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Copyright and Creativity

By Dennis S. Karjala*

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I. INTRODUCTION

In *Feist Publications, Inc. v. Rural Telephone Service Co.*,¹ a unanimous Supreme Court concluded, in dictum, that creativity is a necessary condition for copyright protection. The case dealt with a kind of subject matter that often exhibits no intellectual creativity on its face²—a complete (nonelective) compilation of factual matter arranged

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¹ *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340 (1991).

² The phrase “creativity on its face” refers to creative input that can be observed by examination of copies of the work, as opposed to the method by which the work was created. Any painting that is not directly copied displays creativity on its face, whereas the number \$4,300 does not, even though it may be the result of a creative methodology for estimating the value of a used car. In the case of reproductions of public domain works, as well as with some maps and other visual representations of factual information, courts often require the reproduction to show creativity on its face before recognizing copyright protection. See *infra* notes 56-64 and accompanying text. In the case of estimated numerical values of tangible items like cars or coins, some courts do find the necessary creativity. See *infra* note 95 and accompanying text.

in a standard format—and could have been decided solely under the language of the statute defining a compilation. The Court's language, however, purported to base its newly found creativity requirement in the intellectual property clause of the Constitution.³ This logically means that the creativity requirement applies not only to compilations, but to all types of copyright subject matter.

The *Feist* approach to copyright subject matter is problematic, both theoretically and practically, along several dimensions. Treating creativity as a necessary condition for copyright can force lower courts into a Hobson's choice between under-protection and over-protection. On the one hand, requiring creativity runs the risk of market failure by not protecting works like bare-bones maps and complete databases whose optimal production may need the incentive of some degree of intellectual property protection. On the other hand, it raises the problem of how the scope of copyright protection relates, if at all, to the creativity required for copyright protection in the first place. The Court in *Feist* was specific in saying that copyright protection extends only to those components of a work that are original,⁴ and that originality requires at least a minimal amount of creativity.⁵ But what do we do with works that do not show their production creativity on their face, such as many maps,⁶ tables of used car value estimates,⁷ or skillfully made reproductions or photographs of public domain pictures?⁸ If the methodology for generating the work is the only creative aspect of its production, courts sensitive to the market failure problem will be tempted to include this methodology as an element of the work protected by the copyright. Other courts may reject this approach and will emphasize the lack of anything new in the final product and deny copyright protection notwithstanding the potential for market failure. At a minimum, courts will either ignore *Feist's* explicit tie between copyright originality (including creativity) and the scope of protection, or they will ignore more fundamental limitations on copyright. Where the creativity is functional, or otherwise ineligible for copyright protection under the historic limitations on copyright scope now codified in section 102(b) of

³ U.S. CONST. art. 1, § 8, cl. 8: Congress has the power "To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."

⁴ *Feist Publ'ns, Inc.*, 499 U.S. at 348.

⁵ *Id.* at 358.

⁶ See *infra* note 39.

⁷ e.g., *CCC Info. Servs., Inc. v. Maclean Hunter Mkt. Reports, Inc.*, 44 F.3d 61, 66-67 (2d Cir. 1994) (estimates of used car values by the exercise of professional judgment and expertise show copyright originality); see *infra* note 73.

⁸ *Hearn v. Meyer*, 664 F. Supp. 832 (S.D.N.Y. 1987) (no copyright in skillfully reproduced illustrations from *The Wizard of Oz*).

the Copyright Act,⁹ courts may simply dispose of or misinterpret the limitations, resulting in a significant expansion of copyright protection without legislative or policy justification. This dilemma between under-protection and over-protection is a direct result of *Feist*'s creativity requirement.

A second problematic dimension arising from *Feist* is that lower courts sometimes treat creativity as a *sufficient* condition for copyright protection, not just the necessary condition demanded by *Feist*. While there is no direct basis in either *Feist*'s holding or its language for expanding copyright in this dimension, the reasoning of the Court—and in particular its glossing over the tension between the creativity requirement and the scope of protection—invites the conclusion that creativity deserves copyright protection.¹⁰ The result is that creative works are held to be copyright protected, notwithstanding that their functionality makes the patent (or trade secret) regime more appropriate.

Yet a third dimension of confusion arises from an expanded notion of the term “compilation” under copyright law. *Feist* correctly emphasized the statutory terminology for a protectable compilation, which is defined under section 102(a) as a collection whose (creative) selection, coordination, or arrangement makes it an original work of authorship.¹¹ Many courts, however, are now applying this notion of creative selection or arrangement to works that are not compilations at all and in fact fit comfortably within one or more of the express categories set forth in section 102(a).¹² This approach also runs the risk that courts, after finding some creativity, will apply the *Feist* analysis without considering the traditional limitations on copyright protection, such as section 102(b).

Despite the positive connotations associated with the term “creativity,” this article argues that creativity plays little or no useful role in copyright analysis and carries great potential for harm. Except for compilations, where the statute arguably requires creativity in selection or arrangement as a prerequisite to copyright protection, *Feist* should not be applied across the board to make creativity a necessary condition of

⁹ 17 U.S.C. § 102(b): “In no case does copyright protection for an original work of authorship extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work.”

¹⁰ See Mark K. Temin, *The Irrelevance of Creativity: Feist's Wrong Turn and the Scope of Copyright Protection for Factual Works*, 111 PENN. ST. L. REV. 263, 271-72 (2006) (arguing that creativity is irrelevant to the scope-of-protection problem, which should be resolved by reference to the work's purpose).

¹¹ 17 U.S.C. § 101 (definition of “compilation”).

¹² 17 U.S.C. § 102(a).

copyright protection for other types of works. Moreover, even if we are to apply *Feist* beyond compilations to copyright subject matter generally, the creativity analysis should be limited to determining whether the quantity threshold for copyright protection has been reached. In other words, treating creativity as a necessary condition for copyright protection, as *Feist* requires, cannot be a basis for treating creativity as a sufficient condition for copyright protection. For good reason, copyright excludes from its protective umbrella ideas, concepts, systems, procedures, and methods of operation, no matter how creative. To treat creativity as a sufficient condition for copyright protection allows copyright to arrogate subject matter that properly belongs either under patent or trade secret, or outside the intellectual property system altogether.

II. INTELLECTUAL PROPERTY AND CREATIVITY

Everyone is in favor of creativity. The question for intellectual property law is, how can and should this branch of law promote creativity? The short answer is that we cannot simply maximize intellectual property rights with respect to every piece of “creativity” that comes before us and thereby expect to maximize society’s production of creativity.¹³

Our current intellectual property regime gives us three choices when faced with a creative intellectual work or a creative element of such a work: (1) We can protect it under copyright law if it is original to its purported author; (2) we can protect it under patent law if it meets the patent standards; or (3) we can refuse to protect it at all. How do and should we go about making this choice?

If the purpose of affording intellectual property protection is to reward creativity, no creative works should ever be denied protection (choice 3), although a decision still needs to be made whether the work should be protected under copyright or patent law (choices 1 or 2). Because current intellectual property law allows many intellectual creations to go unprotected, rewarding creativity is obviously not the only goal of the intellectual property system. If the purpose of intellectual property protection is to promote creativity, the mere presence of creativity in the production of a given work does not eliminate *any* of the choices from consideration. Protection under patent or copyright law might promote a net gain in creativity production if the intellectual

¹³ See Brett M. Frischmann & Mark A. Lesley, *Spillovers*, 107 COLUM. L. REV. 257 (2007) (demonstrating that intellectual property often generates positive externalities and that internalization through property rights can lead to a net loss in social welfare).

property rights granted stimulate more creative efforts than they inhibit (by tying up subject matter in exclusive rights that could otherwise be used freely by others as the basis for even newer creative works). But denying protection altogether might also promote a net gain in creativity production by allowing others to build on the creative work in question. Consequently, even where the goal is assumed to be the promotion of creativity, creativity itself is not analytically useful in making the most basic determination of whether the creativity under consideration falls within copyright subject matter, patent subject matter, or neither.

In the “no protection” category we take abstract scientific theories, such as Einstein’s theories of relativity, as our paradigmatic example. Few would argue that these theories lack creativity. However, until these theories are tied to a real world application, patent law and its exclusion of abstract ideas offers no protection. Copyright law also excludes ideas (abstract or not) from its protection, and scientific theories are universally deemed to fall under this exclusion.¹⁴ Consequently, merely showing intellectual creativity, even of the highest order, does not, and should not, guarantee the recognition of intellectual property rights. This outcome is not an aspect of the system that needs fixing—experience has shown that intellectual property rights have played essentially no role in supplying an incentive to the Einsteins and Newtons of the world to work on basic scientific theories. Recognition of intellectual property rights in these types of theories would inhibit later scientists from extending or modifying the theories of those who came before them without seeking permission from the creator, and this loss would not be offset by an increase in the supply of basic theoretical research products.

In general, creativity does not enter directly into patent protection analysis, because to the extent creativity is a necessary condition, it is already built into a more specific statutory framework, especially the requirement for nonobviousness. Where patent protection is denied on subject matter grounds it is not due to the presence or absence of creativity, but because of the specific nature of the work (such as abstract idea or copyright subject matter). In other words, patent law does not attempt to protect creativity directly. Rather, it protects creativity indirectly by granting exclusive rights in works that are novel and nonobvious advances in a relevant art. Therefore, even though patent law is designed to promote creativity, the statutory structure implicitly recog-

¹⁴ Even theories concerning historical events are excluded from copyrights. *E.g.*, *Hoehling v. Universal City Studios, Inc.*, 618 F.2d 972, 980 (2nd Cir. 1980).

nizes that patent law does not protect all creativity. While the grounds for making patent subject matter decisions (abstract idea, useful application, copyright subject matter) are not always clear in practice, creativity as such does not further muddy the waters.

*Bleistein*¹⁵ attempted at an early date to remove a judgment of “creativity” from copyright analysis as well. However, under *Feist*,¹⁶ creativity reentered copyright analysis at least in the negative sense that an insufficient amount leads to denial of copyright protection. What is the purpose of this requirement, especially given that the threshold is so low?¹⁷ Except for compilations, where the statute instructs us to look at creativity in selection, coordination, and arrangement, reading the Copyright Act does not answer the question of what kinds of creativity copyright seeks to protect (although section 102(b) informs us concerning certain types of unprotected creativity). Why does copyright law protect original but mundane instructions for using a hair-care product but not a complete, accurate, and socially useful compilation of factual information arranged in a standard way that allows easy access to specific pieces of that information? Moreover, even accepting a low but real creativity threshold as a necessary condition for copyright protection, does that extend to the converse situation—treating creativity as a sufficient condition for copyright protection? Doing so runs the risk of applying copyright law without regard to the potential availability of patent protection for the same subject matter or the potential advantages to society of free use resulting from the denial of protection altogether.

III. *FEIST* AND CREATIVITY

Feist dealt with the copyright protectability of ordinary telephone book white pages—a factual compilation. As a copyright matter, the case should have been a routine exercise in statutory interpretation (complicated, perhaps, by the long “sweat of the brow” tradition that *Feist* purported to overrule). The United States Copyright Act defines compilations as works “formed by the collection and assembling of pre-existing materials or of data that are selected, coordinated, or arranged in such a way that the resulting work as a whole constitutes an original work of authorship,”¹⁸ and it explicitly provides that copyright subject

¹⁵ *Bleistein v. Donaldson Lithographing Co.*, 188 U.S. 239 (1903) (finding an advertising poster to be copyright protected and stating that judges should not be the arbiters of “art”).

¹⁶ *Feist Publ’n’s., Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340 (1991).

¹⁷ *Id.* at 345 (stating that the requisite level of creativity is extremely low so even a slight amount will suffice).

¹⁸ 17 U.S.C. § 101 (definition of “compilation”).

matter “includes compilations.”¹⁹ This statutory language plausibly requires that only the creative selection, coordination, or arrangement of the materials comprising the compilation can result in an original work of authorship. The Court in *Feist* adopted this line of reasoning in Part II.C of its opinion,²⁰ which would have been sufficient to decide the case without reference to the Constitution. However, the Court devoted two subsections of dictum to explain that originality was a general constitutional mandate that included both the traditional copyright meaning of independent production (not copied from something else) and “a minimal degree of creativity.”²¹

Professor Ralph Clifford accepts the *Feist* creativity requirement and tries to give it meaning by looking to the sciences of psychology and neurobiology.²² He worries that by looking solely at creativity in the final product, copyright law will protect creative public-domain or computer-generated works²³ and may fail to recognize copyright in works that do not meet the creativity standards found in works of fine art.²⁴ Based on the physiology of human brain activity, he finds that the mundane has a claim on the “creative spark,” at least equal to “brilliant” works.²⁵ He concludes that one can determine creativity under *Feist*, as the necessary condition for copyright protection (but not for the purpose of determining the scope of protection), by first finding the expressive elements in the usual way, confirming that they were created by the human being claiming to be the author, and then insuring that the author made an intellectual choice from among multiple alternatives.²⁶ He deviates from *Feist* by expressly separating the copyright-protectability question from the scope-of-protection: He would first determine creativity solely for the purpose of deciding whether a work is protected at all; if the creativity threshold is crossed, a different analysis must be applied to determine whether there has been infringement.²⁷ As a practical matter, divorcing the scope-of-protection and copyright-protectability questions is precisely what many courts have been doing. They find creativity in decisions involved in producing a work, such as

¹⁹ 17 U.S.C. § 103(a).

²⁰ 499 U.S. at 354-61.

²¹ *Id.* at 348.

²² Ralph D. Clifford, *Random Numbers, Chaos Theory, and Cogitation: A Search for the Minimal Creativity Standard in Copyright Law*, 82 DENV. U. L. REV. 259 (2004).

²³ *Id.* at 294.

²⁴ *Id.* at 289-90.

²⁵ *Id.* at 290 (creativity is usually the result of a reworking of preexisting ideas and facts within the author's brain and even a “revolutionary” concept lacks any “spark” except perhaps a misfire of some sort within the brain).

²⁶ *Id.* at 295-96.

²⁷ *Id.* at 296.

used car value estimates, and then determine infringement in some other way.²⁸ This is essentially a return to the old “sweat of the brow” doctrine that *Feist* purported to eliminate.²⁹ More fundamentally, if the scope of protection is divorced from the creativity necessary for copyright protection in the first place, what social policy goal is the creativity requirement serving?

Professor Diane Zimmerman has critically analyzed *Feist*'s failure to articulate a fundamental purpose of copyright that explains *why* creativity is a necessary condition for copyright protection.³⁰ She concludes that the Court was trying to draw back from the anything-that-is-not-copied-is-copyright-protectable approach that courts had been following since *Bleistein*.³¹ She applauds this move by the Court in principle but goes on to recognize that *Feist* gives no guidance concerning how far, in what direction, or to what end we should cut back.³² She points out that the fundamental open question is what the Constitution actually does require in order to qualify as a “writing” of an “author” and that to decide this question we must obtain a better understanding of the constitutional purpose of the copyright power.³³

²⁸ The Second Circuit in *CCC Info. Servs., Inc. v. Maclean Hunter Mkt. Reports, Inc.*, 44 F.3d 61, 72 (2d Cir. 1994), for example, found “soft ideas” in the form of estimates of used car values to be copyright protected but noted that the copying at issue was “of virtually the entire compendium” and that it was “of consequence” that there was “wholesale copying” of the compilation.

²⁹ Dennis S. Karjala, *Copyright in Electronic Maps*, 35 JURIMETRICS J. 395, 415 (1995).

³⁰ Diane Leenheer Zimmerman, *It's an Original! (?)*: In Pursuit of Copyright's Elusive Essence, 28 COLUM. J.L. & ARTS 187, 189 (2005).

³¹ *Bleistein v. Donaldson Lithographing Co.*, 188 U.S. 239 (1903).

³² Zimmerman, *supra* note 30, at 208-10. One of the problems, Professor Zimmerman is quite correct to point out, is that copyright in published drivel was of little practical significance in former times. Much was published without the required copyright notice, in which case it immediately went into the public domain, and even where copyright was acquired it expired after 28 years unless affirmative action was taken to renew. *Id.* at 205. Now, however, copyright arises immediately upon fixation and endures for life of the author plus 70 years for individuals and 95 years in the case of works made for hire.

³³ *Id.* at 211. Professor Zimmerman does go on to argue that, if the Constitution *does* require normative quality judgments in order to qualify for copyright, it might not be beyond the ken of judges and legislatures to set and apply implementing standards. *Id.* at 211-12. Professor Justin Hughes does not attack *Feist*'s creativity requirement directly but does convincingly argue that *Feist*'s notion of what constitutes a “fact” is seriously in error. Justin Hughes, *Created Facts and the Flawed Ontology of Copyright Law*, 83 NOTRE DAME L. REV. 43 (2007). Professor Hughes criticizes the *Feist* notion that all facts are somewhere “out there” in the world waiting to be discovered; he is concerned with “creative facts,” that is, facts that are actually brought into existence by an expressive work (such as a model code or a valuation estimate contained in a protectable compilation). *Id.* at 45. While the policy bases for denying copyright to creative facts are similar to those for denying copyright to discovered facts, the former may never come into existence without the copyright incentive, so we need to balance. Professor Hughes would have us look to the extent that the copyright incentive is important in creating the facts and apply the merger doctrine in such a way that

I do not wish to quarrel with Professor Zimmerman's analysis or overall conclusion that copyright should cut back on coverage using a quality standard. Surely it makes no sense to protect trivial scribblings, or even useful collections of facts like telephone books, for the extremely long duration of copyright. Instead, I address *Feist* from a different direction and argue that creativity is a particularly bad dimension for distinguishing the quality that copyright protects from the quality it does not protect. There may also be a question of whether *Feist*'s creativity requirement remains good law. First, the *Feist* Court's assertions concerning the constitutional requirement for originality (and therefore creativity)³⁴ were wholly unnecessary to the decision and therefore dictum.³⁵ Moreover, the Court's more recent decision upholding the constitutionality of the Sonny Bono Copyright Term Extension Act necessarily holds that the meaning of even an express limitation on federal power in the Intellectual Property Clause is for Congress to decide, subject only to rational-basis review by the courts.³⁶ To the extent that originality is constitutionally required for copyright, it is an implied term, and creativity is a judicial gloss on that. At least logically, it would be difficult for the Court now to review congressionally determined levels of copyright protection under a stricter test.³⁷ In addition, while moving to a qualitative standard would heighten the uncertainty concerning what is protected and place an in-

it denies copyright where a copyright incentive is unnecessary but recognizes copyright where an incentive is necessary, subject, however, to a judicially imposed compulsory license in an amount necessary to maintain the incentive. *Id.* at 105.

³⁴ Professor Zimmerman points out that *Feist* did not construct the creativity requirement out of thin air. *Id.* at 200. One hundred years earlier, the Court in the Trade-Mark Cases, 100 U.S. 82, 94 (1879), had stated that copyright required a foundation in the "creative powers of the mind." *But see* Russ VerSteege, *Sparks in the Tinderbox: Feist, "Creativity," and the Legislative History of the 1976 Copyright Act*, 56 U. PITT. L. REV. 549 (1995) (criticizing the judicial adoption of a creativity requirement for copyright and arguing that there is little to no support for such a requirement in the legislative history).

³⁵ See *supra* text accompanying note 20.

³⁶ *Eldred v. Ashcroft*, 537 U.S. 186, 208 (2003) (finding the Sonny Bono act rational and refusing to second guess Congress' "policy" decision to treat a term extension even for works already in existence as a "limited Time" within the meaning of the Intellectual Property Clause).

³⁷ This suggests that Congress could adopt even a database protection statute under its intellectual property power rather than having to rely on the commerce power. At least two post-*Eldred* commentaries, while not expressly calling for an overruling of *Feist*, have forcefully argued for highly deferential judicial review of copyright legislation generally. Thomas B. Nachbar, *Judicial Review and the Quest to Keep Copyright Pure*, 2 J. TELECOMM. & HIGH TECH. L. 33 (2003); Paul M. Schwartz & William Michael Treanor, *Eldred and Lochner: Copyright Term Extension and Intellectual Property as Constitutional Property*, 112 YALE L.J. 2331 (2003).

creased burden on the judiciary,³⁸ removing the creativity requirement would free courts from the mental gymnastics they now perform in determining the copyright protectability of works like maps, which everyone agrees should be protected but many of which cannot qualify as creative in the sense that the end product evinces the author's personal creative choices.³⁹

The main objection to *Feist's* creativity requirement, however, is not that it is technically dictum, nor that it is not truly constitutional if Congress can override it. Nor is the objection that the creativity requirement has increased the burden on the judiciary to determine which fixed works are protected by copyright and the scope of such protection. The real objections to the creativity requirement are, first, that it leads to market failure for many types of works that do not exhibit the requisite creativity and, second, that many courts seek to avoid this market failure by treating the creativity requirement as a touchstone for determining copyright protectability. That is, creativity is often not merely a necessary condition for copyright protection, but for many courts it is also a sufficient condition.⁴⁰ Moreover, the scope of

³⁸ Professor Zimmerman argues that, while the burden on the judiciary might increase, it likely could be managed. Diane Leenheer Zimmerman, *supra* note 30, at 211-12.

³⁹ See, e.g., *Copyright in Electronic Maps*, *supra* note 29, at 397-98 (outlining three post-*Feist* theories for protecting maps and similar traditional "sweat" works that are in reality disguised attempts to avoid the implications of *Feist*). An easy example of a map that evinces no creativity in its ultimate fixation in a tangible medium is the bare bones real estate plat map showing the boundaries of parcels of real property and basic information concerning their ownership. Such maps have been held to be protected by copyright. *Mason v. Montgomery Data, Inc.*, 967 F.2d 135 (5th Cir. 1992); *Rockford Map Publishers, Inc. v. Directory Servs. Co.*, 768 F.2d 145 (7th Cir. 1985); but see *Sparaco v. Lawler, Matusky, Skelly Engineers, LLP*, 303 F.3d 460, 467 (2nd Cir. 2002) (site plan setting forth existing physical characteristics is unprotected by copyright absent creativity in the presentation, such as selection or elimination of detail, choices concerning informative legends, or the establishment of conventions to represent topographical features). The *Sparaco* case is discussed in more detail *infra* at notes 63-64.

⁴⁰ Treatment of "creativity" as a sufficient, rather than just a necessary, condition for copyright is not inherent in the Court's analysis in *Feist*. In its holding, *Feist* simply does not deal with the other limitations on copyright protection beyond the originality and authorship requirements—limitations such as § 102(b). The Court may have contributed to the problem when it said that "copyright protection may extend only to those components of a work that are original to the author." 499 U.S. at 348. The Court's point here, however, is not that every original element in a work is protected. Facts, not being original in themselves, can be protected only through original selection or arrangement. However, the Court never said nor even implied the converse that nonoriginality was the only limit on copyright protectability. For example, an "idea" may be original to the author and even highly creative, yet it is not protected by a copyright in the work expressing the idea. Indeed, *Feist* directly refers to the "fact/expression dichotomy" together with the "idea/expression" dichotomy explicitly contained in § 102(b) in stating that copyright "encourages others to build freely upon the ideas and information conveyed by a work." *Id.* at 350. Nothing in *Feist* suggests that ideas are unprotected simply because they are unoriginal. See Dennis S. Karjala, *Distin-*

protection runs to the creativity the court finds in the work. Courts thus too often leave traditional limitations on copyright—most crucially, the functionality limitation and section 102(b)—out of the analysis.

IV. A NORMATIVE FRAMEWORK

The concern here is the role of creativity in determining both the existence and scope of copyright protection. As discussed in the introduction, creativity by itself does not distinguish between (1) copyright protection, (2) patent protection, or (3) no protection. Before evaluating the damage done by incorporating creativity into the copyright analysis, a normative principle for deciding which of the three possibilities should apply to a given work or element of a work is necessary.

I have offered a normative framework for distinguishing patent and copyright subject matter by looking to functionality, precisely defined by considering whether the subject matter in question is amenable to incremental improvement by others.⁴¹ The approach derives from the Copyright Act's definition of a "useful article" as "an article having an intrinsic utilitarian function that is not merely to portray the appearance of the article or to convey information."⁴² This definition accurately captures a wide range of highly useful subject matter that has traditionally been excluded from patent protection and included under copyright: Maps, dictionaries, novels, paintings, and all other forms of traditional copyright subject matter have no intrinsic utilitarian function other than to portray their own appearance or, more generally, to convey information to human beings. In essence, even though information may be useful, it is nonfunctional under this definition and is therefore copyright rather than patent subject matter.⁴³ Conversely,

guishing Patent and Copyright Subject Matter, 35 CONN. L. REV. 439, 468-69 & n.119 (2003) (hereinafter *Distinguishing Subject Matter*).

⁴¹ *Distinguishing Subject Matter*, *supra* note 40, at 453-58.

⁴² 17 U.S.C. § 101 (definition of "useful article"). This definition was adopted with a view to the separability test for industrial designs and has direct application in the Copyright Act only for pictorial, graphic, and sculptural works. This is part of the problem in getting courts to see its policy validity in the broader normative picture. Fortuitous though it may be, the definition does capture much of the traditional distinction between copyright and patent subject matter.

⁴³ This exclusion of traditional copyright subject matter from patent coverage has long been thought so obvious that it is rarely expressly articulated. The exceptions to patent protection that are usually mentioned are those for "laws of nature, natural phenomena, and abstract ideas." *AT&T Corp. v. Excel Commc'ns, Inc.*, 172 F.3d 1352, 1355 (Fed. Cir. 1999), *citing* *Diamond v. Diehr*, 450 U.S. 175, 185 (1981), *citing* *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980) (patent subject matter includes "anything under the sun that is made by man"). No one has suggested that the Court would extend its interpretation of Patent Act section 101 to include traditional art, music, or literature, notwithstanding that they are all "made by man." See *Distinguishing Subject Matter*, *supra* note 40, at 445 n.26.

if a work is a useful article under this definition it should be relegated to patent or trade secret protection.⁴⁴

Copyright's useful article definition works well to separate tangible products, like automobiles, that have an intrinsic utilitarian function other than to convey information from tangible products, like books and paintings, that do not. This definition does not operate as well, however, in dealing with the important exclusions from copyright protection contained in section 102(b). Systems and processes, for example, are excluded from copyright protection notwithstanding that they consist solely of information that can be applied by human beings (either directly or by using other tangible tools). The difficult question is, what kinds of systems, processes, methods of operation, etc., are excluded from copyright protection under section 102(b) and why?

The answer lies in the differences between works of technology (useful articles under the Copyright Act's definition) and works of information. The former are amenable to objectively measurable incremental improvement, and technology develops faster and better when many people, rather than a single rightsholder, are allowed to try their hands at further development. This is the reason for more stringent requirements to obtain a patent and for patents law's much shorter term of protection.⁴⁵ Society attaches much less social value to incremental "improvements" of traditional copyright subject matter—most people would rather read ten different books than ten versions of the same story that differ only in small (but arguably "improved") details.⁴⁶ Systems and processes that are applied in a practical way to achieve a useful result are also amenable to incremental improvement. A method for curing rubber, for example, can be improved when a computer become available by repeatedly measuring the curing temperature in real time and sending this information to the computer for recalculation of the complex equation that determines the optimal time for opening the mold.⁴⁷ Systems and processes of this type can be made to achieve their

⁴⁴ Computer programs, and perhaps architectural works, are more recently added, congressionally mandated exceptions to this statement. See *Distinguishing Subject Matter*, *supra* note 40, at 450-51 & n.50. Completeness perhaps requires noting that the Copyright Act's definition of a "useful article" is applied by that Act primarily to the separability test for "pictorial, graphic, and sculptural works." 17 U.S.C. § 101 (definition of "pictorial, graphic, and sculptural works"). See note 42 *supra*. My use of the definition as a starting point for distinguishing patent and copyright subject matter is based on the policy view that the definition, perhaps serendipitously, actually captures the core of the distinction between the two types of intellectual property subject matter. I make no claim that Congress consciously articulated this distinction in adopting the definition.

⁴⁵ *Distinguishing Subject Matter*, *supra* note 40, at 453-54.

⁴⁶ *Id.* at 455-56.

⁴⁷ *Diamond v. Diehr*, 450 U.S. 175 (1981).

results faster, at lower costs, more efficiently, more accurately, or in a more user-friendly way by allowing others to tinker with their component steps. This can also be done without unduly undermining the incentives for initial creation or ongoing development of these systems and processes. Section 102(b) insures that copyright will not give a long-term monopoly in the opportunity for making such improvements to the first person who describes the system or process in an underlying copyright-protected work.⁴⁸

It is therefore necessary to distinguish between improvements in the quality of information content and improvements in the means for gathering, presenting, or using the information.⁴⁹ Information content with no practical application other than its appeal to the judgment of a human audience remains copyright, and not patent, subject matter regardless of whether its quality is “high” or “low.”⁵⁰ On the other hand, methods of gathering, organizing, presenting, or using information can be improved incrementally in such ways as reducing costs, enhancing accuracy, augmenting ease of use or modification, or improving the efficiency of information transfer. Increasingly, such methods are deemed patent subject matter.⁵¹ While the rapid expansion of patent to cover methodologies that are not technological has been heavily criticized in the academic community,⁵² the substantial similarity test for copyright infringement and the inordinately long period of copyright protection

⁴⁸ *Distinguishing Subject Matter*, *supra* note 40, at 456.

⁴⁹ *Id.* at 457.

⁵⁰ That information is always copyright subject matter does not mean that all information is protected by copyright. It means only that there can be no patent protection for information content that is not applied to some useful end other than communicating to human beings. Copyright protection may still be denied, for example, to facts or other information that is not original—in the traditional copyright sense of being the product of the purported author.

⁵¹ *E.g.*, *AT&T Corp. v. Excel Commc'ns, Inc.*, 172 F.3d 1352, 1361 (Fed. Cir.1999) (adding a field to a message record for long-distance telephone calls to indicate the primary inter-exchange carrier is a method constituting patent subject matter); *State St. Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368, 1375 (Fed. Cir. 1998) (business methods are not excluded from qualifying as patent subject matter). The Board of Patent Appeals and Interferences of the Patent and Trademark Office has recently rejected the argument that patent subject matter must belong to the “technological arts”; if a process produces “a useful, concrete, tangible result without pre-empting other uses of the mathematical principle,” it is patent subject matter. *Ex parte Lundgren*, 76 U.S.P.Q.2d (BNA) 1385, 2004 WL 3561262, at*3, (Bd.Pat.App. & Interf.), April 20, 2004, Appeal No. 2003-2088, quoting *AT&T Corp.*, *supra*, at 1358 (reversing examiner’s subject-matter rejection, as not belonging to the “technological arts,” of a method for encouraging a manager to achieve certain goals, such as reducing industry collusion, by basing compensation on the degree to which the firm’s performance exceeds a weighted average of comparison firms).

⁵² See *Distinguishing Subject Matter*, *supra* note 40, at 442-44 & nn.19-20. Recently, the issue of whether tax planning strategies can be patented has been much in the legal news. *E.g.*, Steve Seidenberg, *Crisis Pending*, 93 A.B.A.J. 42 (2007).

make copyright wholly inappropriate for the protection of methods that can be incrementally improved to achieve a useful result, including methods for improving the quality of information content.

V. THE LEGACY OF *FEIST*

Feist's emphasis on creativity as a condition for copyright protection has created a potential for market failure with respect to works like complete databases and bare-bones maps, which no longer qualify for copyright protection if *Feist* is applied honestly. This potential for market failure has led courts to stray from basic copyright principles in at least two directions. First, it has encouraged courts to protect all creativity they find, without regard to whether the creativity in question is appropriately protectable under copyright law, under patent law, or is not protectable under either regime. This approach can allow functional subject matter that cannot meet the rigorous demands of patent law to obtain similar, and much longer, protection under copyright. Second, while *Feist* dealt with a very special type of copyright subject matter, namely, a compilation, courts have gone beyond looking for a creative selection or arrangement of the contents of a compilation. Now they are basing copyright protection on a creative selection or arrangement of *any* type of copyright subject matter. For example, once a book describing a sequence of public domain yoga exercises is deemed to be a compilation as a selection and arrangement of those exercises, the court can lose sight of other, more fundamental limitations on copyright, such as functionality.⁵³ Similarly, treating a work of history as a compilation consisting of the selection and arrangement of historical events⁵⁴ can obscure the differences in the scope of protection among literary works, which is very narrow in historical and biographical works.⁵⁵

A. *Creativity as a Necessary Condition to Copyright Protection*

Using creativity as a necessary condition to copyright protection runs a major risk of market failure because socially desirable works that

⁵³ See *Open Source Yogan Unity v. Choudhury*, 74 U.S.P.Q.2d 1434 (N.D. Cal. 2005), 2005 WL 756558, at *4 (creative selection or arrangement of functional, public domain yoga exercises designed to improve the practitioner's health is copyright protected).

⁵⁴ Jane C. Ginsburg, *Sabotaging and Reconstructing History: A Comment on the Scope of Copyright Protection in Works of History after Hoehling v. Universal City Studios*, 29 J. COPR. SOC'Y 647, 664 (1982) (arguing that a history is like a compilation, because it involves a selection and arrangement of facts together with an explanation of those facts).

⁵⁵ *Hoehling v. Universal City Studios, Inc.*, 618 F.2d 972, 980 (2d Cir. 1980) (historical theory); *Rosemont Enters., Inc. v. Random House, Inc.*, 366 F.2d 303, 306-07 (2d Cir. 1966) (biography).

are expensive to produce but cheap to copy will be underproduced. For compilations, this was the problem the old “sweat of the brow” approach to originality was designed to solve. The problem, however, is more general and even precedes *Feist*. Two well known examples are *L. Batlin & Son, Inc. v. Snyder*⁵⁶ and *Hearn v. Meyer*.⁵⁷ In *Batlin*, a newly created version of a public domain Uncle Sam bank was denied copyright protection on the ground that its differences from the public domain original were too slight to qualify as original for copyright purposes. In *Hearn*, meticulously reproduced illustrations of the original public domain version of *The Wizard of Oz* were similarly held to lack copyright originality. More recently, the district court in *Bridgeman Art Library, Ltd. v. Corel Corp.*,⁵⁸ relying on *Feist*, held that skillfully made exact reproductions of public domain art works lacked originality and were therefore without copyright protection. I take it as obvious that anyone wishing to have a copy of a famous work of art would like to have as exact a copy as possible. Although the statute treats “art reproductions” as copyright subject matter,⁵⁹ implying that Congress wanted to encourage the dispersion of knowledge and understanding of fine art by means of reproductions available to people unable to visit the various museums where famous works are housed, these decisions undermine the incentive to create such reproductions. What is the upside to protecting only “creativity” and not the tangible results of the application of mere skill and effort that compensates for this market failure?

The market failure is not limited to reproductions of public domain art. *Darden v. Peters*⁶⁰ involved maps designed to enable a user to find a real estate appraiser in any location in the United States. The map designer started with public domain census maps, digitally redrew the lines to resize the maps and smooth the lines, and created a three-dimensional effect by repeating lines several times, slightly askew and in brighter or darker shades.⁶¹ The Fourth Circuit, applying an abuse of discretion standard, upheld the Copyright Office’s determination that these changes lacked the minimal level of creativity necessary for copyright protection.⁶² Similarly, in *Sparaco v. Lawler, Matusky, Skelly Engineers, LLP*,⁶³ a site plan setting forth existing physical characteristics

⁵⁶ 536 F.2d 486 (2nd Cir. 1976) (en banc), cert. denied, 429 U.S. 857.

⁵⁷ 664 F. Supp. 832 (S.D.N.Y. 1987).

⁵⁸ 36 F. Supp. 2d 191, 196-97 (S.D.N.Y. 1999).

⁵⁹ 17 U.S.C. § 101 (definition of “pictorial, graphic, and sculptural works”).

⁶⁰ 488 F.3d 277 (4th Cir. 2007).

⁶¹ *Id.* at 281.

⁶² *Id.* at 287.

⁶³ 303 F.3d 460, 467 (2nd Cir. 2002).

was held unprotected by copyright law as an unoriginal representation of preexisting facts under *Feist*, absent creativity in presentation, such as selection or elimination of detail, choices concerning informative legends, or the establishment of conventions to represent topographical features.⁶⁴

Courts in these cases legitimately fear inhibiting later creative artists if society recognizes a copyright in basic building blocks, which of course is what the public domain supplies.⁶⁵ In *Todd v. Montana Silver-Smiths, Inc.*,⁶⁶ for example, the court denied copyright in bracelets and related jewelry that were highly realistic copies of barbed wire on the grounds that the jewelry lacked a substantial variation from public-domain barbed wire and that later artists would find it difficult to create jewelry in barbed wire style without infringing.⁶⁷ Similarly, in *Meshwerks, Inc. v. Toyota Motor Sales U.S.A., Inc.*,⁶⁸ essentially exact digital models of Toyota automobiles, prepared by careful grid-pattern measurements on actual cars and by manipulation of the measurement data to give a three-dimensional illusion on the computer screen, were held to lack new creative elements not present in the actual cars modeled.⁶⁹ The solution to the problem of insuring that later authors

⁶⁴ The Second Circuit in *Sparaco* managed to err on *both* sides of the policy dilemma laid down by *Feist*. Not only did its reliance on creativity as a necessary condition lead to the denial of copyright protection for an original map or drawing depicting accurate physical reality; the court held that a site plan “capable of being used to guide actual construction work on numerous site preparation tasks,” such as preparing the building footprint, creating parking lots, drives, and walkways, placing utilities, and creating fire lanes and sediment and erosion control measures, was a specific realization of its underlying ideas, so that copying would be an infringement of copyright. *Id.* at 469. The court appeared to be wholly untroubled by the functionality of the building footprint or the location and operation of parking lots, utilities, and erosion control measures. Implicit in the court’s reasoning is the common but erroneous approach to copyright that if there are many ways of expressing a given idea, any specific way will be protected by copyright—in other words, that the mere absence of merger leads to copyright protection. Section 102(b) and *Baker v. Selden*, however, go well beyond the mere absence of merger and bar copyright protection for machines and methods of operation no matter how many other ways there are of accomplishing the function in question. See *infra* note 135.

⁶⁵ Jessica Litman, *The Public Domain*, 39 EMORY L.J. 965 (1990).

⁶⁶ 379 F. Supp. 2d 1110, 1113-14 (D. Colo. 2005).

⁶⁷ The “substantial variation” requirement for derivative-work originality goes back to *Durham Indus., Inc. v. Tomy Corp.*, 630 F.2d 905 (2d Cir. 1980), and Judge Posner’s opinion for the Seventh Circuit in *Gracen v. Bradford Exchange*, 698 F.2d 300 (7th Cir. 1983). *Gracen* denied copyright in paintings that combined, in original compositions and brushwork, elements from the movie version of *The Wizard of Oz*.

⁶⁸ 81 U.S.P.Q.2d 1367, 2006 WL 2623935 (C.D. Utah 2006).

⁶⁹ The *Meshwerks* court relied on *ATC Distribution Group, Inc. v. Whatever It Takes Transmissions & Parts, Inc.*, 402 F.3d 700, 702-03 (6th Cir. 2005), which found hand-drawn sketches of auto parts copied from photographs were not copyright protected, because the goal of the author was as accurate a reproduction as possible of the copyright-unprotected parts portrayed.

have sufficient tools to work with, however, should not be outright denial of all copyright protection. Rather, the scope of protection should be narrowed to the point that only slavish copying—through the modern equivalents of photocopying, like the use of molds for three-dimensional works—is held to infringe. Otherwise, we risk a judicially induced market failure in which works of this type will be underproduced because the cost of creating a fine reproduction of a public domain or other unprotected work can be much greater than the later cost of copying that reproduction.⁷⁰

B. *Creativity as a Sufficient Condition—Protecting Creativity Wherever It Is Found*

After *Feist* was decided, it was predictable⁷¹ that courts seeking to prevent market failures for “sweat of the brow” works would broaden their search for creativity in an effort to maintain the incentive to create works valued by society, such as many maps and compilations that lack the stamp of authorial creativity on their face.⁷² They might find,

⁷⁰ Professor Clifford discusses the unreported case of *Stuart Entertainment, Inc. v. American Games, Inc.*, No. 1-96-CV-90036, slip op. (S.D. Iowa Mar. 19, 1998), *aff'd*, 205 F.3d 1347 (8th Cir. 1999) (table, opinion at 1999 WL 1144831). Ralph D. Clifford, *supra* note 22, at 282-85. According to Professor Clifford, plaintiff used computer algorithms to generate a set of “optimally playable” bingo cards, such that each card was unique, each number appeared roughly an equal number of times, and each row and column was unique. Defendant copied all of plaintiff’s cards exactly, without, apparently, making any effort to determine whether other combinations might be available that were equally “optimal.” Plaintiff’s 9000 cards were a tiny percentage of the some 111 quadrillion possibilities, so it is implausible that plaintiff actually achieved an absolute optimum, whatever criteria are used to make that judgment. The court denied copyright on the ground that the selection was made mechanically by the computer program, and Professor Clifford rightly criticizes this reasoning on the ground that the plaintiff selected its 9000 cards from a very large universe. For present purposes, we need only observe that the court’s reasoning presents a serious risk of market failure. To the extent that time or money was invested in developing the computer program that made the initial choice of cards, allowing defendant to free ride on that choice undercuts the incentive to use advanced tools for this purpose, and there is no countervailing policy, such as section 102(b), that operates here to limit or deny protection. *Feist*’s requirement for intellectual creativity thus results in at least the potential for market failure with no compensating benefit.

⁷¹ Dennis S. Karjala, *Copyright and Misappropriation*, 17 U. DAYTON L. REV. 885 (1992).

⁷² The creativity requirement may make a little more sense in the rare case involving traditional copyright subject matter where the purported author has made only a small variation on public domain materials. One district court judge refused to grant summary judgment to defendants on the issue of whether a one-musical-bar drum pattern looped twenty-seven times satisfied the originality requirement. *Vargas v. Pfizer, Inc.*, 418 F. Supp. 2d 369, 372-73 (S.D.N.Y. 2005). In the context of music and literature, “originality” in the sense of “not copied” almost always implies sufficient creativity to get over the minimal *Feist* threshold. In *Vargas*, the court seemed most concerned about whether the full looped composition was independently created. *Id.* at 374. The court did not address the issue of whether the basic one-bar pattern was too simple to be protected in itself (even if original), although if

for example, a creative technique or methodology for gathering or checking the factual information in a work to be a basis for affording copyright protection.⁷³ Courts might also rely on a creative methodology for organizing or presenting information.⁷⁴ The problem with this

this issue were decided in favor of the defendants that would have been the end of the matter. Close cases like this can pose interesting challenges to academic copyright theorists, but it is rare that a work valued for its artistic merits is also so simple that it fails to overcome the creativity hurdle.

⁷³ *E.g.*, *CCC Info. Servs., Inc. v. Maclean Hunter Mkt. Reports, Inc.*, 44 F.3d 61, 66-67 (2nd Cir. 1994) (estimates of used car values by the exercise of professional judgment and expertise show copyright originality); *Mason v. Montgomery Data, Inc.*, 967 F.2d 135, 139-40 (5th Cir. 1992) (skill and judgment in selection of sources, their interpretation, reconciling inconsistencies, and depicting the information meet the creativity requirement for copyright); *F.A. Davis Company V. Wolters Kluwer Health, Inc.*, 2005 WL 1993801, 75 U.S.P.Q.2d 1911 (E.D.Pa. 2005) (creative choice of which lab tests to include in a nurse's pocket guide showing typical test results leads to copyright protection for the selection); *Marshall & Swift v. BS & A Software*, 871 F. Supp. 952, 959-61 (W.D. Mich. 1994) (numerical content of cost schedules required by state law to be used in making real estate tax assessments was copyright protected because of the exercise of creative judgment and selection, so inputting that content into a computer program for calculating tax assessments infringed).

⁷⁴ *E.g.*, *Assessment Techs., LLC v. WIREdata, Inc.*, 350 F.3d 640, 643 (7th Cir. 2003) (data structure grouping 456 fields into 34 categories meets the originality requirement because no other similar program used the same arrangement and the structure was not obvious or inevitable); *Am. Dental Ass'n v. Delta Dental Plans Ass'n*, 126 F.3d 977, 979 (7th Cir. 1997) (existence of numerous possibilities for categorizing dental information implies that any given choice is creative, including the numerical codes used to designate specific dental procedures); *CCC Info. Servs., Inc. v. Maclean Hunter Market Reports, Inc.*, 44 F.3d 61, 67-68 (2nd Cir. 1994) (copyright based on choice in dividing national used car market into regions, inclusion of optional features, concept of an "average" vehicle, use of 5000-mile mileage breakpoints, and the number of years to include in a used-car price guide); *Key Publ'ns., Inc. v. Chinatown Today Pub. Enter.*, 945 F.2d 509, 516 (2nd Cir. 1991) (creative choice of "organizing principle" for categories of businesses to include in a Chinese yellow page directory leads to copyright protection); *Kregos v. Associated Press*, 937 F.2d 700, 704-05 (2nd Cir. 1991) (choice of nine categories for presenting statistics useful in predicting the results of baseball games will be protected if creative). The Eleventh Circuit has recently upheld a finding of infringement of a kind of multiple listing service for the sale of yachts. *BUC Int'l Corp. v. Int'l Yacht Council Ltd.*, 489 F.3d 1129 (11th Cir. 2007). Here, individual yacht sellers supplied the information contained in the database but in a format created by BUC. The defendant IYC sought to create a competing service. Many of the contributors to defendant's website had already sent the same information to BUC, so they naturally sent it to IYC in the same format. *Id.* at 1134. The court says BUC's idea is "how to present brokers with information about a boat. BUC expressed this idea by selecting certain features of a boat that it thought would be important to brokers, and arranging them according to what [it] thought was the most important information first." *Id.* at 1143-44. According to this reasoning, a competing service will have to arrange the information differently—even if it gathers all its information independently—notwithstanding that the plaintiff BUC may well have found an optimal or near optimal order for presenting information related to yacht sales. Moreover, to the extent users (brokers) get used to working with the BUC format, they might find it difficult to switch to a competitor. There is no social value in making these search tools different and incompatible simply for the sake of being different. If BUC's data formats are a nonobvious advance in the art, BUC should be entitled to a patent. Otherwise,

approach is that all of copyright tradition, including *Feist*, says that the scope of copyright protection is determined by the work's originality.⁷⁵ When creativity is part of the work's originality, a finding of creativity naturally leads to copyright protection of the creative elements found in the work, even when those elements are more appropriately treated as patent subject matter, or should be denied intellectual property protection altogether.⁷⁶

Two recent cases illustrate this problem. In *Southco, Inc. v. Kanebridge Corp.*,⁷⁷ Judge Alito correctly concluded that part numbers assigned by a manufacturer of a variety of fasteners are not protected by copyright. The plaintiff in *Southco* developed a numbering system that used a particular digit or group of digits to signify a characteristic of the product in question. Defendant Kanebridge was a Southco competitor that used its own parts numbering system but distributed its products with a comparison chart using Southco's numbers to show the Southco fastener to which the Kanebridge product was equivalent. Southco asserted copyright infringement, not for use or application of the Southco numbering system but for copying the numbers themselves onto the comparison chart.⁷⁸ The court concluded that the part num-

its contribution to the art should be regarded like any other unpatented advance, so that others can build upon it in improving the usefulness of the service.

⁷⁵ E.g., *Feist Publ'ns*, 499 U.S. at 348 ("Originality remains the *sine qua non* of copyright; accordingly, copyright protection may extend only to those components of a work that are original to the author").

⁷⁶ An extreme pre-*Feist* example is the district court opinion in *Lotus Dev. Corp. v. Paperback Software Int'l*, 740 F. Supp. 37 (D. Mass. 1990), holding that a spreadsheet menu command hierarchy is copyright protected. While this holding, along with that of its sister in *Lotus Development Corp. v. Borland Int'l, Inc.* 799 F. Supp. 203 (D. Mass.1992), was eventually overturned, 49 F.3d 807 (1st Cir. 1995), *aff'd by an equally divided Court*, 516 U.S. 233 (1996), the court's reasoning was stunning for its emphasis on creativity over all traditional limitations on copyright protection, especially those based on functionality and § 102(b). In response to defendant's argument that the Lotus spreadsheet had become a standard, so that other spreadsheet manufacturers had to copy it in order to be competitive, the court stated, "Copyright protection would be perverse if it only protected mundane increments while leaving unprotected as part of the public domain those advancements that are more strikingly innovative." 740 F. Supp. at 79. Copyright law is not at all perverse when it leaves the protection of innovative functionality to the patent and trade secret regimes. That is the essential lesson of *Baker v. Selden*. The district court in *Lotus* simply forgot that these regimes exist, assuming that if copyright did not apply the innovation would be part of the public domain.

⁷⁷ 390 F.3d 276 (3rd Cir. 2004), *en banc*.

⁷⁸ The majority opinion correctly states that, because ideas cannot be copyright protected, Southco focused on the part numbers themselves. *Id.* at 282. The dissent takes issue on this point, notwithstanding Southco's concession that it "was not claiming infringement by the use of its system for creating part numbers but only in the part numbers themselves." *Id.* at 292 n.9 (Roth, J., dissenting and quoting from Southco brief). Judge Roth argued that Southco was conceding only that the idea to develop a coding system was unprotected, as it asserted throughout the litigation that its "coding process" was covered by the copyright. *Id.*

bers themselves were not protected by copyright because they are the mechanical product of applying the rigid rules of the Southco system.⁷⁹ The dissent argued that the part numbers were “expression” rather than idea, and Judge Alito responded that, “The relevant question is not whether the numbers represent an idea, as opposed to the expression of the idea, but whether the numbers possess the requisite spark of creativity needed for copyright protection.”

While the Third Circuit majority reached the correct result in *Southco*, the separate opinions in the case illustrate the pernicious effect of looking for creativity in copyright analysis. The majority found no creativity in cranking a number out of a formula, but presumably would have considered granting protection had they found creativity. The dissent had no trouble finding creativity, because Southco’s system and the resulting parts numbers were only one of many possibilities for expressing the “idea” of using a code to convey product characteristics.⁸⁰ Even the concurring opinion of Judge Becker was willing to afford copyright protection based on creative choices concerning which characteristics to represent in the system, which values to permit, and the choice of symbols.⁸¹ Judge Becker concludes by saying that because the number of such characteristics was limited and dictated by industry standards, consumer preferences, or objective characteristics of the fasteners, originality was lacking under the *scènes à faire* doctrine.

Perhaps the most surprising aspect of *Southco* is Judge Roth’s dissent, which stated that impairing Kanebridge’s ability to compete with Southco in the market for fasteners was not the type of competition that copyright law is concerned with, citing a notorious dictum from the early 1980’s *Apple Computer* case.⁸² It would be difficult to make a more profoundly incorrect statement about copyright law than this. To say that copyright does not protect against competition in the underlying product market (as opposed to the market for literary and artistic works as such) is not to say that copyright is unconcerned with the effects it has on such markets. Many of the most important limitations and exceptions to copyright, such as fair use and Section 102(b), serve

Given that § 102(b) also excludes any “process” from copyright coverage, one wonders how Judge Roth could credit this argument with any merit.

⁷⁹ *Id.* at 285.

⁸⁰ *Id.* at 292.

⁸¹ *Id.* at 288.

⁸² *Id.* at 293; *Apple Computer, Inc. v. Franklin Computer Corp.*, 714 F.2d 1240, 1253 (3rd Cir. 1983).

the purpose of insuring that copyright protection does not interfere with markets other than the market for copies of the work itself.⁸³

Creativity simply should not be an issue in a case like *Southco*. The critical policy issue is whether *Southco* should have copyright protection for its numbering system as against a competitor who uses the part numbers derived from the system to identify its equivalent parts. The trial court thought the numbering system should be protected, notwithstanding that it had, to some extent, become an industry standard.⁸⁴ However, section 102(b) expressly excludes “systems” from copyright protection.⁸⁵ There may be some dispute concerning the extent to which the word “system,” as used in ordinary speech, is an excluded “system” under section 102(b).⁸⁶ Given the majority’s prior determina-

⁸³ See J.H. Reichman, *Computer Programs as Applied Scientific Know-How: Implications of Copyright Protection for Commercialized University Research*, 42 VAND. L. REV. 639, 685, 691-92 & n.288 (1989) (copyright is designed to regulate the market for literary and artistic works and its protection of utilitarian works can become a tool for restraining trade in copyright-unprotected products; functional works have narrow copyrights and copyright is overridden where the reproduction right would interfere with the use of functional features); Dennis S. Karjala, *Copyright Protection of Computer Software, Reverse Engineering, and Professor Miller*, 19 DAYTON L. REV. 975, 980-81 (1994) (citing cases stressing the importance of insuring that copyright does not displace patent for the protection of functional works); *Sega Enters. Ltd. v. Accolade, Inc.*, 977 F.2d 1510, 1523-24 (9th Cir. 1992), amended by Order and Amended Opinion, D.C. No. CV-91-3871-BAC, Jan. 6, 1993 (“an attempt to monopolize the market by making it impossible for others to compete runs counter to the statutory purpose of promoting creative expression”). The doctrine of copyright misuse has also arisen to deal with attempts to use the copyright to control markets beyond those for the work itself. *Lasercomb America, Inc. v. Reynolds*, 911 F.2d 970, 977 (4th Cir. 1990).

⁸⁴ *Southco Inc. v. Kanebridge Corp.*, 2000 WL 21527, 53 U.S.P.Q.2d 1490, 1493 (E.D. Pa. 2000):

The Numbering System, with its unique, non-intuitive and highly complex attributes, easily satisfies the standard for originality. It was created out of nothing, and has developed to some use as an industry standard. . . . It is expandable as new products are developed, and is of use to *Southco* employees and customers. Each digit represents a different characteristic. *Southco* decides which digit represents which characteristic. *Southco* decides which characteristics it will describe with the Numbering System. The Numbering System is original.

⁸⁵ 17 U.S.C. § 102(b); see *supra* note 9.

⁸⁶ Judge Roth in dissent in *Southco* argued that the “idea” involved in the case was *Southco*’s decision to use a code to describe its products, so that the particular numbering rules, and the numbers it generated, chosen by *Southco* to portray its choice of the products’ relevant characteristics, were expression of that idea. 390 F.3d at 291-92. Judge Roth further treated “idea” and “system” as largely interchangeable but says that “system” can also be used to indicate the means by which an idea is implemented. Thus, the “system” in question is merely the expression of *Southco*’s idea. *Id.* at 292 n.9. This approach to § 102(b) would largely if not wholly read the word “system” out of the statute. The statute is clear: Copyright protection in a given work does not extend to *any* idea, system, procedure, method of operation, concept, and so forth. Copyright may perhaps protect a few things that in ordinary language might be classified as a “system,” but it behooves anyone who chooses to use any of the § 102(b) terms to describe an element of a work to explain, by rational argument, why copyright protection is not denied by that fundamental provision of the statute.

tion that Southco's numbering system was not protected, however, the conclusion that the actual part numbers generated by the system are also unprotected follows as a matter of course. In *Baker v. Selden*,⁸⁷ the forms necessary to implement the unprotected (although surely creative) accounting system were held unprotected because they were necessary incidents to using the system. Similarly, the number generated by Southco's system to portray a copyright-unprotected product, such as a screw, is uniquely necessary in using the system to describe that product. Consequently, the part numbers themselves are unprotected as necessary incidents to using an unprotected system, regardless of whether the numbers or the system is creative.

*F.A. Davis Co. v. Wolters Kluwer Health, Inc.*⁸⁸ is another example of a court getting it wrong by focusing on creativity as a necessary and sufficient condition for copyright protection. At issue was a set of pocket reference guides designed for use by nurses in the field as a quick reference to data that they might need for counseling and treating patients. The court's analysis starts from "the basic principle of copyright law . . . [that] a work will be protected if it evinces even a minimal level of originality or creativity,"⁸⁹ which is to say (incorrectly) that a minimum level of creativity is sufficient for copyright protection. The court found nearly verbatim copying of a blank form for a nurse's use in assessing a patient's condition. The form guided the nurses step-by-step through the information they would need to obtain from the patient. The plaintiff's work also contained a section listing common laboratory tests related to a variety of topics and a range of expected values for each test. The author sought to select and organize the tests that she thought "would be the most useful to nurses and nursing students."⁹⁰ The court noted that other quick reference guides used different laboratory tests and headings, while the defendant's guide listed all but ten of the same tests as plaintiff's and organized them under virtually the same topic headings: "Significantly, Defendant has copied not the factual aspect of this section (the lab values), but rather the subjective, creative aspect of this section (the inclusion of certain laboratory tests over others)."⁹¹ Therefore, on a motion for summary judgment, the court found a likelihood of infringement with respect to the blank forms and the lab test section.

⁸⁷ *Baker v. Selden*, 101 U.S. 99, 103-04 (1879).

⁸⁸ *F.A. Davis Co. v. Wolters Kluwer Health, Inc.*, 413 F. Supp. 2d 507 (E.D.Pa. 2005).

⁸⁹ *Id.* at 511.

⁹⁰ *Id.* at 514-15.

⁹¹ *Id.* at 515.

Setting aside for the moment the blank form problem,⁹² basing copyright on creativity in the choice of which lab tests to include in a pocket reference guide for nurses forces every subsequent maker of such guides to make different choices, even where the first person's choice is optimal. In *F.A. Davis*, the plaintiff sought to select the tests she thought would be most useful to nurses. The existence of other guides containing different sets of tests does not show that the choices are a matter of personal taste. More likely it shows plaintiff's belief that the earlier guides were not as useful to nurses. To the extent that she is correct, her own guide comes closer to being optimal. No one can say exactly when an "optimum" has been achieved, but the primary way to move closer to an optimum is by trial and error. Copyright in any given selection prevents others from trying to improve further by making minor adjustments—and if the plaintiff has achieved something close to an optimum, she will have a very long-term monopoly in that optimal methodology for delivering information.

As a policy matter seeking to cure market failure, what calls for protection in a case like this is precisely what *Feist* says cannot be protected by the copyright, namely, the plaintiff's efforts in collecting and verifying the accuracy of the expected ranges for the tests she included in her reference guide. It is impossible on market failure grounds to justify protection for such efforts for the long term of copyright, but because independent collection of identical information would not infringe even if "sweat of the brow" protection were recognized, subsequent authors seeking to supply improved reference guides could compete with products of the same quality. When courts use creativity in test selection as the touchstone for copyright protection, however, a subsequent author will infringe even if, as in the actual *F.A. Davis* case, she does her own legwork in collecting the information relevant to the tests selected and even if she believes the particular selection of tests is optimal.

⁹² For a discussion of the relationship of blank forms to our creativity focus, see *infra* text accompanying notes 114-122. Courts split three ways on the copyright protectability of blank forms: Some deny copyright altogether, some recognize a copyright but afford a "thin" protection so that essentially only verbatim copying infringes, and some find creativity in the selection or arrangement of items to be filled in and would find infringement by any form seeking substantially similar information. See *Distinguishing Subject Matter, supra* note 40, at 482-84. When blank forms are viewed as a tool by which the user acquires information from those who fill out the form, copyright's poor fit as a protective scheme becomes apparent. Forms are designed for ease of use, including expectations based on prior use by the form fillers, and accuracy and completeness in the information sought. In medical and similar contexts, there will often be an optimal or near optimal selection of information that is most useful, and these optimums are achieved by incremental improvement, as form creators make changes, often based on feedback from users, to better meet their needs. *Id.* at 484-85.

There are many more examples, ranging from “created” facts in compilations⁹³ and maps,⁹⁴ valuations,⁹⁵ systems and methods for

⁹³ *CCC Info. Servs., Inc. v. Maclean Hunter Mkt. Reports, Inc.*, 44 F.3d 61, 66-67 (2nd Cir. 1994) (creativity in estimating used car values through the exercise of professional judgment and expertise).

⁹⁴ *Mason v. Montgomery Data, Inc.*, 967 F.2d 135, 139 (5th Cir. 1992) (real estate plat map produced by creative selection and interpretation of sources, reconciling inconsistencies, and judgment in depiction); *Nester’s Map & Guide Corp. v. Hagstrom Map Co.*, 796 F. Supp. 729 (E.D.N.Y. 1992) (creativity in assigning approximate address numbers to selected intersections on map of New York City designed for use by taxi drivers sufficient for copyright protection).

⁹⁵ *CDN, Inc. v. Kapes*, 197 F.3d 1256, 1260 (9th Cir. 1999) (creative process for determining price of collectible coins leads to protection for the estimated value of each coin). The Second Circuit also found creativity, and therefore copyright protection, in carefully considered estimates of used car values. *CCC Info. Servs., Inc. v. Maclean Hunter Mkt. Reports, Inc.*, 44 F.3d 61, 66-67 (2nd Cir. 1994). The folly of this approach, however, recently became clear even to the Second Circuit in *N.Y. Mercantile Exch., Inc. v. IntercontinentalExchange, Inc.*, 497 F.3d 109 (2nd Cir. 2007). At issue were so-called “settlement prices”—the estimated values of options and futures contracts by an exchange on which such instruments were traded. After each day’s trading, the values of such contracts held by customers had to be determined in order to demand additional margin, or make payouts, to those customers trading on margin. The court was unanimous on the issue that the merger doctrine barred copyright protection for the value estimates, on the ground that the range of estimates that could be obtained for the numerical value of a given contract was limited, and neither the majority nor the concurrence attempted to distinguish *CCC Info.*’s refusal to apply the merger doctrine to used car valuations. While the court thus got to the only sensible result possible, the search for “creativity” muddled the logic. The majority spent considerable effort to argue that, in fact, the settlement prices were not original because, in principle, only one was correct, making it more like a discovered fact than a created value or opinion. *Id.* at 114-15. That is precisely the danger of looking for “creativity.” Whether these derived numbers should be protected is a policy question – for example, “Would nonprotection lead to market failure?”—and has nothing to do with whether creativity was involved in their production. The court went on to find that, even if there was creativity, the merger doctrine precluded a finding of infringement in this case, partly on the policy ground that the plaintiff needed no incentive to create settlement prices because they were both required by law and necessary to operate a functioning commodities market. *Id.* at 118. The concurring opinion correctly argued that it was wrong, even in dictum, to dispose of the creativity issue on summary judgment but agreed with the majority’s handling of the merger issue.

If *N.Y. Mercantile* holds up, it could be the beginning of a more sensible approach to numerical valuations than that of cases like *CCC Info.* and *Kapes*. In all these cases, people are trying to establish the single *correct* value of something. While different experts will come up with different numbers, in principle there is only one correct number, just as there is only one correct way to arrange the fragments of the Dead Sea Scrolls to reproduce the originals. *Distinguishing Subject Matter*, *supra* note 40, at 478. The social goal is not to have a variety of esthetically pleasing guesses about these numbers but rather to have as close an approximation as possible to the actual value, and that is something that is achieved most efficiently by allowing incremental improvement by others. If market failure inhibits the creation of such numerical valuations in the first place, we can consider applying copyright (clumsy though that would be given its long period of protection) or appealing to the legislature for sui generis legislation that supplies an appropriate degree of protection. Creativity in the production of such numbers, however, is wholly irrelevant. Professor Hughes argues that *N.Y. Mercantile* was correctly decided because no copyright incentive was needed to induce the exchange to determine the settlement prices as best it could. He is inclined, however, to

presenting⁹⁶ and organizing information⁹⁷ (including taxonomies⁹⁸), and teaching techniques,⁹⁹ in which judicial emphasis on creativity has blinded courts from applying other copyright limitations such as section 102(b) and the channeling principle of *Baker v. Selden*. I have previously analyzed many of these cases in some detail,¹⁰⁰ arguing that explicit recognition of these functional elements as patent subject matter might relieve some of the pressure on courts to protect such elements under copyright. The functionality and section 102(b) exclusions are a both a vital part of copyright. If courts are going to ignore or abandon them, they should at least do so consciously. *Feist's* creativity requirement actually sends courts in the opposite direction.

C. *Expansion of the Notion of "Compilation"*

Feist dealt with a particular type of copyright subject matter, a compilation. The language of the copyright statute was perfectly adequate to allow the Court arrive at its decision without reference to the Constitution.¹⁰¹ By raising the constitutional issue in the analysis, however, the Court set the stage for lower courts to find creativity as a sufficient condition for protection of *any* work, and not only creativity in general but specifically creativity in so-called "selection or arrangement." The reasoning thus comes full circle and everything qualifies as a "compilation" in the sense that a creative selection or arrangement of component parts of any work leads to copyright protection.

deny operation of the merger doctrine in cases like *CCC Info.* and *Kapes*, because of the potential for market failure. In those cases, therefore, he would recognize the copyright but allow free use of the valuations subject to payment of a compulsory license to the creators of the "facts." Justin Hughes, *supra* note 33, at 93, 105. Nothing herein is intended to quarrel in any way with this conclusion.

⁹⁶ *Kregos v. Associated Press*, 937 F.2d 700 (2nd Cir. 1991) (creativity in the choice of categories for presenting information concerning the pitchers starting in upcoming baseball games is sufficient to confer copyright protection).

⁹⁷ *Key Publ'ns., Inc. v. Chinatown Today Publ'g. Enters.*, 945 F.2d 509, 516 (2nd Cir. 1991) (creativity in the "organizing principle" for the categories in a Chinese yellow page directory protected by copyright—with no explicit recognition that § 102(b) precludes the protection of any "principle").

⁹⁸ *Am. Dental Ass'n v. Delta Dental Plans Ass'n*, 126 F.3d 977, 979 (7th Cir. 1997) (exercise of professional judgment and expertise in devising a taxonomy of dental procedures is creative because there are many ways of classifying such procedures); *Practice Mgmt. Info. Corp. v. Am. Med. Ass'n*, 121 F.3d 516, 521 (9th Cir. 1997) (copyright held to protect, but for copyright misuse, a "coding system" that assigned numbers to 6,000 medical procedures).

⁹⁹ *Kepner-Tregoe, Kepner-Tregoe, Inc. v. Leadership Software, Inc.*, 12 F.3d 527 (5th Cir. 1994) (creative methodology for teaching managerial leadership and decisionmaking protected and infringed even by a system that delivered the same content with different words).

¹⁰⁰ *Distinguishing Subject Matter*, *supra* note 40, at 468-517.

¹⁰¹ See *supra* notes 34-35 and accompanying text.

Section 102(a) of the Copyright Act supplies a nonexclusive list of types of works that can qualify for copyright protection, such as literary works, musical works, and sound recordings.¹⁰² Section 103(a) goes on to specify that the “subject matter of copyright as specified by section 102 includes compilations and derivative works.”¹⁰³ The basis for protecting creative selection or arrangement in compilations derives from the statutory definition of “compilation” as a collection of preexisting materials or data whose selection, coordination, or arrangement makes the work as a whole an original work of authorship.¹⁰⁴ This special treatment was presumably thought necessary to insure that the protectable elements of compilations and derivative works, if otherwise eligible for copyright protection, would not be excluded on the ground that they were not copyright subject matter. It does not remove the other limitations on copyright protection, such as section 102(b), the merger doctrine, *scènes à faire*, or the *Baker v. Selden* channeling principle, which states that functional subject matter¹⁰⁵ should be protected by patent (or trade secret) law rather than copyright law. This definition does not purport to subsume all copyright subject matter specified in Section 102(a) into the definition of a compilation.

However, if a very literal approach is taken, there is likely no work of authorship that is not a compilation under the statutory definition. A novel, for example, is a selection and arrangement of words (or letters), a musical work is a selection and arrangement of notes, and a painting is a selection and arrangement of forms and colors. Indeed, even patent subject matter becomes a compilation under this approach. A car, for example, is a selection and arrangement of parts. It only complicates, and therefore potentially confuses, the analysis to treat such works as

¹⁰² §102(a) reads as follows:

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

- (1) literary works;
- (2) musical works, including any accompanying words;
- (3) dramatic works, including any accompanying music;
- (4) pantomimes and choreographic works;
- (5) pictorial, graphic, and sculptural works;
- (6) motion pictures and other audiovisual works;
- (7) sound recordings; and
- (8) architectural works.

¹⁰³ 17 U.S.C. § 103(a).

¹⁰⁴ 17 U.S.C. § 101 (definition of “compilation”); see *supra* text accompanying note 11.

¹⁰⁵ See *supra* notes 41-52 and accompanying text for the definition of functional subject matter.

compilations, affording protection when the selection or arrangement of their component elements is creative.¹⁰⁶ The functional nature of automobiles takes them out of copyright altogether, regardless of how creatively their various parts have been selected and arranged.¹⁰⁷

Notwithstanding this absurdity when the compilation definition is taken to its logical conclusion, many courts and commentators, especially after *Feist*, have adopted precisely this approach. One can understand how courts dealing with subject matter categories for compilations and taxonomies have made this error. After all, a compilation is a collection of facts or other materials, so if the category selection or arrangement is creative, it would seem almost inevitable that those categories define the statutorily required “selection, coordination, or arrangement.” However, yellow page classification categories,¹⁰⁸ as well as medical-procedure¹⁰⁹ and dental-procedure¹¹⁰ taxonomies, are parts of a system for delivering information to consumers in a user friendly and standardized way.¹¹¹ Like a system for numbering replacement parts,¹¹² these classification schemes are amenable to incremental improvement in efficiency and ease of finding and applying information.¹¹³ They are functional in the traditional sense that

¹⁰⁶ See *Distinguishing Subject Matter*, *supra* note 40, at 484 n.182.

¹⁰⁷ Of course, an original “selection and arrangement” of public domain colors in paint on a canvas will be protected by copyright, but not as a “compilation” but rather as a pictorial work. Similarly, a toy bear made up of individually unprotected features, such as button eyes and sewn mouth, will be protected if those features are combined in a unique (or at least uncopied) way. *Boyd's Collection, Ltd. v. Bearington Collection, Inc.*, 360 F. Supp. 2d 655, 664 (M.D. Pa. 2005). The bear, however, qualifies as a sculptural work, so there is no need to bring “compilations” into the analysis.

¹⁰⁸ *Key Pubs., Inc. v. Chinatown Today Publ'g Enters.*, 945 F.2d 509 (2nd Cir. 1991) (treating choice of categories for Chinese yellow page directory as a “compilation”).

¹⁰⁹ *Practice Mgmt Info. Corp. v. Am. Med. Ass'n*, 121 F.3d 516, 521 (9th Cir. 1997) (coding system for medical procedures copyright protected).

¹¹⁰ *Am. Dental Ass'n v. Delta Dental Plans Ass'n*, 126 F.3d 977, 979 (7th Cir. 1997) (taxonomy of dental procedures protected).

¹¹¹ See Robert Dorit, *By Any Other Name*, 95 *SCIENTIST*, No. 2, March-April 2007, available at <http://www.americanscientist.org/template/AssetDetail/assetid/54776> (arguing that the categories we create for naming diseases are the starting points for specific therapies and that the nomenclature goes well beyond semantics—everything from diagnosis to cure depends on getting the name right).

¹¹² See *supra* notes 77-87 and accompanying text.

¹¹³ Standardization is also an important consideration with many of these classification schemes. It was argued in the *American Dental Association* case that the modifications the defendant desired to make would impede communications by introducing nonstandard terms and categories. 126 F.3d at 981. Within any given industry, some means of insuring an appropriate degree of uniformity is almost surely desirable. The issue is whether each professional group should work out on its own how to set and vary standards or whether intellectual property law should supply the enforcement power to the creator of the basic standard. See *Distinguishing Subject Matter*, *supra* note 40, at 499 n.245. Most professional organizations have reasons independent of intellectual property inducements to develop

distinguishes patent and copyright subject matter, and thus should be excluded from copyright protection under section 102(b).

A similar category selection issue arises in the ongoing problem of blank forms. *Baker v. Selden* denied copyright protection to a blank form that was necessary to the implementation of a copyright-unprotected accounting system.¹¹⁴ A Copyright Office regulation denies copyright to forms that “are designed for recording information and do not in themselves convey information.”¹¹⁵ Still, even before *Feist* courts sometimes struggled to protect what they saw as a creative way of seeking information.¹¹⁶ In *Kregos v. Associated Press*¹¹⁷ the Second Circuit treated the choice of categories for a blank “pitching form” for baseball games as a compilation.¹¹⁸ The court based copyright protection solely on the creativity in the category selection.¹¹⁹ To the extent we believe that predicting the results of baseball games is independent of the information on which experts base their predictions, the choice of categories for such a pitching form can be treated as subjective. This is similar to the proverbial list of the 100 Best Restaurants of X. On the other hand, if we believe that some items of information are better than others for successfully predicting baseball games (or earthquakes, or heart at-

standards, and recognizing copyright rights in such standard classification schemes can prevent the kind of tinkering around the edges that often leads to systemic improvements.

Model codes are another example of works designed for a functional goal, namely, to regulate the affairs of people subject to them when adopted into law, that can be and usually are incrementally improved by the tinkering of many. The Sixth Circuit has recognized that, once a model code is adopted into law, it may be freely copied, as the law of the jurisdiction in question (as opposed to the model law proposed by the author). *Veeck v. S. Building Code Cong. Int’l, Inc.*, 293 F.3d 791 (5th Cir. 2002) (en banc). It would treat the model code as protected, however, until adopted into law, meaning that others could not use it as a base for further improvements. See generally *Distinguishing Subject Matter*, *supra* note 40, at 500-05. A federal district court recently seized on this distinction in holding that a model code resulting from extensive collaboration among code officials, commentators, and professional staff was sufficiently creative to be covered by copyright. *Int’l Code Council, Inc. v. Nat’l Fire Prot. Ass’n*, 2006 WL850879, at *15 (N.D. Ill. 2006). While the court considered the possibility of merger, it did not look at the more basic limitations on copyright deriving from the functionality principle and *Baker v. Selden*. Again, “creativity” was enough for copyright protection.

¹¹⁴ See *supra* text accompanying note 87.

¹¹⁵ 37 C.F.R. § 202.1(c).

¹¹⁶ *E.g.*, *Norton Printing Co. v. Augustana Hosp.*, 155 U.S.P.Q. 133, 134-35 (N.D. Ill. 1967) (suggesting that originality and intellectual effort in the design of forms should lead to protection).

¹¹⁷ *Kregos v. Associated Press*, 937 F.2d 700 (2nd Cir. 1991).

¹¹⁸ *Id.* at 706.

¹¹⁹ *Id.* at 704-05, 709; see also *Advanz Behavioral Mgmt. Res., Inc. v. Mirafior*, 21 F. Supp. 2d 1179, 1191 (C.D. Cal. 1998) (denying copyright under Ninth Circuit precedent but arguing that “creative expression” in the selection of topics covered by a blank form deserved protection).

tacks), recognizing copyright in the choice of items risks giving a long-term monopoly to the first person to come up with the optimal set of choices, which inhibits incremental improvement in the methodology.¹²⁰ The proper analysis of a blank form, therefore, is not as a “compilation” but rather as a literary or graphic work.¹²¹ As such we might seek to alleviate the worst type of market failure by protecting blank forms thinly against slavish copying; however, their function as information-delivery tools strongly militates against any stronger copyright protection.¹²²

Courts have not limited their compilation analysis to methodologies for classifying information. For example, in *Aaron Basha Corp. v. Felix B. Vollman, Inc.*,¹²³ the court treated jewelry pendants in the form of baby shoes as a compilation of specific choices concerning size, shape, proportion, and ornamentation as well as coordination and arrangement of the ornamental features.¹²⁴ Similarly, in *Compaq Computer Corp. v. Ergonome, Inc.*,¹²⁵ the court treated seven phrases and four illustrations in a book about the ergonomic use of computers as a protectable selection and arrangement of the individually unprotected elements, expressly refusing to distinguish the protectability of compilations from other types of works.¹²⁶

More serious problems can result from applying *Feist*'s selection and arrangement rationale to functional works, histories, biographies, and rule books, in which the scope of protection is thin so that the efforts of future authors working with the same material are not severely inhibited. For example, in *Open Source Yogan Unity v.*

¹²⁰ Professor Durham has pointed out that the approach of *Kregos* actually confers a broader copyright than one in a validly predictive formula for combining the factors, because the formula would necessarily use the factors. Alan L. Durham, *Speaking of the World: Fact, Opinion and the Originality Standard of Copyright*, 33 ARIZ. ST. L.J. 791, 835 (2001).

¹²¹ The Ninth Circuit in *Bibbero Sys., Inc. v. Colwell Sys., Inc.*, 893 F.2d 1104, 1108 n.3 (9th Cir. 1990) thus correctly refused to treat the medical insurance form in question as a compilation once it had denied copyright protection as a literary or graphic work under the blank-form doctrine.

¹²² *Distinguishing Subject Matter*, *supra* note 40, at 485.

¹²³ *Aaron Basha Corp. v. Felix B. Vollman, Inc.*, 88 F. Supp. 2d 226, 230 (S.D.N.Y. 2000).

¹²⁴ See also *Lone Wolf McQuade Assocs. v. CBS Inc.*, 961 F. Supp. 587, 594 (S.D.N.Y. 1997) (treating a copyright-protectable film character alternatively as a nonfactual compilation of carefully selected traits). Fortunately, the *Aaron Basha* court's unnecessary treatment of jewelry as a compilation did not interfere with its infringement analysis; the court denied infringement based on absence of similarity in the expressive details and the “total concept and feel” of the works in question. 88 F. Supp. 2d at 232.

¹²⁵ *Compaq Computer Corp. v. Ergonome, Inc.*, 137 F. Supp. 2d 768 (S.D. Tex. 2001).

¹²⁶ *Id.* at 772-73. The court even cited with approval the district court opinion *Lotus Dev. Corp. v. Borland Int'l, Inc.*, 831 F. Supp. 223, 231 (D. Mass.1993), *rev'd* 49 F.3d 807 (1st Cir. 1995), *aff'd* by an equally divided Court, 516 U.S. 233 (1996), which treated an interface menu command hierarchy as a protectable compilation. 137 F. Supp. 2d at 774.

Choudhury,¹²⁷ the court concluded that a sequence of public domain yoga exercises would be protected as a compilation if arranged in a sufficiently creative manner. The copyright claimant asserted not only that he arranged the exercises in an esthetically pleasing manner but also that it was the best design to improve the user's health.¹²⁸ However, if the plaintiff did come up with a new and nonobvious way of improving health, he may be eligible for patent protection. Copyright should not be used to circumvent the substantive requirements of patent law for functional works.

Courts have taken a similar approach with respect to various aspects of computer programs, including their so-called "structure, sequence, and organization" or "SSO." For example, in *Softel, Inc. v. Dragon Medical & Scientific Communs., Inc.*,¹²⁹ the court concluded that a creative combination of functions performed by a computer program was protected as a compilation, and therefore even independently written code performing the same functions could infringe.¹³⁰ This ef-

¹²⁷ *Open Source Yogan Unity v. Choudhury*, 74 U.S.P.Q.2d 1434 (N.D. Cal. 2005), 2005 WL 756558, at *4.

¹²⁸ *Id.*

¹²⁹ *Softel, Inc. v. Dragon Med. & Scientific Commc'ns., Inc.*, 118 F.3d 955, 963-64 (2nd Cir. 1997). See also Jon S. Wilkins, Note, *Protecting Computer Programs as Compilations Under Computer Assocs. v. Altai*, 104 YALE L.J. 435 (1994). Mr. Wilkins concludes, "Comparing software to traditional works of compilation and considering the principles used to protect compilations strongly suggest that courts should protect the selection and arrangement of computer programs." *Id.* at 469. His analysis is based heavily on the notion that the design of a computer program involves the real creativity, while the coding is often routine. *Id.* at 452-53. He is very likely correct in this regard, which strikingly demonstrates the danger of basing copyright on notions of "creativity." Mr. Wilkins's perfect logic gets the intellectual property policy exactly backwards. The policy basis for protecting computer software under copyright instead of relegating programs, which are functional works under anybody's definition, to their fate under patent and trade secret is that the *object code* is subject to market failure (whether or not it is creative, although we may assume that original code passes the low *Feist* threshold). That is, code is expensive to create and cheap to copy, and most programs are ineligible for any patent protection because they incorporate no nonobvious advance in the art of using computers to accomplish the functions of the program. Creative program design and SSO are not subject to the same type of market failure and, in any event, are protectable under patent law if they comply with patent's more stringent requirements. There is therefore no policy basis for bringing noncode functionality under the copyright umbrella. This analysis is also supported by the statutory definition of a "computer program" in section 101 of the Copyright Act. See, e.g., Dennis S. Karjala, *A Coherent Theory for the Copyright Protection of Computer Software and Recent Judicial Interpretations*, 66 U. CIN. REV. 53, 66-77 (1997)(hereinafter *A Coherent Theory*).

¹³⁰ See also *Secureinfo Corp. v. Telos Corp.*, 387 F. Supp. 2d 593, 612 (E.D. Va. 2005) (stating that nonliteral program elements, even if individually unprotected, may be protected if compiled in a unique or creative way); *Positive Software Solutions v. New Century Mortgage Corp.*, 259 F. Supp. 2d 531, 535 (N.D. Tex. 2003) (holding that data structures designed to interoperate with a program written in Structured Query Language (SQL) were copyright protected because they had the requisite degree of creative expression); *eScholar, LLC v. Otis Educ. Sys., Inc.*, 2005 WL 2977569, at *16-17, 76 U.S.P.Q.2d 1880 (S.D.N.Y. 2005)(over-

fectively protects SSO at a very high level of abstraction defined by the overall functions performed by the program. This approach ignores the carefully drawn limits on the protection of computer software established in the seminal case of *Computer Associates Int'l Inc. v. Altai*.¹³¹ Similar errors have been made with respect to the functional aspects of user interfaces. For example, in *Compaq Computer Corp. v. Procom Technology, Inc.*,¹³² threshold values for five parameters related to a computer hard drive, which were used as input to a computer program that analyzed the risk of hard drive failure, were held to constitute a copyright-protected compilation. Determining the optimal values for the parameters and using them together with a computer program to determine the risk of hard drive failure may be a method protectable under patent law. Protecting the set of values as a compilation under copyright law reduces competition in the copyright-unprotected hard-drive market and allows copyright to make an end run around the stricter requirements of patent law. One of the more extreme applications of compilation analysis to user interfaces occurred in *Engineering Dynamics, Inc. v. Structural Software, Inc.*¹³³ The case involved formats for inputting data into programs for structural engineering analysis.¹³⁴ The Fifth Circuit concluded that arranging several dozen inputs resulted in a copyright-protectable work because the result was only one of many ways for expressing a mode of computerized structural analysis.¹³⁵ While the court later recognizes judges must be "cautious" in

all selection and arrangement of the fields in a data model constituting a new way to order and process preexisting data may be copyright protected). For a critical analysis of the *Softel* decision, see Dennis S. Karjala, *Copyright Protection of Computer Program Structure*, 64 BROOKLYN L. REV. 519 (1998). The *Positive Software* court confessed to "some puzzlement" over the argument that commercial compatibility might trump copyright in the computer software area on the ground that traditional copyright subject matter would never allow entertaining such reasoning. 259 F. Supp. 2d at 536 n.9. The court thus wholly failed to see the important limitations on software copyrights that are necessitated by software's functionality. See *supra* note 129.

¹³¹ *Computer Assocs. Int'l v. Altai*, 982 F.2d 693 (2nd Cir. 1992) (establishing the abstraction-filtration-comparison test for the copyright protection of computer program SSO). Properly applied, the *Computer Associates* test allows protection solely for literal program code and close paraphrases of that code. *A Coherent Theory*, *supra* note 129, at 80-81.

¹³² *Compaq Computer Corp. v. Procom Tech., Inc.*, 908 F. Supp. 1409 (S.D. Tex. 1995).

¹³³ *Engineering Dynamics, Inc. v. Structural Software, Inc.*, 26 F.3d 1335 (5th Cir. 1994), *supplemented* 46 F.3d 408 (5th Cir. 1995).

¹³⁴ Actually, the plaintiff in this case did not register the underlying program and relied on its registered user manuals, which specified the input formats in question. 26 F.3d 1335, 1339.

¹³⁵ *Id.* at 1342. The court thus fell into the trap of treating the absence of merger—that is, the existence of many ways to accomplish a given function—with the creativity necessary to sustain a copyright. That absence of merger alone cannot lead to copyright protection is shown by *Baker v. Selden* itself. There are infinitely many ways of doing accounting. The existence of many other accounting system possibilities does not lead to protection of the specific system chosen, because it remains functional and is properly considered for intellec-

applying copyright to functional works, it all but ignored the holding in *Baker v. Selden* and Section 102(b). The opinion actually states that the plaintiff refined its input formats to accommodate users' desire for greater speed, flexibility, and ease of operation.¹³⁶ That recognition alone should have raised serious questions of whether the input formats were unprotectable as a "method of operation" under section 102(b). The court also implicitly recognized the importance of incremental improvements when it noted that the defendant's program managed to perform the same functions as plaintiff's with significantly fewer inputs. However, the court used this strengthened the case for copyright protection by showing creativity in choosing the format.¹³⁷ This is another example of the misuse of "creativity" to bring patent subject matter into the copyright camp. In analyzing the harms caused by this approach, one should note that the input formats inform not only the user concerning what data to input, which under incremental improvability reasoning should be enough to deny copyright protection, like a blank form or classification system. The input formats also "inform" the computer program that analyzes the data. Once the formats are chosen, regardless of how efficient the choice is, the program will not work properly unless data is supplied in the chosen format; no competing program can accept a user's existing data without using the same formats.¹³⁸

tual property protection, if at all, under patent law. See *A Coherent Theory*, *supra* note 129, at 81-82. A number of cases take a similar approach, especially in the computer software arena. *E.g.*, *Harbor Software, Inc. v. Applied Systems, Inc.*, 925 F. Supp. 1042, 1049 (S.D.N.Y. 1996) (programming choices regarding the structure by which a user initiates a process could be made in other ways so the plaintiff's particular choice was protected). Professor Clifford concludes that *Feist's* creativity approach to copyright originality leads to the conclusion that a finding of intellectual creativity depends solely on (1) multiple ways to express something and (2) an actual selection by the author from the available array of choices. Ralph D. Clifford, *supra* note 22, at 295. He may well be correct about the requirements of *Feist*. However, regardless of how we go about determining the existence of creativity under *Feist*, the limitations on copyright protection contained in section 102(b) and the functionality doctrine of *Baker v. Selden* remain.

¹³⁶ 26 F.3d at 1338.

¹³⁷ *Id.* at 1346.

¹³⁸ *A Coherent Theory*, *supra* note 129, at 108. Judge Posner similarly concluded that a data structure involving 456 fields grouped into 34 categories was not so obvious or inevitable as to lack the minimal originality required by copyright, although infringement was denied on other grounds. *Assessment Technologies, LLC v. WIREdata, Inc.*, 350 F.3d 640, 643 (7th Cir. 2003). Again, we see the absence of merger treated as sufficient to confer copyright protection, without any discussion of the limitations arising from *Baker v. Selden* or § 102(b). In *Madison River Mgmt. Co. v. Business Mgmt. Software Corp.*, 387 F. Supp. 2d 521 (M.D. N.C. 2005), the plaintiff Madison supplied data to the defendant BMS, which organized the data in a relational database. Madison made nightly "snapshots" of the database for the purpose of preparing reports using the data Madison supplied. After a dispute between the parties over Madison's alleged overuse of the database, Madison brought suit and BMS as-

VI. CONCLUSION

Even as a necessary condition to copyright protection, creativity badly interferes with the policy goal of using copyright to avoid market failure. Accepting, however, that the current statutory definition of “compilation” requires creativity as a necessary condition for that particular class of copyright subject matter, courts must bear in mind that creativity is not a sufficient condition for copyright. Indeed, because intellectual property policy requires that creative works receive either copyright protection, patent protection, or no protection at all, creativity should be banned from the copyright analysis (or, in the case of compilations, at least after it is determined that the *Feist* threshold has been met). Instead, functionality (properly defined) and section 102(b) should channel works either to the patent or copyright regimes. After this determination is made, the work’s eligibility under the appropriate regime and the scope of protection may be determined.

served copyright infringement as a counterclaim, based on the nightly snapshots. The court concluded that subjecting the raw data to the database structure designed by BMS involved sufficient originality to give copyright in the database, via BMS’s copyright in the software governing the database. *Id.* at 535. Moreover, in denying Madison summary judgment on fair use, the court emphasized that the database structure constituted “the very advantage of running the reports from the [BMS] database instead of from raw data.” *Id.* at 537. The court thus failed to recognize the functionality of the structure that it was protecting under copyright. Structuring the database created a method of operation for using and manipulating the stored data just as the menu command hierarchy in *Lotus* created a method of operation for using the Lotus 1-2-3 spreadsheet program. *Lotus Dev. Corp. v. Borland Int’l, Inc.*, 49 F.3d 807 (1st Cir. 1995), *aff’d by an equally divided Court*, 516 U.S. 233 (1996). Again, the search for “creativity” blinded the court to the functionality and § 102(b) limitations on copyright protection.

