

**How *Oracle* Erred:  
Functionality, Useful Articles, and the Future of Computer Copyright**

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*Preface and summary*

In *Oracle v. Google* (2015), the Federal Circuit addressed whether the “method header” components of a dominant computer program were uncopyrightable as “merging” with the headers’ ideas or function. Google had copied the headers to ease the ability of third-party programmers to interact with Google's Android platform. The court rebuffed the copyrightability challenge; it reasoned that because the plaintiff's expression *might have been written* in alternative forms, there was no “merger” of idea and expression. However, the *Oracle* court may have been asking the wrong question.

In *Lotus v. Borland* (1995), the owner of a dominant spreadsheet program sought to prevent a new competitor's program from making available a set of ‘command menu’ headers based on the dominant program's menus. The defendant also wrote its own, original command menus, but provided the copied menus as an option to relieve customers who, migrating from the dominant spreadsheet, would otherwise have had a substantial burden to master new terms and rewrite macros.

In assessing the legality of the copying, the First Circuit started its inquiry not with a question about how the plaintiff's program might have been written, but rather with how the program actually was written. It then identified the menu commands as “methods of operation” because they were necessary to make the

actual program operate a computer. The copyright statute renders "methods of operation" per se uncopyrightable, regardless of the possibility of alternatives.

Debates over the conflict between *Oracle* and *Lotus* have largely ignored a middle road that supports the *Lotus* result without the potential for overkill some observers see in *Lotus*. This middle road is a doctrine known as the "explanation/use" distinction. Laid out in the classic Supreme Court case of *Baker v. Selden* (1800), and ratified by statutory provisions of the Copyright Act including the much-ignored Section 113(b), the "explanation/use distinction" specifies that a copyright owner has no power to control behaviors that belong to the domain of utility patent. Like "merger" and "method of operation", the "explanation/use" doctrine implements the deference that, pursuant to Congressional command and Supreme Court precedent, US copyright law must give to patent law. However, the explanation/use doctrine operates by limiting the *scope* of the exclusive rights a copyright owner might otherwise possess, not by targeting the copyrightability of what the plaintiff produced.

This chapter examines justifications for the "explanation/use distinction", and suggests a two-part test for implementing that doctrine. The chapter argues that a copyright owner should have no *prima facie* rights over copying behavior where (1) the goals of the copying are "use" (behavior in the realm of utility patent) and (2) the copying is done solely for goals unrelated to the expressiveness of the plaintiff's work of authorship. (The copying of *Oracle* and *Lotus* seem to have been fully indifferent to expressive values; the result might be different in a case where defendant's goals are mixed.)

This two-part test is met by the defendants in *Oracle* and *Lotus*. (1) Making a machine operate is clearly utilitarian. And as for (2) indifference to expression, both *Lotus* and *Oracle* involve someone copying a computer interface to enable users to interoperate: third party programmers could use or design Java-enabled programs on Android, and spreadsheet users could use their prior macros on a new spreadsheet program. Interoperability is one of the few areas where indifference to expression is clear: after all, when one wants a spare key made, the elegance or

beauty of the key's shape is irrelevant – all that matters is that the shape fits the lock.

## 1 Introduction

The world would look far different than it does if copyright law covered functional expression without limit. Someone who imagines they can “build a better mouse trap” would need only to sketch it on paper, or draw it on a computer screen and hit “save”<sup>1</sup>, to secure for the purported innovation over seventy years of legal protection<sup>2</sup> against copying.<sup>3</sup> Anyone else who makes or sells a similar

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<sup>1</sup> Nations differ on the extent to which 'fixation in a tangible medium' is required for copyright, and as to the definition of 'fixation'. Under US law pre-1978, saving a screen drawing to a computer disk would not have qualified as a copyrightable 'writing' because **the drawing** could not be visually perceived from the desk except with the aid of a machine; post 1978, direct visual perception became unnecessary. 17 U.S.C. § (2102) (definition of "copy"). Unless otherwise specified, all references to law are to federal law of the United States.

<sup>2</sup> US Copyrights that come into being today have a duration of either (a) seventy years beyond the life of the author, or (b) the shorter of 120 years from creation or ninety-five years from publication (for works made for hire and some other categories). 17 U.S.C. § 302 (2012). Utility patents by contrast have a duration of no more than twenty years. 35 U.S.C. § 154(a) (2) (2012) (providing that utility patents end twenty years from filing date). Design patents are even shorter, fifteen years from the date of grant. 35 U.S.C. § 173 (2015), as amended by Patent Law Treaties Implementation Act of 2012, Pub. L. No. 91–190, § 102, 125 Stat. 1527 (2012).

The instant chapter is concerned with the intersection of copyright law with the law of utility patents. That is where the most significant conflict with copyright occurs. Design patents pose no such tension for copyrights because, like copyrights, they are supposed to be unavailable for elements that are “functional.” See *L. A. Gear, Inc. v. Thom McAn Shoe Co.*, 988 F.2d 1117, 1123 (Fed. Cir. 1993) (“If the particular design is essential to the use of the article, it cannot be the subject of a design patent.”)

<sup>3</sup> There was a period when United Kingdom and Canadian law took this extreme path. See, e.g., *Spiro-Flex Indust. Ltd. v. Progressive Sealing Inc.*, 1986 CanLII 771 (BC SC), available at [www.canlii.org/en/bc/bcsc/doc/1986/1986canlii771/1986canlii771.html](http://www.canlii.org/en/bc/bcsc/doc/1986/1986canlii771/1986canlii771.html)

Both nations now take a somewhat more patent-deferential approach to design protection.

device would be in danger of suit.<sup>4</sup> By similarly simple means, any car maker or other manufacturer could eliminate competition in the making of spare parts.

Markets for physical products are not the only things that would change. So would markets for electronics and digital content. If copyright had no boundaries where functionality was concerned, a designer of a leading video game could choose one console and, by asserting its copyright, forever<sup>5</sup> limits its fans to that console. Similarly a console maker could bar any “unlicensed” game from playing on its machine. Or the seller of an application program could ensure that once its customers learn the program’s intricacies and prepare macros<sup>6</sup> based upon its

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<sup>4</sup> Admittedly, Copyright gives rights only over “copying.” By contrast, patent infringement can arise regardless of whether or not the defendant who makes and sells a version of the patented innovation has copied it or independently invented it.

But the copyright plaintiff’s need to prove actual “copying” (a kind of “cause in fact”) is less of a barrier to lawsuits than it once was. Given the pervasiveness of mass media, and the internet’s ability to give access largely without regard to geographic boundaries, copyright defendants find it harder to prove they never had contact with a plaintiff’s work. Also, because subconscious copying can trigger copyright liability, at least in the US, defendants cannot be sure that telling their truth on the witness stand (“I cannot remember copying and I believe I did not copy”) will make a difference, even if the jury believes them.

<sup>5</sup> A game (if a work for hire) would have copyright for roughly a century. Each new version of the game would have a new, full-duration copyright in any distinguishable variations added since the prior version. By continually tweaking its games, a company whose copyright knew no functional boundaries could lock its fan base into a particular platform for as long as the fan base continued to exist. By the time that the original version of a game entered the public domain, there would likely be no machines left capable of playing it.

<sup>6</sup> A user can assign a complex set of commands to a simpler keystroke command. This is called writing a “macro.” For example, in using a word processing program, someone who authors documents containing many lengthy quotations might tell her program that a particular keystroke combination (say, hitting “control-alt-q” at the same time) should put highlighted text into quotation form: indenting it and making it single spaced. Thereafter, she could properly format long quotes just by highlighting the relevant text and hitting control-alt-q.

keystroke commands, the customers' learning and all their macros will be worthless if they ever switch to a new provider. The makers of computers, smart phones, or game consoles could limit use of their machines only to programs, apps, and games of which the makers approve.

But copyright law does not cover functional expression without limit. Most of the results just described could not be achieved through copyright,<sup>7</sup> for both Congress and the courts have sharply limited copyright's operation in the field of functionality.<sup>8</sup> Copyright law defers to patent when it comes to functional use, and patents are short-lived and hard to get.

Moreover, patent law jealously guards the public domain status of the functional works that it declines to protect. In the words of the Supreme Court, "the federal patent laws do create a federal right to 'copy and to use,'" a right which is applicable both to expired patents and to "potentially patentable ideas which are fully exposed to the public."<sup>10</sup> The patent public domain similarly

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<sup>7</sup> Regarding the examples just mentioned: an attractively shaped automobile bumper or muffler pipe that lacks patent can be freely copied (unless some aspect of it is a separable work of authorship, which is unlikely), 17 U.S.C. §101(2012) ("definition of pictorial, graphic and sculptural works"); an original drawing of a mouse trap or other functional object can have copyright as a pictorial work, but the rights of the copyright owner do not extend to control over the manufacture and sale of the objects depicted, 17 U.S.C. § 113(b) (2012); copyright's fair use doctrine, 17 U.S.C. § 107, permits the copying of copyrighted computer programs for the purpose of making a video game compatible with existing consoles, see *Sega Enters. v. Accolade, Inc.*, 977 F.2d 1510, 1523 (9th Cir. 1992) ("Accolade did not attempt to 'scoop' Sega's release of any particular game or games, but sought only to become a legitimate competitor in the field of Genesis-compatible video games. Within that market, it is the characteristics of the game program as experienced by the user that determine the program's commercial success. As we have noted, there is nothing in the record that suggests that Accolade copied any of those elements.")

<sup>8</sup> Many of these limits are discussed at length *infra*.

<sup>9</sup> *Bonito Boats v. Thunder Craft Boats*, 489 U.S. 141, 164–5 (1989) (emphasis in original)

<sup>10</sup> *Id.* (citations omitted).

assures “the consuming public of the advantage to be derived’ from free exploitation”<sup>11</sup> of discoveries with expired or invalid patents.<sup>12</sup> So, unsurprisingly, many forms of right (including copyright,<sup>13</sup> trademark,<sup>14</sup> and contract<sup>15</sup>) are limited lest they undermine the “balance between fostering innovation and ensuring public access to discoveries” that “Congress struck” “[i]n crafting the patent laws.”<sup>16</sup>

The boundary doctrines that enforce copyright’s deference to patent are continually threatened with erosion. In particular, the recent decision in *Oracle v. Google*<sup>17</sup> threatens to expand copyright’s reach into functionality. That decision, by

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<sup>11</sup> *Kimble v. Marvel Entm’t, LLC*, 576 U.S. \_\_\_, 2015 U.S. LEXIS 4067, \*10 (2015) (quoting from *Scott Paper Co. v. Marcalus Mfg. Co.*, 326 U.S. 249, 256).

<sup>12</sup> *Kimble v. Marvel Entm’t, LLC*, 576 U.S. \_\_\_, 2015 U.S. LEXIS 4067 (2015) (upholding the rule that royalty contracts are unenforceable to the extent they provide for the payment of royalties after the point of patent expiration.) The Supreme Court in *Kimble* may have had some doubts about the wisdom of the particular rule it upheld, but did not seem to harbor doubts about the importance of the patent public domain.

<sup>13</sup> See, e.g., 17 USC 102(b) (no copyright for systems or methods of operation); 113(b) (no infringement results from building a useful article depicted in a copyrighted portrayal). These and other limits are discussed *infra, passim*.

<sup>14</sup> No trademark can be federally registered if it is “functional,” 15 U.S.C. § 1052(e), and no unregistered trademark can give rise to suit under the Lanham Act unless the plaintiff carries the burden of proving nonfunctionality. 15 U.S.C. § 1125(a) (3) (2012); *Eppendorf-Netheler-Hinz GmbH v. Ritter GmbH*, 289 F.3d 351, 355 (5th Cir. 2002).

<sup>15</sup> *Kimble v. Marvel Entm’t, LLC*, 576 U.S. \_\_\_, 2015 U.S. LEXIS 4067 (2015) (royalty contracts held unenforceable to the extent they provide for the payment of royalties after the point of patent expiration.)

<sup>16</sup> *Id.* at \*8.

<sup>17</sup> *Oracle Am., Inc. v. Google Inc.*, 750 F.3d 1339 (Fed. Cir. 2014) (holding Java’s applied programming interface (API) and its structure, sequence and organization, copyrightable as against claims of “merger” and “method of operation”). The lower court had held the copied

the Federal Circuit, increases the ability of market leaders to use copyright law to lock out competition in a functional market - and to lock their customers, their suppliers, and producers of complementary products into patterns that might be privately profitable, but inefficient or otherwise undesirable from a social perspective.

As a social practice, lock-in is quite controversial. Business schools teach future executives how to lock in their customers and other players,<sup>18</sup> yet antitrust law makes some forms of lock-in unlawful.<sup>19</sup> Scholars debate whether various examples of potential lock-in might be socially harmful, socially useful, or irrelevant to social welfare,<sup>20</sup> and how the law should take lock-in into account.<sup>21</sup>

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portions of Java uncopyrightable as “methods of operation.” *Oracle Am., Inc. v. Google Inc.*, 872 F. Supp. 2d 974, 980 (N.D. Cal. 2012).

<sup>18</sup> See, e.g., Kenneth J. Sousa & Effy Oz, *Management Information Systems* (7th Ed. Cengage, 2015) at 41, 47–8.

<sup>19</sup> See Herbert Hovenkamp et al., *IP and Antitrust: An Analysis of Antitrust Principles Applied to Intellectual Property Law*, sec. 21.4 (Thomson Reuters, 2010).

<sup>20</sup> Compare, e.g., Stan J. Liebowitz & S. E. Margolis, *The Fable of the Keys*, 30 *J. Law Econ.* 1, (1990), with Paul A. David, *Clio and the Economics of QWERTY*, 75 *Am. Econ. Rev.* 332 (1985).

<sup>21</sup> One issue is the doctrinal category through which to address lock-in. The instant article makes lock-in relevant to the scope of a copyright owner's prima facie rights, but the relevance arises indirectly: What's important to this chapter's analysis is whether copying is functional, expressive, or a mixture of both, and copying done to escape lock-in is likely to be non-expressive and purely functional.

Lock-in might also be relevant to copyrightability, to misuse, or to fair use. The Solicitor General, for example, argues that lock-in should be examined under the fair use doctrine. See e.g. *Brief for the United States as Amicus Curiae, Oracle Am., Inc. v. Google Inc.*, 750 F.3d 1339 (Fed. Cir. 2014), at \*17, available at [www.justice.gov/sites/default/files/osg/briefs/2015/06/01/14-410\\_google\\_v\\_oracle\\_us\\_cvsg\\_brief.pdf](http://www.justice.gov/sites/default/files/osg/briefs/2015/06/01/14-410_google_v_oracle_us_cvsg_brief.pdf)

Such arguments need not be resolved for cases like *Oracle v. Google*. That is because, in the context of computer programs, the techniques that companies use to enforce lock-in typically run afoul of a historic doctrine called the “use/explanation distinction.”<sup>22</sup> The doctrine distinguishes between behaviors that use a copyrighted work expressively and those that use the work without regard to its expressive virtues, simply to serve a utilitarian function.\

For example, it is an expressive use when the publisher of a how-to book on home repair copies someone else’s copyrighted passage explaining how to rewire a lamp instead of writing his own instructions. It is a nonexpressive use when a homeowner applies the same copyrighted passage to the task of actually rewiring lighting fixtures. Copying text to convey an explanation or to serve other expressive goals belongs to the realm of copyright; copying to build a functional invention instead belongs to the realm of patent. These basic points about the limited rights that attach to copyright in physical products have important implications for computer copyright cases.

As a result of how the *Oracle v. Google* litigation has been structured, the legal community concerned with computer copyright is currently focused on issues of copyrightability. It is time to redirect our attention to include the scope of a copyright owner’s exclusive right.

This chapter will show how the fundamental distinction between “use” and “explanation” can resolve disputes like *Oracle v. Google*. The chapter will also explore a much-ignored provision in Copyright law, Subsection 113(b) that provides an explicit immunity for using copyrighted works functionally.

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<sup>22</sup> This chapter is focused on uses that are functional (because functional uses implicate patent law) and indifferent to expressivity (for the indifference removes a reason for enforcing copyright). Lock-in and the imposition of switching costs raise many other issues in addition. For example, when a copyright owner’s acts of dissemination and enforcement combine in a way that negatively alters another’s prospects, I argue that this does and should erode the owner’s scope of right. See generally Wendy J. Gordon, *A Property Right in Self-Expression: Equality and Individualism in the Natural Law of Intellectual Property*, 102 *Yale L. J.* 1533 (1993).

## 2 Oracle v. Google

Oracle owns the Java set of programs, and Java is ubiquitous. Third-party programmers are able to make their apps compatible with many platforms, and save time in doing so, because large numbers of platforms are crafted to respond to Java commands with predefined Java routines and subroutines. The Java routines are activated when a programmer uses a specified “method header” accompanied by a statement -- in particular format – of the desired inputs for a method’s operation. Platforms are typically programmed to recognize Java method headers (sometimes called “declaration code”) and to implement the appropriate Java routines and subroutines (sometimes called “implementation code”) in response.

Google, wanting to facilitate third-party programming for the Android phone, tried to obtain a Java license but the parties failed to find mutually agreeable terms.<sup>23</sup> Much of Java is available under General Public License terms,<sup>24</sup> but Google apparently found the free-software license restrictions inconsistent with its business plan. Since in copyright law, unlike patent, duplication without copying is not infringing, Google therefore used independently written implementing code to substitute for Java’s implementing code.<sup>25</sup> Wrote the lower court:

It is the method body that does the heavy lifting, namely the actual work of taking the inputs, crunching them, and returning an answer. The method body can be short or long. Google came up with its own

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<sup>23</sup> *Oracle*, 750 F. 3d at 1350.

<sup>24</sup> David Turner, *The LGPL and Java*, available at [www.gnu.org/licenses/lgpl-java.html](http://www.gnu.org/licenses/lgpl-java.html) (last visited June 8, 2015).

<sup>25</sup> *Oracle*, 750 F. 3d at 1350.

implementations for the method bodies and this accounts for 97 percent of the code for the 37 packages.<sup>26</sup>

(As for patent, Oracle brought patent claims against Google,<sup>27</sup> but the jury rejected them.)

It was clear that Google’s clean-room code did not copy Java’s implementing code (some minor items aside), and it is implementing code that does the “heavy lifting.”<sup>28</sup> However, something significant was copied: to enable the Android platform to recognize what a third-party program might ask for, Google copied from Oracle’s Java program many of its method headers, and by necessary implication, some of Java’s selection and organization.

For example, a particular small program in Java might function to compare two integers, and tell you which one is larger. An ordinary programmer writing an app might be able to easily write this program for herself, but it’s even easier to call on the Java program called MAX. A third-party programmer can call on thousands of such routines to save time - so long as the platform at which her program is aimed recognizes the “method headers” and inputs she has employed. Java’s slogan is “write once, run anywhere.”<sup>29</sup>

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<sup>26</sup> Oracle Am., Inc. v. Google Inc., 872 F. Supp. 2d 974, 980 (N.D. Cal. 2012) (hereinafter “Oracle I”), *rev’d* Oracle Am., Inc. v. Google Inc., 750 F. 3d 1339 (Fed. Cir. 2014) (hereinafter “Oracle II”).

<sup>27</sup> Patents as well as copyrights can exist in computer programs under today’s law. The extent of their eligibility for patent may be limited, however. See *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, [U.S.](#) , 134 S.Ct. 2347, 2357 (2014).

<sup>28</sup> Oracle Am., Inc. v. Google Inc., 872 F. Supp. 2d 974, 980 (N.D. Cal. 2012) (hereinafter “Oracle I”), *rev’ d* Oracle Am., Inc. v. Google Inc., 750 F. 3d 1339 (Fed. Cir. 2014) (hereinafter “Oracle II”), quoted above in text accompanying note [30].

<sup>29</sup> *Oracle*, 750 F. 3d. at 1350.

Google wanted its programs for the Android platform to recognize the familiar identifying language. If instead of using the Java label “MAX” and its syntax, Google had given the Android subroutine that performed the same function a different name, like “LARGER,” then the Android platform would be significantly harder for the Java-accustomed programming community to use. That is, without the “method headers,” the third-party programmers would have found it more difficult to make their programs speak to Google’s (non-infringing) implementing code. Also, lacking the “method headers” would mean that the Android platform could not be backwards compatible with existing application programs that use Java – because when one of those programs needs a subroutine to find the larger of two integers, the program calls what it needs “MAX.”

In order to compete on a level playing field with platforms running Java, therefore, Google needed not only to provide functionality as good as Java’s, but also needed its Android platform to recognize the known method headers and inputs (specified in Java’s declaration code) that identified functions that the third-party programmers would want performed by Android’s new and noninfringing implementation code.

In copying the headers, and making its own modules that mimicked Java functioning, Google also copied by necessity some organization from Java<sup>30</sup>. In particular, Google copied the selection of those functions that were important enough to be worth creating an implementation and header for them.<sup>31</sup>

The District Court ruled that Google only copied uncopyrightable elements of Java, and found no infringement.<sup>32</sup> On appeal, however, the Federal Circuit held

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<sup>30</sup> Organizational elements are sometimes treated as potentially copyrightable compilations. See 17 U.S.C. § 101 (“A ‘compilation’ is a work formed by the collection and assembling of preexisting materials or of data that are selected, coordinated, or arranged in such a way that the resulting work as a whole constitutes an original work of authorship.”) (Emphasis added).

<sup>31</sup> *Oracle* at 1350–1.

<sup>32</sup> *Id.* at 1350–1.

that the headers could have copyrights (as could their organizational structure), largely because many alternative ways to express and organize the headers<sup>33</sup> had been open to Oracle's<sup>34</sup> programmers.

In so holding, Federal Circuit rejected the persuasive power of a 1995 First Circuit decision, *Lotus v. Borland*.<sup>35</sup> The cases posed similar issues.

In *Lotus*, a challenger to the then-dominant spreadsheet program had created a fully independent spreadsheet program, one having its own implementation code. The new program also independently wrote its own structure of commands<sup>36</sup> However, the newcomer program also allowed its users to trigger an optional interface that emulated the dominant spreadsheet's command structure. Through the emulation interface, users switching from the established spreadsheet program to the new program could utilize their existing knowledge-base regarding keystrokes. In addition, many consumers had written macros to customize the earlier program to their purposes;<sup>37</sup> such consumers could continue using their macros on the new program only through the emulation interface. The emulator-- a copied set of commands ordered in a particular way -- made the users' existing macros interoperable with the new spreadsheet program.

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<sup>33</sup> See *Oracle*, 750 F. 3d at 1361 (“...merger cannot bar copyright protection for any lines of declaring source code unless Sun/Oracle had only one way, or a limited number of ways, to write them.”).

<sup>34</sup> By “Oracle” here, I also include Oracle’s predecessor in interest, Sun. It was Sun’s programmers who largely created Java.

<sup>35</sup> *Lotus Dev. Corp. v. Borland Int’l*, 49 F.3d 807 (1st Cir. 1995), *aff’d* by an equally divided Court, 516 U.S. 233 (1996).

<sup>36</sup> Virtually all application programs have command hierarchies; as a common example, users might be instructed to hit the F key to open a "File" menu, on which the user might then find sub-commands such as "Save" or "Save As".

<sup>37</sup> Writing a macro enables a user to trigger a complicated sequence of commands by means of a simple keystroke combination.

To make the emulation interface required the new program to copy both the command headers and some organization from the market leader. The latter company sued for copyright infringement, but lost. The First Circuit held that the copied commands and their hierarchy were “methods of operation.”<sup>38</sup> Given the statutory command that “In no case does copyright protection for an original work of authorship extend to any . . . , method of operation . . . ,”<sup>39</sup> the First Circuit held that the command hierarchy could be copied. Further, the court explained, “The fact that developers of the Lotus spreadsheet program could have designed its menu command hierarchy differently is immaterial to the question of whether the menu hierarchy is a “method of operation.””<sup>40</sup>

As mentioned above, the Federal Circuit in *Oracle v. Google* vigorously disagreed with the *Lotus* analysis of copyrightability.<sup>41</sup> The Oracle court instead ruled for plaintiff on this initial copyrightability issue,<sup>42</sup> arguing that

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<sup>38</sup> *Id.* at 816.

<sup>39</sup> *Id.* at 815–6. 17 U.S.C. § 102(b) is the cited statutory section; in full Section 102(b) states: “In no case does copyright protection for an original work of authorship extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work.” It is usually assumed that “ideas” and “concepts” are outside copyright because of free speech concerns (see *Eldred v. Ashcroft*, 537 U.S. 186 (2003)); that “discover[ies]” are outside copyright because they are not original (see *Feist Pubs., Inc. v. Rural Tel. Svc. Co., Inc.*, 499 U.S. 340, 348 (1991) (“facts do not owe their origin to an act of authorship”); and that Congress put “system[s]” and “method[s] of operation” outside of copyright in order to maintain patent’s dominance over functionality.

<sup>40</sup> *Lotus Dev. Corp. v. Borland Int’l, Inc.*, 49 F.3d 807, 816 (1st Cir. 1995) *aff’d* by an equally divided Court, 516 U.S. 233 (1996).

<sup>41</sup> *Oracle Am., Inc. v. Google Inc.*, 750 F.3d 1339, 1361 (Fed. Cir. 2014).

<sup>42</sup> This ruling may not be determinative of the ultimate outcome, of course. Although the Federal Circuit’s decision reversed a decision that no copyright resided in the material copied from Oracle, copyrightability is only one of the relevant issues. A petition for certiorari having been turned down, 576 U.S. \_\_\_ (2015), the case is being remanded. *Oracle II*, 750 F.3d at 1339.

because all computer programs are methods of operation, adherence to the *Lotus* holding would deny copyright for all computer programs and thus frustrate Congressional intent.<sup>43</sup>

It is on the copyrightability dispute between the First and Federal Circuits that the defendant Google relied in seeking Supreme Court review. Although cert was denied,<sup>44</sup> it is useful to see how Google's Petition for Writ of Certiorari framed the disputed question:

Whether copyright protection extends to all elements of an original work of computer software, including a system or method of operation that an author could have written in more than one way.<sup>45</sup>

These two views of copyrightability -- one upholding copyright when 'alternative' expressions existed, and one refusing to look for 'alternatives' when faced with a method of operation-- also dominated discussion of *Oracle*. Yet approaches to copyrightability need not determine the overall outcome of cases like *Oracle* and *Lotus*.

Central to both *Lotus*<sup>46</sup> and *Oracle*<sup>47</sup> is the iconic Supreme Court case, *Baker v. Selden*.<sup>48</sup> Despite the age of the opinion (*Baker v. Selden* dates from 1880),

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<sup>43</sup> *Oracle Am., Inc. v. Google Inc.*, 750 F.3d 1339, 1361 (Fed. Cir. 2014), cert. denied, 576 U.S. \_\_ (June 29, 2015) (No. 14-410), available at [www.supremecourt.gov/orders/courtorders/062915zor\\_4g25.pdf](http://www.supremecourt.gov/orders/courtorders/062915zor_4g25.pdf).

<sup>44</sup> *Oracle Am., Inc. v. Google Inc.*, 750 F.3d 1339, 1361 (Fed. Cir. 2014), cert. denied, 576 U.S. \_\_ (June 29, 2015) (No. 14-410), available at [www.supremecourt.gov/orders/courtorders/062915zor\\_4g25.pdf](http://www.supremecourt.gov/orders/courtorders/062915zor_4g25.pdf).

<sup>45</sup> Petition for Certiorari, *Google, Inc. v. Oracle America, Inc.*, 750 F.3d 1339 (Fed. Cir. 2014), 83 U.S.L.W. 3240 at i. (U.S. Oct. 6, 2014) (No. 14-410), 2014 U.S. S. Ct. Briefs LEXIS 4113.

<sup>46</sup> *Lotus*, 49 F.4d. at 816-7.

<sup>47</sup> *Lotus*, 49 F.4d. at 816-7.

*Baker* was a primary focus of the Supreme Court's questions during oral argument in *Lotus*,<sup>49</sup> and conflicting views of *Baker* stood at the core of the Federal Circuit's *Oracle* opinion and of the *Oracle* defendant's Petition for Writ of Certiorari. As will appear below, *Baker* makes important rulings on copyrightability, but it also provides a new avenue (outside issues of copyrightability) for handling some software

#### An irony

Before examining the new avenue, let us note the parallel way the Federal Circuit handled the subject-matter issue in another area. In trademark law, "functional" shapes are ineligible for trade dress protection, for the same reasons of patent -deference that limit the reach of copyright.<sup>50</sup> Defining "functionality" has of course been the subject of much litigation. The U.S. Supreme Court in *TraFFix v. MDR*<sup>51</sup> ruled that the availability of alternative product shapes could *not* "save" an otherwise functional shape from being unsuitable subject matter for trademark ownership.<sup>52</sup> The Federal Circuit responded to *TraFFix* essentially by taking

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<sup>48</sup> *Baker v. Selden*, 101 U.S. 99 (1880). (Much of the secondary literature gives the opinion's date as 1879. Although the case was argued in 1879, the opinion came down in 1880).

<sup>49</sup> The oral argument is available at [www.oyez.org/cases/1990-1999/1995/1995\\_94\\_2003](http://www.oyez.org/cases/1990-1999/1995/1995_94_2003)

<sup>50</sup> The core of trademark law is "distinctiveness as to source." Protection for product shapes on the ground of "distinctiveness" is called "trade dress." No form of trade dress protection is permitted for functional configurations. 15 U.S.C. § 1127; see also *Qualitex v. Jacobson Products*, 514 U.S. 159 (1995) ("The functionality doctrine ... forbids the use of a product's feature as a trademark where doing so will put a competitor at a significant disadvantage because the feature is "essential to the use or purpose of the article" or "affects its cost or quality." [citing *Inwood Labs v. Ives Labs*, 456 U.S. 844, 851, fn. 10 (1982)]").

<sup>51</sup> *TraFFix Devices v. Mktg. Displays*, 532 U.S. 23 (2001).

<sup>52</sup> *Id.* at 25.

The Fifth Circuit case *Eppendorf-Netheler-Hinz GmbH v. Ritter GmbH* well illustrates the *TraFFix* approach. In *Eppendorf*, a syringe had a flange that was supported against deformation by a particular design for fins. The plaintiff sought trade dress protection for the fins as

evasive maneuvers, saving questionable trademark rights in functional product shapes by re-introducing “the availability of alternatives.”<sup>53</sup>

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distinctive and nonfunctional trade dress, relying on expert testimony indicating that many different fin designs-- many alternatives -- could have supported the flange. The particular design was nevertheless held ineligible for trademark protection. *Eppendorf-Netheler-Hinz GmbH v. Ritter GmbH*, 289 F.3d 351, 357–8 (5th Cir. 2002) (“Eppendorf’s experts concede that fins of some shape, size or number are necessary to provide support for the flange and to prevent deformation of the product. ... [T]hey are functional as a matter of law. *TrafFix*, 532 U.S. at 33–34.”) (Emphasis added.) The juridical irrelevance of alternative flange designs could not be more obvious.

Copyright uses a similar approach in the “separability” hurdle that useful three-dimensional articles must surmount in order to obtain copyright. Thus, when the Second Circuit denied copyright to sculpted mannequins used for clothing displays, the court did not ask whether the sculpted torsos could have been shaped differently. Instead, the Court looked at the shapes as they existed. Since all the elements served a function, no elements survived the separability inquiry. Thus, despite the obvious possibility of sculpting torsos differently, there was nothing to which a copyright could attach:

[T]he features claimed to be aesthetic or artistic, e.g., the life-size configuration of the breasts and the width of the shoulders, are inextricably intertwined with the utilitarian feature, the display of clothes. [A] model of a human torso, in order to serve its utilitarian function, must have some configuration of the chest and some width of shoulders...

*Carol Barnhart, Inc. v. Economy Cover Corp.*, 773 F.2d 411, 419 (2d Cir. 1985). Although courts vary in their definitions of “separability,” no court will give copyright to a useful product shape simply because alternative shapes exist. One court seems to be flirting with including some consideration of alternatives into “separability”, *Pivot Point Int’l, Inc. v. Charlene Products, Inc.*, 372 F.3d 913, 931 (7th Cir. 2004), but even that court’s dominant inquiry is not “alternatives”. Its focus is on the degree to which the design process was free of “utilitarian pressures”.

The separability test - more demanding than the “merger” test that also denies copyright to works of authorship - is mandated by the definition of sculptural works in the statute. See 17 U.S.C. § 101 (2012) (definition of “pictorial, graphic and sculptural works”).

<sup>53</sup> See *Valu Eng’ g, Inc. v. Rexnord Corp.*, 278 F.3d 1268, 1276 (Fed. Cir. 2002). See 1-2A Gilson on Trademarks § 2A.04 (“The Federal Circuit believes its pre-*TrafFix* test is still good

So when in *Oracle* the Federal Circuit took the same route as it had in trademark - validating non-patent rights over functional subject matter by asking “are alternatives possible?” - it perhaps should not have been surprising. The chapter will suggest that much as the Federal Circuit attempted to evade the full import of the Supreme Court’s *TrafFix* opinion for functionality in trademark law, the Federal Circuit in *Oracle* now attempts to evade the full import of the Supreme Court’s *Baker* opinion for functionality in copyright.

### 3 Copyright Uses and Patent Uses: Baker v. Selden

As mentioned, the core Supreme Court case on functional use of copyrighted works is *Baker v. Selden*.<sup>54</sup> Despite being over 200 years old, the opinion was relied on both by the *Lotus*<sup>55</sup> and *Oracle* decisions.<sup>56</sup> The case involved the copying of accounting forms.

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law and continues to use its *Morton-Norwich* analysis that recognizes evidence of alternative designs as “part of the overall mix. ... The Trademark Trial and Appeal Board follows the Federal Circuit ...”)

A better ground for trying to narrow *TrafFix* might have been to argue that the *TrafFix* approach should apply only to product features which, like the dual-spring device at issue in *TrafFix*, had previously been protected by a now-expired utility patent. I would argue that such a narrowing, too, is questionable. (The Fifth Circuit, for example, applies the *TrafFix* approach to defining trademark’s functionality bar without any hint the approach should be limited to those features that had been previously protected by a utility patent. See *Eppendorf-Netheler-Hinz GmbH v. Ritter GmbH*, 289 F.3d 351, 355 (5th Cir. 2002).) But least such a position would have had some plausible textual support. Presumably the Federal Circuit did not adopt this more plausible position because it would have bound the Circuit to follow the Supreme Court at least in cases involving expired patents.

<sup>54</sup> *Baker*, 101 U.S. 99 (1800).

<sup>55</sup> *Baker v. Selden* is discussed both by the majority, 49 F.3d 807 at 813-17, and by the concurrence, 49 F.3d 807 at 819. *Lotus Dev. Corp. v. Borland Int'l, Inc.*, 49 F.3d 807, (1st Cir. 1995) *aff'd*, 516 U.S. 233 (1996)

<sup>56</sup> *Oracle II* at 1355-57.

### 3.1 Introducing Baker v. Selden

Selden's widow and administratrix, as plaintiff, asserted copyright in a number of books that both explained and illustrated the decedent's supposedly novel method of bookkeeping. The Selden method enabled an accountant to use fewer volumes and work more expeditiously. Baker was alleged to have copied accounting forms from Selden's books, for sale en masse to accountants. Baker's forms differed somewhat from Selden's, but the litigants' focus was not on how similar or different the forms might have been. Rather, their focus was on whether Baker's forms enabled accountants to reach the same practical results via the same system as did Selden's.<sup>57</sup>

The Supreme Court was concerned lest copyright allow an end-run around the requirements imposed by patent law. Patents are secured only by prior review and must be registered to give the public notice of their content; copyrights arise without either necessity. Patents last a short time; copyrights remain assertable for decades longer. Patents are supposed to issue only upon passing rigorous tests of novelty and nonobviousness; copyrights arise in virtually any doodle, letter home from camp, or amateur recording of street noise. In now-classic language, the Court wrote:

To give to the author of the book an exclusive property in the art described therein, when no examination of its novelty has ever been officially made, would be a surprise and a fraud upon the public. That is the province of letters-patent, not of copyright. ... The description of the art in a book, though entitled to the benefit of copyright, lays no foundation for an exclusive claim to the art itself. The object of the one is explanation; the object of the other is use. The former may be secured by copyright. The latter can only be secured, if it can be secured at all, by letters patent.<sup>58</sup>

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<sup>57</sup> Id. at 101 (“The evidence of the complainant is principally directed to the object of showing that Baker uses the same system as that which is explained and illustrated in Selden's books.”).

<sup>58</sup> Id. at 102, 105.

So the functional system or other useful art could not be copyrighted, even though copyright could subsist in the textual explanation or pictorial illustration of the art.

But this conclusion did not necessarily leave a work with functional goals without copyright altogether. A copyright might lose its force as against some forms of copying and yet retain its force against others. The kind of use makes a difference: a diagram that is a "necessary incident" to a system can be used freely by the public for "purposes of practical application" but not "for the purpose of publication in other works explanatory of the art".<sup>59</sup> This distinction has become known as the "use/explanation" doctrine.<sup>60</sup>

The best-known result of the *Baker* Court's concern with keeping copyright from interfering with patent law was *Baker's* holding that systems could not be copyrightable. But copyrightability is only one of copyright's dimensions; another is the nature of the 'exclusive rights' a copyright owner is granted.<sup>61</sup> *Baker v.*

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<sup>59</sup> *Id.* at 103. The Court writes, similarly, that, "[W]hilst no one has a right to print or publish his book, or any material part thereof, as a book intended to convey instruction in the art, any person may practice and use the art itself which he has described and illustrated therein. . . . And, of course, in using the art, the ruled lines and headings of accounts must necessarily be used as incident to it." *Id.* at 104.

<sup>60</sup> As the reader may have noticed, the name of the doctrine comes from a portion of the opinion that is a bit inapposite, as the portion focuses more on copyrightability than on the scope of exclusive right:

"The description of the art in a book, though entitled to the benefit of copyright, lays no foundation for an exclusive claim to the art itself. The object of the one is explanation; the object of the other is use. The former may be secured by copyright. The latter can only be secured, if it can be secured at all, by letters-patent."

*Baker v. Selden*, 101 U.S. 99, 105.

<sup>61</sup> Copyright has essentially three dimensions: duration (has the copyright expired?), subject matter (is the work original, fixed in a tangible medium, and a protectable type of authorship?),

Selden operated in both dimensions: the opinion posited that even when a valid copyright existed, deference to patent would place limits on the scope of a copyright owner's rights.<sup>62</sup> That second aspect of *Baker*, the aspect dealing not with copyrightability but with scope of right, is this chapter's main topic.

*Baker* and its progeny distinguish between two types of behaviors that employ created works: uses that are suitable for copyright regulation, and uses that should be regulated solely by patent law. *Baker's* ruling that copyright owners do not have the same rights to control each type<sup>63</sup> of behavior, provides another avenue for examining copying in suits like *Oracle v. Google*. This new avenue focuses on limiting a copyright owner's rights over functional use rather than on denying copyright to functional subject matter.<sup>64</sup>

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and exclusive right (is the defendant accused of a behavior over which the copyright owner has an exclusive right?)

<sup>62</sup> There is an identity between the "rights" of the owner and the "uses" that the owner controls. See 17 U.S.C. § 106 (2012) (granting to copyright owner exclusive rights to control use of the work via reproduction, use of the work via public performance, use of the work via public display, and so on.)

<sup>63</sup> *Baker*, 101 U.S. at 102.

<sup>64</sup> At the risk of blurring definitional boundaries, it should be noted that many subject-matter questions can be stated in terms of exclusive rights, and vice versa. For example, one could say, equally, that "systems are not copyrightable" or that "copyright owners have no right to control the functional copying of their systems."

The point at issue in this chapter is whether *Baker* can allow the public to engage in some functional use of a program (say, uses which are 'purely' nonexpressive) while allowing the computer program author to retain copyright control over other uses.

It's easy to interpret *Baker* as requiring complete denial of copyright -- after all, the opinion does say, "The conclusion to which we have come is, that blank account-books are not the subject of

At first glance this approach from *Baker* may seem as broad in its impact as the *Lotus* decision that held computer-program command structures uncopyrightable. However, as this chapter shows below, the approach need not imperil the overall copyrightability of computer programs, and would not eliminate all ability of computer-program copyright owners to bring suit against economically significant use.<sup>65</sup> The “rights” approach from *Baker* instead draws some helpful lines - and note that the approach has nothing to do with “alternatives”, which had been key to the *Oracle* court's decision in favor of plaintiff.

### 3.1 Significance

Had the Supreme Court in *Baker v. Selden* enabled copyright owners to control functional uses of the utilitarian systems or devices their copyrighted works portray, a welter of unregistered private rights lasting far longer than patents and easier to obtain than patents would be awarded over utilitarian subject matters regardless of whether they met patentable standards. *Baker v. Selden* marks the place where resistance to the confluence of patent and copyright law first took mature form.<sup>66</sup>

Prior to that 1880 decision, designers of systems who could somehow ground those systems in graphic art had plausible claims to copyright. For

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copyright.” *Baker v. Selden*, 101 U.S. 99, 107. But much of the opinion leans toward a less sweeping invalidation.

<sup>65</sup> This fear was expressed by the *Oracle II* court. *Oracle* 750 F.3d at 1361 (Fed. Cir. 2014).

<sup>66</sup> In my analysis of *Baker*, I am indebted to the work of Pamela Samuelson, particularly Pamela Samuelson, Symposium: Frontiers of intellectual Property: Why Copyright Law Excludes Systems and Processes from the Scope of Its Protection, 85 *Tex. L. Rev.* 1921 (hereinafter “Systems and Processes”); and Pamela Samuelson, *Baker v. Selden: Sharpening the Distinction between Authorship and Invention*, in *Intellectual Property Stories* (Jane C. Ginsburg and Rochelle Cooper Dreyfuss, eds., 2006).

example, some years before *Baker*, a case arose involving copyright in dressmaker patterns.<sup>67</sup> (Dressmaker patterns are two-dimensional paper drawings meant to be pinned on fabric to guide a tailor’s shears.)<sup>68</sup> The plaintiff successfully enjoined unauthorized garment patterns that, though not identical, achieved the “same result” in terms of producing the same finished clothing.<sup>69</sup>

In 1880 that changed. After *Baker v. Selden*, courts continually rejected efforts to argue that similarity in system and practical result<sup>70</sup> could justify a judgment of copyright infringement.<sup>71</sup>

### 3.2. *Baker and “merger”*

The “merger” doctrine aims to preserve the public’s liberty to use abstract ideas by preventing copyright from arising in a work of expression that is one of

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<sup>67</sup> *Drury v. Ewing*, 7 F. Cas. 1113 (C.C.S.D. 1862)

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

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

<sup>70</sup> After discussing various similarities and differences in appearance, as between plaintiff’s work and defendant’s, the court in *Drury* opined:

But there is one fact that seems wholly conclusive on this question of identity, and dispenses with the necessity of a minute inquiry into the alleged discrepancies between the two plans. Some nine or ten witnesses, practical and intelligent dressmakers, well acquainted with the theory and practice of taking measurements, and cutting dresses upon the plan of these parties, testify that the two are substantially the same, and in practice produce the same result. Some of these witnesses swear they have cut dresses by both plans, and that when the directions of each are strictly pursued, the results are substantially the same.

... Mrs. Ewing has, with some adroitness, so arranged and transposed some parts of Mrs. Drury’s diagrams as to present to the unexperienced eye the impression that they are dissimilar, but in doing this she has utterly failed to prove that there is any difference in the principle of the two.

*Drury*, 7 F. Cas. at 1117 (emphasis added).

<sup>71</sup> See, e.g., the cases reviewed *infra* at Section \_\_\_\_.

very few ways to convey the abstraction. If few or no alternative forms exist, then the particular form of expression is said to “merge” with the unprotectable idea, and the expression too becomes incapable of being owned under copyright law.

“Merger” is a troublesome doctrine, but it has some legitimacy when employed to keep copyright from locking up general and abstract ideas. The *Oracle* court took “merger” and applied it instead to functional innovation. Because the contested elements of the Java program could have been written in alternative ways, the Federal Circuit held, those elements were capable of sustaining a copyright.<sup>72</sup>

The Federal Circuit is not alone in using the possibility of alternatives to justify giving non-patent protection to a functional innovation. Yet the application of “merger” in such contexts is neither mandated nor explicitly approved by any legislation, and no court has articulated a clear rationale for taking the step.

Further, much U.S. legislation and precedent would seem to weigh against seeing “merger” and its inquiry into “alternatives” as an appropriate tool for defining appropriate borders between copyright and patent law. For example, consider the requirements for protection in the law of utility patent. Patent applicants must show “utility,” “novelty,” and “non-obviousness,” but applicants need *not* prove that their invention is superior to other ways of accomplishing a goal.<sup>73</sup> The presence of “alternatives” does not doom eligibility for federal patent protection.

Patents exist in many different riding lawn-mowers, for example, without any of the manufacturers needing to prove that their own mower possesses

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<sup>72</sup> Oracle II at 1361.

<sup>73</sup> See, e.g., 1-4 CHISUM ON PATENTS § 4.01 (2015) (“To comply with the utility requirement, an invention need not be superior to existing products or processes.”).

elements so unique that no other product can serve as an adequate alternative. Sometimes, therefore, simply being different can suffice for a patent.<sup>74</sup>

This is a sensible decision for Congress to have made. Judgments of product superiority or uniqueness are vulnerable,<sup>75</sup> and characteristics that make an innovation merely different today might make it uniquely important later. Monetary value, for example, is largely a matter of context, so that price and cost attributable to varying combinations of elements will alter over time as constraints and needs alter.

From the fact that Congress permits patents to be granted in innovations that have alternatives, it would seem to follow that such innovations have at least some

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<sup>74</sup> Some qualifications are in order. For example, in determining whether or not an innovation is non-obvious, courts sometimes use look to secondary evidence such as whether others in the field have long failed to “solve the problem.” *Id.* at § 5.05. Other secondary criteria include, inter alia, length of unmet need, or (most controversially) the presence of commercial success. *Id.* As a matter of logic, an innovation with no existing alternatives will do better on measures like ‘unmet need’ and ‘unsolved problem’ than can an innovation that already has alternatives on the market. Similarly, an innovation that may not have alternatives on the market now, but for which potential alternatives can be easily imagined, may well fare poorly on measures such as commercial success. The presence of actual or potential alternatives may, therefore, make some kind of difference to the likelihood that a patent will be awarded.

<sup>75</sup> Thus, the Tenth Circuit argues:

[T]he framers of the patent system did not require an inventor to demonstrate an invention's superiority to existing products in order to qualify for a patent. That they did not do so tells us that the patent system seeks not only superior inventions but also a multiplicity of inventions. A variety of choices is more likely to satisfy the desires of a greater number of consumers than is a single set of products deemed “optimal” in some average sense by patent examiners and/or judges. And the ability to intermingle and extrapolate from many inventors' solutions to the same problem is more likely to lead to further technological advances than is a single, linear approach seeking to advance one “superior” line of research and development.

Vornado Air Circulation Sys., Inc. v. Duracraft Corp., 58 F.3d 1498, 1508 (10th Cir. 1995), *cert. denied*, 516 U.S. 1067 (1996).

significance.<sup>76</sup> If so, it is quite arguable that the law should avoid undermining innovators' willingness to embrace the costly patent system (with its rigorous standards, disclosure requirements, and short duration) for such innovations. The patent system loses much of its appeal if an innovator can bypass it to employ a regime like copyright. (Although an owner's rights under copyright are a bit less strong than an owner's rights under patent law, copyright is still tempting: <sup>77</sup> copyrights are granted for immensely long terms of private control, are largely free of required requirement of disclosure,<sup>78</sup> and arise under fairly easy standards of acquisition.) In addition, many of Congress's decisions, such as the patent rule that only 'novel' and 'non-obvious' functional innovations should be privatized,<sup>79</sup> will be disregarded if courts uphold copyrights in common and obvious functional variations.

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<sup>77</sup> Some readers may object that this should be parsed more closely. They might point out, for example, that the Supreme Court has indicated that, for innovations clearly ineligible for patents, allowing states to provide alternative routes to privatization would neither reduce the number of federal patent applications nor the amount of disclosure produced by the federal patent system. *Kewanee Oil Co. v. Bicron Corp.*, 416 U. S. 470, 485 (1974) (refusing to pre-empt state trade secrecy law). *Kewanee's* logic is, however, questionable on its own terms and inapplicable here.

One of the difficulties with *Kewanee's* interior logic is the real possibility that diminishing the level of disclosure produced by the patent office might be a lesser problem than the impairment of free competition resulting from non-patent protection. If so, asking how state protections would impact on the number of federal patent applicants would be beside the main point.

More importantly for this chapter is that *Kewanee's* focus on the differential likelihoods of patenting various innovations is largely irrelevant to the "merger" search for alternatives. Whether or not an innovation has alternatives does not directly correlate with whether or not the innovation could obtain a federal utility patent.

<sup>78</sup> All patent applications must disclose their inventions. Copyright Office regulations, by contrast, allow the registrants of computer software to hide most of the code from public view. See, e.g., U.S. COPYRIGHT OFFICE, COMPENDIUM OF U.S. COPYRIGHT OFFICE PRACTICES § 1509.1(C) (4) (b) (3d ed. 2014) (Computer Programs That Contain Trade Secret Material).

<sup>79</sup> The dangers of too much privatization include, inter alia, excessive deadweight loss, and this cost applies to innovations whether or not they are potentially patentable.

### 3.3 Patent law is a jealous monarch

In several cases construing the pre-emptive reach of federal patent law, the U.S. Supreme Court has stated that a functional configuration that is known to the public and is unprotected by utility patent or design patent *should not be able to find protection* under the wings of non-patent regimes.<sup>80</sup> Functional products that patent law does not protect (whether because a product fails to meet standards such as nonobviousness or novelty,<sup>81</sup> or because its patent has expired<sup>82</sup>) become governed by the patent public domain, and in that domain, patent law gives rights “to copy and to use”.<sup>83</sup> It is as if patent law were a monarch who has declared that any product she has freed must remain free of subordinate sovereigns as well.

To crown patent law the chief monarch over functionality makes considerable sense. Federal copyright<sup>84</sup> and federal trademark law<sup>85</sup> both contain

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<sup>80</sup> At first the courts spoke as if patent and copyright were to be given similarly broad pre-emptive effect. See, e.g., *Compco Corp. v. Day-Brite Lighting, Inc.*, 367 U.S. 234, 238 (1964) (“when an article is unprotected by a patent or a copyright, state law may not forbid others to copy that article.”) Over time, however, the patent and copyright cases were given different treatment. Although in many areas the patent statute was understood to have drawn “a balance” between protection and public domain to which states were required to defer, the 1909 Copyright Act by contrast was interpreted as leaving significant topics as to which “Congress has drawn no balance.” *Goldstein v. California*, 412 U. S. 570- 71 (1973) (declining to pre-empt California provision that prohibited the copying of sound recordings).

<sup>81</sup> *Sears, Roebuck & Co. v. Stiffel Co.*, 376 U.S. 225, 226, n.1 (1964) (reiterating a District Court finding that Stiffel’s lamp patent was “invalid for want of invention”—a holding that Stiffel did not challenge on appeal).

<sup>82</sup> *Traffix Devices v. Mktg. Displays*, 532 U.S. 23, 25 (2001) (configuration for which trade dress protection was sought had been previously been protected by patent).

<sup>83</sup> *Bonito Boats v. Thunder Craft Boats*, 489 U.S. 141, 153 (1989) (quoting *Compco Corp. v. Day-Brite Lighting, Inc.*, 367 U.S. 234, 237 (1964).)

<sup>84</sup> In the copyright statute, 17 U.S.C. § 102(b) (2012) puts systems, methods of operation, and processes fully outside copyright protection; in other provisions (such as § 113(b), or the definition of PGS work in § 101), the statute actively prevents copyrights from arising, or deprives copyright owners of otherwise-applicable rights, where copyright could interfere with patent law’s public domain.

<sup>85</sup> Under the federal Lanham Act, trademarks cannot be functional; see 15 U.S.C. §§ 1052(e), 1125(a) (3) (2012). The language is not self-defining, however, and many courts distinguish between “de jure functionality” which permits protection under the Lanham Act, and “de facto”

provisions that *decline* to protect functional innovations and designs. Moreover, it is in the patent statutes that Congress seems to have embodied its most attentive consideration to questions of how functional innovations should be treated.

I concede that this ‘jealous monarch’ view of patent law is not unanimously held, particularly in regard to patent/copyright relations. First, the Supremacy Clause undergirds the pre-emption cases, and the Clause is irrelevant to interactions between two federal regimes like copyright and patent.<sup>86</sup> Second, the copyright and trademark statutes have been interpreted in various ways, sometimes but not consistently hostile to courts that inquire into a functional product’s “alternatives”<sup>87</sup> en route to deciding whether or not to allow non-patent protection. So the monarchical view of patent law does not reign unopposed within courts interpreting its sister statutes. Third, pre-emption cases themselves fluctuate in the strength they attribute to patent’s public domain.<sup>88</sup>

Nevertheless, the pre-emption cases have a clear central line of argument, and the federal statutes for both copyright and trademark consistently defer to patent law for reasons best explained (in terms of both logic and history) by the same approach: namely, that only through patent law should duties be imposed that require the public not to duplicate or sell innovative functional products. After all,

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functionality that just happens to exist. The Supreme Court’s most recent opinion on the topic, *TrafFix Devices v. Mktg. Displays*, 532 U.S. 23 (2001), sensibly ignores the labels of de jure and de facto functionality, and in so doing seems to unite the two categories. The *TrafFix* Court held that the possibility of alternative product shapes could not justify giving federal trade dress protection to a shape that was otherwise functional. *Id.* at 25.

<sup>86</sup> *Bonito Boats v. Thunder Craft Boats*, 489 U.S. 141, 160 (1989) (Florida statute prohibiting certain modes of copying boat designs held inconsistent with the patent public domain and thus pre-empted by the Supremacy Clause).

<sup>87</sup> The Supreme Court has criticized using an inquiry into ‘alternatives’ to decide whether a product shape is ineligible for protection under federal trademark law, *TrafFix Devices v. Mktg. Displays*, 532 U.S. 23 (2001), and the Federal Circuit has resisted. See section 11.2.1, *supra*.

<sup>88</sup> Compare for example the breadth of pre-emptive sweep in *Compco Corp. v. Day-Brite Lighting, Inc.*, 376 U.S. 234 (1964) (pre-empting state protection for certain trade dress) with the convoluted logic of *Kewanee Oil Co. v. Bicron Corp.*, 416 U. S. 470, 485 (1974) (not pre-empting state protection for trade secrets.)

non-patent laws that privatize intellectual products have potential to undermine patent law's balance between competition and monopoly whether the laws are federal or state.

In the pre-emption area, at least one classic case makes it clear that state protection is forbidden not only for unique advances, but also for products that have alternatives. Thus, the Supreme Court wrote:

That an article copied from an unpatented article could be made in some other way, that the design is . . . not essential to the use of either article, . . . that there may be 'confusion' among purchasers as to which article is which or as to who is the maker, may be relevant evidence in applying a State's law requiring such precautions as labeling; however, and regardless of the copier's motives, neither these facts nor any others can furnish a basis for imposing liability for or prohibiting the actual acts of copying and selling.<sup>89</sup>

This approach to the patent public domain leaves no room for a doctrine like “merger”.

Conceivably, a justification could be constructed for restricting the logic of the pre-emption cases to assessing solely the validity of state laws. The justification might also stretch to defending the practice of courts' employing “merger” to justify privatizing functional but unpatented products under federal copyright and federal trademark laws. Perhaps one could argue, for example, that patent law's public domain should defer more to cognate federal laws (such as federal copyright and federal trademark) than it does to states' attempts to create

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<sup>89</sup> *Compro Corp. v. Day-Brite Lighting, Inc.*, 376 U.S. 234, 238 (1964). The Supreme Court has admittedly withdrawn from some of the statements in *Compro* and its companion case *Sears, Roebuck & Co. v. Stiffel Co.*, 376 U.S. 225 (1964). In my view the later cases do not impair the core policy of requiring other laws to respect patent law's limits on protection. The most difficult case for my position is *Kewanee Oil Co. v. Bicron Corp.*, 416 U. S. 470 (1974), but its result is explicable: I think that in *Kewanee* trade secrecy survived the pre-emption attack for reasons not rooted in logic but in practical administration of the law: it was obvious that Congress had not intended to create such a significant disruption in local commercial law.

intellectual property. But such an argument would need to go much further than pointing out that the Supremacy Clause has no purchase over intra-federal relations; such a formalistic reply would ignore the fact that when *either* federal or state law grants exclusivity in functional products outside of patent, those grants can have very serious real world effects.

In sum: patent law makes nothing turn on the difference between innovations that have alternatives and those that do not, and copyright and trademark states both defer to patent law. Therefore it should at least surprise us when a court allows copyright or trademark claims to arise in an original or distinctive functional product simply because the product passes something like a “merger” test of having competitive alternatives. But that is what the *Oracle* court did, and it is what other courts sometimes do as well.

The historic origins of this practice cannot be fully untangled here. Nevertheless the instant chapter does hope to accomplish two things. The first goal is to make vivid why it is problematic for courts to use the search for alternatives as if were a sensible or natural tool – one that needs no explanation or justification-- to resolve tensions between patent law and other cognate doctrines. I hope that goal has been accomplished.

The second goal to make clear that the legal community should stop attributing to *Baker* the mess that is “merger.” It is to that task that the chapter now turns.

### 3.4 Baker v. Selden neither gave birth to, nor legitimates, the use of “merger” in the context of functionality

To recap: The "merger" doctrine aims to preserve the public's liberty to use ideas by preventing copyright from arising in a work of expression that is one of very few ways to convey the abstraction. "Merger" is the basic approach used by the *Oracle* court; because the programs might have done their work if written differently, the Federal Circuit upheld their copyrightability. This misapplication

of “merger” results in part from the way that some jurists, perhaps including some on the Federal Circuit,<sup>90</sup> see *Baker v. Selden* as the foundation for “merger.”

But that reading blurs the line between the reasons why no copyright can inhere in ‘abstract ideas’ (which merger addresses) and why no copyright can inhere in ‘functional systems’ (which are addressed by *Baker* and a host of ‘useful article’ and ‘functionality’ doctrines). Regarding abstract ideas, copyright puts them in the public domain for virtually all purposes, but as for systems and methods of operation, copyright ‘channels’ them toward patent law.<sup>91</sup> Under *Baker*, patent law and its ‘rights to copy and to use’<sup>92</sup> unpatented innovations seem to have a particularly strong magnetic force.

Admittedly the *Baker v. Selden* opinion contains language about the ‘necessity’ of using Selden’s forms -- language which some have interpreted as the Court assuming that few alternative accounting forms would do the job. But the relevant passage is not a finding of fact, and is best explicable on purely rhetorical grounds.<sup>93</sup> More importantly, the same passage indicates that even ‘necessary’

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<sup>90</sup> Oracle II at 1355.

<sup>91</sup> For a useful discussion of pitfalls and opportunities in current methods of channeling IP producers to different legal doctrines, see Mark P. McKenna, *An Alternate Approach to Channeling?*, 51 *Wm. & Mary L. Rev.* 873 (2009).

<sup>92</sup> This language, while applicable in spirit, I quote from a case decided much later than *Baker*. *Bonito Boats v. Thunder Craft Boats*, 489 U.S. 141, 164–5 (1989).

<sup>93</sup> It is true that the *Baker* opinion said that “where the art [that a book] teaches cannot be used without employing the methods and diagrams used to illustrate the book, or such as are similar to them, such methods and diagrams are to be considered as necessary incidents to the art, and given therewith to the public.” *Baker v. Selden*, 101 U.S. 99, 103 (1800). That language is sometimes interpreted to indicate that the Court believed that few or no alternatives existed to the plaintiff’s accounting form. But that language was not a factual finding.

Rather, it was a reply to the earlier claim by plaintiff’s lawyer that his client owned the system precisely because (he alleged) the forms were necessary to the system’s use. (“It is contended [by plaintiff] that he has secured such exclusive right because no one can use the system without

forms *will be infringed* when they are copied in "publication in other works explanatory of the art." <sup>94</sup> The passage therefore is not addressing copyrightability at all.

Whether or not the 'merger' doctrine is capable of safeguarding the public domain status of abstract ideas, abstract ideas were not the Court's concern in *Baker*. As intimated above, abstract ideas and patentable inventions lie outside copyright for non-identical sets of reasons. The *Baker* Court's concern was to keep an overgenerous application of copyright law from undermining inventors' reasons to seek the protection of patent law. Congress had not chosen copyright (with its long term and ease of acquisition) to govern functional innovation; Congress gave that task to patent law, a realm marked by short duration, requirements of disclosure, and high standards that a government agent needed to be persuaded were satisfied.<sup>95</sup>

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using substantially the same ruled lines and headings which he was appended to his books in illustration of it. In other words, it is contended that the ruled lines and headings, given to illustrate the system, are a part of the book, and as such are secured by the copyright, and that no one can make or use similar ruled lines and headings, or ruled lines and headings made and arranged on substantially the same system, without violating the copyright." Id. at 101).

As I see it, the Court was merely turning the copyright claimant's rhetoric on its head. The claimant's lawyer had pointed to an alleged interdependence of the accounting system and the accounting forms. The lawyer had argued that the forms (a set of drawings) were necessary to the system, and that therefore the drawings' eligibility for copyright should make copyright apply to the system as well. The Court replied in kind. If such interdependence existed, the Court ruled, such that the drawings were necessary to the system, then it was the system's ineligibility for copyright that would apply to both.

For other reasons why the "merger" interpretation of *Baker* is incorrect, the best guide is Pamela Samuelson, whose scholarship is cited throughout below.

<sup>94</sup> *Baker v. Selden*, 101 U.S. 99, 103

<sup>95</sup> *Baker v. Selden*, 101 U.S. 99, 102 (1879)

#### 4. Defining "Explanation" and "Use"

The discussion to this point has suggested that, under *Baker*, the owners of copyright in literary and graphic works cannot employ their rights to control all forms of copying. Some copying is functional, and lies within the public's freedom of action unless restrained by some law other than copyright. Thus a copyright owner can have rights against some copying but not others: a liberty to copy can be given the public "for the purpose of practical application. . . ."<sup>96</sup>, while, by contrast, copying done "for the purpose of publication in other works explanatory of the art"<sup>97</sup> could result in infringement. This dichotomy between infringing and noninfringing uses<sup>98</sup> has of course become known as the "use/explanation" distinction or the "use/explanation" doctrine.

The "use/explanation" nomenclature is fairly unhelpful. Everything done with a copyrighted work is in some sense a "use," so the "use" half of the term is less a description than a gesture: a hand waved toward the realm of utility patents. As for the other half of the phrase, "explanation," copying for explanation is obviously exemplary rather than exhaustive of the many kinds of copying behavior that copyright law can legitimately regulate. Scholars sometimes use the term "non-functional" to label the behaviors that copyright can regulate without imperiling patent law. (This chapter also sometimes employs "non-functional" in this way.)

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<sup>96</sup> 101 U.S. 103.

<sup>97</sup> *Id.*

<sup>98</sup> This dichotomy could be equivalently expressed. Where an owner has rights against copying, the public has duties-not-to-copy (for 'duties' are correlative to 'rights'); where an owner lacks rights against copying, the public has a privilege or liberty to copy (for liberties are correlative to an absence of exclusive right in opposing parties). This vocabulary, which can be quite useful, finds its origin with Hohfeld. Wesley N. Hohfeld, *Fundamental Legal Conceptions as Applied in Judicial Reasoning and Other Legal Essays* (1919).

But “non-functional”, too, is mere term-of-art shorthand and, in the end, inaccurate in the context of ordinary language. Behaviors unquestionably within copyright’s legitimate sphere (such as copying a work verbatim into one’s blog) can serve “functions” such as educating one’s readers, or advertising one’s own skills, that are as important as many “functions” served by patented inventions.

So what are the behaviors beyond “explanation” that can properly controlled by copyright? *Baker* has some suggestive answers, as does the contemporary copyright statute.

First, regarding literary or graphic works that convey the “teachings of science,” *Baker* tells us that it is only use of the expressive aspect that copyright can enforce. When scientific and practical teachings are “embodied and taught in a literary composition or book, their essence consists only in their statement. This alone is what is secured by the copyright. The use by another of the same methods of statement, whether in words or illustrations, in a book published for teaching the art would undoubtedly be an infringement of the copyright.”<sup>99</sup> Legislative history tells us that Congress considered “expressiveness” the basis for copyright even for computer programs.<sup>100</sup> So a use on the copyright side of the line is a use that draws on the expressive aspects of a work.

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<sup>99</sup> *Id.* at 104 (emphasis added).

<sup>100</sup> When Congress adopted copyright for computer programs, expressiveness was key. To quote from the legislative history, using emphasis supplied by the Oracle I court:

Some concern has been expressed lest copyright in computer programs should extend protection to the methodology or processes adopted by the programmer, rather than merely to the “writing” expressing his ideas. Section 102(b) is intended, among other things, to make clear that the expression adopted by the programmer is the copyrightable element in a computer program, and that the actual processes or methods embodied in the program are not within the scope of the copyright law.

The *Baker* opinion also provides some helpful examples. Not only can copyright infringement result from copying for “publication in other works explanatory of the art”,<sup>101</sup> the Court tells us; infringement also can arise as a result of copying the “lines of the poet or the historian’s periods”<sup>102</sup> and from copying

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Section 102(b) in no way enlarges or contracts the scope of copyright protection under the present law. Its purpose is to restate, in the context of the new single Federal system of copyright, that the basic dichotomy between expression and idea remains unchanged.

H.R. Rep. No. 94–1476, at 56–7 (1976) (emphasis added).

Oracle Am., Inc. v. Google Inc., 872 F. Supp. 2d 974, 986 (N.D. Cal. 2012) rev’d and remanded, 750 F.3d 1339 (Fed. Cir. 2014) (emphasis altered; footnote omitted).

This reliance on expressiveness also appears in the rationale for the 1980 amendments. The recommendations on which Congress relied in 1980 depended on the division between “the copyrightable element of style and expression in a computer program and the process which underlies it.” Final Report of the National Commission on New Technology Uses of Copyrighted Works (hereinafter, “CONTU”) (1978) at 22. In 1980, Congress essentially adopted the CONTU recommendations.

<sup>101</sup> Id at 104–5.

<sup>102</sup> Id. at 104.

Robert Bone has suggested that the *Baker* court was trying to distinguish between different kinds of works – those susceptible only to expression-oriented behaviors of the kinds with which copyright has traditionally been concerned, and those works that are susceptible to functional application of the kinds with which that patent law has traditionally been concerned. It is possible that, as Professor Bone suggests, the Court may be making a teleological subject-matter distinction here, namely, that works of a particular type (poetry, history, pictures “addressed to the taste”) simply have no conceivable “functions” or “uses” about which patent law should be concerned. But even so, the Court’s root concern would seem to be with types of use.

One need not go so far as to eliminate copyrightability in order to shelter the public’s freedom to use functional aspects of a copyrighted work in a functional way.

works of authorship whose only goal is to serve aesthetic “taste”<sup>103</sup> or the “production of pleasure in the [] contemplation” of “form.”<sup>104</sup>

So it does not count as utilitarian "use" to produce pleasure through aesthetics and contemplation. To produce pleasure through designing a tickling machine would be another story.

It can be as difficult to define what counts as a patent-type "use" as it was to define a copyright-type "explanation". Yet it is important to identify what kinds of purposes (described with whatever specificity is possible) might suffice to activate patent's magnetic force so strongly that patent's influence makes an act of reproduction noninfringing under copyright law.

We might start by distinguishing expressive from non-expressive uses.<sup>105</sup> However, *Baker* does not address all nonexpressive uses; *Baker* addresses only one subset, namely, copying behavior that lies within the domain of patent law's proper concern. Does patent law provide answers? Unfortunately not; patent law's notion of 'utility' is too vague to assist and hardly self-defining. Is there some other source of criteria for identifying patent-type "use", or for identifying (something not quite its converse) the kind of "use" for which copyright is not the proper regulator?

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<sup>103</sup> *Baker*, 101 U.S. at 104.

<sup>104</sup> The Court noted, “[T]hese observations are not intended to apply to ornamental designs, or pictorial illustrations addressed to the taste. Of these it may be said, that their form is their essence, and their object, the production of pleasure in their contemplation.” *Baker*, 101 U.S. at 103–4 (1880).

<sup>105</sup> By contrast, Abraham Drassinower's view of *Baker* does begin with a distinction between communicative and non-communicative use. See the discussion of Drassinower's view *infra* at —.

One potential source is the contemporary statutory concept of “useful article.”<sup>106</sup> The phrase and its definition appear in the 1976 Copyright Act.

Coming into the mid-seventies, Congress was considering the latest of a series of copyright reform bills. When the House received the bill containing what soon became the new Copyright Act, part of the bill ("Title II") was a set of sui generis rules granting design protection for 'applied art' such as the attractive design of autos, appliances and furniture. The House jettisoned Title II. It did so in part because of concerns about monopoly.<sup>107</sup>

The entitlements given by Copyright are even stronger than the sui generis right that Congress had declined to create, and thus copyright posed more danger of monopoly than the rejected right. It is natural that the Copyright Act of 1976 would thus leave, as it did, a wide moat of public-domain liberty around objects that meld form and function. This public-protective ring is embodied not only through narrowing the copyrightability of PGS useful articles.<sup>108</sup> The statute

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<sup>106</sup> 17 USC section 202 (definition of 'useful article') (2012).

<sup>107</sup> In dropping the design-protection portion of the bill, Title II, the House Report gave among its reasons the following:

"[T]he Committee will have to examine further the assertion of the Department of Justice, which testified in opposition to the Title, that Title II would create a new monopoly which has not been justified by a showing that its benefits will outweigh the disadvantage of removing such designs from free public use."

H.R. Rep. No. 94-1476 (hereinafter “1976 House Report”) at 49-50 (1976), available at [www.copyright.gov/history/law/clrev\\_94-1476.pdf](http://www.copyright.gov/history/law/clrev_94-1476.pdf).

<sup>108</sup> Useful articles that seek protection as pictorial, graphic, or sculptural works (“PGS” works) must meet a demanding “separability” test:

[t]he design of a useful article, as defined in this section, shall be considered a pictorial, graphic, or sculptural work only if, and only to the extent that, such design incorporates pictorial, graphic,

also limits the exclusive rights that attach to any copyrights that portray useful articles- the copyright owner's rights do not control what *Baker* called "use".<sup>109</sup>

We might, accordingly, find some hints to fill out *Baker's* distinction between "use" and "explanation" in the current statute's definition of "useful article." The definition reads as follows:

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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 (2012) (definition of "pictorial, graphic and sculptural works").

In my view, the "best" account of separability is that advanced by Paul Goldstein. The key, as he indicates, is whether forbidding competitors to copy the copyrighted portion of the useful article will make the utilitarian aspects of the item less useful. For example, will removing the "aesthetic" component made the object do its task less well, or make the object more expensive to manufacture? If so, the component is not "separable." If removing it makes no utilitarian difference, however, then it is "separable." See Goldstein, 1 Copyright § 2.5.3 (physical separability exists if the sculptural feature "can be physically separated from the article without impairing the article's utility and if, once separated, it can stand alone as a work of art traditionally conceived," *id.* at page 2.75; conceptual separability arises when a feature "can stand alone as a work of art traditionally conceived, and if the useful article in which it is embodied would be equally useful without it." *Id.* at page 2:78.1.)

In some of its cases the Second Circuit has implemented this perspective: explicitly or implicitly asking whether the useful article's functions can be equally well served were the object denuded of the portion in which copyright is claimed. See *Carol Barnhart, Inc. v. Economy Cover Corp.*, 773 F.2d 411, 418 (2d Cir. 1985).

<sup>109</sup> See, e.g., 17 U.S.C. § §113 (b) and 113 (c); 102(b) (2012). Subsection 113(b), discussed at further length *infra* at \_\_\_, provides in essence that "the copyright in a work portraying a useful article as such would not protect against manufacture of that article." Report of the Register of Copyrights, General Revision of the Copyright Law (1961) at 14, available at [http://copyright.gov/history/1961\\_registers\\_report.pdf/](http://copyright.gov/history/1961_registers_report.pdf/). Also see 1976 House Report at 109, available at [www.copyright.gov/history/law/clrev\\_94-1476.pdf](http://www.copyright.gov/history/law/clrev_94-1476.pdf).

A “useful article” is an article having an intrinsic utilitarian function that is not merely to portray the appearance of the article or to convey information.<sup>110</sup>

According to this definition, it is apparently a copyright–appropriate use “to portray appearance” (or, presumably to portray any pattern of form to any sense, whether the form be, e.g., a pattern of colors, a pattern of sounds, or a pattern of dance steps). Similarly, “to convey information” is also a presumptively copyright-appropriate use. Functions beyond “appearance” and “information” lean in the patent direction. Although PGS works are especially singled out for special copyrightability hurdles<sup>111</sup> that do not apply to useful articles packaged in non-PGS formats, the definition is at least suggestive; it suggests that any function beyond “appearance” and “information” might be ripe for being classified as none of copyright's business.

Copyright scholars are accustomed to drawing a sharp line between ‘useful articles’ that are pictorial, graphic or sculptural works (“PGS” works), on the one hand, and, on the other, the many other kinds of functional-but-expressive creations that appear in non-PGS parts of the copyright statute. Given legislative history the distinction between PGS works and other works makes sense when

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<sup>110</sup> 17 U.S.C. § 101 (2012). The statute gives force to the “useful article” concept most obviously in regard to Pictorial, Graphic and Sculptural (“PGS”) works: useful articles that seek copyright under the PGS category must pass a separability test, section 101, and the derivative work right attaching to a copyrighted PGS work that depicts a useful articles is narrow will not cover the making of the functional articles depicted, section 113(b).

More controversially, “useful article” has application in regard to functional use more generally, pursuant to a broad but plausible reading of 17 U.S.C. § 113(b) (2012). The broad reading of Subsection 113(b) is discussed further *infra* at \_\_\_.

<sup>111</sup> The statute gives PGS works that serve functions beyond “appearance” and “information” rough treatment when it comes to copyrightability. Useful PGS works must pass a ‘separability’ test, as discussed \_\_\_ *infra*.

copyrightability is on the table.<sup>112</sup> However, when 'scope of right' rather than copyrightability is the issue, Congress has not drawn such a sharp line.<sup>113</sup> All functional-but-expressive creations owe a conflicting allegiance to both copyright and to patent; they share many common policies; it may be time for 'useful' PGS works and other 'useful' works to learn something from each other.

The *Baker*-type cases cited in copyright legislative history are in fact consistent with what became the 1976 definition of "useful article".<sup>114</sup> These cases refuse to impose liability for making a copy or derivative work that does more than portray "appearance" or convey "information"-- that is, the cases give an immunity for any version of the copyrighted work that actually functions.

Thus, to manufacture furniture,<sup>115</sup> lamps,<sup>116</sup> or gears<sup>117</sup> copied from copyrighted graphics in a competitor's catalogue does not infringe the copyrights.

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<sup>112</sup> :[A]lthough the shape of an industrial product may be aesthetically satisfying and valuable, the Committee's intention is not to offer it copyright protection under the bill. Unless the shape of an automobile, airplane, ladies' dress, food processor, television set, or any other industrial product contains some element that, physically or conceptually, can be identified as separable from the utilitarian' aspects of that article, the design would not be copyrighted under the bill." 1976 HOUSE REPORT at 55.

<sup>113</sup> See especially the discussion of section 113(b), *infra* at text accompanying notes \_\_\_\_.

<sup>114</sup> These were cited in regard to what became section 113, as discussed *infra* at \_\_\_>

<sup>115</sup> *Lamb v. Grand Rapids School Furniture Co.*, 39 F. 474 (W.D. Mich. 1889) (defendant alleged to have manufactured church furniture depicted in another entity's copyrighted catalog and to be publishing as advertisements graphics showing its 'own' furniture that virtually duplicated the plaintiff's original photos; motion seeking preliminary injunction denied.)

<sup>116</sup> *Kashins v. Lightmakers, Inc.*, 155 F. Supp. 202 (S.D.N.Y. 1956) (no infringement results from making lamps identical to those appearing in a copyrighted catalog). The case does not really assist in fleshing out section 113(b), however, since the plaintiff seemed to claim no authorship in the lamp designs that were photographed. If the plaintiff's originality subsisted only in choice of photographic angles and such, a defendant who built the objects depicted in the

It also does not infringe to build a highway/bridge interchange based on a copyrighted drawing of an original road design.<sup>118</sup> These noninfringing acts of reproduction are all uses that go beyond “conveying information” and “portraying” form; they are on the “use” side of the *Baker* divide. Similarly, cases that did impose infringement verdicts (i.e., those on the ‘explanation’ side of the *Baker* divide) involved defendants whose purposes involved only ‘information’ or ‘appearance’.

Thus, it did infringe to build a memorial<sup>119</sup> based on a copyrighted sculpture. Memorial stones only convey information (such as naming who is buried beneath, reproducing lines of poetry, conveying descriptions and dates) and portray appearance.

Similarly, to make a doll<sup>120</sup> based on a copyrighted comic did infringe. This too fits the ‘useful article’ definition; stuffed dolls are not ‘useful’ because they

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photo would have used nothing of what made the photos copyrightable. In such a case, infringement would not attach whether or not the objects depicted were ‘useful’.

<sup>117</sup> In *PIC Design Corp. v. Sterling Precision Corp.*, 231 F. Supp. 106 (S.D.N.Y. 1964), the defendant’s catalogs copied illustrations of gears from the Plaintiff’s catalogs. It appears that the plaintiff had designed the gears, though no inquiry into their originality was made. The court noted that “The component parts so pictured in all the catalogs before us are in the public domain and plaintiff has no exclusive right to produce and illustrate them. It is the illustration that is protected, not the object itself.” *Id.* at 110.

<sup>118</sup> *Muller v. Triborough Bridge Auth.*, 43 F. Supp. 298, 300 (S.D.N.Y. 1942) (copying a drawing of a highway/bridge interchange by building such a roadway does not infringe copyright in the drawing).

<sup>119</sup> A memorial stone is not a useful article; it merely portrays appearance (e.g., angel wings) and conveys information (about the deceased.) To copy someone else's art in a memorial can therefore infringe. *Jones Bros. Co. v. Underkoffler*, 16 F. Supp. 729, 731 (M.D. Pa. 1936) (memorial copied from a photograph was held infringing).

<sup>120</sup> *King Features Syndicate v. Fleischer*, 299 F. 533, 537 (2d Cir. 1924) (defendant infringed by making a three-dimensional doll from plaintiff’s two-dimensional cartoon horse “Sparky”). The

employ only the copied work's form and "appearance". Today's Copyright Office does not consider dolls and other toys to be 'useful articles.'<sup>121</sup>

There is of course no prescience in the old case decisions; the judges were not seeking to anticipate and apply the 'useful article' definition from the 1976 Act. To the contrary, any causal relation ran in the ordinary temporal direction. The pre-1976 cases just mentioned are based on *Baker v Selden*, and those decisions along with *Baker* are part of the source from which the 1976 definitional principle drew its legitimacy. The Justice Department's anti-monopoly position too was hardly born the moment Congress heard it; the anti-monopoly strains in IP law are rooted

#### 4.1 Tentative Conclusion: Interoperability and *Baker*

Returning to *Oracle v. Google*, it is indisputable that computer programs do more than "portray form" and "convey information." They make machines work, and when someone copies code, the copies are typically sold to people for the purpose of making other machines work. While neither of these facts about the use of computer programs is sufficient to resolve the *Oracle* case, they remind us computer code may be a 'useful article' and that like all useful articles, considerations of patent deference can and should play a strong role.

As mentioned, *Baker* indicates that expressive use is the kind of use which copyright law can legitimately regulate.<sup>122</sup> Copying an entire copyrighted computer

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court imposed liability by finding a parallel between "the production of pleasure in contemplation," mentioned in *Baker v. Selden* as a legitimate copyright purpose, and the ability of Sparky to produce "pleasure in amusement." Also see *Fleischer Studios, Inc. v. Freundlich, Inc.*, 73 F.2d 276 (2d Cir. 1934) (involving the Betty Boop doll).

<sup>121</sup> From cases like this arose the current rule treating stuffed animals and dolls as art and not as useful articles. Toys and stuffed animals are typically not considered "useful articles". Compendium II of Copyright Office Practices at 502, available at <http://www.copyrightcompendium.com/#500>

<sup>122</sup> See *supra* notes 56–62 and accompanying text.

program will of necessity make use of both expressive and nonexpressive aspects,<sup>123</sup> and using the copy – even using it to run a machine – could therefore infringe. Where any possibility exists that the defendant saved herself some expressive effort, and that obtaining this advantage played a nontrivial role in motivating the copying, it is not as clear that *Baker* will shelter her behavior.<sup>124</sup>

But copying that is done solely to achieve interoperability (with other programs or with previously acquired utilitarian skill) is fully indifferent to the copied program’s expressive aspects. This is true both for interoperability between the copied program and the copier’s program, as in *Lotus v. Borland*, or interoperability between the copier’s program and third-party programs, as in *Oracle v. Google*. What matters for interoperability is not the quality of expression, but exact conformity.

If it is correct that uses indifferent to expression cannot infringe, then a proper resolution of *Oracle* and *Lotus* is clear. In neither case would the copying infringe.

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<sup>123</sup> Were a program to lack any expressive content, it could not have copyright in the first instance.

Whether expression in a program ever “really” exists (in the ordinary-language sense of) or whether Congress conclusively deems it to exist (in the sense of a mandatory legal fiction) is a question this chapter does not address. Many scholars have addressed the inherent conceptual instability caused by Congress including computer programs among the categories of potentially copyrightable subject matter. See, e.g., Lloyd L. Weinreb, Copyright for Functional Expression, 111 Harv. L. Rev. 1149 (1998).

<sup>124</sup> The touchstone examples in *Baker* involve no use of expressiveness: the medicines made by reading a book, the mechanical skills learned from a book ... none copy or use the book’s mode of “statement” which *Baker* teaches is the aspect to which copyright attaches. See \_\_ supra.

This result does not turn on the value or disvalue of lock-in as a social or economic practice.<sup>125</sup> A logically prior matter is whether an instance of copying is related or unrelated to the copied material's expressivity. And copying to avoid lock-in certainly seems to be unrelated to expression. When having a key made, one doesn't care if the key is clunky or beautiful. Its elegance as a sculptural artifact is irrelevant.

All that matters is that it fits the lock.

#### 4.2 Juridical Integrity and Lack of "Fit"

My contention, that copying for interoperability does not infringe, cuts less broadly than may seem. To better see this, it will be helpful to examine and distinguish the perspective that Abraham Drassinower brings to *Baker v. Selden*.

In Professor Drassinower's view, *Baker* demonstrates that nonexpressive, noncommunicative forms of copying should count as "nonuse,"<sup>126</sup> a behavior outside the copyright statutes, and thus not actionable under copyright law.<sup>127</sup> Only

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<sup>125</sup> Overstating the importance of lock-in economics to the *Oracle* case is a mistake the Solicitor General made in his opposition to certiorari. See Brief for the United States as Amicus Curiae, *Oracle Am., Inc. v. Google Inc.*, 750 F.3d 1339 (Fed. Cir. 2014), available at [www.justice.gov/sites/default/files/osg/briefs/2015/06/01/14-410\\_google\\_v\\_oracle\\_us\\_cvsg\\_brief.pdf](http://www.justice.gov/sites/default/files/osg/briefs/2015/06/01/14-410_google_v_oracle_us_cvsg_brief.pdf).

<sup>126</sup> ABRAHAM DRASSINOWER, *WHAT'S WRONG WITH COPYING?* (Harvard University Press, 2015) (hereinafter "Drassinower"), at 13 ("[In *Baker*, t]he defendant used the forms as a tool but not as a work, and was therefore not liable in copyright... *Baker* thus turns on a crucial distinction between the work as a communicative act and its material form as its physical embodiment. Use of the physical embodiment for noncommunicative purposes does not give rise to liability.").

<sup>127</sup> Drassinower emphasizes that copyright would have reached the accounting form in *Baker* if it had been copied as part of an explanatory book, or copied for other reasons relating to its expressive, authorial qualities. The defendant however copied the form for reasons relating to its inventive qualities. The set of lines changed role from "work of authorship" to "tool" –resulting in a lack of fit' with copyright, and defendant was not liable. *Id.* at 100.

when a work is used expressively, as a communication, Drassinower argues, can the use give rise to copyright infringement. It's not that Drassinower argues that patent's public domain has "trumping" power, or that giving patent-like power to copyrights is socially costly; his argument is rather that copyright has no role beyond its proper (communicatory) sphere.

While I cannot agree with all of Professor Drassinower's contentions, I find an immensely useful starting point in Drassinower's observation that mere mechanical repetition of a particular physical or audible form does not always use the work as a work.<sup>128</sup> Sometimes, for example, it is being used as a tool (functionally) or as a fact (as evidence in a courtroom) or for some other purpose whose value does not depend on the work's expressiveness.

We all know how a person can change roles, and that different roles (spouse, employer, enemy combatant) can trigger different rights and duties both socially and under law. Similarly, a given configuration of words (or symbols, sounds, shapes, lines or colors) can have different roles in different contexts.

A new role can change the configuration's legal significance – either because copyright is juridically concerned only with one role, namely, communication (as Drassinower might have it)<sup>129</sup>, or because the new role alters the work's economic and social impact (as policy analysts might have it).

For an example of changing roles for a copyrighted work, consider a love letter introduced into evidence in a divorce proceeding. In the litigation context the letter's eloquence as a work of authorship is irrelevant; the literary work has become a fact, valued not for its beauty in language but for what it implies, factually, about the relationship between sender and receiver. The same copyrightable letter, now serving as a fact rather than as expression, under current

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<sup>128</sup> Id. at 102 (arguing that it is an error to see "any and all uses of a work's material form" as "uses of the work.")

<sup>129</sup> See generally Drassinower, *supra* note \_\_\_\_.

law can be freely copied for evidentiary purposes in litigation.<sup>130</sup> It is a “fair use.”<sup>131</sup>

There are reasons for granting private rights in the first instance, and rights should not be exercised for reasons that lie far afield. Functional uses, like evidentiary uses, do not reward quality of expression; they do not “fit.”

If crafting exceptions to the public’s duty-not-to-copy were costless and perfectly predictable, lack of fit standing alone would always suffice as ground for sheltering a defendant’s activity. Instead, the process consumes some governmental and private resources, probably increases uncertainty (in both markets and everyday non-commercial behaviors), and might make unlawful copying and litigation a bit more likely.<sup>132</sup> Rule of Law values such as predictability might be poorly served by case-by-case insistence on “fit.”

Lack of “fit” in a particular instance shows merely that enforcement will fail to further a particular law's goals. Courts often want a showing that, in addition, refusing to enforce will achieve some affirmative public advantage. They want something that can outweigh the extra costs involved in case-by-case recrafting of the rules.

For an example, consider negligence law. It uses the “proximate cause” doctrine to immunize defendants from liability when the harm they cause is

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<sup>130</sup> Copying for courtroom purposes is seen as a “fair use,” recognized by cases such as *Den Hollander v. Steinberg*, 419 Fed. Appx. 44 (2d Cir. 2011).

<sup>131</sup> *Id.* It would be more accurate to say that works of authorship become “facts” when copied for evidentiary purposes; unfortunately, however, clear statement about these cases is inhibited by the Supreme Court’s odd ontological assertion that “facts” are “found” and never “created.” *Feist Pubs., Inc. v. Rural Tel. Svc. Co., Inc.*, 499 U.S. 340, 348 (1991) (“facts do not owe their origin to an act of authorship.”) On this latter point, see Wendy J. Gordon, *Reality as Artifact: From Feist to Fair Use*, 55 *L. Contemp. Probs.* 93 (1992).

<sup>132</sup> Conceivably each case where a defendant succeeds in finding a limitation could encourage new types of copying that might hope (with less ground) to find equivalent shelter.

unrelated to the dangers that made their behavior negligent in the first instance. Because there is a “lack of fit” between unforeseeable harm and imposing a duty of care, a proximate cause limitation makes sense both on juridical grounds and on economic grounds.<sup>133</sup>

But because “proximate cause” is implemented on a fact-sensitive, case-by-case basis, which is costly, we expect to find more explanation for the doctrine, in addition to simple “lack of fit” - and we do. Eliminating the proximate cause doctrine, which would mean imposing liability to the extent of all unforeseeable harms caused, could bring with it demoralizing<sup>134</sup> and crushing burdens<sup>135</sup> of

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<sup>133</sup> Juridically, there is no conceptual linkage between taking reasonable care and avoiding an unforeseeable kind of harm. The proximate cause limitation makes sense economically as well, for the law is powerless to encourage people to take precautions against invisible dangers.

A copyright analogue to ‘proximate cause’ can be found in the fair use doctrine, where courts tend to find noninfringing a use that is quite unexpected and ‘transforms’ the purpose and direction of the copyrighted work. See generally, Wendy J. Gordon, “Proximate Cause, Proximate Use, and the Tort/Copyright Relation,” draft available on request, forthcoming in *HARVARD JOURNAL OF LAW & TECHNOLOGY* (2016).

<sup>134</sup> “Demoralization cost” is a term coined by Frank Michelman to refer to disincentives (effects that discourage productive activity) caused by the threat of large unpredictable losses. Frank Michelman, *Property, Utility and Fairness: Comments on the Ethical Foundations of “Just Compensation Law*, 80 *Harv. L. Rev.* 1165, 1214 (1967).

<sup>135</sup> Having to pay an immense judgment can trigger costs much higher than the numbers in the judgment itself. For example, tort judgments against companies can cause prices to rise and jobs to be lost; tort judgments against individuals may mean losing a home, which in turn leaves family members vulnerable to further losses.

The same point is true on the side of potential plaintiffs: bearing a tortious injury without receiving compensation can result in disastrous follow-on costs for both businesses and individuals. See Guido Calabresi *Guido Calabresi, The Costs of Accidents*, 27-28 (Yale University Press, 1970) (“secondary costs”). Identifying which kinds of cost are likely to be more serious in varying circumstances is the task of empirical research.

liability.<sup>136</sup> These social burdens make a difference, particularly since, given the lack of “fit” caused by unforeseeability, the burdens would not even be partially offset with gains in encouraging reasonable care. Taken together, these are weighty reasons to adopt a doctrine (called 'proximate cause') to limit liability where there is 'lack of fit' in personal injury cases.

I don't deny that lack of 'lack of fit' standing alone can and should warrant limiting legal enforcement in some circumstances, particularly those involving free speech and other fundamental rights. Outside the area of fundamental rights, however, few judges demand that the legislature (in crafting rights) or a particular plaintiff (in bringing suit) demonstrate a one-on-one correlation between a particular exercise of right and the policies for which the right was granted. Except perhaps for juridical purists, law must usually operate on a more wholesale level.<sup>137</sup>

Arguably copyright should be one of those rare areas where “lack of fit” alone will suffice.<sup>138</sup> As a matter of fundamental right, overbroad copyright enforcement often threatens first-amendment values.<sup>139</sup> As an economic matter, copyright liability imposes obvious social costs. Monetary incentives for new authorship are generated by making it more expensive to purchase copies of, or access to, existing authorship; the increasing costs makes authorship less available both for new authors to use<sup>140</sup> and for consumers to purchase.

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<sup>136</sup> I am indebted to Bob Bone here.

<sup>137</sup> I am indebted to discussions with Jane Ginsburg for her insistence on this point.

<sup>138</sup> Fundamental liberties are usually linked to avoiding important harms; when this is true, the lack of fit means an “extra” element of social harm is present.

<sup>139</sup> Admittedly, we commentators perceive these threats to free speech far more easily than do the courts.

<sup>140</sup> A classic statement of these issues is William Landes & Richard Posner, *An Economic Analysis of Copyright Law*, 18 J. Leg. Stud. 325 (1989).

These ever-present risks counsel that copyright's scope should generally remain within the arena where these social costs are most likely to be outweighed by copyright's positive incentive effects – which is, definitionally, the arena where the elements of the cause of action are a “good fit” with statutory purpose. Only in the area of 'fit'-- authorial works being used for authorial purposes-- is the ability of copyright enforcement to produce more benefits than costs likely to be more than coincidental. And indeed, in copyright law, the fair use doctrine and a multitude of specific exemptions provide some shelter from simple “lack of fit.” But we have no consensus on how far the shelter should extend, and at the moment it is far from complete.<sup>141</sup>

As an example of a "lack of fit" that might not give rise to a copyist victory, consider a hypothetical decorator who has noticed that sheet music can make visually pleasing patterns, and who begins manufacturing wallpaper that duplicates the appearance of copyrighted sheet music. In papering its customers' walls with a particular composer's clefs, eighth-notes, sharps and so on, the wallpaper maker is not using the musical work as a musical work. Any connection between the notes' visual appeal and the quality of the work's intended aural expression is purely coincidental. Allowing the composer to collect monies from the wallpaper maker does nothing to reward composing skill or encourage its further development.

There is no "fit.”

It is possible such copying might be sheltered from liability.<sup>142</sup> Yet given the commercial nature of the use, and the obscurity of any claim the wallpaper

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<sup>141</sup> As a matter of current doctrine, a court might impose copyright liability despite “lack of fit” unless the defendant can demonstrate an additional public interest dimension that would be served by giving her the contested liberty of action. Stacey Dogan makes this point about trademark law. Stacey Dogan, *Principled Standards vs. Boundless Discretion*, 37 Colum. J. L. Arts 503, 506 (2014).

<sup>142</sup> It might, for example, be considered “transformative” under the fair use doctrine. See, e.g., *Bill Graham Archives v. Dorling Kindersley Ltd.*, 448 F.3d 605 (2d Cir. 2006) (defendant

might have to be serving the public interest, as a descriptive matter the defendant's likelihood of success is rather low.

By way of contrast, recall the example of copyrighted works being reproduced for evidentiary use in court. Courts understand the importance of providing factual evidence for litigation, and understand also how often the author of an incriminating document might wish to assert copyright to prevent its being copied. Establishing a rule that permits copying for evidentiary purposes serves a public interest easily understood, and therefore such copying is routinely accommodated by copyright's fair use doctrine. Judges are likely to be sensitive to the different levels of social interest at stake and, even in copyright, "lack of fit" alone will not always generate shelter for an act of unconsented copying.

Moreover, the Supreme Court has upheld two statutory expansions of copyright with only the roughest guess as to "fit." Both term extension and statutory restoration of public domain copyrights have doubtful ability to further copyright goals, and both statutes have implications for free speech; but when these statutes were challenged the Court declined to employ strict scrutiny.<sup>143</sup> These developments counsel caution, even though the judiciary's role in deploying

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applied miniaturized copies of copyrighted Grateful Dead concert posters to mark a timeline of the band's history; held not to infringe on grounds of fair use).

<sup>143</sup> See *Golan v. Holder*, 132 S. Ct. 873 (2012) upholding the revival of certain copyrights already in the public domain; *Eldred v. Ashcroft*, 537 U.S. 186 (2003) (upholding the constitutionality of the Sonny Bono Copyright Term Extension Act).

In *Eldred* the Court defined its path: declining to apply a heightened degree of scrutiny. The opinion states that "copyright law contains built-in First Amendment accommodations" such as "fair use" and the idea/expression dichotomy, *id.* at 219, that make lesser scrutiny appropriate. Further, to measure whether "Congress' exercise of its Copyright Clause authority" was "rational," *id.* at 206, the Court employed an extremely broad notion of what purposes federal copyright could legitimately serve. See generally Wendy J. Gordon, *The Core of Copyright: Authors, Not Publishers*, 52 *Houston L. Rev.* 613 (2014) (criticizing *Eldred*'s analysis of copyright's purpose).

doctrines like 'the explanation/use dichotomy' or 'fair use' is different from the role the Supreme Court plays in reviewing the constitutionality of Congressional statutes.

For such reasons, this chapter does not claim (as a descriptive matter) that a lack of “fit” between a copyright defendant’s actions and copyright law’s overall policy will always suffice to defeat liability. Also, given the real costs of making fine distinctions among cases, this chapter does not claim (as a normative matter) that all non-fitting cases of copying should escape liability. What the chapter does claim is that line-drawing is worth the cost when copyright threatens to control the kinds of functional uses that *Baker* saw as properly relegated to patent. Imposing liability on purely functional uses not only fails to advance the goal of incentivizing expressive activity; such liability has the potential for undermining the patent system, with effects such as decreasing the disclosure of inventions, and shrinking free competition among unpatented utilitarian products. The result, in *Baker*’s language, could be a “fraud upon the public.”<sup>144</sup>

These are matters whose importance is difficult to understate. Therefore, when it comes to a particular kind of disjunction – between expressive use and functional use, or (putting it somewhat differently) between authorship and invention – the Supreme Court in *Baker* held that the cost of disregarding the “lack of fit” is too high.

That, I would argue, is the essential point of *Baker v. Selden*.

#### 4.4 Should Mixed Uses Qualify for Baker’s Shelter

This chapter interprets *Baker* as resting not only on juridical coherence in Drassinower’s sense, but also on consideration of social and economic cost. To obtain *Baker*’s shelter, then, two elements are needed: the user's indifference to expression (that is, “non-use” in Drassinower’s sense) and interference in patent law’s domain.

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<sup>144</sup> *Baker*, 101 U.S. at 102.

Must the use be purely functional, with no admixture of expressive value? From an abstract juridical perspective, as long as some expressive value inheres in the use, copyright should be able to find a mixed use (both expressive and functional) to be an infringement. Yet concerns from outside of copyright (such as pressure from patent's public domain) might counsel against copyright owners having rights over a mixed area. In terms of *Baker's* policies, an expressive value should be capable of being outweighed or even trumped by a functional role. Under *Baker*, must copyright remain unenforced whenever the use has a functional aspect? These questions remain open, for in terms of our facts-- those of *Oracle* and *Lotus*-- the nature of the use is fairly 'pure' in its functionality.

How do we know when a work of authorship is being used solely as a functional tool?<sup>145</sup> As suggested above, the answer must surely lie in determining whether the defendant is indifferent to the stylistic or expressive aspect – if the defendant would copy whatever the language or style might be, not caring in the least for the content but only for its physical effects, then the copying is of the “tool” variety and copyright law does not (or at least should not) reach it.<sup>146</sup>

#### 4.5 Directness

Does the *Baker* rule apply only to shelter the "users" who employ the copy functionally, or does it also shelter those from whom the "users" purchased the copies? Lawyers usually think of “direct” versus “contributory” roles in terms of secondary liability. (For example, we debate whether computer programs that allow consumers to violate copyright law should be held responsible for the

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<sup>145</sup> Within “sole” or “pure” functional use, I include functional uses that are insubstantially or trivially concerned with expression.

<sup>146</sup> It may be that mixed uses of copyright works should sometimes be sheltered from liability. I need not reach that question, for copying sequences of command names (*Lotus*) or method headers (*Oracle*) for purposes of defeating switching costs is not a mixed case.

consumers' unlawful behavior.<sup>147</sup>) In discussing the how far the *Baker* doctrine reaches, however, we address the converse: whether an actor's contribution to another person's lawful act can be sheltered by the lawfulness of the assisted behavior.

The issue has significance in many areas of copyright law, particularly fair use, but within the confines of *Baker* it can be resolved straightforwardly. The defendant in *Baker v. Selden* was manufacturing account books for sale to others. Nothing in the opinion suggests it would have been necessary for the defendant to have used the account books himself. Similarly, when a manufacturer uses a competitor's catalogue or drawings without permission as his source for his new product line, the statute shelters not only those who use the product he makes, but the manufacturers, retailers and advertisers as well.<sup>148</sup> Therefore precedent and statutory analogy suggest that "directness of use" is not a prerequisite to shelter under *Baker*.

## 5 Resistance to the Use/Explanation Distinction

Some resistance to making distinctions among types of use is evident. One hears comments such as, "If an arrangement of lines or symbols is someone's property, the owners should be able control any use they want. That's what property is for." At one point the Nimmer copyright treatise similarly opines that "the question of liability should turn simply on whether the defendant has copied copyrightable elements contained in the plaintiff's work, without regard to the

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<sup>147</sup> See, e.g., Wendy J. Gordon, *Moral Philosophy, Information Technology, and Copyright: The Grokster Case*, in INFORMATION TECHNOLOGY AND MORAL PHILOSOPHY 270 (Jeroen van den Hoven & John Weckert, eds.) (Cambridge University Press, 2008).

<sup>148</sup> 17 U.S.C. § 113(b) (anyone engaged in "making, distribution, or display"); also see § 113(c) ("In the case of a work lawfully reproduced in useful articles that have been offered for sale or other distribution to the public, copyright does not include any right to prevent the making, distribution, or display of pictures or photographs of such articles in connection with advertisements or commentaries related to the distribution or display of such articles, or in connection with news reports.").

manner in which the defendant uses or intends to use the copied material.”<sup>149</sup> This cannot be taken literally. An exemption for patent-type “use” is hardly the only copyright limitation tied to “use” issues.

### 5.1 “Rights Over Use” as a Conceptual and Economic Fulcrum

All of copyright operates on two dimensions – to prevail in an infringement suit, a plaintiff must prove (1) ownership of appropriate (copyrightable) subject matter and (2) that his or her exclusive rights include control over the use that the defendant has made of the copyrighted subject matter.

The overall structure of the Copyright Act thus ties the definition of a copyright owner’s rights to defined uses, so that *prima facie* liability always varies with the nature of the defendant’s use even in the statute’s operative core, Section 106.<sup>150</sup> A host of additional uses are categorized as not infringing.<sup>151</sup> So, for

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<sup>149</sup> 1–2 Nimmer on Copyright at § 2.18 [D] [1]. The Treatise continues: “If ... copying of copyrightable expression occurs, then infringement should be found, even if the defendant employs the material for use rather than for explanation” *Id.*

<sup>150</sup> See Wendy J. Gordon, *Intellectual Property as Price Discrimination: Implications for Contract*, 73 *Chicago-Kent L. Rev.* 1367 (1998).

It is equally hard to understand the purported irrelevance of “use” from a statutory perspective. The Copyright Act throughout varies rights and duties according to the nature of the use, starting with the basic section of copyright owner rights in Section 106, 17 U.S.C. § 106 (2012). The statute also empowers judges to make general variations by “use” in the fair use doctrine, 17 U.S.C. § 107, and variations according to use are fleshed out in the dozens of specific use-limitations embedded in the statute, *id.* at 108–22.

<sup>151</sup> The shape of a copyright owner’s exclusive rights can be determined only by examining a wide range of sections, namely 17 U.S.C. §§ 106–122, but the primary section is §106. It is subdivided by type of use, from reproduction to performance:

§ 106. Subject to Sections 107 through 122, the owner of copyright under this title has the exclusive rights to do and to authorize any of the following:

- (1) to reproduce the copyrighted work in copies or phonorecords;

example, since only “public” performances can infringe,<sup>152</sup> an allegation of private performance would be dismissed as not satisfying the plaintiff’s obligation to present a prima facie case. The same should be true when a plaintiff seeks copyright redress for rights that the Supreme Court or Congress has removed from the copyright owner as better relegated to patent’s domain.

As already mentioned, copyright’s statutory structure places emphasis on distinguishing among uses. Differences among uses are also central to how copyright functions as an economic engine.

Congress provides incentives to authors largely by helping copyright owners subject the users of their works to differential pricing (“price discrimination”) according to intensity of use.<sup>153</sup> Copyright law embodies a set of Congressional decisions about which uses of a copy should be subjected to this legal power to meter (and price) types and frequency of usage.

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- (2) to prepare derivative works based upon the copyrighted work;
  - (3) to distribute copies or phonorecords of the copyrighted work to the public by sale or other transfer of ownership, or by rental, lease, or lending;
  - (4) in the case of literary, musical, dramatic, and choreographic works, pantomimes, and motion pictures and other audiovisual works, to perform the copyrighted work publicly;
  - (5) in the case of literary, musical, dramatic, and choreographic works, pantomimes, and pictorial, graphic, or sculptural works, including the individual images of a motion picture or other audiovisual work, to display the copyrighted work publicly; and
  - (6) in the case of sound recordings, to perform the copyrighted work publicly by means of a digital audio transmission.

<sup>152</sup> 17 U.S.C. § 106(4) (2012) (right of public performance for literary works, musical works and additional works other than sound recordings); § 106(6) (right of public performance for sound recordings).

<sup>153</sup> See Gordon, *supra* note 124 at 1367.

To illustrate, consider again the right of “public performance.”<sup>154</sup> Because the statute gives the copyright owner prima facie rights to control public performance, the copyright owner can distinguish in pricing between the person who wants to read a literary work silently to herself, and a person who wants to read the work aloud at an auditorium or on radio. The silent reader pays whatever price for the copy was charged by her bookstore or online supplier; her use is contained in the base price. By contrast, the public performer has to negotiate and pay something beyond the price of the copy in order to avoid the risk of an infringement suit. She needs to purchase a permission or set of permissions to cover her behavior, which usually means she has to disclose to the copyright owner economically meaningful data about her behavior in order to obtain a meaningful license.<sup>155</sup>

Conversely, because the statute gives the copyright owner no rights to control private performance, the copyright owner will find it harder to distinguish in pricing between, say, a person who wants to read to herself the published script of a play, and an ambitious society host who wants to have his friends perform the play during a series of dinner parties. These all are private uses under the statute,<sup>156</sup> and do not fall within the domain of an exclusive right. The private reader, the living-room performers, and the host may have very differing values for the text, but each pays the same (base) price for a copy, without risk of liability arising from how they are using it. Congress has decided not to help copyright owners distinguish among these home uses.

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<sup>154</sup> 17 U.S.C. § 106(4) (2012) (for literary works, musical works, and additional works other than sound recordings) and § 106(6) (for sound recordings).

<sup>155</sup> This brief discussion of permissions is not fully generalizable. A purchaser (rather than a seeker of specific permissions) may be better able to conceal details. But even a purchaser of copyrights needs to identify herself as such, giving the potential seller some notice of her plans.

<sup>156</sup> Under the statute, a place is not public if it is open only to “a normal circle of a family and its social acquaintances.” See 17 U.S.C. §101 (2012) (definition of “publicly”).

Defining the types and limits of “exclusive right” is an important part of how Congress calibrates the balance between public domain and public duty. Uses that are within the copyright domain impose duties on the general citizenry to either obtain permissions or refrain from use. Uses that are not within copyright owners’ control lie in copyright’s public domain.<sup>157</sup>

So “exclusive rights” over types of use are always crucial. It would be odd indeed if one of copyright’s most important policies – to avoid interference with patent law – found expression only in the dimension of “subject matter” and none in the dimension of “exclusive right.”<sup>158</sup>

## 5.2 Further Buttressing Baker’s Use/Explanation Distinction from Attack

The *Oracle* court ignored *Baker*’s careful distinction between different kinds of rights of control, and instead treated *Baker* as an on-off switch that determines copyrightability. The fullest articulation of the reasons for such an approach appears in the Nimmer Treatise, which argues that, “If copying of copyrightable expression occurs, then infringement should be found, even if the defendant employs the material for use rather than for explanation.”<sup>159</sup> (Although David Nimmer, the current author of the Treatise, indicates he is rethinking its position,<sup>160</sup>

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<sup>157</sup> That a behavior like “building a machine” is in copyright’s public domain, that means that the behavior cannot be restrained or penalized by copyright. If a utility patent exists that covers the machine, however, the behavior is not in patent’s public domain, and can be restrained by patent law.

<sup>158</sup> See the discussion of Hohfeld’s terminology, supra note \_\_\_\_.

In sum, a copyright owner’s claim rights over use correlate with the public’s duty to refrain from such use.

<sup>159</sup> The Treatise argues, Nimmer on Copyright sec. 2.18; also see sec. 2.18 at n 44. Nimmer’s claim has had some influence. See, e.g., *Close to My Heart, Inc. v. Enthusiast Media LLC*, 508 F.Supp.2d 963 at n.3 (2007).

<sup>160</sup> See infra note 180. At one point the Treatise follows an interpretation of *Baker* far more congenial to the instant chapter’s viewpoint. See 1–2 Nimmer on Copyright § 2.08[1][a] (2015).

the Treatise’s provides a useful point of departure from which to crystallize discussion.)

There are several reasons why it is erroneous to reject the use/explanation distinction. Three reasons are matters of positive law. First, the Nimmer position relies on dicta from a 1954 case whose reasoning is itself unreliable on this score. Second, rejecting the use/explanation distinction ignores both the language of *Baker* itself and post-1954 instantiations of *Baker* in the courts. Third, a rejection of the use/explanation distinction is puzzling because Congress explicitly adopted an immunity for practical “use” in the current Copyright Act.<sup>161</sup> Finally, as a policy matter, ignoring a defendant’s type of use would be inconsistent with both the juridical integrity and economic logic of the copyright system.

#### 1954 Dicta

In rejecting the use/explanation interpretation of *Baker*, the Nimmer Treatise relies heavily on the 1954 Supreme Court opinion, *Mazer v. Stein*.<sup>162</sup> In *Mazer*, a statuette of a Balinese dancer was employed as the base for an electric lamp, and copied for a similar use by another lamp maker.<sup>163</sup> The 1954 Court approved *Baker*, but gave *Baker* a reading that cautiously depended on the case’s particular facts:

Unlike a patent, a copyright gives no exclusive right to the art disclosed; protection is given only to the expression of the idea - not the idea itself. Thus, in *Baker v. Selden*, 101 U.S. 99, the Court held that a copyrighted book on a peculiar system of bookkeeping was not infringed by a similar book using a similar plan

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<sup>161</sup> 17 U.S.C. § 113(b), set forth infra at note 75. This section incorporates by reference a series of cases that, largely relying on *Baker*, refuse to allow the copyright in a work that depicts a useful article – such as the copyright in a sketch depicting an automobile or the copyright in a blueprint depicting a motor – to be asserted against persons who actually make or build the useful article itself.

<sup>162</sup> See, e.g., Nimmer on Copyright sec. 2.18

<sup>163</sup> *Mazer v. Stein*, 347 U.S. 201 (1954).

which achieved similar results where the alleged infringer made a different arrangement of the columns and used different headings.<sup>164</sup>

Nimmer builds this observation from *Mazer* into an argument that the Supreme Court in *Mazer* stripped from *Baker*'s heritage its concerns with functional use.<sup>165</sup>

I think such reasoning – trying to turn *Baker*'s own language into a version of the idea/expression dichotomy – misses the mark. As Professor Pamela Samuelson has emphasized, the Court's concern in *Baker* was not with the general principle, already recognized well prior to 1880, that copyright needed to distinguish abstract general ideas from particularized expression, but with preventing copyright from interfering with the balance between competition and incentive set by Congress in the law of utility patent.<sup>166</sup>

It was natural for the Court in *Mazer* to have treaded gingerly in discussing *Baker*. In *Mazer*, the Supreme Court held that the copyright in the statuette gave the plaintiff a valid copyright infringement suit against the competing lamp maker.<sup>167</sup> Yet lamp-making is a utilitarian kind of use, and *Baker* cautioned against extending copyright over utilitarian uses.<sup>168</sup> So perhaps it was fear of being accused of inconsistency with *Baker* that led the Supreme Court in *Mazer* to stick to the narrowest reading of the early case.<sup>169</sup>

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<sup>164</sup> Id. at 217.

<sup>165</sup> Nimmer on Copyright sec. 2.18

<sup>166</sup> See generally, Samuelson, "Systems and Processes"); Pamela Samuelson, CONTU Revisited: The Case Against Copyright Protection for Computer Programs in Machine-Readable Form, 1984 Duke L. J. 663; (1984) and Samuelson, *Baker v. Selden*, supra note 61.

<sup>167</sup> *Mazer*, 347 U.S. at 214.

<sup>168</sup> *Baker*, 101 U.S. at 102.

<sup>169</sup> *Mazer*, 347 U.S. at 217.

In hindsight, however, we see that the *Mazer* court had no reason to fear inconsistency with *Baker*. The freedom to “use” that was recognized in *Baker* only gave freedom to use for functional purposes, that is, freedom to copy for purposes other than explanation and the satisfaction of aesthetic “taste.”<sup>170</sup> By contrast with Selden’s accounting forms, the Balinese dancer’s form served only “taste.” The statuette’s expressive form and graceful lines had no impact on function: it did not make the lamp’s shine any brighter or the lamp’s structure any more stable.

To further see that the statuette served no “functional” purpose, notice what happens if the statuette’s expressive features are eliminated: Filing away the dancer’s sculpted dress and body would leave a smooth ceramic cylinder. The cylinder could hold up the lightbulb and shade – the lamp would function as well as it did before.<sup>171</sup> So enforcing copyright in the statuette posed no direct challenge to patent law: competition based on the functions of a lamp could proceed unimpeded whether or not the Balinese dancer shape had a copyright.<sup>172</sup> That being

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<sup>170</sup> As mentioned above, *Baker* cautioned that its “observations are not intended to apply to ornamental designs or pictorial illustrations addressed to the taste.” *Baker v. Selden*, 101 U.S. at 103–4.

<sup>171</sup> See Samuelson, *Systems and Processes at 1960* (“Because Stein’s [plaintiff’s] lamps did not function any better or worse for having Stein’s statuette as a base instead of a block of wood, it is consistent with *Baker* to hold that the statuettes were, indeed, copyrightable subject matter because the artistic designs they embodied were physically as well as conceptually separable from the lamps.”).

<sup>172</sup> That is not to claim that *Mazer*’s impact was fully costless. The *Mazer* ruling did make it more expensive for competitors to make lamps; they could not use plaintiff’s lamp base as a form for “direct molding” and similar processes, or if they did, they would have to then strip off the dancer’s features. However, the cost difference related only to decoration, not to function.

the case, the defendant in *Mazer* was not threatened by *Baker*, even if the Court in 1954 was not yet in a position to articulate why.<sup>173</sup>

The results of the two opinions are sufficiently consistent with each other that their statutory embodiments are near neighbors. Section 113(a) of the Copyright Act embodies *Mazer*<sup>174</sup> and Subsection 113(b)<sup>175</sup> (which will be discussed further below) embodies *Baker*.

### Baker and its Caselaw Progeny

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<sup>173</sup> See Samuelson, *Systems and Processes at 1960* (“*Mazer*’s observation about differences between the Selden and Baker forms was a simple misreading of *Baker*, not a radical reinterpretation of the case, its holding, and the holdings of *Baker*’s progeny.”).

<sup>174</sup> Section 113(a) provides:

Subject to the provisions of subsections (b) and (c) of this section, the exclusive right to reproduce a copyrighted pictorial, graphic, or sculptural work in copies under section 106 includes the right to reproduce the work in or on any kind of article, whether useful or otherwise.

17 U.S.C. § 113(a) (2012). Thus, under 113(a), a statuette of a dancer did not lose copyright by being fastened to a bulb.

<sup>175</sup> Subsection 113(b) was a response to questions such as, “[W]ould copyright in a drawing or model of an automobile give the artist the exclusive right to make automobiles of the same design?” Congress essentially answered “no.” See 1976 House Report at 109. The statute provides:

§113 (b) This title does not afford, to the owner of copyright in a work that portrays a useful article as such, any greater or lesser rights with respect to the making, distribution, or display of the useful article so portrayed than those afforded to such works under the law, whether title 17 or the common law or statutes of a State, in effect on December 31, 1977, as held applicable and construed by a court in an action brought under this title.

17 U.S.C. §113(b). This provision is discussed further infra at <Section D> <All internal cross-references are tentative and will need to be checked>.

The Nimmer treatise relied on 1954 dicta from *Mazer* which depicted the defendant's victory in *Baker* as resting on a lack of substantial similarity between the defendant's forms and plaintiff's form. The dicta did not accurately portray *Baker v. Selden*. The Supreme Court's 1880 opinion in *Baker* showed no concern with determining how similar defendant's forms were to those of plaintiff.

Moreover, judicial decisions since 1954 continued to posit that the functional copying of a copyrighted design is non-infringing. As one such court said, "It is the illustration that is protected, not the object itself."<sup>176</sup> The post-*Mazer* precedent includes cases on which Congress relied in drafting the 1976 Copyright Act.<sup>177</sup>

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<sup>176</sup> PIC Design Corp. v. Sterling Precision Corp., 231 F. Supp. 106 (S.D.N.Y. 1964). It is not clear that the plaintiff could have claimed originality in the design, however. A better case is *Muller v. Triborough Bridge Auth.*, 43 F. Supp. 298, 298 (S.D.N.Y. 1942) (which predated *Mazer*). In *Muller v. Triborough*, the plaintiff claimed "that his copyrighted drawing [of a design to unsnarl traffic at a bridge approach] was novel and unique and originated with him." Citing *Baker*, the court characterized the design as a 'system' and ruled for the defendant despite arguable similarities between the drawings and the actual roads the defendant had built. Note that no challenge was made to the copyrightability of the drawing.

<sup>177</sup> The primary legislative Report for the current Act mentioned with approval a list of twelve cases that had appeared in the Supplemental Report of the Register of Copyright (1965) at 48. See H.R. Rep. No. 94-1476, at 109 (1976) 1976 House Report, at 109. Many of the cited cases predate *Mazer* in 1954, but some came later. See *DeSilva Construction Corp. v. Herral*, 213 F. Supp. 184 (M.D. Fla. 1962); and *PIC Design Corp. v. Sterling Precision Corp.*, 231 F. Supp. 106, 110 (S.D.N.Y. 1964). Thus, the *DeSilva* court cited the major copyright treatise of its day, *Ball on The Law of Copyright and Literary Property*, which in turn explicitly relied on *Baker*. *DeSilva*, 213 F. Supp. at 195–6. (Note, however, that the *Baker* rationale was only one ground of several for dismissing the plaintiff's complaint in *DeSilva*.) These cases are discussed at notes [103-106] supra.

### Congressional Implementation

An absolutist approach to “copyright as property” might suggest that an owner’s rights will be unvarying, and that the public has no shelter for “copying for use.” Yet not only does *Baker* provide such a shelter, but Congress has also implemented *Baker* by explicitly enacting a statutory shelter as well. Subsection 113(b) provides that copyright in a drawing or model that “portrays a useful article as such” (such as a copyrighted sketch of a garment, or a copyrighted blueprint for a machine) does not grant its owner the full scope of ordinary rights to control derivative works.<sup>178</sup>

Subsection 113(b) directs that the copyright owner has no rights over the “making, distribution or display” of the useful article depicted.<sup>179</sup> This is by way of contrast to the usual rule, under which the maker of two-dimensional portrayals (say, a drawing of a sculpture, or a sketch of a cartoon character) has derivative-work rights to control the portrayal being adapted into three-dimensional form. Thus, the owner of copyright in a drawing of a car can control the making of toys,

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<sup>178</sup> 17 U.S.C. § 113 (b) provides:

This title does not afford, to the owner of copyright in a work that portrays a useful article as such, any greater or lesser rights with respect to the making, distribution, or display of the useful article so portrayed than those afforded to such works under the law, whether title 17 or the common law or statutes of a State, in effect on December 31, 1977, as held applicable and construed by a court in an action brought under this title.

Section 113(b) constitutionality is open to question on the ground of vagueness. Its vagueness may not be fatal: at least one federal statute was held constitutional even though it incorporated state law not yet enacted or decided. *United States v. Sharpnack*, 355 U.S. 286 (1958). But Section 113(b) makes reference to state and federal law in a manner so general it leaves open to question even the sources to be incorporated by reference. See, e.g., Goldstein on Copyright § 7.4.4 (2014), especially 7:116–1120 (presenting some of the puzzles generated by the subsection’s imprecision).

<sup>179</sup> [Section 113\(b\)](#).

murals, or movies based on the drawing, but cannot control the construction of a working automobile based on it.

Subsection 113(b) limits the rights that attach to copyrighted portrayals of useful articles, but does not impact the copyrightability of the portrayals themselves. (Drawings, models, blueprints, or other portrayals of a useful article are not themselves “useful articles” because they do no more than convey information or portray appearance.<sup>180</sup> Since the drawings, etc., are not useful articles, in order to obtain copyright the portrayals need not pass the “separability test” to which useful articles are subject.<sup>181</sup>) Rather, Subsection 113(b) leaves intact the copyrightability of any expression that depicts a useful article, and instead limits the rights that attach to owning the portrayal.

Patent law imposes many subtle limits on copyright, but the limit in Subsection 113(b) is hit-over-the-head necessary: Should rights against copying attach to an innovation merely by drawing it, describing it, or modelling it in clay, few inventors would go through the expensive and uncertain route of trying to persuade federal patent examiners that their mechanical invention is “novel” and nonobvious’ – especially since the payoff from succeeding in the more difficult and more costly route of seeking a utility patent would be to receive a right only

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<sup>180</sup> Under the statute, 17 U.S.C. § 101 (2012), “A “useful article” is an article having an intrinsic utilitarian function that is not merely to portray the appearance of the article or to convey information.” Therefore, a work is not “useful” (in the sense of being dangerous to patent) unless it does something more than “convey information” or “portray appearance.” 2 Nimmer on Copyright § 2.18 (2015). A blueprint for a mechanical device is not a “useful article,” even though the device as built will be a “useful article.” Id.

<sup>181</sup> The copyrightability of useful articles that are PGS works depends on whether the “separability” test can be passed. 17 U.S.C. § 101 (2012) (definition of PGS works). Useful articles of other kinds might need to pass different tests, such as proof that giving copyright will not restrain competition in providing the function because, e.g., ample alternatives to the plaintiff’s expression exist that have equal and equivalent functional advantages.

marginally stronger than copyright's,<sup>182</sup> which lasts for a term of protection far shorter than copyright provides.<sup>183</sup> A whole area of patent law - at least, patents in mechanical configurations,<sup>184</sup> and perhaps other types of inventions as well - would cease to exist, and with it the "rights to copy and to use" that patent gives to nonpatented inventions<sup>185</sup> would also disappear. Subsection 113(b) prevents that from happening.

Here is a Copyright Office Report illustrating the Subsection's impact on day to day objects:

[T]he copyright in a work portraying a useful article as such would not protect against manufacture of that article...

[C]opyright protection would not extend to the following cases:

A copyrighted drawing of a chair, used to manufacture chairs of that design;

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<sup>182</sup> As mentioned, patent plaintiffs do not have to prove copying, but with technological change spreading works across the globe, copyright plaintiffs find it progressively easier to lead juries to find "copying" has occurred.

<sup>183</sup> Depending on circumstances, copyrights remain in private ownership at least for seventy years, and often for well over a century. Utility patents expire after twenty years. See \_\_ supra.

<sup>184</sup> Subsection 113(b) is usually understood as addressing pictorial works or models that depict functional three-dimensional objects. As I argue below, the subsection is not explicitly so limited, and can also be understood as applying to non-PGS works that implicate patent issues, such as computer programs.

<sup>185</sup> *Bonito Boats v. Thunder Craft Boats*, 489 U.S. 141, 164–5 (1989):

[T]he federal standards for patentability, at a minimum, express the congressional determination that patent-like protection is unwarranted as to certain classes of intellectual property. ... For almost 100 years it has been well established that in the case of an expired patent, the federal patent laws do create a federal right to "copy and to use." *Sears and Compco* extended that rule to potentially patentable ideas which are fully exposed to the public. (Emphasis in original.)

A copyrighted scale model of an automobile, used to manufacture automobiles of that design;

A copyrighted technical drawing showing the construction of a machine, used to manufacture the machine;

A copyrighted picture of a dress, used to manufacture the dress.<sup>186</sup>

Thus, copyright can subsist in a drawing of a dress, in a blueprint of a car, or in a scale model of a tractor or teapot. Someone who makes an unauthorized copy of such a drawing for illustrative use in a coffee-table book would infringe the copyright, as would someone who reproduced the scale models in a toy<sup>187</sup> or in a new scale model. Those are not uses of functional application that threaten patent. By contrast, under *Baker* and under Subsection 113(b), the public may lawfully employ the copyrighted drawing or model to construct working, full-size versions of the car, dress, tractor or teapot. This is certainly a special exception pertaining to “copying for use.”

#### 6 Subsection 113(b) Applied Directly to Computer Programs

Subsection 113(b) does more than support the “use/explanation distinction” in *Baker*. The section can be applied on its own terms to computer copyright litigation.

Programmers write human-readable code (“source code”) that is then “compiled” into the binary patterns that computers can understand. The resulting

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<sup>186</sup> Report of the Register of Copyrights, General Revision of the Copyright Law (1961) at 14, available at [http://copyright.gov/history/1961\\_registers\\_report.pdf/](http://copyright.gov/history/1961_registers_report.pdf/). This 1961 Report was approved in the 1965 Supplementary Report at pages ix & 47–9, and that Report in turn was relied on in the drafting of Subsection 113(b) in the 1976 Copyright Act. See 1976 House Report at 109.

<sup>187</sup> That making toys lies on the “copyright” side of the line was first determined in *King Features Syndicate v. Fleischer*, 299 F. 533 (2d Cir. 1924). Also see *Fleischer Studios, Inc. v. Freundlich, Inc.*, 73 F.2d 276 (2d Cir. 1934) (involving the Betty Boop doll).

binary pattern, called “object code,” does more than portray information and appearance: object code runs the machine. Object code is thus a “useful article.”<sup>188</sup> It might be argued that human-readable source code is a “portrayal” of that useful article. If so, Subsection 113(b) might mandate that any functional copy made from source code is immune from charges of copyright infringement.

The following discussion addresses three issues: whether the subsection’s language permits or requires it to be applied to computer programs; whether the section’s origin in *Baker* allows the subsection to be applied to computer programs and other “literary works”; and whether Subsection 113(b) would immunize not only purely nonexpressive uses, but also functional uses that contain a substantial admixture of expressive use.

### 6.1 Language

Subsection 113(b) appears in a section entitled, “Scope of exclusive rights in pictorial, graphic and sculptural works” (hereinafter, “PGS” works). Computer programs are not categorized not as PGS works but rather as “literary works.”<sup>189</sup> The section title seems therefore to indicate that subsection (b) does not apply to computer programs.

However, titles do not trump plain meaning. “[A] heading. . . . cannot limit the plain meaning of the text.”<sup>190</sup>

The language of Subsection 113(b) itself does not mention PGS works. It could have done so; the language of the preceding Subsection, § 113(a), quite

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<sup>188</sup> 17 U.S.C. § 101 (“A ‘useful article’ is an article having an intrinsic utilitarian function that is not merely to portray the appearance of the article or to convey information.”)

<sup>189</sup> See, 17 U.S.C. §§ 102(a) (subject matter), 101 (definitions) (2012).

<sup>190</sup> Yule Kim, *Statutory Interpretation: General Principles and Recent Trends* 31–2 CRS Report for Congress (2008), available at <http://fas.org/sgp/crs/misc/97-589.pdf>.

explicitly limits itself to the PGS category.<sup>191</sup> The language of Subsection 113(b) is by contrast not limited to any particular category of works.

The statute's definition of "useful article," too, is not limited to PGS works or any other particular category of works.<sup>192</sup> Any work that does more than "portray" form or "convey information" (that is, any work that goes beyond serving the expressive functions appropriate for copyright regulation) is a "useful article"<sup>193</sup> – which makes sense, for any such work potentially has implications for patent.

Subsection 113(b) incorporates pre-1978 caselaw by reference, and the legislative history mentions particular cases and gives a number of examples. On the one hand, that the caselaw cited in the legislative history seems to involve only PGS works<sup>194</sup> might suggest the subsection should be confined to the PGS context

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<sup>191</sup> 17 U.S.C. §§ 113(a) provides:

Subject to the provisions of subsections (b) and (c) of this section, the exclusive right to reproduce a copyrighted pictorial, graphic, or sculptural work in copies under Section 106 includes the right to reproduce the work in or on any kind of article, whether useful or otherwise.

In my view, subsection (b) articulates a generally applicable rule to remind courts not to let copyright erode patent via Section 113(a).

19217 U.S.C. § 101 (2012). ("A 'useful article' is an article having an intrinsic utilitarian function that is not merely to portray the appearance of the article or to convey information.")

<sup>193</sup> I am on somewhat less secure ground here. The definition of "useful article" indicates that proper copyright functions are to convey information or "to portray the appearance of the article." *Id.* The word "article" is quite general, which helps my interpretation, but the word also has connotations of physicality that work against my interpretation. Similar ambiguity afflicts the word "appearance." The term "appearance" can mean any kind of "seeming," thus standing in for all types of form. This helps my interpretation. But the word "appearance" also has visual connotations.

<sup>194</sup> Most of the examples and cases cited by Congress or the Copyright Office addressed whether manufacturers infringed when they based their three-dimensional functional products on two-

and not extend to computer programs. On the other hand, none of the cited pre-1978 opinions expressly limits its principles only to the PGS category.

The focus on PGS fact patterns is explicable given technological context. The bulk of the cited examples date from a 1961 Report,<sup>195</sup> and the list of cited cases come from a 1965 Copyright Office Report.<sup>196</sup> At that stage in law and technology, copyright in product shapes posed the most obvious danger to patent.<sup>197</sup> The same policies that in the 1960s triggered concerns with product shape, today also trigger concerns with computer programs.

An additional wrinkle is presented by Congress's actions in 1980. To see its significance, consider some background:

Recall that Subsection 113(b) incorporates caselaw ending in 1977, that is, cases decided prior to the effective date of the 1976 Copyright Act.<sup>198</sup> In 1977,

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dimensional drawings whose copyrights were owned by others. The cases are summarized in supra notes \_\_\_[73–38]\_\_.

<sup>195</sup> Report of the Register of Copyrights, General Revision of the Copyright Law (1961) at 14, available at [http://copyright.gov/history/1961\\_registers\\_report.pdf/](http://copyright.gov/history/1961_registers_report.pdf/). This 1961 Report was approved in the 1965 Supplementary Report at pages ix & 47–9, and that Report in turn was relied on in the drafting of Subsection 113(b) in the 1976 Copyright Act. See 1976 House Report at 109.

<sup>196</sup> A list of twelve cases that appeared in the Supplemental Report of the Register of Copyright (1965) at 48. The primary legislative Report for the current Act mentioned this list with approval. See 1976 House Report at 109.

<sup>197</sup> Ordinary literary descriptions posed little danger of giving control over systems, given *Baker*'s insistence that a book copyright gave no rights over any practical sciences it might describe.

<sup>198</sup> Again, the statute reads as follows:

§ 113 (b) This title does not afford, to the owner of copyright in a work that portrays a useful article as such, any greater or lesser rights with respect to the making, distribution, or display of the useful article so portrayed than those afforded to such works under the law, whether title 17

computer programs had uncertain copyright status; because machine-readable copies of literary works did not count as infringing,<sup>199</sup> little economically meaningful protection could attach even to programs that might in the abstract be eligible for copyright.<sup>200</sup> That helps explain why *Baker*-oriented caselaw (or any

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or the common law or statutes of a State, in effect on December 31, 1977, as held applicable and construed by a court in an action brought under this title.

<sup>199</sup> See *White-Smith Publishing Co. v. Apollo Co.*, 209 U.S. 1 (1908). This decision held that copyrights could be infringed only by persons making visually perceptible copies. The decision was overturned for most literary works by the Copyright Act of 1976, effective 1978. See 17 U.S.C. § 101 (definition of “copies”) (1976); also see 1976 House Report at 52. Computer programs, however, remained governed by 1977 law. 17 U.S.C. § 117 (1976); see 1976 House Report at 116.

<sup>200</sup> Computer source code is visually perceptible without machine aid, and in 1977 source code probably could be federally copyrighted. But unauthorized disk copies of source code would not infringe because the contents of a CD or other machine-readable disk are not visually perceptible to the naked eye. Only with the new 1976 Copyright Act, effective in 1978, did the federal copyright statute embrace all embodiments that could be perceived “with the aid of a machine or device.” 17 U.S.C. § 101 (2012):

“Copies” are material objects, other than phonorecords, in which a work is fixed by any method now known or later developed, and from which the work can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device. ... (Emphasis added)

Therefore the federal protection available to source code would be limited (since unauthorized object code copies would not be actionable) and object code itself would be unprotectable under federal law.

It might be asked whether state protections for computer programs pre-1978 might be relevant. In my view, they probably would not. Subsection 113(b) incorporates only caselaw “construed by a court in an action brought under this title.” State copyright actions are not “brought under this title.” They reach federal court under diversity jurisdiction.

The state rights that can appear as pendent claims in an “action brought under this title” are claims sounding in state trademark law or other kinds of unfair competition. See 28 U.S. C. § 1338 (a):

copyright caselaw) on computer programs would be scarce. Moreover, at the same time that Congress adopted 113(b), it adopted a special section to govern computer programs. That special provision, Section 117, fixed the law of computer copyright also at the end of 1977.<sup>201</sup>

Then, in 1980, Congress amended Section 117 and the copyright act's definitions<sup>202</sup> to bring computer programs into modern federal copyright.<sup>203</sup> Also,

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The district courts shall have original jurisdiction of any civil action asserting a claim of unfair competition when joined with a substantial and related claim under the [federal] copyright, patent, plant variety protection or trademark laws. ... (Emphasis added)

Nevertheless, state copyright claims have been brought under a variety of labels, including "misappropriation" which is a type of unfair competition. So the potential relevance of pre-1978 state copyright law for Subsection 113(b) remains unresolved.

Note that in 1978, the federal copyright act abolished most state copyright law. 17 U.S.C. §301 (2012) (pre-emption).

<sup>201</sup> 17 U.S.C. §117 (1976) as originally enacted read as follows:

§117. Scope of exclusive rights: Use in conjunction with computers and similar information systems.

Notwithstanding the provisions of Sections 106 through 116 and 118, this title does not afford to the owner of copyright in a work any greater or lesser rights with respect to the use of the work in conjunction with automatic systems capable of storing, processing, retrieving, or transferring information, or in conjunction with any similar device, machine, or process, than those afforded to works under the law, whether title 11 or the common law or statutes of a State, in effect on December 31, 1977, as held applicable and construed by a court in an action brought under this title.

Copyright Act of 1976, Pub. L. 94-553, title I, § 117, Oct. 19, 1976, available at <http://copyright.gov/history/pl94-553.pdf>.

<sup>202</sup> In 1980, Pub. L. 96-517 inserted a definition for "computer program" into the statute, 17 U.S.C. § 101 (2012).

<sup>203</sup> Pub. L. 96-517.

starting in 1978, machine-readable disks counted as “copies” and, if unauthorized, could infringe.<sup>204</sup> However, Congress did not amend Subsection 113(b).

The upshot: Reading the 1980 amendments in conjunction with the un-amended Subsection 113(b), Congress could be seen as eliminating one barrier to enforcing copyright in computer programs but retaining another: it eliminated the old visual-bound definition of “copy,” but retained the public’s liberty to employ copyrighted portrayals of useful articles to make and sell functioning versions of those articles without authorization.

#### 6.2 Is *Baker* only for accounting forms and other PGS works?

*Baker v. Selden*<sup>205</sup> dealt with a pictorial work. However, it was not limited to the pictorial context. To the contrary, the Court’s analysis took as its touchstone the public’s liberty to make machines or use systems described in books. It was from examples involving literary works that the Court built the public’s liberty to reproduce Selden’s pictorial accounting forms.

Thus, the Court writes:

[T]here is a clear distinction between the book as such and the art<sup>206</sup> which it is intended to illustrate. . . . A treatise on the composition and use of medicines, be they old or new; on the construction and use of ploughs, or watches, or churns; . . . would be the subject of copyright; but no one would contend that the copyright of the treatise would give

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<sup>204</sup> The 1980 amendments eliminated the 1977 reference point that had been embedded in Section 117, and inserted a definition of “computer program” as “literary work” into Section 101. Pub. L. 96–517 (1980). This made the general provisions of the 1976 Copyright Act – and its definition of “copy” – applicable to programs, so that “unaided” visual perception became irrelevant.

<sup>205</sup> *Baker v. Selden*, 101 U.S. 99 (1800).

<sup>206</sup> “Art” in this context refers not to aesthetics but to practical skills, as in the “arts” of husbandry, carpentry, or medicine.

the exclusive right to the art or manufacture described ... To give to the author of the book an exclusive property in the art described therein when no examination of its novelty has ever been officially made would be a surprise and a fraud upon the public. That is the province of letters patent, not of copyright. ...<sup>207</sup>

The Court repeats and elaborates the point,<sup>208</sup> and returns to new literary-work examples, such as books about the art of perspective.<sup>209</sup>

When the Court finally turns to graphic and pictorial works (such as the accounting forms at issue in *Baker*), the opinion returns to literary works as its first and primary point of reference:

Had he used words of description instead of diagrams (which merely stand in the place of words), there could not be the slightest doubt that others, applying the art to practical use, might lawfully draw the lines and diagrams which were in the author's mind, and which he thus described by words in his book.<sup>210</sup>

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<sup>207</sup> *Id.* at 102 (emphasis added).

<sup>208</sup> The Court writes:

...Take the case of medicines. Certain mixtures are found to be of great value in the healing art. If the discoverer writes and publishes a book on the subject (as regular physicians generally do), he gains no exclusive right to the manufacture and sale of the medicine; he gives that to the public. If he desires to acquire such exclusive right, he must obtain a patent for the mixture as a new art, manufacture, or composition of matter.

**Baker v Selden**, 101 U.S. 102–3 (emphasis added)

<sup>209</sup> *Id.* at 103.

<sup>210</sup> *Id.* at 103 (emphasis added). The Court wrote these works in regard to one of its many examples, namely, a “book on perspective.” The opinion quickly made clear, *id.* at 104, that these observations were directed to Selden's accounting forms as well.

Just as a graphic design or a set of diagrams “merely stand in the place of words”<sup>211</sup> for the Court in *Baker*, so can words stand in the place of graphic designs and diagrams for Subsection 113(b).

To see how closely Subsection 113(b) fits *Baker*’s treatment of literary works, note that *Baker* ’s examples could be restated using the words of the subsection: The subsection tells us that an “owner of copyright in a work that portrays a useful article as such” has no rights to control the manufacture of the useful article itself. Therefore (turning to *Baker*’s examples), the “owner of copyright in a [literary] work that portrays” a medicine, system or device, gives no rights to control those who use the book to make the medicine, employ the system or build the device.<sup>212</sup>

### 6.3 Mixed Uses

*Baker*’s facts seem to describe a purely functional use of the accounting forms. If Subsection 113(b) goes further, and applies even to uses that mix functional and expressive uses, the subsection’s sweep against the enforceability of programs will be broad indeed, because most copies of computer programs will be used functionally at least in part.<sup>213</sup> Does Subsection 113(b) extend to mixed uses?

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<sup>211</sup> *Baker* at 103. The paragraph from which the quoted words are drawn is quoted in full just above, in text at note 117.

<sup>212</sup> In the Court’s words, “The very object of publishing a book on science or the useful arts is to communicate to the world the useful knowledge which it contains. But this object would be frustrated if the knowledge could not be used without incurring the guilt of piracy of the book.” *Id.* at 103

<sup>213</sup> Source code can be copied for explanatory purposes. For example, open-source licenses typically require the sharing of source code in part to explain what a program does and how it does it. See [www.gnu.org/licenses/old-licenses/gpl-2.0.en.html](http://www.gnu.org/licenses/old-licenses/gpl-2.0.en.html).

Copying source code for explanatory purposes without license can infringe. Section 113(b) by its own terms has no relevance to copying done to serve proper copyright purposes such as explanation and amusement. See \_\_\_ *supra*.

The post-*Baker* cases that give meaning to Subsection 113(b)<sup>214</sup> suggest it might extend so far. The cases involved inter alia chairs, lighting fixtures, and other furnishings that various defendants had “built” without permission by copying their competitors’ copyrighted drawings and photos. It is highly likely that some of these copyrighted pictorial works showed furnishings that contained separable ornamental features, such as statuettes on lamp bases or flower designs on upholstery. It is even likely that some of the copying was motivated by a desire to capitalize on the market appeal of such ornamental elements.

Yet the courts gave the defendants in these cases the liberty to build and sell working duplicates of what appeared in the pictures, without regard to whether or not the portrayed objects might have contained separable ornamental features.<sup>215</sup> Consider a drawing of a chair that contained a separable work of authorship (such as an original design of colors or flowers applied to the chair seat). These cases seem to suggest that the act of constructing the article depicted cannot result in infringement even if the defendant’s chair seat bore a duplicate of the separable flower design.<sup>216</sup> If so, the limits that Subsection 113(b) puts on a copyright

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<sup>214</sup> The cases are summarized at notes \_ [103-107]\_ supra.

<sup>215</sup> “An article that is normally a part of a useful article is considered a useful article.” 17 U.S.C. § 101 (“definition of useful article”). Subsection 113(b) gives rights to build whatever is depicted in the drawing of the useful article, which according to this definition would include all parts, including separable artistic works.

Thus, there is no infringement when a stranger without authorization builds a chair that purposely duplicates a copyrighted portrayal - even a portrayal that shows a chair designed with a separable ornament. The rule is different if a designer does more than portray her design in a drawing or sketch, but actually builds it. A stranger who builds a chair that purposely duplicates a designer’s as-built chair might infringe if the chair has an ornament that is arguably separable.

<sup>216</sup> Under this provision’s wording, a designer who sketched a chair (for example) could not use her copyright in the two-dimensional sketch to restrain a competitor from building the chair, even if the designer had included in her sketch elements of the chair which would be “separable” (and copyrightable) if she built the chair. Paul Goldstein criticizes the subsection for exempting the copying of “separable” features from a copyrighted portrayal of a useful object, but does not

owner's rights apply to shelter copying that is partly motivated by expressive concerns. Giving Subsection 113(b) such breadth for PGS works makes some sense: no one wants the utilitarian product markets to be subject to strike suits by doodlers who see some resemblance between a manufactured product and some fantasy sketches they have posted on social media.<sup>217</sup> If the doodlers cannot argue "separability" as a way to withstand motions to dismiss – if Section 113(b) can be

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seem to challenge that the subsection has that effect. 2 GOLDSTEIN ON COPYRIGHT § 7.4.4.1, 118 (2014). He suggests that a court should first assess the copyrightable elements if any in the design being depicted, and then compare that element of copyrightable (separable) expression to the appearance of the defendant's functioning object.

Instead, the subsection seems to provide that the designer would have to authorize the construction of an actual chair in order to have copyright in the separable components.

There are some good reasons for requiring the designer to engage in such a two-step dance. Images of useful and potentially useful articles abound, from Dufy's sailboats to Dali's melting watches. Should a designer of actual objects be afraid to take inspiration from the painters and visual fantasists who might never make the three-dimensional objects they have dreamed up and depicted on canvas or in print? The Section 113(b) rule means that only copying from an actual useful article will make someone liable for reproducing the separable (copyrightable) parts.

Nevertheless, it is undoubtedly cumbersome to withhold copyright in "separable" parts until the designer brings the useful article to life. Paul Goldstein argues as a policy matter that this aspect of Subsection 113(b) should be altered.

<sup>217</sup> Note that my example here focuses on a plaintiff's sketches rather than on a plaintiff's constructed design. The law may differ for each context.

Subsection 113(b) appears to allow members of the public to build any and all aspects of a useful article that they copy from a copyrighted drawing, whether or not any aesthetic element is 'separable' from the useful components. By contrast, if the designer actually constructed the article in question, she could have a copyright in its 'separable' elements.

The difference in legal result may be attributable to the minor investment required to merely sketch a useful article (and thus the greater threat that, in the absence of Subsection 113(b), sketches would pose to patent) as compared with the effort required to construct a three-dimensional article.

used even by defendants who “build” and use a portrayal’s expressive content - patent law may be safer.

But for computer programs, it is dangerous to extend Subsection 113(b) to shelter functional uses with substantial expressive content. It’s hard to imagine any functional copying of source code that could survive a statute so interpreted. Also, if Subsection 113(b) extended that far, it would make other computer-related provisions of the Copyright Act surplusage.<sup>218</sup>

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<sup>218</sup> In the 1980 amendments to Section 117, Congress gave the public some liberties to use computer programs functionally. For the public to need such a specific set of liberties, Congress would seem to have been assuming that (without the specified new liberties) some functional uses of programs could be infringing. If Subsection 113(b) reached mixed uses, then all but the archival portion of Section 117 would be surplusage. (The liberty to make and keep an archival copy, 17 U.S.C. 117(a) (2) (2012), does not involve a functional use, and thus does not invoke either *Baker* or Subsection 113(b).)

By contrast, if Subsection 113(b) reaches only uses that are very substantially or purely functional, then computer copyrights would remain enforceable against defendants whose purposes are substantially related to “style and expression.” (Were copying of programs never done for purposes related to “style and expression,” **CONTU at 22**, then Congress certainly did err – perhaps on a Constitutional level - in accepting computer programs into the list of copyrightable works!)

In short, a narrow reading Section 113(b) leaves untouched all copying that is done for mixed purposes of function and expressiveness. If so, Section 117 provides liberties that go beyond Section 113(b), and applying 113(b) to computer programs does not make Section 117 surplusage.

If copying for mixed purposes of function and expressiveness is not embraced by *Baker* or by Subsection 113(b), a wide range of copying remains potentially open to copyright’s control – that is, *Baker* leaves untouched all copying that is done for mixed purposes of function and expressiveness. If so, Section 117 provides needed liberties that go beyond Section 113(b), and is not surplusage.

As a policy matter, this chapter argues, Subsection 113(b) should either be limited to purely functional and nonexpressive uses, or should be limited to PGS works.

Limiting the subsection to functional uses that are fully non-expressive is admittedly in some tension with the language of the subsection, for that language seems to treat all “portrayals of useful articles” the same. But it must be remembered that Subsection 113(b) merely incorporates caselaw, including distinctions that the caselaw might embody. Refusing to apply Subsection 113(b) to “mixed” uses is not inconsistent with the relevant caselaw. None of the cases I have found explicitly say that deference to patent requires giving the public a liberty to construct useful articles that have separable and copyrightable parts. Under my more narrow reading, then, the subsection would only shelter use that is both functional and fully nonexpressive.

One final note is needed, regarding the copying of “object code,” that is, copying directly from the machine-readable disk to make another disk.

#### 6.4 Copying Computer Object Code

Subsection 113(b) limits the rights of those who own copyrights in drawings and other portrayals of useful articles, and does not limit the rights of those who own copyrights in useful articles themselves.<sup>219</sup> And useful articles can indeed have copyrights.<sup>220</sup> A computer programmer typically does more than “portray” a useful

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<sup>219</sup> Note that Subsection 113(b) is also inapplicable to cases where the defendant has copied a work that portrays an article that is not useful. This rule does not change even if the copy is then applied to a useful object. See *Falk v. T. P. Howell & Co.*, 7 F. 202 (C.C.D.N.Y. 1888) (infringement results from copying an artistic work even though the defendant used it to decorate a chair back); 17 U.S.C. 113(a) (2012),

<sup>220</sup> Useful articles can have copyright. As mentioned, “PGS works” that are useful articles can be copyrighted as to those aspects that pass a “separability” test. 17 U.S.C. 101 (2012) (defining PGS works). “Architectural works” that are useful articles are copyrightable to the extent their features are not “functionally required.” See H.R. Rep. No. 101–735, 101st Cong., 2d Sess. 20–

article. Consider Sun Microsystems, Oracle's predecessor in interest which was largely responsible for Java. Sun not only created Java source code (a "portrayal" of a useful article); it actually created indisputably "useful article" namely, Java object code.

Even if making a functional copy of a source code (a "portrayal") is non-infringing because of Subsection 113(b), that section is simply inapplicable to acts that copy useful articles themselves. Infringement can result from making a functional copy of object code.

As a factual matter, it seems unlikely that Google copied Java object code.<sup>221</sup> But what if a defendant also copied from object code? If so, Subsection 113(b) drops out as a potential shelter for that aspect of the defendant's behavior.

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21 (1990), reprinted in 1990 U.S.C.C.A.N. 6935, 6951–2. Different kinds of useful articles can thus be governed by different tests.

What tests should govern the copyrightability of computer code is of course much debated in the context of Oracle v. Google. This chapter does not reach that issue, but rather addresses the question of what rights should attach to code even if copyrightable.

<sup>221</sup> Source-code versions of Java commands and input specs were widely available, and evidence in the case shows that Google did indeed use the source code. For example, a "slide show" that Java prepared for litigation highlighted this colloquy (from a deposition):

Q. Did you consult the Java docs when doing your work on the API implementations for Android?

A. Yes.

Q. Okay. And where did you obtain those Java docs?

A. They're posted for free on Sun's website.

Deposition of Bob Lee, August 3, 2011, quoted in Google Employees Consulted Sun's Copyrighted Java Materials When Implementing Android, from Oracle Slideshow, available at [www.cnet.com/pictures/oracles-slideshow-alleging-how-google-copied-java-images/2/](http://www.cnet.com/pictures/oracles-slideshow-alleging-how-google-copied-java-images/2/) (last visited June 29, 2015)

Nevertheless, as for all copying, a copyright owner's rights over the copying of object code are governed by Supreme Court precedent, including *Baker*. If the copying was fully nonexpressive in nature, then under *Baker* no infringement of copyright would result.

#### 6.5 Does the breadth of Subsection 113(b) govern?

*Baker* mandates freedom to copy non-expressively; its mandate is less clear in cases where copying is a mixed case of expressive and nonexpressive use. By contrast, Subsection 113(b) is not limited by inquiry into the defendant's pure concern with function. It is likely that attractive features triggered some of the copying of furniture and lamps in the old cases; Subsection 113(b) seems to mandate that the public has freedom to copy portrayals of useful articles by building the articles even if the copying was partly motivated by a desire to capture expressive elements.

Subsection 113(b) thus might sweep more broadly than *Baker* itself.

Fortunately, in cases of fully nonexpressive copying like *Oracle*, the courts need not reach the scope of Subsection 113(b). *Baker* itself suffices. In fact, in the computer context, I think that Subsection 113(b) functions best as an echo and reinforcement for *Baker* rather than an independent source of command. It is nevertheless time for the legal community to see that the subsection potentially has significant impact.

#### 7 Conclusion

Copyright has no inherent interest in governing copying that is indifferent to expression, such as copying a letter to present evidence in a lawsuit, or copying a sculptural key shape to unlock a door. To regulate such copying would be foreign to copyright's interior logic.<sup>222</sup> From an economic perspective, also, incentives to create more or better expression can have only random correlation with copying that is motivated by expressive-indifferent concerns.

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<sup>222</sup> For one eloquent view of this interior logic, see Drassinower, discussed *supra* at \_\_\_.

Because line-drawing among types of copying can be costly, infringement claims need not be struck down every time an act of copying does not “fit” copyright’s expressive paradigm. But often a lack of “fit” is linked to significant policy concerns. In *Baker v. Selden* the Supreme Court made clear that line-drawing among forms of copying is worth the attendant costs, and must be done, when broad enforcement would give copyright law the power to redraw boundaries that Congress has entrusted to patent.

It is not just caselaw that demonstrates this sensitivity. The Copyright Act also includes provisions that limit copyright owners’ rights out of deference to patent law.

One such Copyright Act provision, Subsection 113(b), provides that the rights that attach to owning copyright in the portrayal of a useful article do not cover the functional use – the making or sale – of the useful article itself. Taking the section literally, it could immunize defendants who made functional copies of source code because source code is a “portrayal” of the useful article known as object code. In the recent case of *Oracle v. Google*, it appears that Google copied from source code rather than from object code; if so, Google’s copying could be sheltered by Subsection 113(b).

However, Subsection 113(b) may sweep very broadly, and it is not certain how Congress meant its language to be interpreted. *Baker* itself can suffice to resolve *Oracle v. Google* and similar disputes. *Baker* indicates that where copying is done with indifference to expressive values, and to serve utilitarian goals of the kind that governed by the law of utility patent, copyright infringement should not result.

*Oracle v. Google*, like *Lotus v. Borland* before it, involves a kind of interoperability that is needed to fight lock-in: interoperability between a newcomer program and the relevant public’s habituated skills and its existing macros or other programs. In the *Oracle* case, the goal of the copying was to help third-party programmers, who were habituated to Java, more easily interoperate

with Google’s Android platform. Google’s copying the familiar method headers from Java into Android enabled the programmers choose whether or not to work with the Android platform on its merits, rather than being discouraged by the switching costs involved in recrafting their programming habits. In *Lotus*, the goal of the copying was to help customers of an established spreadsheet program decide whether or not to choose a new spreadsheet program on its merits, rather than being held to the old program by the switching costs involved in learning new meanings for keys and recreating macros.

In both these cases, the plaintiff’s programs were not copied because they embodied skilled expression; in both cases the defendants carried the “heavy lifting” of creating new implementation code independently. What copying occurred was not done to spare the defendants the effort, money, or other resources that would be involved in creating high-quality expression. Instead, the copying was done for the purpose of conforming with exactness to whatever the dominant program specified; the copying was done without regard to the quality, *vel non*, of what was copied.

Under the canonical case of *Baker v. Selden*, as reinforced by *Baker*’s progeny in both caselaw and the copyright statute, the copying in *Lotus* and *Oracle* did not infringe. And this conclusion need not follow from copyrightability, or from “fair use,” but from the plaintiff’s lack of prima facie right to control functional use. Going forward in *Oracle* and other cases that charge infringement of computer copyrights, *Baker*’s use/explanation distinction can play a clarifying role. Patent law gives the public rights to copy and to use<sup>223</sup> that *Baker*, its progeny, and the pattern of the copyright statute all tell us copyright should not undo.

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<sup>223</sup> *Bonito Boats v. Thunder Craft Boats*, 489 U.S. 141, 164–5 (1989).

