, § 2.01, at 2-5 to -16 (1990). For a more complete discussion of copyright originality, see *infra* notes 160-208 and accompanying text.

among the original works of authorship that Congress expressly recognizes.<sup>50</sup> He acknowledged, however, that computer programs, like all copyrightable works, are not entitled to an unlimited scope of copyright protection.<sup>51</sup> The law's protection extends only to expression; it does not extend to ideas, procedures, processes, systems, methods of operation, concepts, principles, or discoveries.<sup>52</sup> Furthermore, what is protectable in a computer program is the programmer's expression, not the processes or methods embodied in the program.<sup>53</sup>

Judge Keeton then reviewed the work of the National Commission on New Technological Uses of Copyrighted Works (CONTU).<sup>54</sup> He considered the evidence from the CONTU Report regarding the scope of copyrightability of computer programs as inconclusive and inconsistent.<sup>55</sup> Keeton then turned his attention to two specific aspects of copyright: first, the protection that the statutes and courts extend to nonliteral expression; and second, the exclusion of useful articles from the scope of copyright protection.<sup>56</sup>

Of particular importance is his finding that copyright protection extends to the nonliteral elements of literary, musical, dramatic, and motion picture works.<sup>57</sup> Judge Keeton stated, "[C]opying of nonliteral expression [in these areas], if sufficiently extensive, has never been upheld as permissible copying; rather, it has always been viewed as copying of elements of an expression of creative originality."<sup>58</sup>

Judge Keeton then stated that useful articles had long been excluded from copyright protection.<sup>59</sup> He concluded, however, that "those elements of a useful article that can exist indepen-

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<sup>50</sup> *Lotus*, 740 F. Supp. at 48-49. See also 17 U.S.C. § 101 (1988) (including "computer program" definition); *supra* note 19.

<sup>51</sup> *Lotus*, 740 F. Supp. at 49.

<sup>52</sup> *Id.* (quoting 17 U.S.C. § 102(b) and HOUSE REPORT, *supra* note 2, at 57 (discussing intent of § 102(b)); see also *supra* note 5.

<sup>53</sup> See *Lotus*, 740 F. Supp. at 49.

<sup>54</sup> *Id.* at 49-51; see also *supra* note 19 (discussing CONTU).

<sup>55</sup> See *Lotus*, 740 F. Supp. at 49-51.

<sup>56</sup> *Id.* at 51-52. See *infra* notes 57-63 and accompanying text.

<sup>57</sup> *Lotus*, 740 F. Supp. at 51. Among these elements are: characters, their relationships to each other, and their physical attributes; plot; setting; and sequences of events. *Id.* at 51-52 (citations omitted).

<sup>58</sup> *Id.* at 52.

<sup>59</sup> *Id.* Here he cited the definition of "useful article" in the 1976 Act: "an article having an intrinsic utilitarian function that is not merely to portray

dently of the utilitarian aspects of the article are potentially copyrightable" because they are expressive elements distinguishable from the article's utilitarian function.<sup>60</sup>

Judge Keeton then set out to determine the object and policy of copyright law. He saw this task as especially important in this case because Paperback was arguing that an extension of copyright protection to nonliteral elements of computer programs would conflict with the purposes of the law.<sup>61</sup> Judge Keeton determined that the object of copyright law was to promote the public welfare. He said that Congress had achieved this objective by giving authors exclusive rights that allow them to reap rewards for their works, in the hope that their works will include ideas that inure to the public good.<sup>62</sup> Finally, Judge Keeton determined that Congress had left it to the courts to fix the lines between copyrightable and noncopyrightable elements in computer programs by mandating that the courts use a standard that distinguishes between ideas and the expression of those ideas.<sup>63</sup>

## 2. Idea and Expression: The *Lotus* Copyrightability Rule

Having concluded that Congress intended that decisions about

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the appearance of the article or to convey information." 17 U.S.C. § 101. The 1976 Act also provides:

[T]he design of a useful article . . . shall be considered a pictorial, graphic, or sculptural work only if, and only to the extent that, such design incorporates pictorial, graphic, or sculptural features that can be identified separately from, and are capable of existing independently of, the utilitarian aspects of the article.

17 U.S.C. § 101 (1988) (defining "pictorial, graphic and sculptural works"). Courts and commentators have struggled to find a viable way to distinguish between an object's form and its function. *See, e.g.*, *Mazer v. Stein*, 347 U.S. 201 (1954); *Brandir Int'l v. Cascade Pac. Lumber Co.*, 834 F.2d 1142 (2d Cir. 1987); *Kieselstein-Cord v. Accessories By Pearl, Inc.*, 632 F.2d 989 (2d Cir. 1980); *Esquire, Inc. v. Ringer*, 591 F.2d 796 (D.C. Cir. 1978), *cert. denied*, 440 U.S. 908 (1979); Robert C. Denicola, *Applied Art and Industrial Design: A Suggested Approach to Copyright in Useful Articles*, 67 MINN. L. REV. 707 (1983).

<sup>60</sup> *Lotus*, 740 F. Supp. at 52 (citing HOUSE REPORT, *supra* note 2, at 55; *Whelan Assocs., Inc. v. Jaslow Dental Lab., Inc.*, 797 F.2d 1222, 1236 (3d Cir. 1986), *cert. denied*, 479 U.S. 1031 (1987), for proposition that the utilitarian aspects of such articles are not works of authorship in which copyright can subsist).

<sup>61</sup> *Id.*

<sup>62</sup> *Id.* at 52-53.

<sup>63</sup> *Id.* at 53.

the scope of copyrightability for computer programs be made by distinguishing between ideas and the expression of those ideas, Judge Keeton rejected Paperback's suggestion that Congress intended to draw the line between literal and nonliteral elements of computer programs.<sup>64</sup> Instead, he formulated a more general rule. He held that "Congress chose to extend copyright protection to original expression embodied in computer programs, but not to any idea, method, or process described in that expression."<sup>65</sup>

According to Judge Keeton, this conclusion is consistent with the treatment accorded to other types of intellectual works. This consistency is especially apparent with regard to protection for nonliteral elements of expression. He found that the nonliteral elements of computer programs are not merely useful articles, but also involve elements of expression apart from their utilitarian function. This conclusion is also consistent with the treatment mandated for useful articles, which cannot be copyrighted.<sup>66</sup> To the extent that the nonliteral elements of computer programs contain elements capable of separate identification from their utilitarian function, he held that they are potentially copyrightable.<sup>67</sup> Finally, Judge Keeton expressed the

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<sup>64</sup> *Id.*

<sup>65</sup> *Id.* at 54 (citing 17 U.S.C. §§ 102(a), 102(b); HOUSE REPORT, *supra* note 2, at 54, 57).

<sup>66</sup> *See, e.g.,* Mazer v. Stein, 347 U.S. 201, 218 (1953) (quoting Stein v. Rosenthal, 103 F. Supp. 227, 231 (1952)) ("artistic articles are protected in 'form but not their mechanical or utilitarian aspects'"). *See also supra* note 59.

<sup>67</sup> *Lotus*, 740 F. Supp. at 52. In the next part of his opinion, Judge Keeton expanded upon his reasons for rejecting Paperback's contention that the line between copyrightable and noncopyrightable aspects of computer programs should be drawn between literal and nonliteral elements. *See id.* at 54-62. Paperback's principal argument was that 1-2-3's "user interface" is a functional object, like the functional layout of the gears in an "H" pattern on an automobile with a manual transmission, or the layout of a typewriter keyboard in the familiar, awkward QWERTY arrangement, or the keys of a piano. *Id.* at 54-55. Judge Keeton analyzed most of the major computer copyright cases and determined that Paperback had missed the mark. For every case finding nonliteral elements noncopyrightable, there is at least one other holding to the contrary. Compare *Plains Cotton Coop. Ass'n v. Goodpasture Computer Serv., Inc.*, 807 F.2d 1256 (5th Cir. 1987), *reh'g denied*, 813 F.2d 407 (5th Cir. 1987), *cert. denied*, 484 U.S. 821 (1987) (holding that when market forces dictate sequence and structure of computer program, those nonliteral elements are not copyrightable) and *Digital Communications Assocs., Inc. v. Softklone Distrib. Corp.*, 659 F.

view that this conclusion is consistent with the objective and policy of copyright law because it encourages the promotion and dissemination of ideas by extending protection, for a limited time, to the particular expression an author has selected.<sup>68</sup>

After an extended analysis of the role of functionality and usefulness in copyright law, Judge Keeton focused his inquiry even more narrowly on the idea-expression dichotomy.<sup>69</sup> While it is plain that an idea is not copyrightable and that an expression of an idea may be copyrightable, it does not follow that *every* expression of an idea is copyrightable.<sup>70</sup> To clarify the legally significant distinctions among an idea, a copyrightable expression of an idea, and a noncopyrightable expression of an idea, and as a precedent to articulating his doctrinal model for distinguishing among

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Supp. 449 (N.D. Ga. 1987) (holding that audiovisual screen displays are not copyrightable) and *Synercom Technology, Inc. v. University Computing Co.*, 462 F. Supp. 1003 (N.D. Tex. 1978) (holding that nonliteral elements are not copyrightable) with *Whelan Assocs., Inc. v. Jaslow Dental Lab., Inc.*, 797 F.2d 1222 (3d Cir. 1986), *cert. denied*, 479 U.S. 1031 (1987) (holding that nonliteral elements such as structure, sequence, and organization are copyrightable) and *Manufacturers Technologies, Inc. v. Cams, Inc.*, 706 F. Supp. 984 (D. Conn. 1989) (holding that screen displays or user interface is copyrightable) and *Broderbund Software, Inc. v. Unison World, Inc.*, 648 F. Supp. 1127 (N.D. Cal. 1986) (holding that nonliteral elements such as overall structure and screen displays are copyrightable).

Telling, too, is the closeness of Paperback's analogy to one made by Commissioner Hersey, the dissenter to the CONTU Report. Although the CONTU Report does not qualify as legislative history *per se*, it is entitled to some weight because Congress adopted some of its recommendations nearly verbatim. Conversely, Congress rejected Commissioner Hersey's view in dissent when it adopted the majority's view. *Lotus*, 740 F. Supp. at 55-56.

The most important portion of Judge Keeton's analysis of Paperback's literal-nonliteral dichotomy argument concerns the issue of functionality. While the functionality of an article does not support a claim for copyright, proof of an article's usefulness does not necessarily eliminate all of its aspects from copyright protection. "Elements of expression, even if embodied in useful articles, are copyrightable if capable of identification and recognition independently of the functional ideas that make the article useful." *Id.* at 58. Holding otherwise would withdraw from protection products that are "the most original and least obvious" creations of the mind merely because the public accepts them as distinctively useful or functional. *Id.* See also *supra* note 59 and accompanying text.

<sup>68</sup> See *Lotus*, 740 F. Supp. at 58.

<sup>69</sup> *Id.* at 58-59. See also *supra* note 5.

<sup>70</sup> *Lotus*, 740 F. Supp. at 58.



them, Judge Keeton singled out four concepts that he derived from copyright law.

The first two of these concepts are originality and functionality.<sup>71</sup> The expression of an idea is copyrightable only if it is original; that is, only if the expression originated with the author.<sup>72</sup> Yet even such original expression may not be copyrightable if it does nothing more than embody elements of the idea that are functional in a utilitarian sense.<sup>73</sup>

At this point, Judge Keeton departed from established principles of copyright analysis and set forth a third concept, "obviousness." He asserted that to be copyrightable, an expression cannot be obvious.<sup>74</sup> According to Judge Keeton, "When a particular expression goes no farther than the obvious, it is inseparable from the idea itself. Protecting an expression of this limited kind would effectively amount to protection of the idea, a result inconsistent with the plain meaning of the statute."<sup>75</sup>

Finally, Judge Keeton identified a fourth concept, "merger."<sup>76</sup> Judge Keeton recognized that, if a given expression is one of only a very few available ways of expressing a particular idea, then the idea and the expression "merge," rendering the expression noncopyrightable.<sup>77</sup> The effect of granting copyright protection for a merged idea-expression would be to permit one or a few persons to exhaust all possible uses of an idea simply by copyrighting a handful of expressions.<sup>78</sup>

From these four concepts, Judge Keeton derived the following rule for determining copyrightability (the "*Lotus* Copyrightability Rule"): "If . . . the expression of an idea has elements that go

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<sup>71</sup> *Id.* For an introduction to the concept of "originality," see *supra* note 49. See also *infra* notes 160-208. For an introduction to the concept of "functionality," see *supra* note 59.

<sup>72</sup> *Lotus*, 740 F. Supp. at 58 (citing 17 U.S.C. § 102(a)).

<sup>73</sup> *Id.* (citing 17 U.S.C. § 102(b)).

<sup>74</sup> *Id.* at 58-59.

<sup>75</sup> *Id.* (citing *E.H. Tate Co. v. Jiffy Enters., Inc.*, 16 F.R.D. 571, 573 (E.D. Pa. 1954) to support the proposition that an "obvious" expression is uncopyrightable). For a more complete discussion of the *E.H. Tate Co. v. Jiffy Enterprises, Inc.* case see *infra* notes 96-111 and accompanying text.

<sup>76</sup> *Lotus*, 740 F. Supp. at 59.

<sup>77</sup> *Id.*

<sup>78</sup> *Id.* (quoting *Morrissey v. Proctor & Gamble Co.*, 379 F.2d 675, 678-79 (1st Cir. 1967); citing *Concrete Machinery Co. v. Classic Lawn Ornaments, Inc.*, 843 F.2d 600, 606 (1st Cir. 1988); *Herbert Rosenthal Jewelry Corp. v. Kalpakian*, 446 F.2d 738, 742 (9th Cir. 1971)).

beyond all functional elements of the idea itself, and beyond the obvious, and if there are numerous other ways of expressing the non-copyrightable idea, then those elements of expression, if original and substantial, are copyrightable.”<sup>79</sup>

### 3. The *Lotus* Idea-Expression Test

Having introduced these four basic concepts and the *Lotus* Copyrightability Rule, Judge Keeton next proceeded to fashion a doctrinal model for distinguishing idea from expression: a legal test for applying at least part of the *Lotus* Copyrightability Rule.<sup>80</sup> Keeton felt this was necessary because neither the Copyright Act itself nor the courts had provided a clear test; they had only left vague boundary markers, which were helpful, at most, in narrowing the scope of the questions that remained.<sup>81</sup> According to Judge Keeton, a court making a copyrightability determination need not completely separate an idea from its expression to determine whether there is expression. Instead, the court must employ a method that permits it to choose some point on a continuum running from the most generalized statement of an idea to the most specific example.<sup>82</sup>

Judge Keeton formulated a three-step analytical model to determine copyrightability:

FIRST, in making the determination of “copyrightability,” the decisionmaker must focus upon alternatives that counsel may suggest, or the court may conceive, *along the scale from the most generalized conception to the most particularized*, and choose some formulation—some conception or definition of the “idea”—for the purpose of distinguishing between the idea and its expression.<sup>83</sup>

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SECOND, the decisionmaker must focus upon whether an

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<sup>79</sup> *Id.*

<sup>80</sup> *Id.* at 59-62.

<sup>81</sup> *Id.* at 59. Drawing on all that he had already found, Judge Keeton determined that the issue of copyrightability does not turn on whether a work expresses ideas, but on whether, in addition to expressing one or more ideas, it does something more, in some material respect, and does so in an original way. *Id.* at 59-60.

<sup>82</sup> *Id.* at 60.

<sup>83</sup> *Id.* at 60-62. Judge Keeton relied on the judicial opinions of Judge Learned Hand, whose years as a federal judge on the Second Circuit were marked by scores of copyright cases. During those years, Judge Hand developed the essentials of the first step of the test proposed here by Judge Keeton. Of the four Learned Hand opinions that Judge Keeton cited to support the first step of his three-step legal test for copyrightability, Nichols

alleged expression of the idea is limited to elements essential to

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v. Universal Pictures Corp., 45 F.2d 119 (2d Cir. 1930), is the most important and presents the fullest statement of Judge Hand's approach.

Plaintiff Anne Nichols, the author of the play *Abie's Irish Rose*, sued, alleging that the defendant Universal had infringed her copyright when it publicly produced a film called *The Cohens and The Kellys*. *Nichols*, 45 F.2d at 120. Although the court assumed for the sake of argument that in some details Universal had used Nichols's play, the court thought Universal's film "too unlike the plaintiff's to be an infringement," and felt compelled to provide outlines of the plots and characters of the two works. *Id.* While these outlines are too extensive to reproduce here, *see id.* at 120-21, Judge Hand's explication of the law is worth repeating at some length:

It is of course essential to any protection of literary property . . . that the right cannot be limited literally to the text, else a plagiarist would escape by immaterial variations. That has never been the law, but, as soon as literal appropriation ceases to be the test, the whole matter is necessarily at large, so that . . . the decisions cannot help much in a new case. When plays are concerned, the plagiarist may excise a separate scene; or he may appropriate part of the dialogue. Then the question is whether the part so taken is "substantial," and therefore not a "fair use" of the copyrighted work . . . . But when the plagiarist does not take out a block in situ, but an abstract of the whole, decision is more troublesome. Upon any work, and especially upon a play, a great number of patterns of increasing generality will fit equally well, as more and more of the incident is left out. The last may perhaps be no more than the most general statement of what the play is about, and at times might consist only of its title; but there 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. In some cases the question has been treated as though it were analogous to lifting a portion out of the copyrighted work; but the analogy is not a good one, because, though the skeleton is a part of the body, it pervades and supports the whole. In such cases we are rather concerned with the line between expression and what is expressed. As respects plays, the controversy chiefly centers upon the characters and sequence of incident, these being the substance.

*Id.* at 121 (citations omitted).

Judge Hand went on to say that the court had no doubt that the plots of two plays may have corresponded closely enough for infringement, although:

[The extent to which] that correspondence must go is another matter. Nor need we hold that the same may not be true as to the characters, quite independently of the "plot" proper . . . . If *Twelfth Night* were copyrighted, it is quite possible that a sec-

expression of *that* idea (or is one of only a few ways of expressing the idea) or instead includes identifiable elements of expression not essential to every expression of that idea.<sup>84</sup>

THIRD, having identified elements of expression not essential to every expression of the idea, the decisionmaker must focus on whether those elements are a substantial part of the allegedly copyrightable "work."<sup>85</sup>

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ond comer might so closely imitate Sir Toby Belch or Malvolio as to infringe, but it would not be enough that for one of his characters he cast a riotous knight who kept wassail to the discomfort of the household, or a vain and foppish steward who became amorous of his mistress. These would be no more than Shakespeare's "ideas" in the play, as little capable of monopoly as Einstein's Doctrine of Relativity, or Darwin's theory of the Origin of Species. It follows that the less developed the characters, the less they can be copyrighted; that is the penalty an author must bear for marking them too indistinctly.

*Id.* For a compelling analysis of *Nichols* and its significance in the idea-expression dichotomy debate, see Cohen, *supra* note 5, at 220.

Of the three other Learned Hand opinions Judge Keeton cites for his first step, two are copyright cases that track the *Nichols* formulation. In *Shipman v. R.K.O. Radio Pictures, Inc.*, 100 F.2d 533 (2d Cir. 1938), Judge Hand stated:

*Nichols v. Universal Pictures Corp.* followed exactly the same doctrine that we are using now: it held that there is a point where the similarities are so little concrete (are therefore so abstract) that they become only "theme", "idea", or skeleton of the plot, and that these are always in the public domain; no copyright can protect them.

*Id.* at 538.

In *Peter Pan Fabrics, Inc. v. Martin Weiner Corp.*, 274 F.2d 487 (2d Cir. 1960), Judge Hand stated:

The test for infringement of a copyright is of necessity vague. . . . [A]lthough the "proprietor's" monopoly extends beyond an exact reproduction of the words, there can be no copyright in the "ideas" disclosed but only in their "expression." 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*.

*Id.* at 489.

The other opinion cited, *Sinram v. Pennsylvania R.R. Co.*, 61 F.2d 767 (2d Cir. 1932), is offered merely for Judge Hand's observation in a negligence case that such *ad hoc* decisionmaking may seem merely to be fiat but that decisionmaking is always fiat, although disguised. *Id.* at 771.

<sup>84</sup> *Lotus*, 740 F. Supp. at 61.

<sup>85</sup> *Id.* "Substantiality" is to be measured both quantitatively and qualitatively. See generally *Whelan Assocs., Inc. v. Jaslow Dental Lab., Inc.*, 797 F.2d 1222 (3d Cir. 1986), *cert. denied*, 479 U.S. 1031 (1987) (discussing

In applying this new test, the decisionmaker should weigh all of the elements together, rather than trying to draw a bright line. If the decisionmaker determines that the test is satisfied, then copyrightability is established. Questions may remain, however, as to whether the allegedly infringing work actually took copyrightable elements of the copyrighted work.<sup>86</sup>

#### 4. Obviousness in *Lotus*

In his decision, Judge Keeton expressly ruled on the obviousness or nonobviousness of a number of elements of 1-2-3. He held that the “core idea” of developing an electronic spreadsheet was “both functional and obvious.”<sup>87</sup> But he also held that it did “not follow, however, that every possible method of designing a metaphorical spreadsheet is obvious . . . .”<sup>88</sup> Similarly, he stated that “[t]he idea for a two-line moving cursor menu is also functional and obvious . . . .”<sup>89</sup> He further reasoned that the use of the “enter” key “to place keystroke entries into the spreadsheet cells,” and of the “+” key for addition, the “-” key for subtraction, the “\*” key for multiplication, and the “/” key for division in mathematical formulas, was “either essential to every expression of an electronic spreadsheet, or at least ‘obvious’ if not essential . . . .”<sup>90</sup> On the other hand, Judge Keeton held that 1-2-3’s menu command structure—taken as a whole—was “an original and nonobvious way of expressing a command structure.”<sup>91</sup> Although he reached these conclusions regarding the obviousness and nonobviousness of different elements of the 1-2-3 program, Judge Keeton failed to articulate any analysis that

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quantitative and qualitative similarity in an infringement context). While he did not say so, Judge Keeton appeared more concerned with the qualitative measure in *Lotus*. See *Lotus*, 740 F. Supp. at 61. This tripartite test, as formulated, does not explicitly incorporate the requirement of nonobviousness specified in the *Lotus* Copyrightability Rule; but the nonobviousness requirement is probably implicitly incorporated.

<sup>86</sup> *Lotus*, 740 F. Supp. at 61.

<sup>87</sup> *Id.* at 65.

<sup>88</sup> *Id.*

<sup>89</sup> *Id.*

<sup>90</sup> *Id.* at 66-67.

<sup>91</sup> *Id.* at 68. Judge Keeton specified both “original and nonobvious.” *Id.* This implies that he views originality and obviousness as distinct considerations. This Article, on the other hand, argues that the best interpretation of his use of the word “obvious” is that it is a subset of originality—i.e. subjective originality. See *infra* notes 160-208.

explained how he determined whether any given element was obvious or nonobvious. His failure to articulate this analysis is a troubling omission.

## II. *E.H. TATE CO. V. JIFFY ENTERPRISES, INC.*<sup>92</sup>

Judge Keeton cited only one source for the concept of obviousness as a limiting factor in questions of copyrightability: *E.H. Tate Co. v. Jiffy Enterprises, Inc.*<sup>93</sup> Copyright case law interpreting the terms “originality” and “functionality” is quite extensive.<sup>94</sup> Similarly, a number of copyright cases have discussed the concept of “merger” as it relates to copyrightable subject matter.<sup>95</sup> Prior to the *Lotus* decision, however, no court had ever held that an “obvious” work was not copyrightable.

In *Tate*, the defendant, Jiffy Enterprises, Inc. (Jiffy), owned a patent on an adhesive-coated cloth picture hanger.<sup>96</sup> The plaintiff, E.H. Tate Co. (Tate), brought an action for declaratory judgment of patent invalidity and noninfringement,<sup>97</sup> apparently in response to a letter stating that Tate was infringing Jiffy’s patent.<sup>98</sup> Jiffy answered and counterclaimed for patent infringement.<sup>99</sup> Subsequently, Jiffy amended its counterclaim, adding

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<sup>92</sup> 16 F.R.D. 571 (E.D. Pa. 1954).

<sup>93</sup> *Lotus*, 740 F. Supp. at 59 (citing *Tate*, 16 F.R.D. at 573).

<sup>94</sup> See *supra* notes 49, 59, 60, 65; see also *infra* notes 160-208.

<sup>95</sup> See, e.g., *Baker v. Selden*, 101 U.S. 99, 101-02 (1879) (holding that copyright cannot protect the forms needed to practice bookkeeping system; copyright can only protect the author’s description of how to practice system); *Educational Testing Serv. v. Katzman*, 793 F.2d 533, 539-40 (3d Cir. 1986) (holding scholastic aptitude testing service’s questions copyrightable; “merger” not present when many possible expressions of ideas of questions were available to defendants); *Apple Computer, Inc. v. Franklin Computer Corp.*, 714 F.2d 1240, 1252-54 (3d Cir. 1983), *cert. dismissed*, 464 U.S. 1033 (1984) (stating that if other methods of expressing ideas of operating system computer programs are available, no merger exists and systems can be copyrighted); *Herbert Rosenthal Jewelry Corp. v. Kalpakian*, 446 F.2d 738, 742 (9th Cir. 1971) (holding that expression of idea of jewel-encrusted bee pin is inseparable from idea itself; therefore jeweler cannot protect bee pin under copyright). See also *supra* notes 76-78 and accompanying text. See generally NIMMER, *supra* note 5, § 2.18, at 2-195 to 2-222.

<sup>96</sup> For a description of the patent and discussion of the patent issues in the litigation between E.H. Tate Co. and Jiffy, see *infra* note 110.

<sup>97</sup> *Tate*, 16 F.R.D. at 573.

<sup>98</sup> *Id.* at 574.

<sup>99</sup> *Id.* at 573.

claims for unfair competition, antitrust violations, and copyright infringement.<sup>100</sup> Tate moved to dismiss the added claims.<sup>101</sup> In addressing Tate's motion to dismiss Jiffy's copyright infringement claim, Chief Judge Kirkpatrick held that the text and illustrations in question were "purely functional in the sense that their purpose . . . is to instruct purchasers of the article how to use it."<sup>102</sup> Thus, he dismissed Jiffy's copyright claim.<sup>103</sup> Judge Kirkpatrick did not use the term "obvious" or "obviousness" anywhere in the *Tate* decision.<sup>104</sup> Nor is there a single citation to any precedent in the portion of the opinion determining that it was "absurd to apply the copyright law" to such works.<sup>105</sup>

In describing both the purpose of the illustrations and the texts, Kirkpatrick used the phrase "how to use" three times in one paragraph.<sup>106</sup> He also included the phrase "for its use."<sup>107</sup> This

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<sup>100</sup> *Id.* at 573-74. Jiffy's copyright claim focused on the similarities between the text and illustrations on Tate's packaging and the copyrighted text and illustrations on Jiffy's packaging.

<sup>101</sup> *Id.*

<sup>102</sup> *Id.* at 573.

<sup>103</sup> It is instructive to look at Judge Kirkpatrick's entire discussion on this point:

The second cause of action is for copyright infringement. The only feature of the copyrighted material which the defendant alleges to have been copied by the plaintiff consists of three small sketches each about half the size of one's fingernail on a card approximately five inches square. *These sketches are purely functional in the sense that their purpose on the card is to instruct purchasers of the article how to use it.* The plaintiff's sketches are not even copies of the defendant's. If the plaintiff has the right to sell and advertise its hanger, it certainly has the right to supply purchasers and prospective purchasers with sketches for its use. If the plaintiff has the right to use a sketch, I do not see how it could very well do so without showing some sort of similarity to that of the defendant. *The same considerations apply to the legend.* Both cards [i.e., Tate's and Jiffy's packaging] use the words "Apply hook to wall" under the first sketch and both explain, in connection with the third sketch, in similar though not exactly the same terms, *how to use* the hook as an eyelet on the back of the picture. It seems to me that it is little short of absurd to apply the copyright law to the words "Apply hook to wall" in a perfectly natural explanation on *how to use an article.*

*Id.* (emphasis added).

<sup>104</sup> *See id.*

<sup>105</sup> *Id.*

<sup>106</sup> *Id.*

<sup>107</sup> *Id.*

repetition shows that Kirkpatrick viewed the illustrations and texts as functional. Clearly, their functionality, not their obviousness, rendered them uncopyrightable.

The only conceivable textual basis for reading the *Tate* case as requiring nonobviousness as an element of copyrightability must be Kirkpatrick's characterization of the words "Apply hook to wall" as "a perfectly natural explanation."<sup>108</sup> This reading, however, simply does not bear scrutiny, because this language is an integral part of Kirkpatrick's description of the text as functional: the entire clause describes the words "Apply hook to wall" as "a perfectly natural explanation *on how to use an article*."<sup>109</sup> A close reading of *Tate* thus reveals that Judge Keeton's reliance on it for the proposition that an obvious expression is uncopyrightable is completely unwarranted.<sup>110</sup> *Tate* plainly stands for the proposi-

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<sup>108</sup> *Id.*

<sup>109</sup> *Id.* (emphasis added).

<sup>110</sup> Judge Keeton's unwarranted reliance on Chief Judge Kirkpatrick's decision may be due to the confusing history of the *Tate*-*Jiffy* litigation. The facts surrounding the litigation are drawn from three separate court opinions. Between 1953 and 1962, *Tate* and *Jiffy* were involved in three lawsuits with each other. The three lawsuits involved two disputes over two different patents. Both patents were issued to *Jiffy*'s president, Joseph P. Margulis.

The dispute involving the first patent began in 1953 and gave rise to the decision in *E.H. Tate Co. v. Jiffy Enterprises, Inc.*, 16 F.R.D. 571 (E.D. Pa. 1954) (*Tate I*). The parties settled *Tate I* in 1955.

The dispute over the second patent (*Tate II*) led to the second and third lawsuits (*E.H. Tate Co. v. Jiffy Enterprises, Inc.* [Civ. A. No. 25,486] and *Jiffy Enterprises, Inc. v. Sears, Roebuck & Co.* and *E.H. Tate Co.* [Civ. A. No. 25,504]). These actions were brought in the District Court for the Eastern District of Pennsylvania. *E.H. Tate Co. v. Jiffy Enters., Inc.*, 196 F. Supp. 286 (E.D. Pa. 1961) [hereafter *Tate v. Jiffy*], *aff'd sub nom. Jiffy Enters., Inc. v. Sears, Roebuck & Co.*, 306 F.2d 240 (3d Cir. 1962), *cert. denied*, 371 U.S. 922 (1962) [hereafter *Jiffy v. Sears*]. The District Court consolidated these cases for trial, tried them as one suit, and delivered one opinion. *See Tate v. Jiffy*, 196 F. Supp. 286, 287 & n.1. The Third Circuit then issued another opinion affirming the District Court. *See Jiffy v. Sears*, 306 F.2d at 244. In *Tate I*, the dominant controversy involved a patent. On August 4, 1953, the Patent Office issued Patent No. 2,647,711 to Joseph M. Margulis (hereafter "Margulis '711") for his invention of an adhesive-coated cloth picture hanger that could be secured to a wall without penetrating the wall. *See Tate v. Jiffy*, 196 F. Supp. at 289. The inventor, Margulis, was *Jiffy*'s president and he assigned his patent to *Jiffy*. *See id.* at 293-95.

The Margulis '711 hanger consisted of a strip of adhesive-coated cloth folded on itself and sewn at the folds to form a hem with a pair of flaps. *Jiffy v. Sears*, 306 F.2d at 241-42 n.2. A steel support bar was inserted in the hem



tion that simple illustrations and short texts that merely describe

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and a metal picture hook was secured to the support bar by means of a metal rivet extending through the support bar and the surrounding hem fabric. This arrangement allowed the hook to pivot on the rivet. *Id.*

E.H. Tate Company, a Massachusetts corporation, manufactured "a line of Ten Cent Store items." *Tate v. Jiffy*, 196 F. Supp. at 294. Jiffy wrote a letter to Tate stating that one of Tate's products, an adhesive cloth hanger, infringed "one or more of the claims" in Margulis '711. *Tate I*, 16 F.R.D. at 574. Tate brought an action for declaratory judgment of patent invalidity and non-infringement. Jiffy answered and counterclaimed for infringement of the Margulis '711 patent. *Id.* at 573. Subsequently, Jiffy amended its counterclaim by adding a claim for copyright infringement. *See supra* notes 92-109 and accompanying text.

Although Chief Judge Kirkpatrick dismissed Jiffy's copyright infringement claim, the original patent litigation continued for fourteen months. In December, 1955, the parties settled *Tate I* when Jiffy granted Tate a free, non-exclusive license under Margulis '711. *Tate v. Jiffy*, 196 F. Supp. at 296-97.

*Tate I* was still in its early phases when Joseph Margulis applied for a second patent on June 7, 1954, for "'an improved wall hanger in which all of the advantages possessed by the construction set forth in [Margulis '711] are secured, yet which is simpler in construction and easier to manufacture.'" *Id.* at 294 (quoting application for Margulis '001). The inventive improvement on which Mr. Margulis based his application for a second patent was the introduction of a one-piece flanged pivoting hook to replace the two-piece rivet and hook assembly of Margulis '711. *Id.* at 294-95. In prosecuting the second application, Mr. Margulis's patent attorney told the Patent Office that Jiffy had produced approximately 100,000,000 picture hangers of both the Margulis '711 and the new variety; that the improved hanger was not only easier to manufacture but was also a better product than the hanger of Margulis '711; and that Jiffy had virtually stopped making its patented hanger and was making several hundred thousand of the new variety each week instead. *Id.* at 295.

Subsequently, in a supplemental amendment dated June 2, 1955, Mr. Margulis's attorney informed the Patent Office that Jiffy's principal competitor, E.H. Tate Company, had come out with a hanger that was a copy of Jiffy's new hanger. *Id.* at 296. He asserted that Tate's adoption of Jiffy's new hanger was "the most persuasive evidence of invention." *Id.* In a later amendment, the attorney told the Patent Office that Jiffy had produced nearly 300,000,000 picture hangers, of which approximately 200,000,000 were of the new variety, and that, since the invention of the new hanger, Jiffy had abandoned production of Margulis '711 hangers in favor of the new variety. *Id.* According to Jiffy's attorney, however, the most significant evidence of the patentability of the new invention was Jiffy's competitor's actions. *Id.* The attorney claimed that Tate had produced infringing copies of the Margulis '711 hanger until Jiffy began producing its new hanger, at which point Tate stopped copying Margulis '711 and began copying the improved hanger. *Id.* This argument was apparently convincing. The Patent Examiner allowed the application and, on October 8, 1957, the

to consumers how to use a product are uncopyrightable because

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Patent Office issued Patent No. 2,809,001 to Joseph M. Margulis (Margulis '001) for an adhesive-coated cloth picture hanger. *Id.* at 293.

As soon as it learned that Margulis '001 had been granted, Tate brought an action for a declaratory judgment that Margulis '001 was invalid. *Id.* at 297. Shortly thereafter, Tate stopped making Margulis '001-type hangers, probably as a litigation strategy. Anyone who makes, uses, or sells a patented invention within the United States during the term of the patent without authority infringes the patent. *See* 35 U.S.C. § 271(a) (1988). Since Tate was no longer making or selling Margulis '001-type hangers, Jiffy could not counterclaim against Tate for infringement. Jiffy circumvented this barrier, however, by suing Sears, Roebuck & Co., one of Tate's customers, for selling Tate's Margulis '001-type hanger, probably from stock.

Tate intervened in Jiffy's case against Sears and defended the infringement claim on behalf of its customer. *Tate v. Jiffy* at 287. Initially, Tate raised a defense of license and moved for summary judgment in the patent infringement action, claiming that its license under Margulis '711 covered the allegedly infringing Margulis '001-type hangers. *Id.* at 287 n.1; *see also Jiffy v. Sears*, 306 F.2d at 241 n.1. The district court denied the motion, finding that the language of Margulis '711 did not cover the hangers at issue. *Jiffy v. Sears*, 306 F.2d at 241 n.1. Tate abandoned the license defense and the district court consolidated the two suits and tried them as one "orthodox patent suit by Jiffy vs. Tate for infringement," *Tate v. Jiffy*, 196 F. Supp. at 287-88 n.1. The sole issue was the validity of Margulis's '001. *Id.* at 287.

In his findings of fact, Senior District Judge Leahy found that the only significant difference between Margulis '711 (the principal prior art relied on by the Patent Office) and Margulis '001 was the use of a one-piece flanged swiveling hook to replace the two-piece rivet and hook assembly of Margulis '711. *Id.* Except for the different hooks, the differences between the patented hangers were negligible, at best. *Id.* Judge Leahy found that the one-piece hook and the two-piece assembly were full mechanical equivalents of each other. *Id.* He also found that making the rivet and hook assembly in one piece was an obvious expedient, especially in light of nineteen patents showing boot lacing hooks with integral tubular flanges, which the Patent Examiner had failed to cite as prior art against Margulis '001. *Id.* at 291-92. Although he found that Margulis '001 was much easier and significantly cheaper to manufacture than Margulis '711, Judge Leahy found no evidence that the adhesive cloth hanger industry had sought unsuccessfully for a way to make a one-piece hook. *Id.* at 297. Nor did he find any evidence that there was an unmet demand in the industry for a single hook as a solution. *Id.*

Judge Leahy concluded that "[t]he test of invention is whether the subject matter would have been obvious to one skilled in the art to which the invention pertains at the time it was made"; that the use of an expedient common to many arts is no more than the exercise of mechanical skill; that the substitution of an equivalent for one of the parts of an old device is not invention; and that commercial success of itself cannot confer patentability when invention is lacking. *Id.* at 298. Therefore, Judge Leahy granted

they serve a functional, utilitarian purpose.<sup>111</sup>

In the realm of intellectual property, a well-developed body of

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declaratory judgment to Tate and dismissed Jiffy's complaint, *id.* at 293, holding that Margulis '001 was invalid for lack of invention. *Id.* at 298.

Jiffy appealed both decisions. A divided panel of the Court of Appeals for the Third Circuit affirmed the lower court's decision. *Jiffy v. Sears*, 306 F.2d at 244. While Judge Leahy's opinion had mentioned "the test of invention" for patents without citation, the Third Circuit quoted and cited 35 U.S.C. § 103 as the statutory test of invention. *Id.* at 242-43. That test was "[w]hether 'the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.'" *Id.* at 243 (quoting 35 U.S.C. § 103 (1952)). The Third Circuit held that Judge Leahy's determination regarding the differences between the two types of hangers was not clearly erroneous, since its own examination had revealed "that beyond any reasonable doubt, these differences are not readily perceptible to the senses." This enabled the Third Circuit to find that the district court was justified in stating "that the advantages claimed from these differences 'are not in fact there.'" *Id.* (quoting *Tate v. Jiffy*, 196 F. Supp. at 291). Additionally, the court agreed with Judge Leahy's finding that the hook arrangement of Margulis '001 was an obvious expedient. *Id.*

In his dissent, Judge Kalodner disagreed with the majority on both counts. *Id.* at 244-45. First, he found that the differences between Margulis '711 and Margulis '001 were substantial and that the substantiality of those differences had been established as the law of the case when the district court refused to grant Tate's summary judgment motion. *Id.* Second, he found that both the district court and the majority misapplied the obviousness standard in reaching their decisions. *Id.* at 245. They had looked at the changes under Margulis '001 after they were made and labeled them "obvious." The obviousness test, however, must focus on whether the improvement was obvious before it was made. Viewed from that perspective, Judge Kalodner would have reversed the judgments of the district court and held Margulis '001 nonobvious, valid, and infringed. *See id.*

Although Judge Keeton did not mention or cite either of the opinions resulting from the *Tate II* dispute in the *Lotus* decision, Judge Keeton may have read obviousness into copyright law as a result of a misunderstanding of the complex *patent* litigation between Tate and Jiffy, especially since that litigation turned almost entirely on the question of obviousness. For a more complete discussion of obviousness in patent law, *see infra* notes 112-54.

<sup>111</sup> This holding is entirely consistent with the Copyright Office Regulations, which provide:

The following are examples of works not subject to copyright and applications for registration of such works cannot be entertained:

(a) Words and short phrases such as names, titles, and slogans; familiar symbols or designs; mere variations of

law defines and interprets the concept of obviousness. It is in the field of patent law, however, that Congress and the courts have shaped the meaning of obviousness. By examining the patent doctrine of obviousness, it is possible to evaluate its potential applicability in copyright.

### III. OBVIOUSNESS IN PATENT LAW

#### A. Invention

Before one can fully appreciate the meaning of obviousness in patent law, one must consider a related patent law concept: invention.<sup>112</sup> When Congress revised the patent laws of the

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typographic ornamentation, lettering or coloring; mere listing of ingredients or contents;

(b) Ideas, plans, methods, systems, or devices, as distinguished from the particular manner in which they are expressed or described in a writing;

(c) Blank forms, such as time cards, graph paper, account books, diaries, bank checks, scorecards, address books, report forms, order forms and the like, which are designed for recording information and do not in themselves convey information;

(d) Works consisting entirely of information that is common property containing no original authorship, such as, for example: Standard calendars, height and weight charts, tape measures and rulers, schedules of sporting events, and lists or tables taken from public documents or other common sources.

Material Not Subject to Copyright, 37 C.F.R. § 202.1 (1988); *see also* Magic Mktg. v. Mailing Servs. of Pittsburgh, Inc., 634 F. Supp. 769 (W.D. Pa. 1986) (holding that phrases such as "TELEGRAM," "GIFT CHECK," "PRIORITY MESSAGE," and "CONTENTS REQUIRE IMMEDIATE ATTENTION" on the outside of envelopes were not copyrightable).

<sup>112</sup> The writings and speeches of Judge Giles S. Rich provide the basis for much of the discussion in this section. Judge Rich has been an influential and significant force in the field of patent law for more than four decades.

Judge Rich was born in 1904 in Rochester, New York, where his father, G. Willard Rich, practiced patent law. *See Giles S. Rich Appointed To Court of Customs and Patent Appeals*, 38 J. PAT. OFF. SOC'Y 819 (1956). Judge Rich graduated from Harvard College in 1926 and from Columbia University School of Law in 1929, and was admitted to the New York Bar. *Id.* He began practicing law in New York City with his father's firm, Williams, Rich & Morse, where he became a partner in 1937. *Id.* Active in bar association work, Judge Rich was president of the New York Patent Law Association in 1950 and 1951. *Id.* From 1950 to 1952, Judge Rich was a member of the drafting committee of the coordinating committee of the National Council

United States in the Patent Act of 1952,<sup>113</sup> it used the word “invention” to refer only to the thing invented or discovered,<sup>114</sup>

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of Patent Law Associations. This committee did much of the drafting of the Patent Act of 1952. *Id.*

President Eisenhower appointed Judge Rich to the United States Court of Customs and Patent Appeals (CCPA) on May 17, 1956. *Id.* Judge Rich served on the CCPA for the next 26 years. When the Federal Courts Improvement Act of 1982 abolished the CCPA and replaced it with the Court of Appeals for the Federal Circuit, *see infra* notes 146-48, Judge Rich continued his regular, active judicial service on the CAFC.

Over the years, in his occasional speeches and in writings both on and off the bench, Judge Rich has repeatedly promoted an interpretative approach to the 1952 Act, especially § 103, that is cogent, coherent, and fully consistent with the language used. *See* *Kimberly-Clark Corp. v. Johnson & Johnson*, 745 F.2d 1437, 1450-54 (Fed. Cir. 1984) (Rich, J.) (discussing pre-1952 patent law meanings of terms “invention,” “inventor,” and “requirement of invention,” as well as the purpose of § 103 generally and its effect on long-standing legal fiction that inventor is presumed to know all of the pertinent prior art in the field of endeavors); *In re Bergy*, 596 F.2d 952, 958-67 (C.C.P.A. 1979) (Rich, J.), *vacated sub nom. Diamond v. Chakrabarty*, 444 U.S. 1028 (1980), *aff'd* *Diamond v. Chakrabarty*, 447 U.S. 303 (1980) (discussing the constitutional basis for Congress’s establishment of the patent system and thoroughly analyzing §§ 101-103 of the 1952 Act); Giles S. Rich, *Act of 1952—Patents*, in *ENCYCLOPEDIA OF PATENT PRACTICE AND INVENTION MANAGEMENT* 16 (Robert Calvert ed. 1964) [hereafter Rich, *Act of 1952*]; Giles S. Rich, *Congressional Intent—Or, Who Wrote the Patent Act of 1952?*, in *PATENT PROCUREMENT AND EXPLOITATION* 61-78 (1963); Giles S. Rich, *Escaping The Tyranny Of Words—Is Evolution In Legal Thinking Impossible?*, 60 J. PAT. OFF. SOC’Y 271 (1978) [hereafter Rich, *Tyranny of Words*]; Giles S. Rich, *Laying the Ghost of the “Invention” Requirement*, 1 AM. PAT. L. ASS’N Q.J. 24 (1972) [hereafter Rich, *Laying the Ghost*]; Giles S. Rich, *Principles of Patentability*, 28 GEO. WASH. L. REV. 393 (1960) [hereafter Rich, *Principles*]; Giles S. Rich, *The Vague Concept of “Invention” as Replaced by Sec. 103 of the 1952 Patent Act*, 46 J. PAT. OFF. SOC’Y 855 (1964) [hereafter Rich, *Vague Concept*].

<sup>113</sup> Patent Act of 1952, Pub. L. No. 82-593, 66 Stat. 792-817 (codified at 35 U.S.C. §§ 1-293 (1958) (current version at 35 U.S.C. §§ 1-376 (1988)).

<sup>114</sup> Rich, *Principles*, *supra* note 112, at 405. This 1960 article criticized the idea that to be patentable, an invention must be better than the prior art. Judge Rich noted that as originally enacted and codified, the 1952 Act had three parts dealing with patentability. *Id.* at 393-94. The second part was entitled “Part II—Patentability of Inventions and Grant of Patents.” 35 U.S.C. §§ 100-188. The first chapter of Part II, chapter 10, consisting of five sections, was entitled “Patentability of Inventions.” 35 U.S.C. §§ 100-104. Section 100, entitled “Definitions,” states that “[w]hen used in this title unless the context otherwise indicates . . . [t]he term ‘invention’ means invention or discovery.” 35 U.S.C. § 100(a).

Another commentator, Judge George Edwards, suggested that “[s]ection

without regard to whether it satisfies the conditions and requirements for patentability established by the statute.<sup>115</sup>

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100 defines invention (not very well) but in Constitutional language.” See Rich, *Tyranny of Words*, *supra* note 112, at 280 n.9 (quoting George Edwards, *That Clumsy Word “Nonobviousness”!*, 60 J. PAT. OFF. SOC’Y 3, 8 (1978)). Judge Rich responded to Edwards’s assertion by stating that the provision in § 100(a) was “a mere statutory drafting convenience, not an attempt at definition,” and it “was included only to avoid the clumsy, repetitive use of the expression ‘invention or discovery’ . . . which had been used in earlier statutes, as the reviser’s note explains.” *Id.*; see also Historical and Revision Notes, following 35 U.S.C. § 100.

<sup>115</sup> The conditions for patentability of inventions are set forth in three sections of the Patent Act: §§ 101, 102, and 103. *Graham v. John Deere Co.*, 383 U.S. 1, 12 (1966). These sections establish that the patentability of an invention depends upon satisfying three explicit conditions: novelty, utility, and nonobviousness. *Id.*

§ 101 provides that “[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.” 35 U.S.C. § 101. Courts have usually read the phrase “new and useful” in this provision as establishing two of the three explicit conditions for patentability (novelty and utility). The phrase “process, machine, manufacture, or composition of matter, or any . . . improvement thereof” establishes the statutory subject matter to which the Patent Act applies and defines what may be patented. See *In re Bergy*, 596 F.2d 952, 959-64 (1980) (analyzing the conditions and requirements imposed by §§ 101-103 of the 1952 Act); see also *Chakrabarty v. Diamond*, 447 U.S. 303, 307 n.5 (1980) (“This case does not involve the other ‘conditions and requirements’ of the patent laws, such as novelty and nonobviousness.”).

§ 102, entitled “Conditions for patentability; novelty and loss of right to patent,” establishes the meaning Congress intended for the word “new” in § 101. It also establishes the standards for novelty that the Patent Office should use to determine whether a patent should issue, and that the courts should use to evaluate challenges to the validity of issued patents. See *In re Bergy*, 596 F.2d at 961 (quoting *In re Bergstrom*, 427 F.2d 1394, 1401 (C.C.P.A. 1970)) (“The word ‘new’ in § 101 is defined and is to be construed in accordance with the provisions of § 102.”).

One finds the third and final condition for patentability in § 103: “Conditions for patentability; non-obvious subject matter.” 35 U.S.C. § 103. See *infra* notes 128-54 and accompanying text for a full discussion of this subject.

Judge Rich made clear that Congress intended to establish both conditions and requirements when it adopted the language in §§ 101-103 of the 1952 Act:

Achieving the ultimate goal of a patent under [these] statutory provisions involves, to use an analogy, having the separate keys to open in succession the three doors of sections 101, 102, and

As it was used in patent law prior to 1952, however, the term "invention" was ambiguous. In some instances, it had the meaning given to it in the 1952 Act and was used to refer to the invention or discovery claimed in a patent or patent application (the thing invented). At other times, and occasionally at the same time, it was used to refer to a vague quality that the subject matter of the patent or patent application was judicially required to possess. Otherwise, the patent would not withstand an assault on its validity or the application would not pass muster in the Patent Office's examination process.<sup>116</sup> This second meaning of invention gave rise to the notion that the Constitution contained a requirement or standard of invention.<sup>117</sup> This notion led some in the judiciary "to approach all inventions gingerly in their opin-

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103, the last two guarding the public interest by assuring that patents are not granted which would take from the public that which it already enjoys (matters already within its knowledge whether in actual use or not) or *potentially* enjoys by reason of obviousness from knowledge which it already has.

. . . .

Section 101 *states* three requirements: novelty, utility, and statutory subject matter. The understanding that these three requirements are *separate and distinct* is long-standing and has been universally accepted. . . . Thus, the questions of whether a particular invention is *novel* or *useful* are questions wholly apart from whether the invention falls into a category of *statutory subject matter*. Of the three requirements *stated* in § 101, only two, utility and statutory subject matter, are *applied* under § 101. . . . [I]n 1952 Congress voiced its intent to consider the novelty of an invention under § 102 where it is first made clear what the statute means by "new", notwithstanding the fact that this requirement is first *named* in § 101.

*In re Bergy*, 596 F.2d at 960-61.

<sup>116</sup> See *Kimberly-Clark Corp. v. Johnson & Johnson*, 745 F.2d 1437, 1453 (Fed. Cir. 1984); *In re Bergy*, 596 F.2d at 961-62; Rich, *Principles*, *supra* note 112, at 403; Rich, *Tyranny of Words*, *supra* note 112, at 281; Rich, *Vague Concept*, *supra* note 112, at 860-62.

<sup>117</sup> See Rich, *Principles*, *supra* note 112, at 403. Judge Rich has been quite explicit in his scorn for this second meaning of invention:

It has generally been stated to be the law that, in addition to being new and useful, an invention, to be patentable, must involve "invention." Merely to state that proposition, in the absence of an initiation into the mysteries, sounds ridiculous. A neophyte might well ask, "What do you mean, an invention must involve invention?" The sophisticates would answer saying, "'Invention,' the Supreme Court has held 'cannot be defined.' It is 'that impalpable something' which you must have to get a

ions by referring to them as 'alleged' or 'supposed' inventions."<sup>118</sup> Although the roots of this ambiguity problem go back to the Patent Act of 1793,<sup>119</sup> the second meaning of invention did not become a judicially engrafted requirement or element<sup>120</sup> until the United States Supreme Court decision of *Hotchkiss v. Greenwood*.<sup>121</sup>

In *Hotchkiss*, the Court ruled on the validity of jury instructions in a patent infringement suit.<sup>122</sup> The court below had instructed the jury to find the plaintiff's patent for a method of making doorknobs invalid if they believed that the construction of the plaintiff's doorknob required no more skill or ingenuity than that possessed by an ordinary mechanic acquainted with the business of making doorknobs.<sup>123</sup> The United States Supreme Court held that these instructions were not reversible error.<sup>124</sup>

Interestingly enough, courts and practitioners did not conclude from *Hotchkiss* that an applicant could obtain a valid patent only if the applicant had done something more than an ordinary mechanic could accomplish. Instead, *Hotchkiss* precipitated a cen-

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patent. Experienced patent lawyers, the Patent Office, and the courts understand what it means, only they never agree."

*Id.* (citing *McClain v. Ortmyer*, 141 U.S. 419, 427 (1891)). See also Rich, *Laying the Ghost*, *supra* note 112, at 32-33.

<sup>118</sup> Rich, *Vague Concept*, *supra* note 112, at 862.

<sup>119</sup> The Patent Act of 1793, ch. 11, 1 Stat. 321, declared that "simply changing the form or the proportions of any machine, or composition of matter, in any degree, shall not be deemed a discovery." Rich, *Principles*, *supra* note 112, at 402-03. The apparent reason for this provision was an assumption that one who had not made a discovery was not an inventor and therefore was not entitled to a patent. *Id.* Similarly, the word "[i]nventors" was used from an early date "as a basis for saying that to have anything patentable, there must in fact be an 'invention.'" *Id.* at 403. In the early patent statutes, the words "discovery" and "invention" were used interchangeably. As a result, there was "evidently . . . from the very outset of our patent system a working rule that no patent would be granted unless there was what was deemed to be an 'invention' or 'discovery,' which contributed to the semantic difficulties." *Id.*

<sup>120</sup> See Rich, *Act of 1952*, *supra* note 112, at 17 ("In 1952, there was a requirement for 'invention,' a judge-made 'law' over a century old.").

<sup>121</sup> 52 U.S. (11 How.) 248 (1850).

<sup>122</sup> *Id.* at 264-65.

<sup>123</sup> *Id.*

<sup>124</sup> *Id.* at 267. "[T]here was an absence of that degree of skill and ingenuity which constitute essential elements of every invention. In other words, the improvement is the work of the skillful mechanic, not of the inventor." *Id.*



ture-long hunt in the courts and in the Patent Office for the meaning of "invention."<sup>125</sup>

Judge Learned Hand summarized the confusion engendered by the "invention" requirement, stating that "when the question is whether there is invention . . . [the] issue is as fugitive, impalpable, wayward, and vague a phantom as exists in the whole paraphernalia of legal concepts. . . . If there be an issue more troublesome, or more apt for litigation than this, we are not aware of it."<sup>126</sup> Judge Hand's comment came just two years before the 1952 Act—the first complete revision of the patent statutes in over eighty years.<sup>127</sup> His observation represented the culmination of a century of growing frustration. It was this frustration that Congress sought to alleviate in section 103 of the 1952 Act.

### B. *Invention and Section 103*

As adopted by Congress in 1952, section 103 used the term "invention" to refer to the subject for which a patent is sought. The section used the term "non-obviousness" to mean a require-

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<sup>125</sup> As the court in *Kimberly-Clark Corp. v. Johnson & Johnson*, 745 F.2d 1437 (Fed. Cir. 1984) noted:

To be entitled to a patent, the inventor was required to have made an "invention"—inversely, he had to be "an inventor." This requirement was in addition to the requirements of novelty and utility, which were always statutory. This was law made by the courts. In essence, it required that an applicant for patent, when presented with the problem, must have done more than would have been done by "an ordinary mechanic acquainted with the business."

. . . [T]he courts were constantly faced with situations where the applicant or patentee had actually made a new and useful invention, and therefore was an inventor, in every sense of the word but one—he had invented something which the courts, viewing prior art, felt did not involve the quality of "invention" and a reason for denying a patent had to be rationalized.

*Id.* at 1453 (citing *Hotchkiss*, 52 U.S. at 265).

<sup>126</sup> *Harries v. Air King Prods. Co.*, 183 F.2d 158, 162 (2d Cir. 1950).

<sup>127</sup> The Patent Act of 1870 was a thorough revision of the amended Act of 1830. The Act of 1870 incorporated some twenty-five amendments to the existing patent law. In 1874, the federal statutes were completely revised and consolidated, and the Patent Act of 1870, with some minor changes, became the Patent Act of 1874. *Outline of the History of the United States Patent Office*, 18 J. PAT. OFF. SOC'Y 59, 110-15 (1936).

ment for patentability.<sup>128</sup> Congress used the two terms to clear up confusion that had developed in the case law over the years.<sup>129</sup>

Even for those intimately involved with the revision, however, the ghost of the invention requirement was not easily dispelled. For example, in a speech he made in 1952, Giles S. Rich, one of the drafters of section 103, characterized the section as (1) the first statutory inclusion of a requirement for invention and (2) a statement that a patent cannot be granted if invention is wanting.<sup>130</sup> When he revised his speech for publication a decade later, Judge Rich left his original comments on section 103 undisturbed, but he added an illuminating addendum:

Thus spake a patent lawyer of a decade ago who, with hindsight wisdom, would now clarify his earlier explanation.

In 1952 there was a requirement for "invention," a judge-

<sup>128</sup> Section 103 reads as follows:

**CONDITIONS FOR PATENTABILITY; NON-OBVIOUS SUBJECT MATTER**

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Patent Act of 1952, 35 U.S.C. § 103 (1988). The Historical and Revision Notes shed light on the purpose of this provision:

There is no provision corresponding to the first sentence explicitly stated in the present statutes, but the refusal of patents by the Patent Office, and the holding of patents invalid by the courts, on the ground of lack of invention or lack of patentable novelty has been followed since at least as early as 1850. This paragraph is added with the view that an explicit statement in the statute may have some stabilizing effect, and also to serve as a basis for the addition at a later time of some criteria which may be worked out.

The second sentence states that patentability as to this requirement is not to be negated by the manner in which the invention was made, that is, it is immaterial whether it resulted from long toil and experimentation or from a flash of genius.

Historical and Revision Notes, 35 U.S.C. § 103.

<sup>129</sup> See *supra* notes 112-27 and accompanying text.

<sup>130</sup> See Rich, *Act of 1952*, *supra* note 112, at 17. Attorney Rich spoke to the New York Patent Law Society on November 6, 1952. For biographical information on Giles S. Rich, see *supra* note 112. For more on his role in drafting the Patent Act of 1952, see Rich, *Congressional Intent*, *supra* note 112.

made "law" over a century old. All patent lawyers thought in terms of this undefined mystery.

Section 103 put a requirement into the statute, the purpose of which was to "codify" the requirement for "invention." What was put into the statute, however, was *not* a requirement for "invention" but a provision that *the* invention could *not* be patented if "the subject matter as a whole (i.e., the claimed invention) would have been *obvious* at the time the invention was made *to a person having ordinary skill in the art* to which the subject matter pertains." Clearly the law is not that there must be "invention" but that there must be statutory *unobviousness*. To say, as some courts are still doing, that unobviousness is indicative of "invention" is tautological, not to say confusing.

When unobviousness has been found, there is no need to go further. Only confusion in thinking can result from referring to the less definite term "invention," which Section 103 displaced. Reading the section will show that it contains no reference to a requirement for "invention." The drafters of the section, in fact, assiduously avoided that term for the very purpose of liberating the law from the moss which it had gathered and providing a clearer and more workable concept free from the clouding of the issue by old cases.<sup>131</sup>

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<sup>131</sup> See Rich, *Act of 1952*, *supra* note 112, at 17. Several years later, Judge Rich made a similar point in one of his decisions with a quote from the legislative history of the 1952 Act:

Section 103, for the first time in our statute, provides a condition which exists in the law and has existed for more than 100 years, but only by reason of decisions of the courts. *An invention* which has been made, and which is new in the sense that the *same* thing has not been made [or known] before, may still not be patentable if the difference between the new thing and what was known before is not considered sufficiently great to warrant a patent. That has been expressed in a large variety of ways in decisions of the courts and in writings. Section 103 states this requirement in the title ["Conditions for patentability; non-obvious subject matter"]. It refers to the difference between the subject matter sought to be patented *and the prior art*, meaning what was known before as described in section 102. If this difference is such that *the subject matter as a whole* would have been obvious at the time [the invention was made] to a person [ordinarily] skilled in the art, then the subject matter cannot be patented.

*In re Bergy*, 596 F.2d 952, 962 (C.C.P.A. 1979) (quoting H.R. REP. NO. 1923, 82d Cong., 2d Sess. 4 (1952), *reprinted in* 1952 U.S.C.C.A.N. 2399 (alterations in original)).

C. *Section 103 and the Judiciary: Graham v. John Deere Co.*<sup>132</sup>

Two years after Judge Rich published his speech, the United States Supreme Court had its first opportunity to interpret section 103 in *Graham v. John Deere Co.*<sup>133</sup> Although the Court found that Congress had not intended "to change the general level of patentable invention" and had merely codified "judicial precedents,"<sup>134</sup> the Court also recognized that Congress did intend to create a more practical test for patentability.<sup>135</sup>

The Court then outlined the basic factual inquiries that section 103 mandated.<sup>136</sup> The Court held that the decisionmaker must consider three "primary" factors.<sup>137</sup> First, the decisionmaker must determine the scope and content of the prior art that pertains to the subject matter sought to be patented.<sup>138</sup> Second, the decisionmaker must ascertain the differences between that prior art and the claims of the patent application or patent at issue.<sup>139</sup> Finally, the decisionmaker must establish the level of ordinary skill in the art.<sup>140</sup> The results of these inquiries, the Court held, will provide the standards for measuring the obviousness or non-obviousness of an invention.<sup>141</sup>

The Court also suggested that decisionmakers could consider certain secondary factors, such as the commercial success of the invention at issue, the existence of long-felt but unresolved needs that the invention cured, or a history of failed attempts by others to redress the problems solved by the invention, in determining

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<sup>132</sup> 383 U.S. 1 (1966).

<sup>133</sup> *Id.*

<sup>134</sup> *Id.* at 17.

<sup>135</sup> As the *Graham* court noted,

[I]nquiries into the obviousness of the subject matter sought to be patented are a prerequisite to patentability . . . .

Approached in this light, the § 103 additional condition, when followed realistically, will permit a more practical test of patentability. The emphasis on non-obviousness is one of inquiry, not quality, and, as such, comports with the constitutional strictures.

*Id.*

<sup>136</sup> *Id.*

<sup>137</sup> *Id.*

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

<sup>139</sup> *Id.*

<sup>140</sup> *Id.*

<sup>141</sup> *Id.*

obviousness.<sup>142</sup> In the wake of the *Graham* decision, it appeared as though Judges Rich and Hand and other voices for coherent statutory standards had won the day.

#### D. *Nonobviousness in the Post-Graham Era*

Although it may be fair to characterize *Graham* as an orderly, meticulous, and poised retreat from the confusion engendered by *Hotchkiss* and its offspring, it was not a wholesale rout of the invention requirement. Some courts continued to draw on pre-1952 case law in deciding cases after *Graham*, while others continued to equate invention with nonobviousness.<sup>143</sup> The United

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<sup>142</sup> *Id.* at 17-18. See *supra* note 110 for a creative use of the secondary factors in the context of patent prosecution.

<sup>143</sup> 2 ERNEST B. LIPSCOMB III, LIPSCOMB'S WALKER ON PATENTS § 6:28, at 126 (3d ed. 1985); see, e.g., *Reynolds Metals Co. v. Acorn Bldg. Components, Inc.*, 548 F.2d 155, 159 (6th Cir. 1977) (stating that nonobviousness is actually the statutory equivalent of the judicial test of invention as incorporated by Congress in § 103); see also *Continental Oil Co. v. Cole*, 634 F.2d 188, 196 (5th Cir. 1981), *cert. denied*, 454 U.S. 830 (1981) (stating that in an infringement action, the defense of obviousness raises the question of inventiveness); *Eltra Corp. v. Basic, Inc.*, 599 F.2d 745, 751 (6th Cir. 1979), *cert. denied*, 444 U.S. 942 (1979) (stating the "[e]ssentially, non-obviousness is the statutory equivalent of the requirement of 'invention'"); *Robbins Co. v. Dresser Indus.*, 554 F.2d 1289, 1290 (5th Cir. 1977) ("[i]nvention is the *sine qua non* of patentability"); *Grayson v. McGowan*, 543 F.2d 79, 81 (9th Cir. 1976) (holding fact that a method and apparatus produces desirable benefits is not sufficient to establish patentability without invention); *Kalkowski v. Ronco, Inc.*, 424 F. Supp. 343, 351 (N.D. Ill. 1976) (finding that there must be invention before the federal government will grant patents; if the prior art discloses the same functional relationship as that described in a patent application, the subject matter of the application does not rise to the dignity of invention; and invention determines patentability); *Metallurgical Exoproducts Corp. v. Pittsburgh Metals Purifying Co., Inc.*, 393 F. Supp. 1104, 1108 (W.D. Pa. 1975), *aff'd*, 532 F.2d 747 (3d Cir. 1976), *cert. denied*, 429 U.S. 829 (1976) (ruling that once the court determines that the difference between the prior art and the challenged patent is not substantial enough to be termed invention, the patent cannot be sustained); *Technitrol, Inc. v. Aladdin Indus., Inc.*, 316 F. Supp. 639, 645 (N.D. Ill. 1970) (noting that while commercial success and long-felt but unmet need are important secondary factors, such factors without invention will not make for patentability).

In several post-*Graham* cases, the invention requirement appeared in a litany that said that patentability requires the existence of three elements: novelty, utility, and invention. See *Westwood Chem., Inc. v. Owens-Corning Fiberglas Corp.*, 317 F. Supp. 201, 215 (N.D. Ohio 1970), *modified*, 445 F.2d 911 (6th Cir. 1971), *cert. denied*, 405 U.S. 917 (1972); *Carter-Wallace, Inc. v.*

States Supreme Court itself wandered back onto the battlefield in 1976 when it mentioned, albeit in dicta, that, “[a]s a judicial test, ‘invention’—i.e., ‘an exercise of the inventive faculty,’—has long been regarded as an absolute prerequisite to patentability.”<sup>144</sup> Furthermore, the Court seemed to be bent on creating yet another judicial requirement for patentability in 1976: “synergism.”<sup>145</sup>

For the most part, however, the “invention” requirement has been laid to rest, and synergism (at least as a condition for patent-

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Riverton Labs., Inc., 304 F. Supp. 357, 368 (S.D.N.Y. 1969), *aff'd*, 433 F.2d 1034 (2d Cir. 1970); Panduit Corp. v. Stahlin Bros. Fibre Works, Inc., 298 F. Supp. 435, 441 (W.D. Mich. 1969), *aff'd*, 430 F.2d 221 (6th Cir. 1970), *cert. denied*, 401 U.S. 939 (1971).

<sup>144</sup> Dann v. Johnston, 425 U.S. 219, 225 (1976) (citation omitted).

<sup>145</sup> Sakraida v. Ag Pro, Inc., 425 U.S. 273, 282 (1976). In *Sakraida*, the Court refused patent protection for “the combination of . . . old elements to produce an abrupt release of water directly on [a] barn floor from storage tanks or pools . . . .” *Id.* Justice Brennan, writing for the Court, said that such a combination could not “be characterized as synergistic, that is, ‘result[ing] in an effect greater than the sum of the several effects taken separately.’” *Id.* (quoting *Anderson’s-Black Rock v. Pavement Co.*, 396 U.S. 57, 61 (1969)).

One extralegal source, providing an admittedly apocryphal context for Justice Brennan’s opinion, indicates that *Sakraida* was considered an insignificant case that did “not pos[e] any interesting questions in the arcane field of patent law.” BOB WOODWARD & SCOTT ARMSTRONG, *THE BRETHERN: INSIDE THE SUPREME COURT* 419 (1979). According to this source, *Sakraida* came up to the Court at a time when Justice Brennan was chafing under what he saw as Chief Justice Warren Burger’s abuses of the assignment power (i.e., the power of the Chief Justice when he is in the majority on a case to assign the task of writing the opinion to any other member of the majority or to himself). *See id.* at 418-19. *Sakraida* involved a patent dispute over a water flush system used to remove manure from the floor of dairy barns and was referred to around the Court as the “cow shit case.” *Id.* at 419. The Justices were unanimous in their decision that the patent at issue was invalid and that consequently there could be no infringement. *Id.* Ordinarily the assignment of such uninteresting cases would go to the most junior associate justice, who was then Justice John Paul Stevens, but Chief Justice Burger assigned the case to Justice Brennan, then the most senior associate justice. Although he felt insulted, Justice Brennan wrote the opinion himself, refusing to “pass along the humiliation to his clerks.” *Id.* at 419.

When we first learned of this story, the authors of this article and one patent attorney of our acquaintance thought it explained why *Sakraida* was so troubling. We assumed that it was written in anger and that Justice Brennan’s engraftment of the “synergism” requirement as a condition for patentability of “combination” inventions (i.e., inventions which combine

ability) was strangled in its crib as a result of Congress's establishment of the Court of Appeals for the Federal Circuit (CAFC) in 1982.<sup>146</sup> Since its establishment, the CAFC has had exclusive appellate jurisdiction over all appeals from United States District Courts in patent matters.<sup>147</sup> Congress established the CAFC and conferred such extensive jurisdiction on it to provide litigants with a forum that would increase doctrinal stability in the field of patent law.<sup>148</sup>

In sum, section 103's nonobviousness requirement clarifies a

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old elements) could be understood as an excess. *See Sakraida*, 425 U.S. at 282.

We have since changed our minds, however, or had them changed. As Judge Rich has pointed out, Justice Brennan's decision in *Sakraida* does not engraft synergism as a condition for patentability; it merely says that synergism is lacking in the invention at issue. Rich, *Tyranny of Words*, *supra* note 112, at 297-98. The engraftment of synergism took place after the Supreme Court decided *Sakraida*, and it was the work of a few district court judges and courts of appeals. *See id.*; *see also* John R. Crossan, *Patent Law: Synergism Rejected*, 56 CHI.-KENT L. REV. 339, 341-48 (1980) (discussing the rise of synergism in the Seventh Circuit and its subsequent fall in *Republic Indus., Inc. v. Schlage Lock Co.*, 592 F.2d 963 (7th Cir. 1979)). The real mistake in *Sakraida*, as Judge Rich forcefully pointed out, was the Court's "apparently unthinking adherence to the outworn and unhelpful *A & P* requirement for 'invention,' after telling the world in *Graham* that Congress has 'emphasized "non-obviousness" as the operative test,' which is the new 'statutory formulation' . . . ." Rich, *Tyranny of Words*, *supra* note 112, at 296 (referring to *Great Atl. & Pac. Tea Co. v. Supermarkets Equip. Corp.*, 340 U.S. 147 (1950)).

<sup>146</sup> *See, e.g.*, *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1540 (Fed. Cir. 1983) (holding that the patent statute does not require synergism and that, while its presence may support an allegation of nonobviousness, its absence has no place in an evaluation of obviousness); *see also* *American Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F.2d 1350, 1360-61 (Fed. Cir. 1984) (holding that even though a new or unexpected result might be indicative of nonobviousness, synergism is not required for patentability).

Congress created the United States Court of Appeals for the Federal Circuit (CAFC) in the Federal Courts Improvement Act of 1982 (FCIA), Pub. L. No. 97-164, 96 Stat. 25.

<sup>147</sup> The jurisdiction of the CAFC is more limited than that of the other federal courts of appeal. 28 U.S.C. § 1291 (1988) (limiting the jurisdiction of the CAFC to the jurisdiction described in 28 U.S.C. § 1292(c)-(d) and 28 U.S.C. § 1295). Of importance here is the CAFC's exclusive jurisdiction of appeals from decisions of the federal district courts in patent cases.

<sup>148</sup> S. REP. NO. 275, 97th Cong., 1st Sess. 5 (1981), *reprinted in* 1982 U.S.C.C.A.N. 11, 5. The CAFC's jurisdiction is defined by subject matter rather than geography. Congress intended it to provide a forum for appeals from throughout the country in areas of law in which Congress determined

confusing area of the law. The nonobviousness requirement also assures that inventions which receive protection of the patent laws are of a higher order than would be required under a patent statute written to meet the minimal standards of the Constitution.<sup>149</sup> The constitutional grant is the basis for Congress's authority to grant exclusive rights to authors and inventors in the areas of both patent and copyright.<sup>150</sup>

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that there is a special need for national uniformity. S. REP. No. 275, 97th Cong., 1st Sess. 3-4 (1981), *reprinted in* 1982 U.S.C.C.A.N. 11, 13-14.

For an interesting discussion of the nature of the CAFC's jurisdiction, see *Panduit Corp. v. All States Plastic Mfg. Co.*, 744 F.2d 1564, 1571-78 (Fed. Cir. 1984).

<sup>149</sup> The Constitution grants Congress the power "[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries." U.S. CONST. art. I, § 8, cl. 8.

<sup>150</sup> Judge Rich has noted that those who "have studied this provision, its origins, and its subsequent history, have, from time to time, pointed out that it is really two grants of power rolled into one; first, to establish a copyright system and, second, to establish a patent system." *In re Bergy*, 596 F.2d 952, 958 (C.C.P.A. 1979) (citing RICHARD B. DEWOLF, *AN OUTLINE OF COPYRIGHT LAW* 15 (1925); Karl B. Lutz, *Patents and Science: A Clarification of the Patent Clause of the U.S. Constitution*, 18 GEO. WASH. L. REV. 50 (1949); P. FEDERICO, *COMMENTARY ON THE NEW PATENT ACT*, 35 U.S.C.A. §§ 1 TO 110, 1, 3 (1954); Rich, *Principles*, *supra* note 112, at 393). Judge Rich also noted that Congress adopted this construction of Article I, § 8, clause 8, and that Congress recognized that the purpose of the first provision, the copyright provision, is to grant Congress the power to promote the progress of science (meaning knowledge) by giving authors the exclusive right to their writings for a limited time. The second provision grants Congress the power to promote the progress of useful arts by giving inventors the exclusive right to their discoveries for a limited time. *In re Bergy*, 596 F.2d at 958 (citing H.R. REP. No. 1923, 82d Cong., 2d Sess. 4 (1952); S. REP. No. 1979, 82d Cong., 2d Sess. 3 (1952), *reprinted in* 1952 U.S.C.C.A.N. 2394, 2396).

In *Graham v. John Deere Co.*, 383 U.S. 1 (1966), the Supreme Court adopted just such a reading of the Constitution and noted that the provision that authorizes Congress's patent powers "appears in the Constitution spliced together with the copyright provision." *Id.* at 5 n.1. In *Feist Publications, Inc. v. Rural Tel. Serv. Co.*, 111 S. Ct. 1252 (1991), Justice O'Connor comes very close to reading the copyright provision in Article I, § 8, clause 8, of the Constitution in the same way: it authorizes Congress to "secur[e] for limited Times to Authors . . . the exclusive Right to their respective Writings." *Id.* at 1288. Justice O'Connor's reading of the provision differs, however, insofar as it excludes the express limitation on Congress's exercise of its copyright power ("To promote The Progress of Science") and it includes the one word in the clause ("respective") that is



Some have suggested that the best approach to this constitutional grant would be to limit the conditions for patentability to those which are inherent in the grant: namely, novelty and utility.<sup>151</sup> Yet, as the United States Supreme Court noted in *Graham*, Americans have an aversion to monopolies.<sup>152</sup> The judicial imposition of the “invention” requirement is probably an example of this aversion.<sup>153</sup> By requiring an inventor to do something more than those having only “ordinary skill in the art” could have done had they addressed the problem, section 103 ensures that inventions that others might have made with relative ease are not

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entirely superfluous when reading the single phrase as two distinct granting provisions. *Id.*

Notwithstanding these errors, Justice O'Connor's reading in *Feist* and Justice Clark's in *Graham*, if read carefully by the courts and the members of the bar, should help to correct the misunderstandings that Justice Douglas engendered in the “requirement of invention” era, because they distinguish the requirements for copyright from the requirements for patent. Justice Douglas had stated in a concurring opinion that, in exercising its patent power, Congress acts under the restraint imposed by the purpose expressed in Art. I, § 8, cl. 8: “To Promote the Progress of Science and useful Arts.” *Great Atl. & Pac. Tea Co. v. Supermarket Equip. Corp.*, 340 U.S. 147, 154 (1950) (Douglas, J., concurring). See Rich, *Laying the Ghost*, *supra* note 112, at 32-33.

<sup>151</sup> Richard J. Dearborn & R. B. Boal, *Invention*, in THE ENCYCLOPEDIA OF PATENT PRACTICE AND INVENTION MANAGEMENT 480, 483-84 (Robert Calvert ed., 1964). “Novelty and utility . . . have much in their favor. . . . [One eminent patent counsel] advocated that patentability be determined simply by answering the questions: Is it *new*? Is it *useful*? . . . [I]t is hard to conceive of a better yardstick for measuring patentability or one more definite and easily determined.” *Id.*

<sup>152</sup> *Graham*, 383 U.S. at 7. The Court's observation fails to ascribe this aversion to its source: the English common law and the common-law lawyers of the late Elizabethan and early Stuart eras. For an excellent, brief history on this subject, see 1 LIPSCOMB, *supra* note 143, §§ 1:1-1:6; see also Rich, *Vague Concept*, *supra* note 112, at 856-58.

<sup>153</sup> See Rich, *Principles*, *supra* note 112, at 403. Judge Rich noted that Thomas Jefferson once proposed to revise the Patent Act of 1790 by adding a statutory defense to a patent infringement claim that the infringed “invention is so unimportant and obvious that it ought not to be the subject of an exclusive right.” *Id.* Judge Rich also pointed out that Jefferson's language makes clear that he believed one might have invented something (and therefore be an inventor and have an invention) that was or should be unpatentable. See *id.*; see also *Graham*, 383 U.S. at 6-10 (discussing Jefferson's views on patents); *Kimberly-Clark Corp. v. Johnson & Johnson*, 745 F.2d 1437, 1453 (Fed. Cir. 1984) (Rich, J.) (discussing judiciary's “need to find a reason for saying the applicant or patentee either had not made an ‘invention’ or should not be called ‘an inventor’”).

removed from the public domain (i.e., monopolized) for seventeen years.<sup>154</sup> The patent laws thus promote competition by leaving obvious inventions open to all, while they promote progress in the useful arts with the promise of exclusive rights for those who go beyond the obvious.

#### IV. INTERPRETING THE *LOTUS* NONOBVIOUSNESS STANDARD FOR COPYRIGHT

##### A. *Patent-Like Nonobviousness*

*Lotus* set forth a nonobviousness standard in a copyright case. Neither prior case law nor the 1976 Copyright Act expressly provide that nonobviousness is necessary for copyrightability. One reasonable interpretation of Judge Keeton's application of a nonobviousness standard to copyright is that he intended copyright nonobviousness to be analogous to patent nonobviousness.

In an elementary sense, the patent concept of obviousness is closely related to a rather fundamental, ordinary English meaning of the word "obvious." Often, when one says that a thing is "obvious," one means that one can logically deduce it based upon the prior knowledge of another thing or other things. But to determine whether something is obvious in this sense, one must first determine the scope of the prior knowledge that is relevant. Something that is an obvious, logical deduction for a medical student might never occur to a law student, and vice versa. What is obvious to one may be opaque or even incomprehensible to another.

If this "logical deduction" concept of obviousness is what

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<sup>154</sup> As Judge Rich observed, the opinions that deny patent rights do not usually explain the real reason, "which is the basic principle . . . that no patent should be granted which withdraws from the public domain technology already available to the public." *Kimberly-Clark*, 745 F.2d at 1453 (citing *Graham*, 383 U.S. at 6, as an exception). Since the passage of § 103 of the Patent Act of 1952, courts need no longer hide behind the fiction they used to implement this basic principle—the fiction that the applicant or patentee is not an inventor or did not make an invention. In § 103, Congress gave the courts a replacement for the "requirement of invention": nonobviousness. Because nonobviousness is statutory, it should be used exclusively. *Kimberly-Clark*, 745 F.2d at 1454; see also *supra* note 115 (quoting *In re Bergy*, 596 F.2d 952, 960 (C.C.P.A. 1979) for the proposition that § 103 protects the public interest "by assuring that patents are not granted when they would withdraw from the public that which it already enjoys . . . by reason of obviousness from knowledge which it already has.").

Judge Keeton had in mind when he said that something obvious is uncopyrightable, then it is critical to determine to whom something can be said to be obvious and the scope of prior knowledge necessary to make that judgment. Only when one establishes what prior knowledge can be assumed and whose perceptions are relevant can one begin to evaluate the viability of obviousness as a copyright standard.

If patent concepts of nonobviousness are to serve as a guide for application to copyright, the issue of whether something is non-obvious for purposes of copyright must, then, turn on a question analogous to the obviousness inquiry in patent law. One must ask whether the work in question would be obvious to someone—one who might be called the copyright analogue of a skilled mechanic—possessing ordinary skill in the type of copyrightable subject matter at issue (i.e., the pertinent art).<sup>155</sup> Courts would then need to resolve a new threshold question: What people should serve as the copyright analogue of the skilled mechanic in patent law? Perhaps “artisans” or “craftspeople” would be the appropriate class of persons whose skills are sufficiently below the skill level of authors and artists to be regarded as the benchmark for decisionmaking.<sup>156</sup>

Applying the teachings of *Graham* to copyright to assess the copyrightability of a work, a decisionmaker would have to investigate three additional key questions: (1) What is the scope of the prior art for works of the type at issue;<sup>157</sup> (2) What are the differences between those pre-existing works and the work at issue; and (3) What is the ordinary level of skill of the copyright analogue of a skilled mechanic for the type of work at issue.<sup>158</sup> Inquiries such as these will, no doubt, be extremely difficult to resolve in a copy-

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<sup>155</sup> See *supra* note 128 and accompanying text (setting forth text of 35 U.S.C. § 103); *Graham*, 383 U.S. at 17.

<sup>156</sup> In *Hotchkiss v. Greenwood*, 52 U.S. (11 How.) 248 (1850), the United States Supreme Court created the so-called “skilled mechanic” standard. The Court stated that “unless more ingenuity and skill” were involved “than were possessed by an ordinary mechanic acquainted with the business,” the invention was not patentable. *Id.* at 267. The *Hotchkiss* Court contrasted a “skilled mechanic” with an “inventor,” stating that the work of the former was unpatentable while the latter’s was patentable. *Id.*

<sup>157</sup> Presumably this investigation would include works in the public domain as well as works protected by copyright.

<sup>158</sup> See *supra* notes 136-41 and accompanying text. Presumably courts could also consider the types of factors that the *Graham* Court suggested as “secondary.” See *supra* note 142 and accompanying text.

right context. In addition to the practical difficulties, moreover, a patent-like nonobviousness requirement for copyrightability would significantly alter the currently accepted standards for copyrightability.<sup>159</sup>

### B. Nonobviousness as a Sub-Element of Originality

#### 1. Originality

The 1976 Act provides that something is copyrightable if it is an "original work[] of authorship fixed in any tangible medium of expression. . . ."<sup>160</sup> Computer programs, like 1-2-3, ordinarily are fixed on floppy disks (or some analogous magnetic medium) and, thus, by their very nature, meet the fixation requirement.<sup>161</sup> Congress defined a computer program in the 1976 Act as "a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result."<sup>162</sup> Courts have uniformly held that computer programs are "literary works" protectable as works of authorship.<sup>163</sup> As a matter of statutory law, then, a computer program is generally copyrightable unless it

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<sup>159</sup> In fact, Judge Keeton himself has acknowledged that he did not intend to impose a patent-like nonobviousness standard. Rather, he supports the view espoused *infra* that his discussion of "obviousness" was aimed at achieving a better understanding of copyright "originality." Interview with Robert E. Keeton, Judge of the United States District Court for the District of Massachusetts, in Boston, Mass. (Sept. 20, 1991).

<sup>160</sup> 17 U.S.C. § 102.

<sup>161</sup> There have been, however, cases that have questioned whether the audiovisual aspects of computer video games meet the fixation requirement. *See, e.g., Williams Elec., Inc. v. Artic Int'l*, 685 F.2d 870 (3d Cir. 1982). Parties have argued that because the player manipulates the objects on the screen, those movements generated by the player are never "fixed in any tangible medium of expression." *Id.* at 875. The *Williams* court rejected this argument, stating that "there is always a repetitive sequence of a substantial portion of the sights and sounds of the game, and many aspects of the display remain constant from game to game regardless of how the player operates the controls." *Id.* at 874.

<sup>162</sup> 17 U.S.C. § 101; *see also supra* note 19 and accompanying text.

<sup>163</sup> *See, e.g., Apple Computer, Inc. v. Franklin Computer Corp.*, 714 F.2d 1240, 1247 (3d Cir. 1983), *cert. dismissed*, 464 U.S. at 1033; *Williams Elec.*, 685 F.2d at 875; *Stern Elec., Inc. v. Kaufman*, 669 F.2d 852, 855 n.3 (2d Cir. 1982); *Digital Communications Assocs., Inc. v. Softklone Distrib. Corp.*, 659 F. Supp. 449, 454 (S.D. Fla. 1987); *Midway Mfg. Co. v. Strohon*, 564 F. Supp. 741, 750 (N.D. Ill. 1983). The 1976 Act provides that, for purposes of copyright, "[w]orks of authorship include . . . literary works. . . ." 17 U.S.C. § 102(a).

fails to meet the requirement that it be "original."<sup>164</sup>

As a general rule, the originality required for copyrightability of literary works is rather modest.<sup>165</sup> The *House Report* expressly stated that the standard of copyright originality "does not include requirements of novelty, ingenuity, or esthetic merit, and there is no intention to enlarge the standard of copyright protection to require them."<sup>166</sup>

Courts have interpreted the word "original" to have two distinct meanings for purposes of copyright. First, courts have recognized that "[o]riginality is distinct from novelty. To be original, a work must be the product of independent creation."<sup>167</sup> For purposes of clarity, it is useful to refer to this first meaning of originality, which demands independent creation, as "objective originality."<sup>168</sup> In order to meet the requirement of objective originality, a work must be created independently of other pre-existing works (i.e., not copied from any other source—whether the source is protected by copyright or in the public domain).<sup>169</sup>

Courts have also interpreted the word "original" to contain an additional subjective element. To be copyrightable, not only must a work have been created independently, but a second element must also be present: the work must be "more than a trivial

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<sup>164</sup> 17 U.S.C. § 102.

<sup>165</sup> *Feist Publications, Inc. v. Rural Tel. Serv. Co.*, 111 S. Ct. 1282, 1286-87 (1991); *Durham Indus., Inc. v. Tomy Corp.*, 630 F.2d 905, 910 (2d Cir. 1980); see *Eden Toys, Inc. v. Florelee Undergarment Co.*, 697 F.2d 27, 35 (2d Cir. 1982). For a good introduction to the concept of "originality" in copyright, see Dale P. Olson, *Copyright Originality*, 48 Mo. L. Rev. 29 (1983).

<sup>166</sup> HOUSE REPORT, *supra* note 2, at 51. Notwithstanding this legislative language, Congress has adopted regulations requiring "creativity" for pictorial, graphic, and sculptural works. 37 C.F.R. § 202.10(a) (1990). The *Code of Federal Regulations* provides: "In order to be acceptable as a pictorial, graphic, or sculptural work, the work must embody some creative authorship in its delineation or form. . . ." *Id.*; see also *infra* notes 171-201 and accompanying text (discussing "creativity" requirement espoused in *Feist*, 111 S. Ct. at 1287-88).

<sup>167</sup> *Magic Mktg., Inc. v. Mailing Servs., Inc.*, 634 F. Supp. 769, 771 (W.D. Pa. 1986); see *Feist*, 111 S. Ct. at 1287-88.

<sup>168</sup> The authors have coined the terms "objective originality" and "subjective originality" to distinguish the two types of copyright originality that courts have required. By coining these terms, the authors hope to add some clarity to the often confused discourse surrounding "originality" in copyright law.

<sup>169</sup> Judge Keeton acknowledged this meaning of "originality" early in the *Lotus* decision. See *supra* note 49 and accompanying text.

variation of a previous work.”<sup>170</sup> Justice O’Connor referred to this element of originality as “some minimal degree of creativity” in *Feist Publications, Inc. v. Rural Telephone Service Corp.*<sup>171</sup> To distinguish this aspect of originality from “objective originality” (i.e., independent creation), it is useful to refer to this second type of originality as “subjective originality.”<sup>172</sup>

In one of the leading cases that tried to explain this second element, the Second Circuit advanced the following interpretation of copyright originality: “To support a copyright there must be at least some substantial variation, not merely a trivial variation such as might occur in the translation to a different medium.”<sup>173</sup> Thus, even though there is presently no express requirement that a work be nonobvious to be copyrightable, courts have consistently interpreted the subjective originality requirement to mean that a work must contain variations (i.e., differences from other copyrighted or public domain works) that are more than merely trivial.<sup>174</sup>

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<sup>170</sup> *Magic Marketing*, 634 F. Supp. at 771. See also *Kramer Mfg. Co. v. Andrews*, 783 F.2d 421, 438 (4th Cir. 1986).

<sup>171</sup> *Feist*, 111 S. Ct. at 1287. For the reasons stated below, the authors believe that “subjective originality” is a more useful term than “creativity” for the second element of originality. Many courts and commentators, however, prior to Justice O’Connor, had used the word “creativity” to describe this second element. See, e.g., *Baltimore Orioles, Inc. v. Major League Baseball Players Ass’n*, 805 F.2d 663, 668 n.6 (7th Cir. 1986), cert. denied, 480 U.S. 941 (1987); *John Muller Co. v. New York Arrows Soccer Team*, 802 F.2d 989, 990 (8th Cir. 1986); *West Publishing Co. v. Mead Data Cent., Inc.*, 799 F.2d 1219, 1233 (8th Cir. 1986), cert. denied, 479 U.S. 1070 (1987); *L. Batlin & Son, Inc. v. Snyder*, 536 F.2d 486, 490 (2d Cir. 1976), cert. denied, 429 U.S. 857 (1976); *Universal Athletic Sales v. Salkeld*, 511 F.2d 904, 908 (3d Cir. 1975), cert. denied, 423 U.S. 863 (1975); *Atari Games Corp. v. Oman*, 693 F. Supp. 1204, 1205 (D.D.C. 1988), rev’d, 888 F.2d 878 (D.C. Cir. 1989); *Sebastian Int’l, Inc. v. Consumer Contact (PTY) Ltd.*, 664 F. Supp. 909, 913 (D.N.J. 1987); Mitzi S. Phalen, Comment, *How Much is Enough? The Search for a Standard of Creativity in Works of Authorship Under Section 102(a) of the Copyright Act of 1976*, 68 TENN. L. REV. 835 (1989). For a particularly lucid discussion, see Brian A. Dahl, Comment, *Originality and Creativity in Reporter Pagination: A Contradiction in Terms?* 74 IOWA L. REV. 713, 716-18 (1989).

<sup>172</sup> See *supra* note 168.

<sup>173</sup> *L. Batlin & Son v. Snyder*, 536 F.2d 436, 491 (2d Cir. 1976).

<sup>174</sup> A long line of cases have enunciated this “trivial variation” standard. See, e.g., *Weissman v. Freeman*, 868 F.2d 1313, 1321 (2d Cir. 1989), cert. denied, 110 S. Ct. 219 (1989); *Kramer Mfg.*, 783 F.2d at 438; *Alfred Bell & Co. v. Catalda Fine Arts, Inc.*, 191 F.2d 99, 102-03 (2d Cir. 1951); *Plymouth*

## 2. Nonobviousness, Originality, and Creativity in *Feist*

In *Feist*, Justice O'Connor, writing for a unanimous Supreme Court, used the term "creativity" to refer to subjective originality.<sup>175</sup> Consequently, a summary of *Feist* will aid in understanding this second element of originality in copyright law.

In contrast to the complex factual scenario of *Lotus*, *Feist* is a relatively simple case. Rural Telephone Service Company (Rural) was a public utility company serving a portion of Northwest Kansas.<sup>176</sup> A Kansas regulation mandated that Rural publish an annual telephone directory.<sup>177</sup> Rural's white pages listed the names of subscribers alphabetically, as well as their towns and telephone numbers.<sup>178</sup> Feist Publications, Inc. (Feist) published "area-wide telephone directories" that listed numbers in an unusually broad geographic area, "reducing the need to call directory assistance or consult multiple directories."<sup>179</sup> When Rural refused to license its white page directory to Feist, Feist copied the information in Rural's directory without permission.<sup>180</sup>

Justice O'Connor held that Feist had not infringed Rural's copyright because Rural's alphabetized white page directory lacked the originality necessary to be copyrightable.<sup>181</sup> In reaching this conclusion, Justice O'Connor, as Judge Keeton had done in *Lotus*, carefully reviewed the concept of originality.<sup>182</sup> She explained that "[o]riginal, as the term is used in copyright, means only that the work was independently created by the author (as opposed to copied from other works), and that it possesses at least some minimal degree of creativity."<sup>183</sup>

She emphasized that originality is a constitutional requirement<sup>184</sup> and specifically cited *The Trade-Mark Cases*<sup>185</sup> and *Burrow-*

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Music Co. v. Magnus Organ Corp., 456 F. Supp. 676, 679-80 (S.D.N.Y. 1978); Consolidated Music Publishers, Inc. v. Ashley Publications, Inc., 197 F. Supp. 17, 18 (S.D.N.Y. 1961).

<sup>175</sup> *Feist*, 111 S. Ct. at 1288; see *supra* note 166.

<sup>176</sup> *Feist*, 111 S. Ct. at 1288.

<sup>177</sup> *Id.*

<sup>178</sup> *Id.*

<sup>179</sup> *Id.*

<sup>180</sup> *Id.*

<sup>181</sup> *Id.* at 1296-97.

<sup>182</sup> *Id.* at 1288-97.

<sup>183</sup> *Id.* at 1288.

<sup>184</sup> *Id.* at 1290.

*Giles Lithographic Co. v. Sarony*<sup>186</sup> as support for the constitutional underpinnings of originality.<sup>187</sup> According to Justice O'Connor, *The Trade-Mark Cases* and *Burrow-Giles* defined the constitutional terms "authors" and "writings" in such a way that required originality.<sup>188</sup> Furthermore, she concluded that *The Trade-Mark Cases* established the two elements of originality, independent creation and a "modicum of creativity."<sup>189</sup>

After detailed discussions of the noncopyrightability of facts,<sup>190</sup> the sweat of the brow doctrine,<sup>191</sup> and the copyrightability of compilations,<sup>192</sup> Justice O'Connor concluded that "[t]here remains a narrow category of works in which the creative spark is utterly lacking or so trivial as to be virtually nonexistent."<sup>193</sup> She then stressed that the copyright protection for a compilation is severely limited. The 1976 Act expressly limits copyright protection in compilations "only to the material contributed by the author. . . ."<sup>194</sup> Therefore, Justice O'Connor concluded that "the facts contained in existing works may be freely copied because copyright protects only the elements that owe their origin to the compiler—the selection, coordination, and arrangement of facts."<sup>195</sup> Relying upon this rule of copyrightability, Justice O'Connor determined that "[t]he selection, coordination, and arrangement of Rural's white pages do not satisfy the minimum constitutional standards for copyright protection."<sup>196</sup> According to Justice O'Connor, an alphabetical listing of names was "devoid of even the slightest trace of creativity."<sup>197</sup>

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<sup>185</sup> *Trade-Mark Cases*. *United States v. Steffens*; *United States v. Wittemann*; *United States v. Johnson*, 100 U.S. 82 (1879).

<sup>186</sup> 111 U.S. 53 (1884).

<sup>187</sup> *Feist*, 111 S. Ct. at 1290.

<sup>188</sup> *Id.*

<sup>189</sup> "[W]hile the word *writings* may be literally construed . . . it is only such as are *original*, and are founded in the creative powers of the mind." *Id.* at 1288 (quoting *Trade-Mark Cases*, 100 U.S. at 94).

<sup>190</sup> *Id.* at 1290-93.

<sup>191</sup> *Id.* at 1291-93.

<sup>192</sup> *Id.* at 1293-95.

<sup>193</sup> *Id.* at 1294.

<sup>194</sup> 17 U.S.C. § 103(b) (1988).

<sup>195</sup> *Feist*, 111 S. Ct. at 1295.

<sup>196</sup> *Id.* at 1296.

<sup>197</sup> *Id.* She continued, stating:

[T]here is nothing remotely creative about arranging names alphabetically in a white pages directory. It is an age-old practice, firmly rooted in tradition and so commonplace that it



“Creativity,” like the words “invention” and “originality,” is subject to widely disparate interpretations. The difficulty of interpreting the word “creativity” accentuates why it is preferable to use the phrase “subjective originality,” defined as the existence of a variation that is more than merely trivial, to refer to the second element of originality.<sup>198</sup> Rather than relying on an ambiguous label like “original” or “creative,” a viable alternative test would be to consider whether a work entails a variation that is more than merely trivial. One can apply a merely trivial variation standard (i.e., “subjective originality”) more easily than a standard involving “creativity.” For example, in *Feist*, it would have been relatively straightforward for the Court to have held that an alphabetical white page listing was not more than merely a trivial variation of the facts (names and telephone numbers). The process of putting names in alphabetical order today is no more than a trivial variation of the names and numbers themselves.

Justice O’Connor actually referred to obviousness twice in *Feist*. Early in the opinion, she noted that “[t]he vast majority of works”

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has come to be expected as a matter of course. It is not only unoriginal, it is practically inevitable. This time-honored tradition does not possess the minimal spark required by the Copyright Act and the Constitution.

*Id.* at 1297.

<sup>198</sup> “Creativity” is an ambiguous word in the English language. It comes from the Latin verb *creō* (“to beget, sire; . . . give birth”). OXFORD LATIN DICTIONARY 456 (combined ed. first pub. 1982, reprinted 1983) [hereafter OXFORD]. The word “original” also has its roots in Latin; it derives from the noun *origo* (“the coming into being (of a thing), first appearance, beginning, birth, starting point”). *Id.* at 1592. *Webster’s Third New International Dictionary* defines “creative” as “1: having the power or quality of creating: given to creation. 2: PRODUCTIVE. . . . 3: having the quality of something created rather than imitated or assembled: expressive of the maker: IMAGINATIVE.” WEBSTER’S THIRD NEW INTERNATIONAL DICTIONARY 532 (3d ed. 1971). “Original” is defined as “1 a: of or relating to a rise or beginning: existing from the start. . . . b: constituting a source, beginning, or first reliance. . . . 2 a: taking independent rise: having spontaneous origin: not secondary, derivative, or imitative: FRESH, NEW. . . . b: gifted with the powers of independent thought, direct insight, or constructive imagination: CREATIVE, FERTILE, GERMINAL, INVENTIVE. . . . *Id.* at 1592. The similarity between the meanings of “originality” and “creativity” makes it nearly impossible to distinguish them.

Courts have already begun citing *Feist* for the proposition that “creativity” is a requirement for originality. See, e.g., *Victor Lalli Enter., Inc. v. Big Red Apple, Inc.*, 936 F.2d 671, 673 (2d Cir. 1991); *Kregos v. Associated Press*, 937 F.2d 700, 703 (2d Cir. 1991).

possess a sufficient level of originality to be considered copyrightable, because “they possess some creative spark, ‘no matter how crude, humble *or obvious*’ it might be.”<sup>199</sup> As part of her explanation for why the white page directory lacked originality, however, Justice O’Connor emphasized the obviousness of the white page directory, stating that the “selection of listings *could not be more obvious. . . .*”<sup>200</sup> Justice O’Connor’s references to obviousness in *Feist* are inconsistent at worst and ambiguous at best. In dicta she stated that obviousness is not relevant, and then, as part of her rationale for holding the directory uncopyrightable, she stressed the obviousness of the alphabetical listing. Hence, *Feist* failed to resolve the role of obviousness in copyright.<sup>201</sup>

### 3. The Interface Between Obviousness and Triviality: A Proposed Resolution

An examination of the history and meaning of the words “obvious” and “trivial” can shed light on the confusion *Feist* failed to resolve. According to the *Oxford English Dictionary*, something is obvious if it is “directly in the way.”<sup>202</sup> In order to be copyrightable, an expression must be “fixed in any tangible medium of expression . . . from which [it] can be perceived, reproduced, or otherwise communicated directly or with the aid of a machine or device.”<sup>203</sup> The very fact that the expression is intended to be perceived by the human senses indicates that, at least in an ele-

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<sup>199</sup> *Feist*, 111 S. Ct. at 1287 (quoting NIMMER, *supra* note 5, § 1.08[C][1]) (emphasis added).

<sup>200</sup> *Id.* at 1296 (emphasis added).

<sup>201</sup> Justice O’Connor stated that Rural’s decision to publish its subscribers’ names, towns, and numbers was an “obvious” selection that “lacks the modicum of creativity necessary to transform mere selection into copyrightable expression.” *Id.* Like Judge Keeton in *Lotus*, however, she does not explain why she thinks that these selections are obvious. She does not apply a *Graham*-like obviousness test. In a recent opinion, Judge Newman of the Second Circuit relied on *Feist* in considering whether a form used for baseball pitching performance statistics was “entirely typical,” “garden variety,” or “obvious.” *Kregos v. Associated Press*, 937 F.2d 700, 705 (2d Cir. 1991).

<sup>202</sup> The word “obvious” comes from the Latin words “*ob*” (“in front of or in the way of”) and “*via*” (“road” or “way”). In Latin, the adjective *obvius* is the direct etymological ancestor of our English adjective “obvious.” The Latin adjective *obvius* means “that is in the way or path,” “placed so as to meet,” “in a position to confront.” OXFORD, *supra* note 198, at 123.

<sup>203</sup> 17 U.S.C. § 102(a).

mentary sense, all copyrightable expressions are obvious.<sup>204</sup> The word “trivial” also comes from Latin; the adjective *trivialis* means that which is in or belongs to the crossroads.<sup>205</sup> *Trivialis*, in turn, derives from the combination of the Latin cardinal numeral three, *tres* (also spelled *tris*), and *via* (“road” or “way”).<sup>206</sup>

The similarity between the words “obvious” and “trivial” is unmistakable. Technically, their meanings are slightly different. Given the practical difficulties that would result from applying a patent-like notion of nonobviousness to copyright cases,<sup>207</sup> if one wishes to adhere to Judge Keeton’s requirement that works must be nonobvious in order to be copyrightable, it is prudent to equate his use of “obvious” with “trivial” in copyright precedent. By construing Keeton’s nonobviousness requirement to mean “nontrivial,” one can harmonize *Lotus* with the precedents that require “subjective originality.” This interpretation becomes even more appealing when one considers that there is neither a statutory nor a case law foundation for interpreting Keeton’s nonobviousness requirement as either patent-like nonobviousness or as a previously unknown element of copyrightability.<sup>208</sup>

Judge Keeton’s lack of explanation, coupled with the unsavory practical and legal ramifications that would result from applying a patent-like nonobviousness standard, justify a cautious interpretation of his nonobvious requirement for copyrightability. Interpreting that requirement as subjective originality (i.e., a trivial variation standard) is a logical construction.

#### CONCLUSION

Judge Keeton’s careful analysis and lucid discussion of computer copyright issues and precedents in the *Lotus* case are

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<sup>204</sup> This is certainly true in the case of those expressions that we perceive “directly.” They are, by definition, directly in the path of our senses of sight, touch, or hearing.

<sup>205</sup> See WEBSTER’S THIRD INTERNATIONAL DICTIONARY 2450 (1969).

<sup>206</sup> See OXFORD, *supra* note 198, at 1970-71; 2053-54. Literally, then, a *trivia* is a place where three roads meet.

<sup>207</sup> See *supra* notes 154-55 and accompanying text.

<sup>208</sup> In fact there is ample support for the view that Congress never intended any such *Graham*-like requirement for copyright law. See NIMMER, *supra* note 5, § 2.01[A] n.10 (discussing Justice Douglas’s dissent in *Lee v. Runge*, 404 U.S. 887 (1971), wherein he argued that *Graham v. John Deere Co.*, 383 U.S. 1 (1966) mandated that copyrights, like patents, should meet a novelty requirement in order to pass constitutional muster).

extremely useful. *Lotus* is certain to be important for years to come. Judges and scholars have expended considerable effort in their attempts to formulate rational methods for determining the appropriate boundaries that should separate ideas from the expressions of those ideas and to identify the nature of copyrightability. As regards those two issues, one of the most important dimensions of the *Lotus* decision is clearly Keeton's tripartite test for determining copyrightability. Judge Keeton's decision in *Lotus* takes us several steps closer to understanding these problems, particularly as they relate to computer technology. To the extent, however, that courts seek to apply *Lotus*'s requirement of nonobviousness to copyright law, this Article urges that courts not adopt this particular jewel in the lotus. Rather, it should be interpreted as a requirement of subjective originality.