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# DYNAMIC COPYRIGHT LAW: ITS PROBLEMS AND A POSSIBLE SOLUTION

*Fred Anthony Rowley, Jr.*[*]

## I. INTRODUCTION

Copyright law endeavors to promote the production of creative works by balancing between two competing policy interests: (1) ensuring that authors have an adequate economic incentive to produce those works;[1] and (2) preserving the public domain by ensuring that the author's monopoly is not so broad that it prevents others from developing competing works.[2] In striking this balance, copyright law traditionally has relied upon a fixed, limited grant of protection for individual works. Under this approach, an author would receive a copyright covering the material in her work that originated with her, leaving others free to copy the ideas, concepts, and words that preexisted her work. The author's copyright, the scope of which would remain constant, would protect her original work until its term expired. At that point, her work could be used freely by others and perhaps facilitate the development of additional creative works.

Imagine, however, a form of copyright protection that is less fixed, less rigid, that changes as a work's relationship to the market changes. For example, an author creates an expressive work (the "Opus$^{X}$"), obtains a copyright for that work, and markets it. Soon, the Opus$^{X}$ becomes enormously popular, and the author reaps a rich reward in a comparatively short period of time. Since the features and aspects originating with the author are the source of the Opus$^{X}$'s popularity, other creators seek to produce works improving upon the features of the Opus$^{X}$. Because those features are protected by copyright, however, the potential innovators are frustrated in their efforts. Responding to this post-copyright tip in the balance between preserving incentives and the

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1. *See* William M. Landes & Richard A. Posner, *An Economic Analysis of Copyright Law*, 18 J. LEGAL STUD. 325, 326 (1989).

2. *See id.* at 347-48; *see also* BENJAMIN KAPLAN, AN UNHURRIED VIEW OF COPYRIGHT 2 (1967) ("'[P]rogress,' if it is not entirely an illusion, depends upon generous indulgence of copying.").

public domain, courts reduce the copyright protection over the Opus$^X$ in order to allow others to draw on its formerly protected features and elements. The original creator of that work becomes wildly rich. The Arts are advanced.

Now imagine the converse situation. An author labors hard to produce a different expressive work (the "Opus$^Y$"), which is composed largely of facts, ideas, and other materials not protected by copyright, but which nonetheless contains enough originality to give the author thin copyright protection. After the author markets the Opus$^Y$, it becomes enormously popular, but its limited protection allows competitors to copy and market, in a detailed fashion, the author's Opus$^Y$ design. Consequently, the ability of the author to benefit economically from the work is reduced, and the incentive to create these types of works is undermined. Others are deterred from creating and marketing products similar to the Opus$^Y$ for fear of being underprotected by copyright. Courts respond by giving the author of the Opus$^Y$ slightly more copyright protection against competitors than it deserves under conventional copyright analysis. The author of the Opus$^Y$ creates new and interesting versions of that work and retires as a rich woman. The Arts are advanced.

The vision of copyright I have just described differs from the traditional idea of copyright protection in its responsiveness to market factors existing after a work is created and distributed. Under this theory of copyright, a given work may require adjustments in its scope of protection in order to strike the appropriate balance between preserving incentives and the public domain. Accordingly, the rules and principles governing the scope of protection accorded a work should be flexible, permitting courts to make any adjustment necessitated by the market — whether it be market domination and standardization, as with the Opus$^X$ scenario, or market interference, as with the Opus$^Y$ scenario. In this way, determining copyright protection for a given work would acquire a dynamic character that it traditionally has not possessed.

In Part II, I explore the process by which copyright *in fact* has acquired a dynamic character in the area of computer software protection. As a preliminary matter, I briefly outline the policies underlying copyright law in order to draw out the concerns animating its doctrinal development. Next, I examine the development of copyright doctrine in the area of computer software, which I believe has given rise to the dynamic approach to protection illustrated by the Opus$^X$ scenario. I argue that in order to strike a balance between competing interests, courts have endeavored to *reduce* the scope of copyright protection during the term of the copyright. I then set forth a hypothetical controversy to show how copyright protection for a given work might be

*expanded beyond* (rather than reduced from) conventional copyright protection. I argue that, in some cases, interference by competitors may render conventional protection inadequate to strike the appropriate balance between copyright's competing interests. The question then becomes whether copyright protection can be adjusted to account for market interference, much like the adjustment suggested in the Opus[Y] scenario.

In Part III, I point out some of the problems with this dynamic approach to copyright. First, the flexible protection granted by courts in certain cases is inconsistent with the language of the current copyright statute. Second, this dissonance between some of the copyright rules being developed by the courts and the current statute may produce doctrinal incoherence and confusion. Dynamic copyright protection applies the broad policies underlying copyright law with greater precision to works which, because of market considerations, are ill-suited to conventional copyright analysis, but this approach may unnecessarily destabilize copyright protection for more traditional works. Dynamic protection creates uncertainty in the scope of a copyright, thus making decisions more problematic concerning the economic value of copyright grants, the permissibility of copying creative elements, and other important issues. While such uncertainty may be offset by the benefits of determining a more precise, optimal scope of protection for works such as computer software, those benefits do not obtain with respect to traditional works for which conventional copyright analysis has proven adequate.

Accordingly, I propose a new regime offering dynamic protection for those works whose markets require it, leaving copyright to protect more traditional works. In particular, I advance a federal intellectual property scheme that draws upon the flexibility of common law misappropriation doctrine and the basic protective framework of copyright. Such a scheme would not only secure the optimal scope of protection for non-traditional works but also obviate the need for courts to contravene congressional intent in order to achieve this goal. I close with a brief afterthought: would a specialized Article I court or an administrative tribunal best administer this new intellectual property regime? I conclude that jurisdiction over such a regime should not be vested in an agency, but in the federal courts of general jurisdiction.

## II. COPYRIGHT LAW: TRADITIONAL APPLICATIONS AND MARKET CONSIDERATIONS

### *A. Copyright's Underlying Policies*

Natural rights theories of intellectual property generally focus on the right of the creator to the fruits of her labor. Such theories claim that when an individual toils to produce a creative work, she has infused that work with part of herself and therefore is entitled to control its disposition. Under these theories, intellectual property should endeavor to ensure that the individual's inherent entitlement to her creation is protected by the law.[3] However, despite the fact that some courts have used the discourse of natural rights to justify copyright rules,[4] copyright law in the United States is firmly grounded in a utilitarian approach to intangible property rights. The text of the Constitution directs Congress to establish what has come to be known as copyright and patent law as means of "promot[ing] the Progress of Science and useful Arts, by

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3. This theory resonates with and is often justified in terms of the philosophy of John Locke. *See* JOHN LOCKE, *An Essay Concerning the True Original, Extent, and End of Civil Government*, *in* TWO TREATISES OF GOVERNMENT (Peter Laslett ed., 1988) (1689). An intellectual property theory based on Locke may be reasoned in the following way: in the same way that a Lockean actor creates a tangible property interest by mixing her labor with the soil, an author creates an intangible property interest by mixing her intellectual labor with ideas, words, and cultural artifacts. Numerous commentators have discussed and/or criticized the ways in which Locke has been used to support and justify American copyright protection. *See, e.g.*, R. Anthony Reese, Note, *Reflections on the Intellectual Commons: Two Perspectives on Copyright Duration and Reversion*, 47 STAN. L. REV. 707 (1995) (discussing libertarian and utilitarian forms of rent theory to justify copyright protection and applying these theories to the proper term and reversion of copyright interests); *see also* Justin Hughes, *The Philosophy of Intellectual Property*, 77 GEO. L.J. 287 (1988) (setting forth a Lockean theory of intellectual property and contrasting it with a Hegelian justification for such property); Alfred C. Yen, *Restoring the Natural Law: Copyright as Labor and Possession*, 51 OHIO ST. L.J. 517 (1990) (updating natural law arguments for copyright law using a Lockean justification in part); Diane Leenheer Zimmerman, *Information as Speech, Information as Goods: Some Thoughts on Marketplaces and the Bill of Rights*, 33 WM. & MARY L. REV. 665, 700-05 (1992) (explaining why Lockean theory has curtailed First Amendment values in intellectual property).

4. For example, in the early case of *Wheaton & Donaldson v. Peters & Grigg*, 33 U.S. 591, 657 (1834), the Supreme Court reasoned that the act of labor itself gives rise to a natural property interest in a creative work, although that right is subject to positive law restrictions and conditions: "That every man is entitled to the fruits of his own labor must be admitted; but he can enjoy them only, except by statutory provision, under the rules of property which regulate society, and which define the rights of things in general."

securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."[5] The Constitution contemplates *limited* grants of protection in order to mediate between two competing policy interests: (1) providing authors and inventors with incentives to create; and (2) ensuring that copyright and patent holders are not given absolute monopolies over the building blocks of creativity, such as ideas, concepts, and common words. The ideal result — and the result courts struggle to secure — is the optimal production of creative works.[6]

On the incentive-producing side, copyright law protects authors from illicit, extra-contractual copying by competitors or other parties who may benefit economically from an author's work.[7] If illicit copiers were permitted to cut into an author's market, authors would be unable to recoup the often significant costs of producing their works, and therefore would be deterred from creating them.[8] The limited monopoly granted by the copyright statute ensures that authors will have the opportunity to benefit economically from the works they have produced. To the extent their works possess expressive merit, authors ideally will be able not only to recover the costs invested in producing their works, but also to secure a return on their investment. As Benjamin Kaplan has explained:

> Copyright law wants to give any necessary support and encouragement to the creation and dissemination of fresh signals or messages to stir human intelligence and sensibilities: it recognizes the importance of these

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5. U.S. CONST. art. I, § 8, cl. 8. Indeed, James Madison described this provision as linking individual incentives to create with the broader policy objectives of scientific and humanistic progress:

> The utility of this power will scarcely be questioned. The copyright of authors has been solemnly adjudged, in Great Britain, to be a right of common law. The right to useful inventions seems with equal reason to belong to the inventors. The public good fully coincides in both cases with the claims of individuals."

*See* THE FEDERALIST NO. 43, at 279 (James Madison) (Mod. Lib. ed., 1941)

6. *See* Landes & Posner, *supra* note 1, at 326.

7. *See* 17 U.S.C. § 106 (1994) (defining the exclusive rights embraced by copyright, including the right to "reproduce the copyrighted work in copies" and to "prepare derivative works based on the copyrighted work"); *see also* Landes & Posner, *supra* note 1, at 345 (explaining why copyright protects against only purposeful copying and concluding that checking whether an author's creative expression already existed would be too costly).

8. *See* Landes & Posner, *supra* note 1, at 326.

> excitations for the development of individuals and society.[9]

In this sense, each author's self-interest furthers the public's interest in having a rich and diverse market for expressive and artistic works.[10]

Copyright's purpose of ensuring a baseline level of creative work production weighs against the public's interest in avoiding over-protection. Authors do not spontaneously generate every aspect of their creative works; they draw upon ideas, stock phrases, and understandings common to others within their communities. Accordingly, if copyright law is to maximize the amount of creative expression available to the public, it must ensure that the public domain is not unduly drained of ideas and stock forms of expression.[11] By delimiting the scope of protectable works, copyright law ideally protects enough original material to spur the production of new works while simultaneously ensuring that the material necessary to produce those works remains in the public domain. Thus, the "imposition of limits must be seen as a vital and integral part of copyright's structural function."[12]

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9. KAPLAN, *supra* note 2, at 74.

10. *Cf.* Twentieth Century Music Corp. v. Aiken, 422 U.S. 151, 156 (1975) ("The limited scope of the copyright holder's statutory monopoly, like the limited copyright duration required by the Constitution, reflects a balance of competing claims upon the public interest, but private motivation must ultimately serve the cause of promoting broad public availability of literature, music, and the other arts."). Commentators have offered different theories about the public good created by copyright law. Some emphasize the way in which copyright facilitates the production of works that are important for educational objectives. *See* KAPLAN, *supra* note 2, at 74. Others argue that copyright helps to secure the thriving cultural and intellectual atmosphere that is essential to producing citizens who are well-prepared to participate in a democracy and to share in the power of governing — a purpose envisioned by the framers themselves. *See* Neil Weinsock Netanel, *Copyright and a Democratic Civil Society*, 106 YALE L.J. 283, 349-59 (1996).

11. *See* Iowa State Univ. v. American Broad. Co., 621 F.2d 57, 60 (2d Cir. 1980) (describing fair use as a means of avoiding an application of copyright law that would "stifle the very creativity which that law is designed to foster"); *see also* KAPLAN, *supra* note 2, at 76 ("[C]opyright should not withdraw from the common store building blocks necessary to composition — small particular sequences and general concepts."); Keith Aoki, *Authors, Inventors, and Trademark Owners: Private Intellectual Property and the Public Domain Part I*, 18 COLUM.-VLA J.L. ARTS 1, 40 (1993) ("The very thing that copyright was intended to encourage, an abundance of intellectual goods, may in effect be discouraged [by overprotection]."); Leslie Kurtz, *Copyright: The Scenes a Faire Doctrine*, 41 FLA. L. REV. 79, 82 (1989) (pointing out that copyright's "exclusive rights may hinder the efforts of new authors who seek to build on the creativity of the past").

12. Netanel, *supra* note 10, at 362.

There is also a more general and, indeed, more serious danger associated with overprotection beyond that of frustrating the production of original works of expression. If copyright protection is overbroad, it may burden fundamental social practices and activities. The stuff of copyright protection is also the stuff of basic social interaction, learning, and progress. In its most extreme form, overbroad protection of ideas and facts would threaten current social practices by placing legal constraints upon the ability of individuals to think about, discuss, and examine those ideas and facts.[13]

The text and legislative history of the current Copyright Act[14] reflect this utilitarian approach to copyright law, providing for a balance between public domain material and individual grants of protection. For example, section 102 draws an explicit distinction between the subject matter that may be protected by copyright, namely original expression inhering in a fixed work,[15] and public domain material that is outside the scope of copyright protection, namely such essential building blocks as ideas and concepts.[16] Section 102 thus mandates that courts draw the scope of protection carefully, eliminating the elements of a work that, under the statute, belong in the public domain.[17]

In following the mandate of the Constitution and the Copyright Act, copyright case law has clearly acknowledged that copyright law is grounded in society's interest in maximizing the creative works produced by its members. As the Supreme Court noted in *United States v. Paramount Pictures, Inc.*,[18] "copyright law, like the patent statutes, makes reward to the owner a secondary consideration"[19] — secondary

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13. *See* Kurtz, *supra* note 11, at 83 (pointing out that in a scheme conferring overbroad protection, "[a]s each copyright was obtained, the areas of thought open to discussion and development would be progressively narrowed"); *cf.* Wendy J. Gordon, *On Owning Information: Intellectual Property and the Restitutionary Impulse*, 78 VA. L. REV. 149, 167 (1992) (noting that "[e]very person's education involves a form of free riding on his predecessors' efforts, as does every form of scholarship and scientific progress").

14. Copyright Act of 1976, Pub. L. No. 94-553, 90 Stat. 2541 (codified as amended at 17 U.S.C. § 101 *et seq.* (1994)).

15. *See* 17 U.S.C. § 102(a) (1994).

16. *See* 17 U.S.C. § 102(b) (1994).

17. The legislative history supports this reading, emphasizing the importance of balancing the interest in securing adequate incentives for authors to be creative against the public's interest in avoiding overprotection; "Copyright does not preclude others from using the ideas or information revealed by the author's work." H.R. REP. NO. 94-1476, at 56 (1976), *reprinted in* 1976 U.S.C.C.A.N. 5659, 5670.

18. 334 U.S. 131 (1948).

19. *Id.* at 158.

to the public interest.[20] The Court,[21] as well as the lower federal courts,[22] have emphasized further that copyright entails a balance between ensuring an adequate incentive to promote creativity and protecting the public's interest against undue erosion of the public domain. Consequently, as the case law makes clear, the text of the Constitution, the current copyright statute, and its legislative history point to a utilitarian approach to American copyright law. This utilitarian approach — in particular, its underlying and competing policy interests — informs in important ways the manner in which courts apply and develop copyright doctrine.

### *B. The Transformation of Copyright Law: The Flexible Use of Doctrine*

Copyright law traditionally has balanced its competing interests by means of two distinct mechanisms for limiting protection: (1) doctrines defining the scope of protection properly accorded a work; and (2) the statutory term of protection. The two most important doctrines defining the scope of protection are the idea/expression dichotomy and originality. Under section 102 of the Act, copyright protection extends

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20. *See id.*

21. *See* Sony Corp. of Am. v. Universal City Studios, Inc., 464 U.S. 417, 429 (1984) (explaining copyright protection, "Congress . . . has been assigned the task of defining the scope of the limited monopoly that should be granted to authors . . . in order to give the public appropriate access to their work product").

22. *See, e.g.*, Computer Assocs. Int'l, Inc. v. Altai, Inc., 982 F.2d 693, 696 (2d Cir. 1992) ("[C]opyright law seeks to establish a delicate equilibrium. On the one hand, it affords protection to authors as an incentive to create, and, on the other, it must appropriately limit the extent of that protection so as to avoid the effects of monopolistic stagnation."); Apple Computer, Inc. v. Microsoft Corp., 799 F. Supp. 1006, 1021 (N.D. Cal. 1992) ("[W]hile copyright protection increases the expected revenues of authors by restricting competition, it also can have the effect of raising the costs of creation by making a useful building block of creativity the exclusive property of a prior author."). It is also worth noting that the Supreme Court recently went out of its way to reject a natural rights claim to copyright protection, commonly known as the "sweat-of-the-brow" doctrine. *See* Feist Publications, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340 (1991). Under that doctrine, plaintiffs previously had argued that copyright protection should attach to a work that otherwise might not satisfy the statutory and constitutional requirement of originality on the ground that the author had produced it with her labor. *See, e.g.*, Jeweler's Circular Publ'g Co. v. Keystone Publ'g Co., 281 F. 83, 88 (2d Cir. 1922) (reasoning that although a compilation of jewelry store data was not original, it nevertheless warranted protection because it reflected significant work on the part of its author). The *Feist* Court held explicitly that this doctrine could not justify copyright protection, since satisfaction of statutory factors rather than hard work per se was the foundation of copyright law. *See Feist*, 499 U.S. at 357.

only to the expressive elements inhering in works of authorship, leaving the ideas, concepts, and other general intellectual subject matter free for public use.[23] Courts deciding copyright cases seek to parse out unprotected elements from those that constitute expression worthy of copyright protection, hence the idea/expression dichotomy.[24] Section 102(a) also requires that the expression be "original" before copyright protection will attach,[25] but the baseline of originality triggering protection for a work is widely recognized as being low.[26] Accordingly, the rule that copyright protects only expression often presents the primary obstacle to securing protection for a work.[27]

The other principal mechanism for securing copyright's underlying balance is the statutory limitation on the duration of protection. Under section 302(a), copyright protection inheres in a work published after 1978 for the life of the author plus a term of fifty years.[28] Once a work's statutory protection has elapsed, that work falls into the public domain and may be freely copied or used by the public.

Courts defining the proper scope of protection for traditional works such as novels, poetry, and essays generally apply the idea/expression dichotomy in a straightforward manner. They accord protection only to the elements of original expression in a given work and only for the duration of the statutory term, ideally ensuring that the author is able to

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23. *See* 17 U.S.C. § 102 (1994).

24. Although there are a number of particular doctrines connoting unprotected public domain material, the idea/expression dichotomy continues to be used to connote the broader principle that general, fundamental building blocks of expression should not be protected. *See, e.g., Computer Assocs.*, 982 F.2d at 703 (pointing out that "[i]t is a fundamental principle of copyright law that a copyright does not protect an idea, but only the expression of the idea" and characterizing § 102(b) as incorporating this principle); Sid & Marty Krofft Television Prods., Inc. v. McDonald's Corp., 562 F.2d 1157, 1170 (9th Cir. 1977) ("[T]he idea-expression dichotomy already serves to accommodate the competing interests of copyright and the first amendment [concern with public domain material]."); Kurtz, *supra* note 11, at 83-84 ("The idea/expression dichotomy helps copyright strike a balance between providing incentives to create and maintaining the store of raw materials needed for new creations.").

25. *See* 17 U.S.C. § 102(a) (1994) ("Copyright protection subsists . . . in original works of authorship . . . .").

26. *Cf.* Bleistein v. Donaldson Lithographing Co., 188 U.S. 239, 251 (1902) (Holmes, J.) (arguing that judges generally should not be in the business of acting as arbiters of original expression).

27. I do, however, consider originality in greater depth in the section exploring the possibility of ratcheting up protection in order to account for market considerations. *See infra* Part II.B.2.a.

28. *See* 17 U.S.C. § 302(a) (1994). Note that works made for hire garner protection for 75 years from the date the work was published or 100 years from creation, whichever comes first. *See* 17 U.S.C. § 302(c) (1994).

benefit economically from her work.[29] With the application of copyright to computer software, however, courts have begun to apply the idea/expression dichotomy with greater flexibility.

Perhaps out of concern that protecting some original software elements for the full statutory term could hinder the overall progress of computer software,[30] many courts now consider whether a particular element has become a standard in the software market in deciding whether it constitutes original expression. In other words, a court may determine that a certain element of a software program was original expression when first created, but conclude that it has since become so standardized that protecting it would frustrate the creation of new software products. In this way, courts have come to rely upon market considerations existing after the time a work is fixed to help them define the work's proper scope of copyright protection, thereby evading the statute's strict and lengthy term of protection. This is a remarkable change in the way courts apply the idea/expression dichotomy.[31]

In this section, I explore the flexible use of the idea/expression dichotomy in software cases, and elaborate on its possible applications. First, I briefly discuss how the idea/expression dichotomy performs in traditional works. Second, I discuss an example of how courts have applied the idea/expression dichotomy flexibly to reduce protection of arguably original, expressive computer software elements. Finally, I draw out more fully the ramifications of the courts' flexible approach to copyright doctrine by showing how courts might apply the idea/expression dichotomy flexibly to increase the protection accorded a work beyond the protection it would receive under conventional copyright analysis.

1. Ratcheting Protection Downward Through Merger

a. Applying the Idea/Expression Dichotomy to Traditional Works

As we have seen, ideas may not be protected by copyright because they are fundamental building blocks for creating expressive works.[32]

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29. *See infra* Part II.B.1.a.

30. *See infra* Part II.B.1.b.

31. *See* John C. Philips, Note, *Sui Generis Intellectual Property Protection for Computer Software*, 60 GEO. WASH. L. REV. 997, 1007-08 (1992) (explaining that while traditional copyright principles applied cleanly to computer software when developers sought above all to protect source code, courts have struggled to adapt those principles to protect the valuable elements of increasingly sophisticated computer software).

32. The idea/expression dichotomy in actuality embraces a number of more particular doctrines for identifying those building blocks of creativity which are so

In addition, there may be particular forms of expression that are so indispensable that they must be treated as being "merged" into the idea, despite being theoretically separable from the idea itself. This doctrine of merger is rooted in the Supreme Court's decision in *Baker v. Selden*,[33] where the Court considered the protectability of the plaintiff's ledger and the double entry bookkeeping system upon which the ledger was based.[34] After setting forth the basic proposition that copyright protects only the expressive elements of works, the Court further explained that any elements of a work necessary to express an idea may be integrated into the idea itself for the purposes of copyright law.[35] Because the accounting methods and ideas underlying the plaintiff's system were so closely bound with the matrix of lines laid out in the ledger, the latter merged into the former.[36] This process of merger preceded the work's introduction into the market and limited the amount of copyright protection available to the ledger.

As developed in *Baker v. Selden* and subsequent cases,[37] merger ultimately is an inquiry about whether the author claiming copyright protection has produced a work with an adequate level of creative expression. One may labor long and hard to produce what one believes is a stunningly original creative work, but may nonetheless produce a

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general or so fundamental as to defy protection by copyright. For example, courts previously have held that the functional elements of a work falling within the scope of copyright law must be identified and culled, since they are not protected. *See* Carol Barnhart Inc. v. Economy Cover Corp., 773 F.2d 411, 418 (2d Cir. 1985) (finding no elements of protectable expression in mannequin castings of human torsos); Kieselstein-Cord v. Accessories by Pearl, Inc., 632 F.2d 989, 992 (2d Cir. 1980) (parsing out elements of protectable expression in belt buckles). Further, courts have held that the stock elements of an otherwise protectable work are not protectable. *See* Nichols v. Universal Pictures Corp., 45 F.2d 119 (2d Cir. 1930) (finding that certain elements of a play were scenes-à-faire necessary to express underlying ideas). On the other hand, because these individual doctrines share the common purpose of identifying the building blocks of creativity that are beyond protection, courts have pointed out that they are essentially interchangeable. *Cf.* Apple Computer, Inc. v. Microsoft Corp., 799 F. Supp. 1006, 1022 (N.D. Cal. 1992) ("[T]he various doctrines that limit copyright protection are often barely distinguishable from one another."). For ease of application, I focus on the sub-doctrine of *merger* in my examination of how courts have integrated market considerations into idea/expression analysis.

33. 101 U.S. 99 (1879).

34. *See id.* at 100.

35. *See id.* at 103.

36. *See id.* ("[W]here the art [a work] 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.").

37. *See supra* note 32.

work that merits little or no copyright protection because the originality does not subsist in any of its expression. A good illustration of this problem may be found in *Herbert Rosenthal Jewelry Corp. v. Kalpakian*,[38] which dealt with the protectability of a jeweled bee. The plaintiff claimed that its jeweled bee pin was protectable as a sculptured work under section 102(a), but the Ninth Circuit disagreed.[39] The court reasoned that since the idea of a sculptured bee could be expressed in only a few ways, granting copyright protection here would in effect grant a monopoly over that idea.[40] The intellectual gap between the abstract idea of a bee and that of a jeweled bee is a short one, as jewels are commonly made in the shape of objects and animals. Because the possible number of permutations of a jeweled bee are so few, particular jeweled bee designs are not sufficiently distinct from their underlying idea to merit copyright protection:

> [O]n this record the "idea" and its "expression" appear to be indistinguishable. There is no greater similarity between the pins of plaintiff and defendants than is inevitable from the use of jewel-encrusted bee forms in both.
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> When the "idea" and its "expression" are thus inseparable copying the "expression" will not be barred . . . .[41]

In *Kalpakian*, the idea of a jeweled bee and, conversely, the absence of adequate expression, were not dependent upon the popularity of the jeweled bee after its commercial release; market factors were wholly irrelevant to the issue of its protection. In many recent cases, however, expressive elements have been treated as merged into the idea of computer software based upon the elements' popularity or standardization in the market. In those cases, the market works to catalyze merger. One particular area in which these problems abound is that of user interfaces.

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38. 446 F.2d 738 (9th Cir. 1971).
39. *See id.* at 742.
40. *See id.*
41. *Id.*

b. Adaptation of Merger to Account for Market Factors: User Interfaces

It is well settled that computer software may qualify for copyright protection both as text-based works falling within the ambit of copyright protection for "literary works" under section 102(a),[42] and as visual interface programs protectable as "pictorial, graphic" or "audiovisual" works under section 102(a).[43] Consequently, the application of merger to computer software in theory should be no different from its application to other copyrightable works; the court must parse out those ideas included in computer software along with the expressions that are inextricably linked to them.[44] Such conventional merger analysis has been challenged, however, by the application of copyright to graphical user interfaces, the visual media by which users input and receive information.[45] On their face, many graphical user interfaces appear to possess elements that warrant copyright protection, as when an interface's visual display exhibits original expression in its layout and design.[46] Even so, users may come to identify the otherwise protectable

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42. *See, e.g.*, Apple Computer, Inc. v. Franklin Computer Corp., 714 F.2d 1240, 1249 (3d Cir. 1983) (finding that the object code of a computer program was protected); Williams Elecs., Inc. v. Artic Int'l, Inc., 685 F.2d 870, 876-77 (3d Cir. 1982) (holding that object code is protectable under copyright law); *see also* Arthur R. Miller, *Copyright Protection for Computer Programs, Databases, and Computer-Generated Works: Is Anything New Since CONTU?*, 106 HARV. L. REV. 977, 983 (1993) ("Computer programs, like other literary works, are expressive.").

43. *See, e.g.*, Engineering Dynamics, Inc. v. Structural Software, Inc., 26 F.3d 1335, 1342-43 (5th Cir. 1994) (dissecting protectable and non-protectable elements of the user interface); Brown Bag Software v. Symantec Corp., 960 F.2d 1465, 1472 (9th Cir. 1992) (examining protectability of user interfaces); Atari, Inc. v. Amusement World, Inc., 547 F. Supp. 222, 226 (D. Md. 1981) (holding that the visual elements of a video game were prima facie protected by copyright, but finding no infringement); *cf.* Miller, *supra* note 42, at 984 (observing that "interface programmers have taken to calling themselves 'interface designers,' and describing their mission as attaining 'aesthetic functionality'").

44. *See* Computer Assocs. Int'l, Inc. v. Altai, Inc., 982 F.2d 693, 706 (2d Cir. 1992) (setting forth the abstraction-filtration-comparison test for infringement).

45. *See* JONATHAN BAND & MASANOBU KATOH, INTERFACES ON TRIAL: INTELLECTUAL PROPERTY AND INTEROPERABILITY IN THE GLOBAL SOFTWARE INDUSTRY 319 (1995) ("The term 'user interface' refers to the means by which the human user interacts with the computer."); Timothy S. Teter, Note, *Merger and the Machines: An Analysis of the Pro-Compatibility Trend in Computer Software Copyright Cases*, 45 STAN. L. REV. 1061, 1063 (1993) (describing a user interface as consisting of "images on the monitor as well as the keyboard, mouse, etc.").

46. Given that a telephone book's yellow pages have been found to satisfy the originality requirement for selection and arrangement of non-protectable elements, *see* Key Publications, Inc. v. Chinatown Today Publ'g Enters., Inc., 945 F.2d 509 (2d Cir. 1991), then it seems likely that many graphical user interfaces could qualify for

elements of an interface (e.g., a visual menu system) with the abstract ideas underlying a program (e.g., a spreadsheet) within a few years of its release or even on the day of release. The difficult question then arises: if, from the user's perspective, a user interface is inextricably linked to the abstract ideas associated with an entire class of programs, then has the original expression merged into the ideas they expressed?[47] Courts have answered this question affirmatively and, therefore, have made the merger doctrine more flexible in order to account for market standardization.

Software developers are driven continually to improve their software products, and software consumers are driven continually by competition in their respective occupations to update their operating systems and programs.[48] Accordingly, standardization occurs at a rapid rate in the computer software market. The new and innovative features of an application's or operating system's user interface may attract users and secure a strong market presence in a short amount of time.[49] These popular features may very well include the only elements of the program that are protectable by copyright. As users become accustomed to these features and make productive use of them,[50] they begin to expect them in all similar programs and await the next improved line of programs and applications. Conversely, those seeking to create this next generation of

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protection under the same rationale.

47. When, for instance, the researchers at Xerox Research Park first devised the desktop metaphor for operating systems, their interface was unlike any other interface before it. *See* Apple Computer, Inc. v. Microsoft Corp., 799 F. Supp. 1006, 1018 (N.D. Cal. 1992). To the extent that some of the icons were sufficiently original on the day the work was fixed, should the standardization of the desktop metaphor over time erode that protection?

48. *See* Symposium, *Copyright Protection: Has Look & Feel Crashed?*, 11 CARDOZO ARTS & ENT. L.J. 721, 746 (1993) (remarks of Anthony L. Clapes) (noting that "the computer business is driven by software" and discussing the importance of effective protection).

49. A concrete example of this standardization process is the development of spreadsheet programs in the late 1970s and early 1980s. In 1978, Daniel Bricklin, a Harvard Business School student, developed an early version of the spreadsheet that allowed the user to calculate tables of data simultaneously. Within a year, Bricklin had a working program marketed as VisiCalcTM. Soon thereafter, other spreadsheet programs were developed, including Lotus 1-2-3, which was released in 1982. Within a few years, Lotus 1-2-3 became the dominant spreadsheet program, owning 70% of the spreadsheet market by 1987. *See* Respondent's Brief at 15aa, 165aa, 445aa, Lotus Dev. Corp. v. Borland Int'l, Inc., 516 U.S. 233 (1996) (No. 94-2003).

50. This is true even of those features that subsist in the program's architecture and thus may not be clearly manifest to the user. For example, if one spreadsheet program is faster because it uses more efficient program architecture, the user may come to expect a certain baseline level of speed in spreadsheets.

applications and operating systems must satisfy the myriad users who have become accustomed to those features of a program that previously were new but now have become standardized. Those programs must be "interoperable" from the user's perspective, that is, the programs must share the basic features to which users have become accustomed and now associate with the program's underlying purpose or idea.[51] In light of such market realities, the prospective innovator must build upon the recently standardized features of her predecessors in order to produce a viable program that improves upon the previous generation of programs.[52] In other words, because of the user's reliance on the original features of the previous generation of programs, those features have de facto merged into the ideas they expressed.[53] Should this rapid standardization, this de facto association of the innovative elements with general ideas, be considered by courts applying the merger doctrine to computer software?

On the one hand, without free copying of at least some user interface elements, potential innovators may be locked out by market players who have succeeded in making their user interface the standard for a certain category of software, and whose market dominance will then be secured by the decades-long statutory term of copyright protection. This would apply both to competitors wishing to improve upon a standardized user interface and to those seeking to produce software of a different kind that is compatible with the standardized interface. Such a state of affairs conflicts with the policies underlying copyright law in two closely

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51. *See* Joseph Farrell, *Standardization and Intellectual Property*, 30 JURIMETRICS J. 35, 35-36 (1989); *cf.* Neil Gandal, *Hedonic Price Indexes for Spreadsheets and an Empirical Test for Network Externalities*, 25 RAND J. ECON. 160 (1994).

52. *See Apple Computer*, 799 F. Supp. at 1023 ("Some visual displays are or become so closely tied to the functional purpose of the article that they become standard."); *see also* Peter A. Wald et al., *Standards for Interoperability and the Copyright Protection of Computer Programs*, *in* INTELLECTUAL PROPERTY ANTITRUST 1995, at 857, 890 (PLI Patents, Copyrights, Trademarks, and Literary Prop. Course Handbook Series No. G4-3942, 1995) (arguing that because of de facto standardization, "third parties wishing to develop successful competing products may need to incorporate those 'standards' in their own programs").

53. *See* BAND & KATOH, *supra* note 45, at 320 (explaining that standardization of user interfaces may take place whether the users are primarily commercial or individuals, since "employers are not willing to invest in the substantial expense of retraining" workers on a new interface, and similarly, "individual users rarely are willing to devote the time or effort necessary to learn a new interface, even if it is superior to the one they currently use"); Kenneth W. Dam, *Some Economic Considerations in the Intellectual Property Protection of Software*, 24 J. LEGAL STUD. 321, 344-45 (1995) (discussing de facto standards); Glynn S. Lunney, Jr., Lotus v. Borland: *Copyright and Computer Programs*, 70 TUL. L. REV. 2397, 2411-14 (1996) (discussing issues arising from the de facto standardization of user interfaces).

related ways. First, it may stifle innovation and the expression of the ideas underlying the interface at issue.[54] Second, it may give a copyright holder patent-like protection over functional elements that are quite plainly beyond the proper scope of copyright.[55] On the other hand, the absence of *any* protection for standardized works would make potential innovators susceptible to copying immediately after their products entered the market making it impossible for them to secure an adequate return for their work. Innovation would be equally frustrated if obsolete standards were retained because developers were deterred from introducing products with new interface standards into the market.[56]

The long term of copyright protection is challenged here not simply because market forces may be pushing standardization and innovation much more rapidly than they might in markets for more traditional copyright subject matter, but also because rapid standardization may yield richer economic rewards for the copyright holder more quickly.[57] Under such circumstances, a long term of protection does not make sense.

Policy considerations thus may counsel that when resolving issues of protection in the context of user interfaces, courts must take account of the market. Indeed, this is precisely what courts recently have sought to do, making doctrinal adjustments in order to avoid overprotecting user interfaces in a way that undermines innovation, while at once ensuring the existence of adequate incentives for the development of new user

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54. *See Apple Computer*, 799 F. Supp. at 1026 ("The importance of such competition [among software developers], and thus improvements or extensions of past expressions, should not be minimized."); *see also* BAND & KATOH, *supra* note 45, at 323 ("Proprietary control over these standardized user interfaces would give the proprietor a choke hold over the user and software developers seeking access to the user."); Teter, *supra* note 45, at 1067 ("Since firms wishing to introduce new application software may have to copy the de facto user interface standards in order to successfully market their products, protection of the standards may grant a monopoly on application software generally.").

55. *See* Lotus Dev. Corp. v. Borland Int'l, Inc., 49 F.3d 807, 819 (1st Cir. 1995) (Boudin, J., concurring), *aff'd by an equally divided Court*, 516 U.S. 233 (1996); Wald et al., *supra* note 52, at 898.

56. *See* Dam, *supra* note 53, at 358 (emphasizing that allowing "me-too copying restricts the incentives for the first-generation firm to innovate"); Peter S. Mennell, *An Analysis of the Scope of Copyright Protection for Application Programs*, 41 STAN. L. REV. 1045, 1095 (1989) (pointing out that "[t]he inability of programmers to gain access to desirable interfaces — for example, because the owner of intellectual property rights in that interface refused to license — would have a significant chilling effect on the development of complementary computer programs").

57. *See* Mennell, *supra* note 56, at 1100; Wald et al., *supra* note 52, at 897-98 ("[I]f a program enjoys such success that it becomes an industry standard, it presumably will have acquired substantial market share."); Teter, *supra* note 45, at 1068.

interface standards. Perhaps the most striking illustration of this phenomenon is the case of *Lotus Development Corp. v. Borland International, Inc.*,[58] in which the court confronted the issue of whether Lotus had a protectable interest in the menu hierarchy system for its Lotus 1-2-3 program. The Lotus menu hierarchy system operated as a series of commands appearing in columns on the screen — commands that also could be entered through manual keystrokes — that the user could use to manipulate the spreadsheet program.[59] When Borland sought to introduce its own spreadsheet program, it found that users had become highly accustomed to the user interface in Lotus 1-2-3 and that it therefore would be unable to draw users to its own, more advanced[60] program without making use of that interface.[61] Of particular concern was the interoperability of user macros, custom mini-programs that users had devised to perform calculations on their Lotus 1-2-3 program.[62] Unless Borland integrated some aspects of Lotus's menu hierarchy

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58. 49 F.3d 807 (1st Cir. 1995), *affirmed by an equally divided Court*, 516 U.S. 233 (1996). I focus most of my analysis of *Lotus v. Borland* on Judge Boudin's concurring opinion, which included a concise and interesting policy analysis of the proper scope of protection for computer software. The majority treated Lotus's menu hierarchy system as a method of operation, bypassing the need for any careful parsing of the protected from the non-protected elements. *See id.* at 815-16. The majority's mode of analysis not only is in fundamental tension with well-established dissection approaches to infringement analysis. *See* Computer Assocs. Int'l, Inc. v. Altai, Inc., 982 F.2d 693, 706 (2d Cir. 1992) (setting forth abstraction-filtration-analysis approach to substantial similarity). Furthermore, if applied rigidly, it would render virtually any menu hierarchy system unprotected by copyright. Because he sets forth no sweeping and categorical rules, Judge Boudin's opinion is more consistent with the traditional dissection approach to these cases.

59. *See Lotus*, 49 F.3d at 809.

60. In Lotus's own documents produced during this litigation, it conceded the superiority of Borland's product. *See* Petitioner's Brief at 11, Lotus Dev. Corp. v. Borland Int'l, Inc., 516 U.S. 233 (1996) (No. 94-2003).

61. *See Lotus*, 49 F.3d at 810.

62. *See id.* Borland initially included in its program a "Lotus Emulation Interface" by which users could manipulate a visual interface closely resembling Lotus 1-2-3's menu hierarchy system. After a federal district court held that this emulation mode infringed Lotus's copyright; Borland removed this visual interface. *See* Lotus Dev. Corp. v. Borland Int'l, Inc., 799 F. Supp. 203 (D. Mass. 1992), *rev'd*, 49 F.3d 807 (1st Cir. 1995), *aff'd by an equally divided Court*, 516 U.S. 233 (1996). However, Borland's spreadsheet program retained the ability to read Lotus 1-2-3 macros by using that menu hierarchy system internally. *See* Lotus Dev. Corp. v. Borland Int'l, Inc., 831 F. Supp. 223, 229 (D. Mass. 1993) ("[T]o interpret macros, Borland's programs use a file with phantom menus consisting of a virtually identical copy of the Lotus menu tree that Borland used for its emulation interface."), *rev'd* 49 F.3d 807 (1st Cir. 1995), *aff'd by an equally divided Court*, 516 U.S. 233 (1996).

system, users would be unable to transfer their macros, which would deter users from switching programs.

The First Circuit expressed the concern that by extending copyright protection to the Lotus menu hierarchy system, it would be protecting a feature of the program that was a "method of operation" comparable to an idea. The majority reasoned that, in much the same way that an idea admitting of few forms of expression could embrace those expressions for copyright purposes, a method of operation could extend to any and all elements necessary to its operation.[63] That the menu hierarchy system was a method of operation or idea was evidenced by users' reliance upon that system in devising their own macros.[64] Moreover, by giving Lotus a monopoly on its menu hierarchy system, the court would be stifling the development of more innovative expressions of the spreadsheet program, since users would be reluctant to switch without their macros. For the majority, advancements in user-friendly interfaces "[require] the use of the precise method of operation already employed."[65]

Judge Boudin's concurrence drew out more explicitly the policy concerns underlying the majority's conclusions. Judge Boudin noted that where a user interface becomes standardized, it is an inherently useful article, so that the extension of copyright over the interface in effect confers patent-like protection.[66] Judge Boudin suggested that even if we assume that a user interface had elements that constituted protectable expression on the day the work was fixed, those elements nevertheless might be merged into the idea if users came to rely on them as inextricably linked to that idea: "A new menu may be a creative work, but over time its importance may come to reside more in the investment that has been made by users in learning the menu and in building their own mini-programs — macros — in reliance upon the menu."[67] Indeed, by the time Lotus 1-2-3 had become standardized, Lotus had already reaped a rich reward for whatever original expression subsisted in the program at its inception.[68]

*Lotus v. Borland* thus demonstrates how courts might rely upon market considerations, via de facto merger, in order to avoid problems

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63. *See Lotus*, 49 F.3d at 816-17.

64. *See id.* at 818 (noting that if Borland were not able to make use of Lotus's "method of operation," users would need to rewrite their macros to operate on Borland software, something they were loathe to do).

65. *Id.*

66. *See id.* at 821 (Boudin, J., concurring).

67. *Id.*

68. *See id.* at 819.

of overprotection resulting from the rigid, long statutory term of protection. Traditional principles of copyright hold that protection does not extend to those general building blocks that authors use in their creative works. While the Lotus user interface would presumably have been protected on the day it was fixed,[69] the *Lotus v. Borland* Court seemed to conclude that the reliance of users upon that interface in effect made it a building block upon which other creators should be allowed to rely in developing works.[70] The obvious criticism of this dynamic concept of merger is that grants of property should not be ratcheted down over time simply because a product has become popular. Indeed, it is counterintuitive to strip a work of protection it might otherwise have simply because, over time, it has become popular. This would seem to create an incentive to produce mediocre works.

However, the protection of these de facto ideas for a long copyright term, despite this accelerated standardization, would belie the nature of the interest conferred by copyright. As discussed extensively in Part II.A, copyright contemplates a balance between creating an incentive for authors to produce works and preventing erosion of the public domain. In this sense, copyright grants are not fixed the same way that deeds to real property are; rather, they are positive, conditional grants. To treat copyright interests as totally fixed would be effectively to embrace a natural rights conception of property, under which the creator of a work necessarily earns a right to control its disposition. In contrast, under a utilitarian approach, copyright's interest in ensuring an adequate incentive to create original works is satisfied where an author — or, in the case of computer software, a programmer — secures a reasonable return on her investment in time and energy.[71] In the two most celebrated cases involving de facto standardization of user interfaces, the plaintiffs had been the dominant players in their respective markets for years and had generated substantial revenues.[72] Once this interest of

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69. This seems to be a reasonable presumption, given the copyright protection accorded to compilations of otherwise nonprotected works. *See supra* notes 46-47 and accompanying text.

70. See *Lotus*, 49 F.3d at 818; *cf.* BAND & KATOH, *supra* note 45, at 87-89 (arguing that consumer demand can determine scope of scenes-à-faire).

71. *See* Teter, *supra* note 45, at 1068 (arguing that so long as the expressive elements of a user interface are protected until they become de facto standards, "the interface innovator will enjoy at least some lead time while the interface becomes established").

72. In *Lotus v. Borland*, Judge Boudin emphasized that "Lotus has already reaped a substantial reward for being first." 49 F.3d at 821 (Boudin, J., concurring). Similarly, in the *Apple v. Microsoft* case, involving Microsoft's alleged infringement of Apple's desktop motif for its operating system, the district court pointed out that Apple had

ensuring an adequate incentive to create has been satisfied, it makes sense for courts to safeguard copyright's other interest of protecting the public domain.[73]

In this way, the federal courts have integrated market standardization into their merger analysis as a means of ratcheting down copyright protection where necessary to ensure that copyright law strikes the proper balance of protection.[74] Ideally, copyright, so applied, would provide the protection necessary to ensure that those developing new or advanced user interfaces have an adequate incentive to develop them. However, as a user interface becomes more standardized over time and as developers reap the rewards of market dominance, the original expression inhering in that work would fall into the public domain. The next generation of software developers therefore would be able to

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enjoyed "several years of market dominance," 799 F. Supp. 1006, 1025 (N.D. Cal. 1992), as a result of being the first to employ a user interface based on the desktop metaphor.

73. *See supra* Part II.A. One commentator has explained this underlying policy concern in *Lotus v. Borland* in terms of an infusion of antitrust principles into copyright. *See* Anthony L. Clapes, *Software, Copyright and Competition: The Use of Antitrust Theory to Undercut Copyright Protection for Computers* (sic) *Programs*, *in* INTELLECTUAL PROPERTY ANTITRUST 1995, at 555 (PLI Patents, Copyrights, Trademarks, and Literary Prop. Course Handbook Series No. G4-3942, 1995).

74. This flexible use of detail and time may also be accomplished via the close cousin of merger, scenes-à-faire. Under this doctrine, copyright does not offer protection to elements of a work that have become so entrenched in a genre as to be necessary, as a practical matter, in creating such a work. *Cf.* Hoehling v. Universal City Studios, Inc., 618 F.2d 972, 979 (2d Cir. 1980) ("Because it is virtually impossible to write about a particular historical era or fictional theme without employing certain 'stock' or standard literary devices, we have held that *scenes a faire* are not copyrightable as a matter of law."). Scenes-à-faire may, but do not necessarily, flow inherently from a general idea underlying a work as the only possible means of expressing a certain sub-idea. The doctrine of scenes-à-faire requires only that a certain feature be imposed upon the author as a practical matter because it has become so closely identified with a work's general underlying idea; "'Necessary,' in the context of scenes a faire does not mean that there is no other way to do it. It may mean that there is no other equally satisfactory way to do it." Kurtz, *supra* note 11, at 95. This doctrine has been employed in computer software cases, both with respect to internal elements of software and elements of user interfaces. In both sets of cases, courts use the doctrine to parse out elements of software that have become stock, albeit through a process of rapid standardization. *See* Computer Assocs. Int'l, Inc. v. Altai, Inc., 982 F.2d 693, 709-10, 715 (2d Cir. 1992) (discussing the application of scenes-a-faire to compatibility components of operating systems); *Apple Computer*, 799 F. Supp. at 1027-28 (finding that windows were scenes-à-faire in expressing a user interface based on the desktop metaphor); *see generally* BAND & KATOH, *supra* note 45, at 87-89 ("[I]f a defendant can show that particular character traits represent an archetype, then those traits are *scenes-a-faire* and do not receive copyright protection. In this fashion, the market helps define the scope of copyright protection.").

improve upon the aspects of preexisting works that had become stock, and users would be more readily able to switch to more advanced programs.

This fluid form of merger may soon find application beyond the arena of computer software. Recent legislation before Congress,[75] based on a "White Paper" entitled *Intellectual Property and the National Information Infrastructure*,[76] would broadly apply copyright principles to the Internet. If applied rigidly, the White Paper would essentially make browsing on the World Wide Web ("Web") and downloading net content for viewing acts of infringement.[77] Moreover, the White Paper provides copyright holders with a new right to transmit that in effect would preclude users from disseminating any works, in any form, that they download from the Internet.[78] As many commentators have pointed

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75. *See* H.R. 2441, 104th Cong. (1995); S. 1284, 104th Cong. (1995).

76. Bruce A. Lehman, INFORMATION INFRASTRUCTURE TASK FORCE, INTELLECTUAL PROPERTY AND THE NATIONAL INFORMATION INFRASTRUCTURE: THE REPORT OF THE WORKING GROUP ON INTELLECTUAL PROPERTY RIGHTS (1995) [hereinafter WHITE PAPER], *available at* <http://www.uspto.gov/web/offices/com/doc/ipnii>.

77. The White Paper provides that whenever material from the Internet is downloaded for viewing such that it is temporarily stored in the host computer's Random Access Memory ("RAM"), the material is sufficiently fixed to constitute a copy under the Act. *See id.* at 64-66. The White Paper's conclusions find resonance in two recent decisions by the Ninth Circuit holding that a copy created in RAM is sufficiently fixed to constitute a potentially infringing copy. *See* Triad Sys. Corp. v. Southeastern Express Co., 64 F.3d 1330, 1353-55 (9th Cir. 1995); MAI Sys. Corp. v. Peak Computer, 991 F.2d 511, 518 (9th Cir. 1993). It follows from these decisions that even browsing the Internet may constitute infringement of any works that are otherwise protected. As a number of commentators have pointed out, this conclusion is dubious in light of the definition of "fixed" in the 1976 Act as "sufficiently permanent or stable to permit it to be perceived, reproduced, or otherwise communicated for a period of more than transitory duration." 17 U.S.C. § 101. *See generally* Barry D. Weis, *Barbed Wires and Branding in Cyberspace: The Future of Copyright Protection*, *in* UNDERSTANDING BASIC COPYRIGHT LAW 1996, at 450 (PLI Patents, Copyright, Trademarks, and Literary Prop. Course Handbook Series No. G4-3974, 1996) (noting the arguments of commentators); Jessica Litman, *Revising Copyright Law for the Information Age*, 75 OR. L. REV. 19 (1996) (arguing that Congress intended that an appearance of a work in RAM is not a copy but rather an unfixed, evanescent image and thus non-infringing); John C. Yates & Michael R. Greenlee, *Intellectual Property on the Internet: Balance of Interests Between the Cybernauts and the Bureaucrats*, J. PROPRIETARY RTS., July 1996, at 7-10 (delineating an argument that copies created in RAM are not fixed). A copy of material created in RAM arguably is outside the ambit of this definition because, in the context of Web browsing, it is used only temporarily to view or browse through content provided on the Web. Indeed, the legislative history of the Act quite explicitly excludes from the definition of "fixed" those works that are "purely evanescent or transient" in nature. H.R. REP. NO. 1476, at 53 (1976), *reprinted in* 1976 U.S.C.C.A.N. 5659, 5666.

78. The White Paper recommended that the Copyright Act be amended to include, within the exclusive right to distribute, a right to "transmit" which would embrace any

out, these changes in copyright law are likely to result in over-broad, if not draconian, protection on the Internet.[79] To the extent that courts agree with these critics that the protection by copyright law, as amended pursuant to the White Paper, is too broad, they very well might adjust merger to account for market standardization much the way they did with respect to computer software. The end result would be a reduction in the scope and duration of copyright protection on the Internet in order to achieve what the courts believe to be a more optimal level of protection.

Thus, in the contexts of computer software and of Internet content, the problem is that copyright offers protection to elements that concededly are expressive for a term that is exceedingly long in light of their respective markets. In such circumstances, courts may ratchet down protection, via merger, in order to offset this effect. But we can imagine other scenarios where market considerations would require just the opposite, namely a ratcheting *upward* of protection to embrace elements of works that did not constitute expression as an initial matter.

2. Ratcheting Protection Upward Using Originality

This section explores the possibility of adjusting copyright doctrine to respond to market considerations where they militate in favor of granting a work more protection than copyright ordinarily would accord it. If, for instance, a work falling within the scope of copyright protection has such a thin layer of protectable expression that

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fixation of a work "beyond the place from which it was sent." WHITE PAPER, *supra* note 76, at 220. As many commentators have pointed out, this amendment would eviscerate the right of first sale doctrine, under which the owner of a copyrighted work — the lawful purchaser of a book, for example — could convey that work to a friend without violating the Act. *See, e.g.*, Yates & Greenlee, *supra* note 77, at 9 (noting that the changes proposed in the White Paper "[expand] the exclusive rights of authors under the Copyright Act" and thus "[eliminate] the first sale doctrine with respect to transmission"). Although the White Paper purported to exclude e-mail transmissions of works under this definition by narrowing "distribution" to dissemination to the public, *see* WHITE PAPER, *supra* note 76, at 64-66, 217-21, a transmission of a copy of a work from one friend to another presumably would entail an infringement anyway, since a copy of the downloaded work would have to be made.

79. *See, e.g.*, Litman, *supra* note 77, at 27-30 (delimiting an argument in favor of a period of no intellectual property on the Internet in order to allow it to develop unconstrained and better to identify the type of protection needed for content-based works); *but see* Gary W. Glisson, *A Practitioner's Defense of the White Paper*, 75 OR. L. REV. 277, 280-89 (1996) (arguing that the White Paper's recommendations do not constitute dislocating changes in copyright protection and that the protection it affords is sensible); Netanel, *supra* note 10, at 368-71.

competitors may usurp its valuable elements without fear of infringement, there may be inadequate incentive to produce such works. Under these circumstances, the optimal number of thin copyrighted works may not be produced, contravening the policies underlying copyright. In this sense, the market problem we confront here is the converse of the overprotection problem considered Part II.B.1.

Consider the following hypothetical scenario.[80] A basketball fan can currently view all National Basketball Association ("NBA") games by purchasing a satellite television system and subscribing to the NBA's most comprehensive program schedule for about $150. Imagine, then, that an Internet content provider named Realbasketball decides to provide an alternative to this option by hiring programmers to devise a complex, three dimensional representation of NBA basketball — a more sophisticated version of the video representations in Sega Genesis and Nintendo game systems. The firm hires a number of computer-literate basketball fans to have access to all NBA games on television or live. The employees feed game data to a centralized office through a cable line or modem, where the scores and data are rapidly processed through a set of powerful mainframes. The scores and data about the action (e.g., who passed, who shot, and so forth) are transformed into 3-D representations of the game using a wide array of stock visual representations that are vivid, high-resolution, and realistic. These representations are then disseminated over the Internet to subscribers who pay a fraction of what it otherwise would cost to watch NBA games. The games are transmitted on a near-real-time basis, perhaps a few seconds after a basketball game is broadcast on television. Generally, subscribers do not view these games the way they would view a television game, but use them for informational purposes or as supplemental entertainment. For example, a subscriber working on her lap-top may keep a window open in order to keep track of the game's progress.

I show that copyright protection theoretically could be extended, for a narrow window of time, to the facts inhering in the NBA's broadcast — facts that otherwise would remain unprotected under conventional copyright analysis and therefore would be vulnerable to usurpation. In contrast to the merger doctrine innovation relied upon by courts to ratchet down protection in software cases, the innovation that concerns me here involves the statutory requirement of originality and

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80. This hypothetical is inspired by *National Basketball Ass'n v. Sports Team Analysis & Tracking Sys., Inc.*, 939 F. Supp. 1071 (S.D.N.Y. 1996), which involved a paging service providing paying customers with basketball scores.

a corollary doctrine known as the *Feist* doctrine.[81] These doctrines together stand for the proposition that bare facts may not be protected because they lack the original expression required by copyright and, moreover, are paradigmatic public domain material. These doctrines may, like merger, be made more flexible to account for market considerations.

a. Traditional Application of Originality and the *Feist* Doctrine

Fact-intensive works in traditional media are exemplified by telephone books and other directories. Bound and full of text, these works on their face look very much like other books. The critical difference for the purpose of their copyrightability is, of course, that they are filled with the plainest of facts and little else — hardly the stuff of original expression. Thus, although compilations fall within the scope of prima facie protectable works,[82] they are accorded protection only to the extent that they include original expression beyond these bare facts.[83]

It is no surprise, then, that in *Feist Publications, Inc. v. Rural Telephone Service Co.*,[84] the U.S. Supreme Court emphasized the requirement of original expression for copyright protection of fact-intensive works.[85] Rejecting the notion that "sweat-of-the-brow" alone could justify copyright protection, the Court held that "[a] factual compilation is eligible for copyright if it features an original selection or arrangements [sic] of facts, but the copyright is limited to the particular selection or arrangement . . . ."[86] Although the Court stressed that facts do not originate in those who discover them and therefore per se fail to satisfy the requirement of originality, the Court also recognized a necessary corollary of this point, namely that facts are inherently part of the public domain, existing in the world quite apart from our experience of them.[87]

The *Feist* Court concluded that a telephone book failed to satisfy copyright's statutory and constitutional requirement of originality.[88] Because the telephone book was no more than a collection of data

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81. *See* Feist Publications, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340 (1991).

82. *See* 17 U.S.C. § 103(a) (1994).

83. *See* 17 U.S.C. § 103(b) (1994).

84. 499 U.S. 340 (1991).

85. *See id.* at 345-51.

86. *Id.* at 350-51.

87. *See id.* at 361 (noting that the facts contained in the phonebook at issue "existed before Rural reported them and would have continued to exist if Rural had never published a telephone directory").

88. *See id.* at 361-63.

typically found in such directories, ordered alphabetically, it did not garner copyright protection.[89] Although the Court's conclusion indicated that in the future factual compilations would be accorded less protection than they previously earned under sweat-of-the-brow,[90] it elsewhere indicated that the level of originality required for protection remained minimal: "Originality requires only that the author make the selection or arrangement independently . . . and that it display some minimal level of creativity."[91] Indeed, the cases following *Feist* indicate that, at least with respect to traditional forms of media, courts remain committed to a low threshold of creativity for factual works.[92] At the same time, it is equally clear that fact-intensive works lacking any identifiable layer of original expression garner no copyright protection under *Feist*.[93]

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89. *See id.* at 361-62.

90. *Cf.* Jewelers Circular Publ'g Co. v. Keystone Publ'g Co., 281 F. 83, 88 (2d Cir. 1922) (upholding compilation based upon sweat-of-the-brow).

91. *Feist*, 499 U.S. at 358. The *Feist* Court thus indicated that the minimum standard of creativity set forth in *Bleistein v. Donaldson Lithographing Co.*, 188 U.S. 239 (1903) (Holmes, J.), remained viable.

92. Courts have upheld the copyrightability of compilation of terms, *see* Lipton v. Nature Co., 71 F.3d 464, 470 (2d Cir. 1995) (upholding protectability of compilation of terms of venery), valuation tables for cars, *see* CCC Info. Servs., Inc. v. Maclean Hunter Mkt. Reports, 44 F.3d 61, 66 (2d Cir. 1994) (finding that compilation of information related to used car value was sufficiently original to warrant protection and arguing that "[t]he thrust of the Supreme Court's ruling in *Feist* was not to erect a high barrier of originality requirement"), and maps, *see* Mason v. Montgomery Data, Inc., 967 F.2d 135 (5th Cir. 1992) (holding that real estate ownership maps were sufficiently original to warrant copyright protection). *See generally* Dennis S. Karjala, *Copyright in Electronic Maps*, 35 JURIMETRICS J. 395 (1995) (discussing problems related to the application of *Feist* to maps).

93. *See, e.g.*, Victor Lalli Enters., Inc. v. Big Red Apple, Inc., 936 F.2d 671 (2d Cir. 1991) (denying copyright protection to gambling charts lacking requisite originality). In a recent case, West Publishing was denied copyright protection over its star pagination system for its on-line case reporting service, in part because its compilation of cases lacked the requisite originality. *See* Matthew Bender & Co. v. West Publ'g Co., No. 94 Civ. 0589, No. 95 Civ. 4496 (JSM), 1997 WL 117034 (S.D.N.Y. Mar 12, 1997). In *United States v. Thomson Corp.*, involving an antitrust action by the federal government against West, the district court noted with approval the Southern District's recent decision: "[T]his Court has serious doubts about the continuing vitality [of previous decisions upholding West's copyright in its star pagination system] in view of the subsequent decision of the Supreme Court in [*Feist*]." 949 F. Supp. 907, 926 (D.D.C. 1996).

b. Adaptation of Originality and the *Feist* Doctrine to Account for Market Factors: Internet Sports

The cases dealing with traditional fact-intensive works, such as compilations and directories, have not explicitly discussed market considerations when determining the proper scope of protection, perhaps because traditional copyright principles were adequate to protect their economic value. Market conditions, however, may become relevant to the proper scope of protection for fact-intensive, copyrightable works that include elements not generally protected by copyright law. When the noncopyrighted elements are economically valuable, these works are particularly vulnerable to interference by competitors. The hypothetical controversy between the NBA and an Internet content provider illustrates this point well because conventional copyright may not prevent Internet representations of live NBA games that commercially exploit the games' time-sensitivity.

The NBA's televised games are composed mostly of non-protectable, largely factual elements; the moves the athletes execute, the scores they rack up, their strategies and so forth are all uncopyrightable. However, because the filming of a live event has been held to produce original expression,[94] these broadcasts nevertheless are protected to the extent they contain any original expression. NBA broadcasts would be protected against literal copying, such as direct rebroadcasting, even under the standard for protecting compilations. On the other hand, usurping the bare facts of the NBA games would not be tantamount to infringement under *Feist*.[95]

The instant hypothetical rests between these two extremes. I have assumed that the hypothetical content provider, Realbasketball, produces high-resolution 3-D images, but the change in medium necessarily entails a distortion of and even a reduction in quality over a televised broadcast of a basketball game. Applying the principles announced in *Feist* to dissect the factual, nonprotected elements,[96] it seems unlikely

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94. *See* National Ass'n of Broadcasters v. Copyright Royalty Tribunal, 675 F.2d 367, 378 (D.C. Cir. 1982) (finding that a live telecast of a sporting event is copyrightable on the ground that it was simultaneously being recorded and thus "fixed" within the meaning of the Copyright Act).

95. Indeed, this is precisely the conclusion reached by the district court in a recent case. *See* NBA v. Sports Team Analysis & Tracking Sys., Inc., 939 F. Supp. 1071, 1093 (S.D.N.Y. 1996) ["*STATS*"], *aff'd in part and vacated in part on other grounds sub nom.* NBA v. Motorola, Inc., 105 F.3d 841 (2d Cir. 1997) (holding that the defendants' pager device, which provided NBA scores on a regular basis, had usurped only facts from the NBA's broadcasts, and therefore the defendants were not liable for infringement).

96. The approach I assume here is a dissection analysis of the kind commonly

that the NBA broadcast would be accorded copyright protection against Realbasketball. The original expression in the NBA's broadcasts is highly particular, subsisting in the representation of the game itself — the camera angles, the selection and arrangement of the footage, and other elements specific to the filming process. Would Realbasketball's 3-D graphical representation of the NBA's games be substantially similar to the original expression subsisting in NBA broadcasts?[97] Given the way in which Realbasketball's representation is produced, the answer to this question is likely to be negative. In order to minimize the time gap between the game and the representation's dissemination, the programmers would be forced to focus on the basic facts of the game, for example, who takes the ball down court ("Hardaway takes point"), the passes executed by the players ("Hardaway passes to Mourning"), who takes the shot ("Mourning dunks"). These facts would be translated into stock 3-D images by the central computer and then rapidly disseminated over the Internet. Consequently, the images may look quite different from the broadcast of the game, even if its essential account of the game and its progress are accurate.

In this sense, the rote exclusion of facts mandated by *Feist* would result in the NBA garnering only the thinnest layer of protection for its work against an alleged infringer like Realbasketball.[98] The images produced by Realbasketball seem to raise a copyright infringement issue since they certainly derive from a work protected by copyright, but because of the shift in medium, these images only appropriate facts. By simultaneously broadcasting these mere facts, however, Realbasketball could threaten the NBA's broadcast market.

The NBA's chief concern in employing copyright to protect its games and broadcasts is undoubtedly the existence of competing representations that are real-time, i.e., simultaneous or near

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employed by courts dealing with complex copyright issues. *See, e.g.*, Computer Assocs. Int'l, Inc. v. Altai, Inc., 982 F.2d 693, 706 (2d Cir. 1992) (setting forth abstraction-filtration-comparison approach to substantial similarity).

97. *Cf. id.* at 710 (explaining that "the court's substantial similarity inquiry focuses on whether the defendant copied any aspect of [the plaintiff's] protected expression").

98. The potential for narrow interpretations of original expression with respect to fact-based works under *Feist*, and the possible underprotection that may result from such interpretations, has not escaped the attention of commentators. For example, Professor Jane Ginsburg has pointed out that the *Feist* doctrine may be applied to deny copyright protection to such valuable works as computer databases. *See* Jane Ginsburg, *No "Sweat"? Copyright and other Protection of Works of Information after* Feist v. Rural Telephone, 92 COLUM. L. REV. 338, 347-48 (1992). In order to address this risk of underprotection, Professor Ginsburg proposes congressional action to bring such works within the scope of copyright protection. *See id.* at 381-84.

simultaneous.[99] The NBA draws substantial revenues from the live, direct broadcasts of its games on network and cable television. Because timeliness is closely bound with the economic value of the games, the league presumably cares much more about contemporaneous copying than it does about infringement of copyrights for games from years back.

In contrast to the computer software problem in Part II.B.1.b, the problem here is that facts instantly fall into the public domain, leaving live, heavily-factual broadcasts with a layer of traditional copyright protection that may prove too thin in light of market realities. Under this thin copyright, those producing sports broadcasts may be unable to secure an adequate return on their investment, thereby reducing the incentive to produce such works. Accordingly, whereas in the area of computer software the courts have sought to adjust the overall level of protection downward, here they might be required to adjust the overall level of protection upward in order to optimize protection. Courts will need to be particularly careful not to overprotect in this instance since the nonprotectable material contained in these works is paradigmatic public domain material — facts. One way of balancing these interests here may be to make a *narrow* adjustment in the scope of protection offered these works, an adjustment that recognizes the value in live, instantaneous dissemination. Perhaps courts could adjust in the requirement of originality and the closely-related *Feist* doctrine in order to offer slightly more protection to time-sensitive works that already qualify for a thin layer of copyright protection.

As we have seen, under conventional substantial similarity analysis, originality inheres only in the most particular aspects of the NBA's broadcast — namely, the elements specific to its television representation. Courts, then, might consider the extent to which Realbasketball or another Internet representation tracks NBA broadcasts on a real-time basis in determining the degree of original expression that has been usurped. Under this analysis, an accurate representation of a basketball game (e.g., a high-resolution computer representation) that also was transmitted in real-time would be *constructively substantially similar* to the original broadcast. The potential for direct market interference resulting from Realbasketball's real-time representation of NBA games, then, would affect qualitatively the evaluation whether the works were substantially similar.[100]

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99. This seems to be a reasonable assumption, given that in *STATS*, 939 F. Supp. at 1085, the NBA complained that the pager service offered by STATS and Motorola provided subscribers with scores mere seconds after those scores were created.

100. *See* Figure 1.

Figure 1: Using Market Considerations Flexibly

| | **Realbasketball Case** | **Software Cases** |
|---|---|---|
| **Nonprotected Subject Matter** | Facts — instantaneously fall into the public domain. | Ideas — start out as expression, but become standardized rapidly. |
| **Economic Effect** | Original creator may not be adequately rewarded, reducing the incentive to produce works. | Original creator is rewarded too much; overprotection may occur. |
| **Doctrinal Adjustment** | Liberally construe originality requirement at the initial stages of release in order to ensure adequate return on investment.<br><br>At the same time, *avoid overprotection.* | Limit the scope of protection by using merger to erode expression as the work becomes standardized.<br><br>At the same time, *avoid underprotection.* |

This consideration of time through the doctrine of originality has the advantage of identifying works that may be used as surrogates for the NBA broadcasts. Any difference in visual perspective may be comparable to having a different seat in the arena watching a game; it does not materially alter the fact that the fan is having the experience of watching a game. Just as original expression constructively shrank when otherwise protectable elements in user interfaces became standardized, original expression here constructively *grows* when a visual representation is nearly identical in its form and mode of dissemination. This integration of market interference into originality makes practical sense in the following way: if two visual images are presented to a viewer simultaneously, one of which is essentially derived from the other and is three to five seconds behind, a reasonable person could conclude that the virtual representation was substantially similar to the broadcast for purposes of copyright protection, notwithstanding the particular differences in quality or perspective.

The scope of protection granted to the NBA against such real-time Internet piracy would be limited to that necessary to ensure that its broadcast market was not undermined. The length of time during which originality would expand to protect a broadcast could be determined with a factual inquiry that federal courts are well situated to make — it would certainly be no more complex than that required in an antitrust or unfair competition case. As the exploitation of the broadcast's

time-sensitivity becomes less of a concern, the NBA would be entitled only to conventional copyright protection. Note that this doctrine would apply only to a narrow range of cases because (1) it requires a degree of substantial similarity such that consideration of time-sensitivity exploitation merely tips the scale in favor of infringement and (2) it assumes that only works effecting direct market interference via real-time re-representation would fall within its scope. Accordingly, broadcasters would be protected against Internet piracy, narrowly defined, and little else; for example, under this theory, the STATS/Motorola pager system that disseminated bare facts in *NBA v. Motorola, Inc.*[101] would not be held to infringe the NBA's broadcasts, even if technology eventually made it possible to disseminate those scores continuously, in real-time.

## III. PROBLEMS WITH DYNAMIC PROTECTION UNDER COPYRIGHT AND A POSSIBLE SOLUTION

### *A. Potential Problems with the Flexible Restructuring of Copyright Doctrine*

In flexibly applying merger and the idea/expression dichotomy, the federal courts appear to be crafting important, outcome-determinative changes in doctrine without explicit congressional authorization. First, it is important to note that neither the copyright statute's originality provision,[102] nor its provision for the nonprotection of public domain material,[103] explicitly authorizes federal courts to examine the market conditions existing after a work is fixed. Rather, the courts merely have bootstrapped market factors into doctrines that, on their own terms, do not contemplate a dynamic approach to copyright protection. This court-developed market analysis may mean the difference between protection and nonprotection. Second, the idea that a copyright owner's grant from the Copyright Office may shrink or grow, depending on the market context of that work following its release, cannot be reconciled with the statutory dictate that copyright protection inheres in original works of authorship[104] at the moment such works are fixed.[105] If the protection to which a work is entitled attaches at fixation, the Copyright Act clearly contemplates that this degree of protection will remain stable

101. 105 F.3d 841 (2d Cir. 1997); *see infra* notes 141-47 and accompanying text.
102. *See* 17 U.S.C. § 102(a) (1994).
103. *See* 17 U.S.C. § 102(b) (1994).
104. *See* 17 U.S.C. § 102(a).
105. *See* 17 U.S.C. § 101 (1994) (defining "creation").

throughout the copyright term; the Copyright Act in no way implies that the copyright grant is subject to change.[106] In this way, ratcheting protection up or down contravenes the constant, intangible property right contemplated by the Copyright Act.

Where the federal courts materially extend or narrow the scope of copyright protection beyond the explicit boundaries of the statute, they raise the specter of judicial activism — frustrating Congress's exercise of its Article I power to promote the Arts.[107] Proponents of judicial restraint would argue that significant changes in copyright doctrine should be effected by the legislature rather than by courts exceeding their statutory authority.[108]

Proponents of a dynamic approach to copyright might respond that it is quite consistent with the traditional function of federal courts applying copyright law. As Judge Boudin has pointed out, courts traditionally have had the job of honing and developing the broad copyright rules set forth by Congress.[109] If the protection afforded by copyright were considered rigid and inflexible, the ability of courts to perform this fine-tuning would be significantly undermined. For example, in the area of computer software, where the stakes are extraordinarily high,[110] granting courts the doctrinal flexibility to examine the circumstances surrounding each work is perhaps the only practical substitute for continuous congressional review.[111] Accordingly,

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106. *See* 17 U.S.C. § 302(a) (1994).

107. Justice Benjamin Cardozo states:

> Judges have, of course, the power, though not the right, to ignore the mandate of a statute, and render judgment in despite of it. They have the power, though not the right, to travel beyond the walls of the interstices, the bounds set to judicial innovation by precedent and custom. None the less, by that abuse of power, they violate the law.

BENJAMIN N. CARDOZO, THE NATURE OF THE JUDICIAL PROCESS 129 (1921).

108. *See* Philips, *supra* note 31, at 1028 (arguing that "notions of judicial restraint provide perhaps the most compelling reason why the task of extending protection for computer software should not be entrusted to the judiciary").

109. *See* Lotus Dev. Corp. v. Borland Int'l, Inc., 49 F.3d 807, 820 (1st Cir. 1995) (Boudin, J., concurring) ("For the most part the interstitial development of copyright through the courts is our tradition."); *see also* KAPLAN, *supra* note 2, at 40 (noting that the 1909 statute "leaves the development of fundamentals to the judges"); *cf.* Nichols v. Universal Pictures Corp., 45 F.2d 119, 122 (2d Cir. 1930) (emphasizing the duty of courts to make difficult copyright decisions about the scope of protection).

110. *See* OFFICE OF TECHNOLOGY ASSESSMENT, U.S. CONGRESS COMPUTER SOFTWARE AND INTELLECTUAL PROPERTY: BACKGROUND PAPER 1 (1990).

111. This point may draw strength from the legal process approach to juridical decision-making, under which federal courts interpreting and applying federal statutes ought to act in a functional partnership with Congress to give effect to congressional

copyright law is better treated as part statute and part common law, the uncertainties of common law innovation being a necessary evil.

It is true that the federal courts must often develop rules in order to fill in the gaps left by Congress, and Judge Boudin's observation about the continuing role for courts in the development of copyright doctrine seems quite reasonable. Recent copyright decisions, however, appear to do more than fill in the gaps of the 1976 Copyright Act; by displacing the fixed grant of copyright with a more flexible, market-driven right, they appear to contravene express statutory mandates in order to further more general policy goals.[112]

Not only does the dynamic approach to protection potentially conflict with the copyright statute, but it also raises some significant policy problems. As a preliminary matter, allowing federal courts to alter the scope of a work's protection based on their market analysis is tantamount to authorizing an ad hoc approach to copyright. Such an approach would create tremendous uncertainty, making copyright holders, as well as parties seeking to draw on the unprotected elements of copyrighted works, unsure as to the legal ramifications of their actions. This uncertainty could deter prospective authors from developing works, either because they were risk averse concerning possible infringement of preexisting works or concerning the protection that the work ultimately would receive. Moreover, copyright transactions and valuations would be complicated because the scope of rights would be in flux.

It may be true that such uncertainty is a necessary evil in striking the optimal scope of protection for works such as computer software, but this dynamic approach is not necessary for more traditional works. Courts seem to find copyright's traditional rules adequate not only to protect what is most valuable about books, magazines, phono-records,

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intent. *See generally* HENRY M. HART, JR. & ALBERT M. SACKS, THE LEGAL PROCESS: BASIC PROBLEMS IN THE MAKING AND APPLICATION OF LAW 158 (William N. Eskridge, Jr. & Philip P. Frickey eds., 1994) (arguing that "[d]iscretion is a vehicle of good far more than of evil"); Richard H. Fallon, Jr., *Reflections on the Hart & Wechsler Paradigm*, 47 VAND. L. REV. 953, 957, 966 (1994) (commenting on the Hart and Wechsler legal process paradigm and its support for federal common law-making).

112. Citing *Lotus v. Borland*, among other opinions, one commentator has remarked that:

> [G]iven the strategic importance of the software industry, judicial restraint rather than judicial activism would [appear to be] the wiser course for the federal courts to take in software copyright cases. Yet, lately, the courts of appeal in particular have exhibited a willingness to depart quite markedly from general copyright principles in deciding such cases.

Clapes, *supra* note 73, at 555.

and other traditional works, but also to give those works a term of protection that is sensible for those markets. Copyright protection for these traditional works has not been contorted to address market interference resulting from underprotection or standardization resulting from overprotection. As to more traditional works, the uncertainty created by consideration of market factors likely would yield few benefits and cause significant problems.

The potential for unwarranted uncertainty here might be exacerbated by the doctrinal incoherence resulting from the efforts by courts to integrate market considerations into existing copyright doctrine.[113] Traditional copyright doctrine presupposes a static, rather than dynamic, copyright grant. Thus, the courts evaluate the merger doctrine prior to the work's fixation and determine originality at the work's inception. Evaluating the scope of copyright in response to market factors arising after the fixation of a work requires complex legal reasoning.[114] Such a dynamic doctrine is not conducive to legal certainty.

At the same time, proponents of more flexible copyright doctrine are correct in pointing out that the application of traditional copyright doctrine to contemporary works such as computer software and Internet-based works, without any modification, may actually frustrate the policies underlying copyright law. Copyright ideally provides the protection necessary to optimize the level of production of creative works, which entails a balance between maintaining a rich public domain and securing incentives for individual authors to be creative. If traditional approaches to copyright protection consistently tip too heavily on the side of protection or nonprotection, these policies would favor some kind of doctrinal adjustment.

There may be no easy way of reconciling the dictates of the current statutory scheme with the flexibility required to secure optimal

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113. Philips explains:

> Because copyright law applies to several forms of expression other than computer software, any time a judge makes a decision to reconcile copyright law with the unique qualities of software, that decision also impacts every other form of expression covered by copyright. This added complexity inevitably will cause problems and confusion in the application of copyright law to expressive works other than computer software.

Philips, *supra* note 31, at 1028.

114. Perhaps for this reason, courts in computer software cases sometimes eschew doctrine altogether, relying on blunt policy analysis to explain their conclusions about the proper scope of protection. *See, e.g.*, Apple Computer, Inc. v. Microsoft Corp., 799 F. Supp. 1006, 1025 (N.D. Cal. 1992) (noting that "[c]opyright's purpose is to overcome the public goods externality resulting from the non-excludability of copier/free riders who do not pay the costs of creation").

protection for works that do not fit easily within the scheme of protection offered by traditional copyright law. Perhaps, then, it might be more effective to remove the works that are creating these difficulties from the ambit of copyright altogether instead of contorting copyright doctrine to accommodate them.[115] Why not leave copyright to those works for which it has proven an effective scheme of protection, and develop a new protective scheme for those works for which it has proven ill-suited?

Copyright might in this way be restricted to more traditional works such as books, motion pictures, and phono-records, while a new protective scheme could be applied to expressive works requiring more flexibility, such as live broadcasts, Internet-based products, and computer software. I acknowledge that drawing boundaries between these two intellectual property regimes raises significant problems, but doing so may be the best means of preserving copyright while simultaneously recognizing the unique protection needs of certain contemporary and emerging works. In the next section, I explore a federal hybrid between misappropriation and copyright law as a possible candidate for this new intellectual property regime.

### *B. Federal Misappropriation Law as a Possible Protective Scheme*

One possible solution to the problems discussed in Part III.A is a federal intellectual property scheme modeled in part on copyright and in part on misappropriation law. I refer to this new, hybrid intellectual property regime as *federal misappropriation law*. This scheme would draw on the flexibility of common law adjudication[116] in applying broad

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115. Some commentators have argued that patent law may effectively protect computer software, particularly in light of recent developments in that field. *See* David Bender, *Recent Developments in Software Patents, in* COMPUTER SOFTWARE PROTECTION 1997, at 156-92 (PLI Patents, Copyrights, Trademarks, and Literary Prop. Course Handbook Series No. G4-4006, 1997) (noting developments and refinements in patent protection of computer software); Thomas Burke, Note, *Software Patent Protection: Debugging the Current System*, 69 NOTRE DAME L. REV. 1115 (1994) (suggesting changes to improve patent protection of computer software). Others counter that patent protection is ill-suited to computer software. These critics argue that its standards of obviousness and inventive advance are too high for the incremental advancements in software that deserve protection, and that its focus on protecting methods and processes fails to capture the valuable features of some software programs (e.g., the ornamental and stylized features of a user interface that makes it attractive to consumers). *See, e.g.*, Pamela Samuelson et al., *A Manifesto Concerning the Legal Protection of Computer Programs*, 94 COLUM. L. REV. 2308, 2359 (1994); *see also* Philips, *supra* note 31, at 1022-23.

116. I use this term in the narrow sense of judge-made law.

policy interests in particular cases, as reflected in state misappropriation law. At the same time, it would draw on the copyright statute for basic structural features: categorization of works, criteria for prima facie protection, and so forth.[117] Ideally, federal misappropriation law would accomplish what federal courts applying copyright have tried to achieve, namely optimal protection for contemporary and emerging works. My analysis is cursory, directed at spurring further inquiry rather than addressing in detail all the difficult questions that are raised in the development of any new intellectual property scheme.

First, I briefly examine state misappropriation law and how courts have employed common law adjudication to strike a policy balance comparable to that underlying copyright. Second, I explore how a federal misappropriation framework might make use of the flexible character of common law misappropriation. In particular, federal misappropriation law might empower courts to consider market factors when deciding the proper scope of protection for works falling within its ambit. I further suggest that federal courts of general jurisdiction might be the ideal tribunal for apply and developing federal misappropriation law. Finally, I examine how such a framework might apply to the computer software and hypothetical NBA cases from Part II.B.

1. State Misappropriation Law

State misappropriation law is relevant to the structuring of a flexible, market-sensitive intellectual property regime because it provides a model of how common law adjudication has been used to further underlying incentive-based policies. Unlike copyright law, misappropriation law has evolved through common law adjudication, which is by nature flexible in its development of legal rules and principles. Misappropriation law began with a general rule against unfair usurpation of the economic value of a competitor's product, but courts qualified this rule once it became clear that misappropriation law could potentially stifle innovation.

The doctrine has its roots in the seminal case of *International News Service v. Associated Press* ["*INS*"],[118] in which the Supreme Court held that it was tortious for a firm deliberately to usurp the economic value of a competing firm's product by copying it.[119] The case involved two

117. To the extent my proposed misappropriation offshoot of copyright optimally protects computer software, this scheme would obviate the need for adjustments in the patent doctrine.

118. 248 U.S. 215 (1918).

119. *See id.* at 239-40.

news agencies, the Associated Press ("AP") and the International News Service ("INS"), and their efforts to disseminate news during World War I. Using extensive networks throughout the world, AP and INS independently gathered news, which they transmitted to their member newspapers in exchange for subscription fees.[120] AP alleged that INS engaged in unfair business practices when it gleaned information about the battles in Europe from the papers of AP members published early in the morning on the East Coast, and disseminated that information to INS members, who in turn were able to include that information in papers published later the same day in the West. By relying upon the time difference between the coasts, INS was able to release its papers with substantially the same information at the same time and in some cases before the release of AP member papers.[121]

AP had poured substantial effort and resources into its news-gathering service.[122] The value of AP's product, and the source of its cost recoupment and profit, was the timeliness of the news gathered and transmitted to its members.[123] The Court stressed that it was not the news per se that warranted protection against a competitor, but rather its value consisted in being current; "the peculiar value of news is in the spreading of it while it is fresh."[124] The Court reasoned that it was tortious for a firm to usurp the product that a competitor had labored hard to produce, thereby depriving that competitor of the benefits it otherwise would have secured.[125] Thus, the Court simply extended the basic common law tort principle that a party may be held civilly accountable for purposeful injuries to another party to certain kinds of competitive activity.[126]

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120. *See id.*

121. *See id.* at 231. As commentators have noted, INS was, as a practical matter, compelled to engage in this duplicitous practice because it had been frozen out of news-gathering in Europe by the British and French governments, who objected to some of the positions that the organization had taken about the war. *See* Douglas Baird, *Common Law Intellectual Property and the Legacy of* International News Serv. v. Associated Press, 50 U. CHI. L. REV. 411, 411-12 (1983); Richard Epstein, International News Serv. v. Associated Press*: Custom and Law as Sources of Property Rights in News*, 78 VA. L. REV. 85, 91-92 (1992).

122. *See INS*, 248 U.S. at 237-40.

123. *See id.* at 235.

124. *Id.*

125. *See id.* at 239.

126. The Court stated:

> The parties are competitors in this field [of newspaper publication]; and, on fundamental principles, applicable here as elsewhere, when the rights or privileges of the one are liable to conflict with those of the other, each party is under a duty so to conduct its own

By conferring state law protection on the AP, the Court preserved the economic incentive for that organization to continue providing news coverage of events in Europe to its readership.[127] If INS had been allowed to usurp the economic value of its news-gathering efforts, the AP would have been deterred from undertaking those efforts in the future. Since the *INS* case, courts have applied state misappropriation law where necessary to prevent free-riding by competitors that would otherwise undermine the incentive to create.[128] In particular, misappropriation has been applied to protect works as diverse as radio broadcasts covering sports,[129] audio tapes of musical performances,[130] animal calls,[131] and dress design.[132] Moreover, many courts have upheld state misappropriation claims even where the plaintiff and defendant were not direct competitors, as they were in *INS*.[133] In this way, misappropriation law has been employed to avoid the kind of market interference that would reduce the incentive to produce a work, even where that intervention is effected by a non-competition.[134]

Weighing against this concern with preserving incentives is the idea that without copying of intellectual material such as facts and ideas, "our

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business as not unnecessarily or unfairly to injure that of the other. *Id.* at 235-36.

127. *See* Baird, *supra* note 121, at 420-21 (noting that "without the right [against misappropriation, the AP] will lack the incentive to gather as much information").

128. *See, e.g.*, Metropolitan Opera Ass'n v. Wagner-Nichols Recorder Corp., 101 N.Y.S.2d 483, 492 (Sup. Ct. 1950) (upholding a misappropriation claim against a non-competitor, reasoning that "the effort to profit from the labor, skill, expenditures, name and reputation of others which appears in this case constitutes unfair competition").

129. *See* National Exhibition Co. v. Martin Fass, 143 N.Y.S.2d 767 (Sup. Ct. 1955); Mutual Broad. Sys. v. Muzak Corp., 30 N.Y.S.2d 419 (Sup. Ct. 1941); Twentieth Century Sporting Club, Inc. v. Transradio Press Serv., 300 N.Y.S. 159 (Sup. Ct. 1937).

130. *See* Capitol Records, Inc. v. Greatest Records, Inc., 252 N.Y.S.2d 553 (Sup. Ct. 1964); Capitol Records, Inc. v. Erickson, 2 Cal. App. 3d 526 (Ct. App. 1969).

131. *See* United States Sporting Prods., Inc. v. Johnny Stewart Game Calls, Inc., 865 S.W.2d 214 (Tex. App. 1993).

132. *See* Dior v. Milton, 155 N.Y.S.2d 443 (Sup. Ct. 1956).

133. *See* Berni v. International Gourmet Restaurants, 838 F.2d 642, 648 (2d Cir. 1988) ("Under New York law, a party need not be a direct competitor to institute an unfair competition action."); Roy Export Co. Establishment v. Columbia Broad. Sys. Inc., 672 F.2d 1095, 1105 (2d Cir. 1982); *Metropolitan Opera*, 101 N.Y.S.2d at 491.

134. *See* Rudolph Mayer Pictures, Inc. v. Pathe News, Inc., 255 N.Y.S. 1016 (App. Div. 1932); *cf.* Madison Square Garden Corp. v. Universal Pictures, 7 N.Y.S.2d 845 (App. Div. 1938) (upholding misappropriation claim based upon defendant's representation in film of the New York Rangers playing in Madison Square Garden). For further examination of this issue, see Bruce P. Keller, *Condemned to Repeat the Past: The Reemergence of Misappropriation and Other Common Law Theories of Protection for Intellectual Property*, 11 HARV. J.L. & TECH. 401 (1998).

economy would still be in the Dark Ages . . . ."[135] Accordingly, courts applying state misappropriation law have been careful to consider the public's interest in preserving the public domain and facilitating competition to produce innovative works.[136] These courts have recognized that granting a monopoly over the basic building blocks of creativity could stifle innovation and competition, and they have developed misappropriation doctrine accordingly. For example, in *Cheney Brothers v. Doris Silk Corp.*,[137] Judge Learned Hand, writing for the court, limited the scope of *INS* to its facts and declined to apply that case to a controversy involving alleged usurpation of silk patterns.[138] In rejecting the plaintiff's misappropriation claim, Judge Hand noted that misappropriation law could be misapplied to grant protection over the work's ideas, information, and other generalized intellectual material: "To exclude others from the enjoyment of a chattel is one thing; to prevent any imitation of it, to set up a monopoly in the plan of its structure, gives the author a power over his fellows vastly greater . . . ."[139] Judge Hand followed up this criticism of *INS* in other opinions for the Second Circuit, emphasizing in one case that misappropriation law "cannot be used as a cover to prevent competitors from ever appropriating the results of the industry, skill, and expense of others."[140] The flexible approach of common law misappropriation is exemplified by the contrasting approaches of the federal district court and court of appeals in the recent case of *NBA v. Sports Team Analysis & Tracking Systems, Inc.*[141] In that case, the NBA sued Motorola and Sports Team Analysis and Tracking Systems for misappropriation, among other claims, based on their Sportstrax paging service, which provided paying customers with the scores of NBA games at regular

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135. James A. Rahl, *The Right to "Appropriate" Trade Values*, 23 OHIO ST. L.J. 56, 72 (1962).

136. *See* Baird, *supra* note 121, at 421 ("[E]ven though the concern with free access lies dormant under a natural rights theory, courts seem sensitive to it and rarely restrict a copier when the public lacks alternative access to the information."). Foreshadowing the problems of overprotection that arose from the misappropriation doctrine, Justice Brandeis, writing in dissent in *INS*, argued that "the creation or recognition by courts of a new private right may work serious injury to the general public, unless the boundaries of the right are definitely established and wisely guarded." 248 U.S. 215, 262, 263 (1918) (Brandeis, J., dissenting).

137. 35 F.2d 279 (2d Cir. 1929).

138. *See id.* at 280.

139. *Id.*

140. RCA Mfg. Co. v. Whiteman, 114 F.2d 86, 90 (2d Cir. 1940).

141. 939 F. Supp. 1071 (S.D.N.Y. 1996) ["*STATS*"], *aff'd in part and vacated in part on other grounds sub nom.* NBA v. Motorola, Inc., 105 F.3d 841, 855 (2d Cir. 1997) ["*Motorola*"].

intervals.[142] The district court held that Sportstrax unfairly usurped, for its own commercial benefit, information that was produced through the NBA's time, effort, and money,[143] a reasoning that emphasized that the NBA had expressed an "unequivocal intention not to abandon its proprietary interests in real-time NBA game information."[144] On appeal, however, the Second Circuit reversed the district court's decision with respect to the league's misappropriation claim.[145] Relying on a copyright preemption analysis, the court significantly narrowed the scope of misappropriation claims, as they applied in the instant case, to those involving the usurpation of news gathered by a competing news organization.[146] In arriving at its conclusion, the Second Circuit highlighted what it interpreted to be the incentive-based policy underpinnings of the *INS* decision: "INS is not about ethics; it is about the protection of property rights in time-sensitive information so that the information will be made available to the public by profit seeking entrepreneurs."[147]

In this sense, state misappropriation law has developed flexibly by way of common law adjudication. Where misappropriation law was necessary to protect incentives to create, courts demonstrated a willingness to hear such claims. However, where it appeared that application of misappropriation law would restrict innovation and competition, courts declined to grant the plaintiff such protection.

### 2. Optimal Protection for Certain Works Through a Federal Hybrid of Misappropriation and Copyright Law

The common law character of misappropriation law, when coupled with its underlying policy concerns, makes it uniquely well-suited to subject matter requiring flexible, market-sensitive protection. Like copyright law, the policies underlying state misappropriation law involve a balance between society's interest in providing authors with the incentive to create, and society's interest in preserving the public domain necessary to facilitate the production of creative works. More importantly, misappropriation law's common law character lends itself to flexible applications. By drawing on the common law adjudication employed in state misappropriation law and synthesizing it with some of

142. *See STATS*, 939 F. Supp. at 1080.
143. *See id.* at 1105.
144. *Id.*
145. *See Motorola*, 105 F.3d at 855.
146. *See id.* at 853.
147. *Id.*

the structural features of copyright, a *federal misappropriation framework* might allow courts to strike the appropriate balance of protection in works that have proven ill-suited to copyright protection.

a. Federal Misappropriation Framework

How would such a framework function? How would it be structured? Such an intellectual property scheme should be grounded in federal law to account for the strong policy concern of favoring national uniformity. The products that would be protected under this regime, including computer software and Internet-based works, are an important part of the national economy,[148] and therefore should be subject to one centralized body of law rather than an array of inconsistent and even conflicting state laws. Moreover, it is clear that Congress would have the power to establish such an intellectual property regime under the federal Constitution.[149]

The details of a federal misappropriation framework are far beyond the scope of this paper; if the process leading up to the 1976 Copyright Act[150] is any indication of the effort required to devise such a scheme, this new intellectual property framework would require exhaustive policy analysis by Congress.[151] However, the general structure of the proposed framework may be derived directly from my two proposed sources: federal copyright and state misappropriation law.

Federal misappropriation law should be grounded upon a broad statutory grant by Congress. The federal misappropriation statute should set forth the policy concerns underlying it, which mirror those underlying copyright and state misappropriation law: preserving the incentive to create while retaining the necessary building blocks in the public domain. The statute should lay down general categories of protected works, like the current copyright statute, to facilitate the development of rules specific to those works. Classifications might

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148. *See* CHARLES H. FERGUSON & CHARLES MORRIS, COMPUTER WARS: HOW THE WEST CAN WIN IN A POST-IBM WORLD 7 (1993) (discussing current and future growth of U.S. software markets); *see also* OFFICE OF TECHNOLOGY ASSESSMENT, *supra* note 110, at 5.

149. *See* Ginsburg, *supra* note 98, at 380-84 (noting that Congress could enact a federal intellectual property scheme for databases based upon its powers from the Constitution's Commerce Clause and Copyright/Patent Clause).

150. Copyright Act of 1976, Pub. L. No. 94-553, 90 Stat. 2541 (codified as amended at 17 U.S.C. § 101-1101 (1994)).

151. *See generally* H.R. REP. NO. 94-1476, at 47-50 (1976) (discussing the decades-long process leading up the 1976 Copyright Act), *reprinted in* 1976 U.S.C.C.A.N. 5659, 5660-63.

include computer software, Internet-based products and services, and live multimedia broadcasts.

General principles of protection should be defined for each category of works based upon the characteristics that give them economic value, just as original expression is considered valuable in works protected by traditional copyright. For example, some commentators have suggested that the protection of computer software should be defined in terms of software behavior or processes.[152] Congress could, then, provide that computer programs are entitled to a grant of misappropriation protection to the extent that the programs possess some degree of innovative or uncommon behavioral characteristics.[153] With respect to live multimedia broadcasts (particularly sports events), Congress could protect the economically valuable elements of those works by defining their protectability in terms of real-time representation. Live broadcasts would be given protection against any representation that in effect displaced or materially interfered with their markets.

These grants of protection, however, should be explicitly limited, empowering courts to make adjustments necessary to secure an optimal degree of protection in a given work — a power modeled on the case-by-case approach of state misappropriation law. The proposed statute therefore should authorize courts to consider market factors when applying federal misappropriation law in a particular case. These qualifications on the interests created by federal misappropriation law should be phrased broadly and generally.[154] If granting a work protection would stifle innovation or progress, the court would be free

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152. *See* Samuelson et al., *supra* note 115, at 2350 (explaining that "[c]opyright law is mismatched to software, in part, because it does not focus on the principal source of value in a program (its useful behavior)" and that "[t]he ability to copy valuable behavior legally would sharply reduce incentives for innovation, and thus thwart the policy behind legal protection"); *see also* Wendy J. Gordon, *Assertive Modesty: An Economics of Intangibles*, 94 COLUM. L. REV. 2579, 2580-83 (1994) (discussing the theory of protection set forth in Samuelson et al., *supra* note 115).

153. *See* Samuelson et al., *supra* note 115, at 2350-52.

154. Thus, for example, Congress might set forth the following qualification of protection afforded by federal misappropriation law:

> § X. Consideration of Market Factors:
>
> § X.1 Protection of [computer software behavior or real-time, multimedia broadcasts] against usurpation shall be adjusted by the district court to the extent necessary to further the policies underlying this act.
>
> § X.2 Prior to adjusting misappropriation protection, the court shall make findings of fact with respect to the likely market effects of protection. Such findings of fact shall be subject to de novo review.

to ratchet down protection as needed, or to grant no protection at all. Conversely, if granting a work slightly more protection would preserve the incentive to produce future works, the court would be free to ratchet up protection.

The power given to the courts to consider market factors under this framework may be characterized as a quasi-common law power to develop the law as necessary to decide a given case. Over time, courts could use their quasi-common law adjudicatory power to develop standards governing the circumstances under which it might be appropriate to make adjustments in protection for a given class of works. Such development of legal standards would be comparable to the manner in which the federal courts have developed standards in a quasi-common law fashion in enforcing the broad dictates of the Sherman and Clayton antitrust acts.[155] As previously noted in Part III.A, the qualification of statutory grants by court-performed market analyses introduces some uncertainty into those interests. However, such uncertainty may be a necessary evil in striking the optimal scope of protection in individual cases involving works with rapidly moving, complex markets. Whereas the benefits of such uncertainty may not be justified in the context of traditional copyright law, they likely would be justified here in order to avoid the high costs of over- and under-protection of contemporary and emerging works.

b. Subject Matter Jurisdiction over Federal Misappropriation

The inherent uncertainty in federal misappropriation law might be exacerbated by (1) delays in adjudicating misappropriation cases; and (2) imprecision in determining the scope of protection for works. These concerns with administrative efficiency and judicial precision raise the question whether jurisdiction over federal misappropriation law should be vested in an Article III court of general jurisdiction or in a specialized Article I court. Because this question is exceedingly complex, implicating administrative law and separation-of-powers issues, I intend only to scratch its surface. I suggest that, on balance, federal misappropriation subject matter jurisdiction should be vested in federal courts of general jurisdiction.

The *Misappropriation Court*, as one might call a hypothetical Article I tribunal, would develop federal misappropriation law through

155. Clayton Act, Pub. L. No. 63-212, ch. 323, 38 Stat. 730 (1914) (codified as amended in 15 U.S.C. §§ 12-27, 44 (1994)); Sherman Anti-Trust Act, Pub. L. No. 51-647, ch. 647, 26 Stat. 209 (1890) (codified as amended in 15 U.S.C. §§ 1-7 (1994)); *cf.* PHILLIP AREEDA & LOUIS KAPLOW, ANTITRUST ANALYSIS ¶ 133 (4th ed. 1988).

the adjudication of individual cases. The subject matter of the court would, of course, be limited to that embraced by misappropriation law itself. These two characteristics — development of law through case-by-case adjudication and limited subject matter jurisdiction — would make the court roughly comparable to "the Board" of the National Labor Relations Board ("NLRB").[156] Like the Board, the court would fashion rules flexibly and without some of the constraints and inefficiencies that apply to Article III courts. The question then becomes whether vesting original jurisdiction over federal misappropriation in such a tribunal would actually enhance judicial efficiency and accuracy.

The federal courts have been flooded with an ever-increasing caseload,[157] making the adjudicatory process in those courts long and arduous[158] and potentially exacerbating the uncertainty of the federal misappropriation right. The adjudicatory process might be shortened significantly by establishing a tribunal exclusively devoted to administering federal misappropriation law. Any significant decrease in the duration of litigation would give the parties certainty of legal rights at a time when such certainty would still be relevant. Thus, for example, the prevailing party in a litigation would likely garner more effective protection while the product remained a market player, in contrast to the Pyhrric victory won by Lotus in the *Lotus v. Borland* litigation.[159]

Theoretically, the Misappropriation Court not only could decide fully ripened controversies between parties, but could make the legal

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156. Note, however, that the NLRB is not merely a single adjudicative body, but a sprawling agency that comprehensively regulates the nation's labor affairs. The NLRB has regional offices, administrative law judges under the Board itself, and its own corps of labor attorneys. *See* ARCHIBALD COX ET AL., LABOR LAW 102 (12th ed. 1996). In this sense, the comparison between the proposed Misappropriation Court and the NLRB is limited to the latter's highest tribunal.

157. *See* RICHARD H. FALLON, JR. ET AL., HART & WECHSLER'S THE FEDERAL COURTS & THE FEDERAL SYSTEM 47-55 (4th ed. 1996) (providing data for and describing the workload of the federal district courts and courts of appeals); FEDERAL COURTS STUDY COMMITTEE, JUDICIAL CONFERENCE OF THE U.S., REPORT OF THE FEDERAL COURTS STUDY COMMITTEE 5-6 (1990) (noting the crisis of volume facing the federal courts and proposing reforms); RICHARD A. POSNER, THE FEDERAL COURTS: CHALLENGE AND REFORM 53-86 (1996) (discussing the increased workload of the federal courts).

158. *See* THOMAS E. BAKER, RATIONING JUSTICE ON APPEAL: THE PROBLEMS OF THE U.S. COURT OF APPEALS 43-50 (1994) (discussing the delays in the U.S. Court of Appeals resulting from its case backlog). For example, the *Apple Computer v. Microsoft Corp.* litigation was initiated on March 17, 1988, *see* 799 F. Supp. 1006, 1015 (N.D. Cal. 1992), and in effect concluded on September 19, 1994, when the Ninth Circuit handed down its opinion, *see* 35 F.3d 1435 (9th Cir. 1994).

159. *See* Lotus Dev. Corp. v. Borland Int'l, Inc., 49 F.3d 807 (1st Cir. 1995). By the time this litigation concluded, Lotus' spreadsheet had already lost substantial market share. *See* Dam, *supra* note 53, at 355-56.

rights granted under a federal misappropriation framework more certain by issuing declaratory relief. Note that the court would not be constrained by Article III's requirement of a case or controversy,[160] and therefore could issue orders even in situations where no actual controversy existed.[161] The problem with enabling the court to issue such declaratory decisions is that it would likely result in a flood of actions for such preemptive relief. Consequently, broad declaratory relief jurisdiction could potentially undermine the efficiency of the court and, thus, decrease the benefits of vesting a specialized tribunal with the administration of federal misappropriation law. Therefore, declaratory relief actions should be modeled on those heard in federal court, requiring some actual controversy between the parties.

A dedicated Misappropriation Court also has the potential to enhance the accuracy of misappropriation decisions. Striking the proper balance of protection in a software or multimedia broadcast piracy case is likely to require not only the consideration of market factors, but also a familiarity with high technology. Because federal courts are courts of general jurisdiction, federal judges are unlikely to have expertise regarding emerging technology or economic analysis of the markets for high technology products. An oft-cited opinion by Learned Hand illustrates the problem of judicial expertise:

> I cannot stop without calling attention to the extraordinary condition of the law which makes it possible for a man without any knowledge of even the rudiments of chemistry to pass upon such questions as these. . . . How long we shall continue to blunder along without the aid of unpartisan and authoritative scientific assistance in the administration of justice, no one knows; but all fair persons not conventionalized by provincial legal habits of mind ought, I should think, unite to effect such an advance.[162]

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160. This requirement is reflected in the text of the Declaratory Judgment Act, *see* 28 U.S.C. § 2201 (1993) (requiring that an "actual controversy" occur in a declaratory relief action in federal court).

161. For example, when software company A learned that competing company B intended to develop software drawing on company A's user interface, it could seek a declaration of its proper scope of protection from the Misappropriation Court.

162. Parke-Davis & Co. v. H.K. Mulford Co., 189 F. 95, 115 (S.D.N.Y. 1911), *aff'd in part and rev'd in part*, 196 F. 496 (2d Cir. 1912). Another Second Circuit great, Judge Henry Friendly, echoed this sentiment many years later: "I am unable to perceive why we should not insist on the same level of scientific understanding on the patent bench that clients demand of the patent bar, or why lack of such understanding by the

Perhaps the accuracy of misappropriation decisions would be enhanced by appointing judges experienced with intellectual property protection of high technology products.[163] Because these judges would adjudicate federal misappropriation cases exclusively, they would further enhance their expertise in misappropriation law, thereby raising the quality of decision-making.[164] The recent experience of the Federal Circuit shows that vesting a specialized court with subject matter jurisdiction over a complex area of law may result in more accurate decisions, as well as a more coherent body of law.[165] Indeed, a specialized judge may render decisions which more precisely and efficiently balance federal misappropriation law's competing interests.[166]

Upon reflection, however, the potential benefits of vesting exclusive jurisdiction over federal misappropriation law in a specialized tribunal

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judge should be deemed a precious asset." HENRY J. FRIENDLY, FEDERAL JURISDICTION: A GENERAL VIEW 157 (1973).

163. *See* Harold H. Bruff, *Specialized Courts in Administrative Law*, 43 ADMIN. L. REV. 329, 330 (1991) ("[S]pecialized judges can become expert in the substantive and procedural issues surrounding particular programs, especially highly technical ones. More accurate decisions should result."); Ellen R. Jordan, *Specialized Courts: A Choice*, 76 NW. U. L. REV. 745, 747 (1981) (reasoning that "when[, for example,] evaluation of patent controversies requires understanding of complex scientific and technological matters, judges with special backgrounds would better understand the matters in dispute"); *cf.* Ethyl Corp. v. EPA, 541 F.2d 1 (D.C. Cir. 1976) (Bazelon, C.J., concurring) (arguing that judges should only review administrative agency decisions for procedural errors since judges often lack the expertise to criticize those decisions substantively); STEPHEN BREYER, BREAKING THE VICIOUS CIRCLE: TOWARD EFFECTIVE RISK REGULATION 62 (1993) (discussing the benefits of expert decision-making in the agency context).

164. *See* Edward V. Di Lello, Note, *Fighting Fire with Firefighters: A Proposal for Expert Judges at the Trial Level*, 93 COLUM. L. REV. 473, 490-91 (1993) (discussing the ways in which even Federal Circuit judges without technical backgrounds developed patent expertise through the court's specialized caseload).

165. The impact of the Federal Circuit's formation on patent law doctrine is explored at length by Rochelle Cooper Dreyfuss, *The Federal Circuit: A Case Study in Specialized Courts*, 64 N.Y.U. L. REV. 1, 8 (1989). Professor Dreyfus measures this impact in terms of precision, defined as the ease with which doctrine is applied, and accuracy, defined as doctrinal correctness. *See id.* at 5, 8. Professor Dreyfuss concludes that the Federal Circuit has made the patent doctrine of obviousness more precise by establishing a series of objective tests. *See id.* at 9. The Federal Circuit also has made the doctrine of obviousness more accurate by rejecting synthesis and combinations as separate, dispositive tests for obviousness. *See id.* at 15. Another commentator has argued that the Tax Court has similarly improved decision-making in the area of U.S. tax law. Jordan, *supra* note 163, at 752 (noting that "[t]ax court opinions are generally more detailed[,] are far less frequently reversed on appeal, and are cited three times as often by courts and in the tax literature").

166. *See* Bruff, *supra* note 163, at 330-31; Jordan, *supra* note 163, at 747.

may be illusory. It is questionable whether specialized adjudication in fact produces more accurate decisions. As Judge Richard Posner has explained, judges with strong backgrounds in an area of law may bring strong ideological views to cases in that area.[167] Consequently, the decisions of a specialized court comprised of "expert" judges might be less objective and more vulnerable to ideological swings than one composed of generalist judges without firm ideological convictions.[168] This concern is particularly pronounced in the area of software protection, where sharply drawn battle lines exist concerning the proper scope of protection.[169] One could imagine a Misappropriation Court oscillating between protectionist and anti-protectionist positions as the composition of the court changed.

Furthermore, the quality of decision-making by a specialized Misappropriation Court may be negatively affected by the narrow scope of subject matter within the court's jurisdiction. A specialized court may suffer from "tunnel vision," isolated from developments and trends in other areas of the law that might illuminate problems or difficulties in their cases.[170] The doctrinal development of federal misappropriation law may be hindered by excluding it from the broader legal development evolution that occurs in the courts of general jurisdiction. Since a federal misappropriation framework would require close analysis of market forces and of the work's innovative aspects,[171] misappropriation law decisions would benefit from ideas developed in such areas as copyright and antitrust law.

Finally, the subject matter of federal misappropriation law may be distinguishable in its level of complexity and technical difficulty from patent law and other fields warranting special tribunals, further weakening the case for a separate Misappropriation Court. Federal misappropriation law generally would not require the high level of technical knowledge employed in patent law, because it would focus on what makes a particular software or multimedia product valuable. For example, misappropriation law would focus on the innovative functions of a program, rather than the technical processes underlying the program's functions. Misappropriation law analysis thus would be closer in nature to antitrust analysis, or to the dynamic copyright analysis examined in Part II.B.1.b. Since non-specialist federal judges are

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167. *See* POSNER, *supra* note 157 at 250-52; *see also* Dreyfuss, *supra* note 165, at 3.

168. *See* Dreyfuss, *supra* note 165, at 3.

169. *See supra* notes 45-47 and accompanying text.

170. *See* POSNER, *supra* note 157, at 258-59 (affirming "a general legal culture that enables those broadly immersed in it to enrich one field with insights from another").

171. *See supra* note 100 and accompanying figure.

considered capable of making careful and reasonable decisions in these areas, they should be capable of doing the same with respect to a new regime.

This leaves enhanced efficiency as the principal benefit of vesting subject matter jurisdiction over federal misappropriation in a specialized tribunal. Undoubtedly, quicker decisions would enhance the value of a common law misappropriation right, but the marginal increase in the speed with which a case is decided by a specialized tribunal may be outweighed by the costs in decision-making quality. Moreover, it is unclear whether a relevant distinction exists between the need for quick decisions in this field and the need in other areas of the law where the economic stakes are equally high (e.g., antitrust or securities law). Because the judicial inefficiency problem presented here is really system-wide, the proper remedy likewise should apply to the federal courts generally.[172]

The decision whether to establish this kind of Article I court to administer federal misappropriation law would not be an easy one: Congress would have to weigh carefully the relevant policy considerations in deciding whether some kind of dedicated administrative tribunal would be superior to federal court adjudication. On balance, however, the marginal benefits of more efficient, expert decision-making probably do not justify an entirely separate Misappropriation Court.

3. Application of Federal Misappropriation Law to the Illustrative Cases

Applying the qualified grants of protection contemplated by federal misappropriation law would achieve roughly the same results as when courts flexibly applied copyright principles — without the related destabilization of copyright doctrine.

On the facts of *Lotus Development Corp. v. Borland International, Inc.*,[173] Lotus would bring suit for federal misappropriation against Borland in a federal district court. The court might find that Lotus's 1-2-3 menu hierarchy system on its face was protected against

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172. A number of more general approaches to coping with the increasing workload of the federal courts, particularly the courts of appeals, have been suggested and/or implemented. These range from administrative innovations such as those implemented by the Ninth Circuit, *see* RESTRUCTURING JUSTICE: THE INNOVATIONS OF THE NINTH CIRCUIT AND THE FUTURE OF THE FEDERAL COURTS 93-165 (Arthur D. Hellman ed., 1990), to increasing the size of the federal judiciary, *see* Stephen Reinhardt, Book Note, 73 TEX. L. REV. 1505, 1515 (1995) (reviewing THOMAS E. BAKER, RATIONING JUSTICE ON APPEAL: THE PROBLEMS OF THE U.S. COURTS OF APPEALS (1994)).

173. 49 F.3d 807 (1st Cir. 1995); *see supra* Part II.B.1.b.

duplication on the ground that it included innovative software behavior. After all, at the time of its release, the Lotus software was considered a functional advance over preexisting spreadsheet programs.[174] The court might make a factual finding that conferring federal misappropriation might stifle the development of new, innovative spreadsheet programs because the Lotus user interface had become standardized. The court might also note that Lotus already had reaped the rewards of market dominance. Relying upon these factual findings, the court likely would decline to protect the Lotus user interface citing market considerations, as provided for by the statute.

On the facts of the Realbasketball hypothetical discussed in Part II.B.2.b, the NBA would bring suit against Realbasketball for federal misappropriation in a federal district court. The court might recognize a prima facie protectable interest in the NBA's real-time representation of its basketball games, and then consider whether Realbasketball's service infringed this interest. If the court found that Realbasketball acted as a surrogate for the NBA's real-time broadcast, then Realbasketball would be held liable. If, however, no market interference was found, the court would be free to conclude that no federal misappropriation claim would lie. Considering the strong interest on the part of the public in preserving the free flow of information necessary to ensure the production of other creative and socially valuable works, the degree of market interference likely would have to be substantial in order to warrant such a claim.

## IV. CONCLUSION

A federal misappropriation framework would provide precisely the kind of doctrinal flexibility that federal courts have sought to develop when applying copyright law to nontraditional works. Broad principles of protection, coupled with an explicit provision for the consideration of market factors, would enable courts to optimize the scope of protection accorded a given work, while maintaining the rich body of copyright law in those areas where it has proven workable and effective. This misappropriation framework undoubtedly would constitute a fundamental shift in intellectual property protection. In the absence of such a shift, courts will simply continue to contort copyright principles to obtain outcomes that may further copyright's underlying policies, but would ultimately render copyright doctrine incoherent.

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174. *See* Lotus Dev. Corp. v. Paperback Software Int'l, 740 F. Supp. 37, 66-67 (D. Mass. 1990) ("1-2-3 . . . could thus be thought of as an evolutionary product that was built upon the shoulders of Visicalc.").