To © or Not to ©? Copyright and Innovation in the Digital `Typeface` Industry

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Intellectual property rights are often justified by utilitarian theory. Recent scholarship, however, suggests that creativity thrives in certain industries in the absence of IP protection. Commentators increasingly refer to these industries as IP's negative spaces. One such industry that has received little scholarly attention is the recently digitized typeface industry. Its adoption of digital processes has altered its market structure in ways that necessitate reconsideration of its IP-negative status, with particular emphasis on copyright. This Article considers the historical denial of copyright protection for typefaces in the United States, and examines arguments both for and against extending copyright protection to digital typefaces. It compares copyright law with alternative methods of protection for digital typefaces and suggests that the digital typeface industry may be a useful lens through which to consider broader claims about the application of IP law to IP's negative spaces in the digital age.

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INTRODUCTION

> A letter, no matter how elegantly designed, standing alone, is simply a building block for larger units, words, that convey information. In the same way, when we give copyright protection to the design of buildings, we do not protect individual bricks because they are fungible. We protect collections of bricks. At this atomistic level, letters look very functional.

> — Professor Dan Burk[1]

Scholars often explain intellectual property using utilitarian theory,[2] which stresses the need to encourage optimal levels of innovation for the good of society as a whole.[3] Recent studies, however, demonstrate that in some industries creativity thrives in the absence of strong IP rights. Commentators refer to many of these industries as IP's

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[1] Dan Burk, *Expression, Selection, Abstraction: Copyright's Golden Braid*, 55 SYRACUSE L. REV. 593, 615 (2005).

[2] Adam Moore, *Intellectual Property, Innovation, and Social Progress: The Case Against Incentive Based Arguments*, 26 HAMLINE L. REV. 601, 606-07 (2003) (noting that anglo-American intellectual property systems are generally explained on basis of utilitarian theory); *id.* ("[U]tilitarian-based justifications of intellectual property are elegantly simple. Control is granted to authors and inventors of intellectual property because granting such control provides incentives necessary for social progress. Coupled with the theoretical claim that society ought to maximize social utility, we arrive at a simple, yet powerful, argument."); Kal Raustiala & Christopher Sprigman, *The Piracy Paradox: Innovation and Intellectual Property in Fashion Design*, 92 VA. L. REV. 1687, 1688 (2006) [hereinafter *Piracy Paradox*] ("The standard justification for intellectual property rights is utilitarian. Advocates for strong intellectual property ('IP') protections note that scientific and technological innovations, as well as music, books, and other literary and artistic works, are often difficult to create but easy to copy. Absent IP rights, they argue, copyists will free-ride on the efforts of creators, discouraging future investments in new inventions and creations. In short, copying stifles innovation.").

[3] *See, e.g.*, Maureen O'Rourke, *Evaluating Mistakes in Intellectual Property Law: Configuring the System to Account for Imperfection*, 4 J. SMALL & EMERGING BUS. L. 167, 170 (2000) ("[A]t least in American law, the leading theory [of intellectual property] probably still continues to be a utilitarian one. This perspective emphasizes the need to provide incentives to the firstcomer to create while maintaining a viable public domain from which secondcomers may draw in improving and building on the original work. The social optimum then might be defined as the level of protection that provides the creator with just enough incentive to invest while dedicating to the public sufficient information from which further progress may result. The intellectual property system adopts a multi-layered approach in attempting to implement the social optimum in a cost-effective manner.").

"negative spaces."[4] Creativity and innovation thrive despite minimal IP protection in these industries, which include fashion, food, body art, and magic tricks. Another industry that has flourished in the absence of powerful IP protection is the typeface industry. The typeface industry raises interesting questions about the application of IP law, notably copyright, when IP-negative spaces move online.[5] The United States has generally rejected typeface copyrights on functionality grounds.[6] In the digital age, however, the software code that generates digital typefaces is generally copyrightable.[7] Arguably, then, some

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[4] Raustiala & Sprigman, *Piracy Paradox*, *supra* note 2, at 1762-64 (identifying some of IP's negative space as areas where innovation thrives despite lack of robust intellectual property protection); Kal Raustiala & Christopher Sprigman, *The Piracy Paradox Revisited*, 61 STAN. L. REV. 1201, 1201-02 (2009) [hereinafter *Paradox Revisited*] (referring to recent work that has identified and explored some of IP's negative spaces).

[5] Copyright is, in fact, one of a variety of IP protections that may be available for typefaces. Amongst other options are trademarks and design patents which are discussed in more detail in *infra* Part IV. This Article focuses on copyrights for two reasons. The first is that their scope and application to the copyright industry has historically been poorly understood by many and continues to be problematic as the typeface industries moves into digital content. The second is that copyright has been problematic in a variety of what this Article describes as IP-negative spaces. Thus, a focus on the copyrightability of fonts and typefaces may be illuminating for consideration of some of those other industries as they move increasingly into digital market models. *See infra* Parts II.A and II.B (providing more detailed discussion).

[6] MARSHALL LEAFFER, UNDERSTANDING COPYRIGHT LAW, 100 (4th ed. 2005) ("Examples of express exclusion [from the term "works of authorship" for copyright purposes] are industrial design and typeface design, which Congress has explicitly indicated are not to be considered works of authorship.").

The rejection of functional or utilitarian articles from protection as "pictorial, graphic, and sculptural works" is found in 17 U.S.C. § 101 (2006). That section states:

> "Pictorial, graphic, and sculptural works" include two-dimensional and three-dimensional works of fine, graphic, and applied art, photographs, prints and art reproductions, maps, globes, charts, diagrams, models, and technical drawings, including architectural plans. Such works shall include works of artistic craftsmanship insofar as their form but not their mechanical or utilitarian aspects are concerned; the design of a useful article, as defined in this section, shall be considered a pictorial, graphic, or sculptural work only if, and only to the extent that, such design incorporates pictorial, graphic, or sculptural features that can be identified separately from, and are capable of existing independently of, the utilitarian aspects of the article.

Id.; see infra Part I.A. (providing more detailed discussion).

[7] Adobe Sys., Inc. v. S. Software, Inc., 45 U.S.P.Q.2d 1827, (BNA) 1831-32 (N.D. Cal. 1998) (holding that digitized font could be copyrighted); *cf.* Eltra v. Ringer, 579 F. 2d 294, 298 (4th Cir. 1978) (expressly excluding "typefaces as typefaces" from copyright protection) (citing Copyright Regulation § 202.10(c), 37 C.F.R. § 202.1(e) (1994)).

typeface designers could utilize the backdoor of software copyrights to protect their otherwise uncopyrightable designs.[8]

Changes in market structure in the digital age might justify an extension of copyright to digital typeface designs per se, regardless of the copyrightability of their software code. As the digital typeface market evolves, along with increasing incidences of digital piracy,[9] it may be necessary to alter past policies and accept copyrights in typeface designs. Internationally, typeface designs are generally copyrightable subject matter.[10] Thus, the American position on typeface copyrights is now an outlier. In a seamless, borderless, digital world, it may be necessary for American policy to change in order to reflect digital developments in typeface markets, and to promote global harmonization.

This Article examines the claim that the transition to a digital typeface industry sufficiently alters incentives to innovate so as to merit a reconsideration of available IP protections. Part I considers the basis on which the United States has historically rejected copyright protection for typefaces.[11] It includes a detailed examination of policy arguments both for and against typeface copyrights. Part II identifies

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[8] Of course, software copyrights protect different aspects of a digital font than typeface copyrights per se. This Article does not mean to suggest they are one and the same thing, rather that in some circumstances digital typeface designers may attempt to utilize software code copyrights to monopolize certain aspects of a typeface design. See discussion in *infra* Part II.B.

[9] *See, e.g.*, Ulrich Stiehl, The Funny Font Forging Industry, http://www.sanskritweb. net/forgers/forgers.pdf. (last visited Sept. 13, 2009) (explaining to courts how to spot digital font forgeries).

[10] The American view of the noncopyrightability of typefaces is not shared in many European jurisdictions; for example, the British Copyright, Designs, and Patents Act of 1988 specifically recognizes that typefaces may be copyrightable as "artistic works." Copyright, Designs, and Patents Act, 1988, c. 1, § 4 (Eng.), (definition of "artistic work"); *id.* § 54 (recognizing that copyright in artistic work might comprise design of typeface); *see also* C. DE LA PROPRIÉTÉ INTELLECTUELLE Art. L. 112.2, 8. (Fr.) (affording copyright protection to typefaces); Terrence J. Carroll, *Protection for Typeface Designs: A Copyright Proposal*, 10 SANTA CLARA COMPUTER & HIGH TECH. L.J. 139, 169-70 (1994) (comparing various countries' approaches to IP protections for typeface designs). At the international level, typefaces have also been considered important enough to merit consideration for a form of international *sui generis* IP protection. The Vienna Agreement for the Protection of Type Faces and Their International Deposit of 1973, although never actually brought into force, did recognize that several countries intended to accept copyright and design right protection for typefaces. Vienna Agreement for the Protection of Type Faces and Their International Deposit of 1973, http://www.austlii.edu.au/au/other/dfat/seldoc/1973/ 2203.html (last visited Sept. 11, 2008).

[11] The terminological distinction between fonts and typefaces is considered *infra* Part I.A.

digital age developments in the typeface industry that are relevant to the copyright question, in terms of both digital market structures and the ability of typeface designers to utilize digital technology to protect their work. Part III considers the potential application of the Digital Millennium Copyright Act ("DMCA") to digital typefaces, along with the possibility that this legislation could create overbroad protection for digital typefaces if copyrighted. Part IV considers alternative avenues of protection for digital typeface designers including design patents, trademarks, trade secrets, emerging online norms, technological protection measures ("TPMs"), and restrictive contractual licenses. It compares these with copyright in an attempt to ascertain the most effective means to protect the efforts of a digital typeface designer. Part V draws some conclusions about the appropriate role of copyright law in protecting digital typefaces. It also considers the extent to which the digital typeface example might illuminate general questions about promoting innovation in IP's negative spaces as they move online.

I.   TYPEFACES, FONTS, AND IP'S NEGATIVE SPACES

A.   *Typeface Copyrights: Legal Issues*

Although the digital age has minimized the distinction, historically the terms "typeface" and "font" have referred to different things.[12] A typeface is technically "a set of letters, numbers, or other symbolic characters, whose forms are related by repeating design elements consistently applied in a notational system and are intended to be embodied in articles whose intrinsic utilitarian function is for use in composing text or other cognizable combinations of characters."[13] A font, on the other hand, is "an article in which a typeface resides as the implement of printing technology, regardless of the medium or form."[14] In other words, a typeface is the artistic creation of a typeface designer,[15] while a font is the result of an industrial process to enable the reproduction of typefaces in the printing process.

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[12] Interestingly, typeface designers, even in the digital age, differ as to the increasing relevance of the two terms. Although some typeface designers believe the distinction has been lost, others are not convinced. *See* Note from Thomas Phinney, Typeface Designer, to author (Feb. 27, 2009) (on file with author).

[13] Carroll, *supra* note 10, at 141 n.2.

[14] H.R. 1790, 102d Cong. § 1001(b)(4) (1991).

[15] ROBERT BRINGHURST, THE ELEMENTS OF TYPOGRAPHIC STYLE VERSION 3.1 333-45 (2005) (glossary of noted typeface designers).

Foundries originally made fonts by fashioning physical blocks that embodied designs created by typeface designers.[16] The distinction between fonts and typefaces has become somewhat anachronistic with the advent of digital typesetting technologies because individuals and businesses have aggregated the role of the foundry with that of the typeface designer.[17] Today, people often use the terms font and typeface interchangeably to denote the product of a typeface designer's efforts reproduced in a digital format.[18]

Within the United States, the historically prevailing view has been that typefaces are not copyrightable subject matter.[19] The typeface industry is thus a good example of an industry that appears to have thrived in the absence of powerful IP protections. Of course, it is important to recognize that there has never been a clear-cut borderline between IP's negative spaces and protected spaces. Indeed, the identification of an industry as an IP-negative space often has more to do with practices within the industry than with clear policy determinations against copyrightability.[20] Thus, one needs to accept that the typeface industry is an IP-negative industry to the same extent

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[16] *Id.* at 346-56 (glossary of noted foundries).

[17] LESLIE CABARGA, LOGO, FONT, AND LETTERING BIBLE 12 (2004) ("Before computers, a font was called a *typeface* or *face*. *Font* or *fount* originally referred to the product of a foundry where hot metal is poured into molds, and *type font* referred to the complete character set in one specific point size and style of type within a type family. Now *font* has become revived as the term for any computer typeface sold, traded, pirated or offered for free."); *see also* Note from Thomas Phinney to author, *supra* note 12 (suggesting that many people in industry do maintain distinction between two terms as practical matter).

[18] *See* CABARGA, *supra* note 17, at 12.

[19] LEAFFER, *supra* note 6, at 100 ("Examples of express exclusion [from the term 'works of authorship' for copyright purposes] are industrial design and typeface design, which Congress has explicitly indicated are not to be considered works of authorship."); 1 MELVILLE B. NIMMER, NIMMER ON COPYRIGHT § 2.15, at 2-178.37 (2009) ("Are typeface designs copyrightable? Any argument of copyrightability may appear to be foreclosed by reason of the House Committee's statement that it 'has considered, but chosen to defer, the possibility of protecting the design of typefaces . . . . The Committee does not regard the design of typeface . . . to be a copyrightable 'pictorial, graphic, or sculptural work' within the meaning of this bill and the application of the dividing line in section 101.' ").

[20] *See, e.g.*, Thomas F. Cotter & Angela M. Mirabole, *Written on the Body: Intellectual Property Rights in Tattoos, Makeup, and Other Body Art*, 10 UCLA ENT. L. REV. 97, 103-23 (2003) (explaining that in absence of clear legal arguments to contrary, there are some good reasons why tattoos and body art, generally recognized as IP-negative space, could attract copyright protection); Raustiala & Sprigman, *Piracy Paradox*, *supra* note 2, at 1698-1706 (noting practices in fashion industry that have avoided reliance on powerful IP protections, other than trademarks, despite absence of any express rejection of, say, copyright protection for products of fashion industry).

as any other industry traditionally identified as such, including the fashion, food, and body art industries.[21] The typeface industry may be a particularly useful example of an IP-negative industry because the Copyright Office and the American courts have expressly considered the issue of typeface copyrights, and thus there is some executive and judicial authority on the copyrightability of typefaces.[22] Detailed examination, however, reveals inconsistencies in policy, particularly as the industry moves online.[23]

The 1976 Copyright Act ("1976 Act") extends copyright protection to "pictorial, graphic, and sculptural works," which include the following:[24]

> [T]wo-dimensional and three-dimensional works of fine, graphic, and applied art . . . . Such works shall include works of artistic craftsmanship insofar as their form but not their mechanical or utilitarian aspects are concerned; the design of a useful article, as defined in this section, shall be considered a pictorial, graphic, or sculptural work only if, and only to the extent that, such design incorporates pictorial, graphic, or sculptural features that can be identified separately from, and are capable of existing independently of, the utilitarian aspects of the article.[25]

This definition, along with the House Report accompanying the bill for the 1976 Act,[26] raises questions concerning the copyrightability of typefaces.[27]

Although a typeface may be a work of applied art, copyright protection would only extend to artistic aspects of its form, not its utilitarian attributes. If the artistic attributes are de minimis or not severable from the functional aspects, they will not be copyrightable.[28] The House Report on the 1976 bill states that the House Committee: "[H]as considered, but chosen to defer, the possibility of protecting the design of typefaces . . . . The Committee does not regard the design

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[21] Raustiala & Sprigman, *Paradox Revisited*, *supra* note 4, at 1202 (summarizing other industries identified in past as IP-negative spaces).

[22] *See infra* Part I.A.

[23] *See infra* Part I.A-B.

[24] 17 U.S.C. § 102(a)(5) (2006).

[25] *Id.* § 101 (2006).

[26] H.R. REP. NO. 94-1476 (1976), *as reprinted in* 1976 U.S.C.C.A.N. 5688.

[27] *See* 1 NIMMER, *supra* note 19, § 2.15, at 2-178.37.

[28] LEAFFER, *supra* note 6, at 121-25 (describing copyright law's approach to physical and conceptual separability).

of typeface . . . to be a copyrightable 'pictorial, graphic, or sculptural work' within the meaning of this bill and the application of the dividing line in section 101."[29] Here, the dividing line refers to the ability to separate the artistic elements of a useful article from its utilitarian aspects.

Most courts and commentators consider the words of the House Report to end the matter.[30] However, some, including Professor Melville Nimmer, raise various concerns about this view.[31] The first and most obvious concern is that portions of the House Report appear to directly contradict the statutory text rather than interpret it.[32] In the case of such a contradiction, courts are obliged to follow the statutory text.[33] Additionally, the Senate Report on the 1976 Act does not comment on the copyrightability of typefaces, presumably leaving the statutory text to speak for itself.[34] Thus, there is little reason to give the House Report more weight than the Senate Report where the two appear to conflict.[35]

There is also an apparent conflict within the House Report itself. The House Report states that the list of copyrightable subject matter in § 102 of the 1976 bill was intended to cover all classes of works specified in § 5(g) of the 1909 Copyright Act ("1909 Act").[36] Section 5(g) extended copyright protection to works of art, including models or designs for works of art, thereby suggesting that typefaces were protectable under the 1909 Act.[37] If one made a realistic argument to this end, typefaces would likewise be protected under § 102(a)(5) of the 1976 Act. Thus, there is apparent conflict within the House Report.

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[29] H.R. REP. NO. 94-1476, at 55.

[30] LEAFFER, *supra* note 6, at 100 ("Examples of express exclusion [from the definition of 'works of authorship' in the copyright act] are industrial design and typeface design, which Congress has explicitly indicated are not to be considered works of authorship.").

[31] *See* Burk, *supra* note 1, at 614-15 (noting that copyrightability of typefaces has historically been contested territory in United States, and citing Copyright Office's refusal to register typefaces and Congress's apparent intent in enactment of 1976 Act to exclude typefaces from copyrightability). *See generally* 1 NIMMER, *supra* note 19, § 2.15, at 2-178.37 to -184 (detailed analysis of question of copyrightability of fonts and typefaces, and noting that question is still arguably open one under federal copyright law in United States).

[32] 1 NIMMER, *supra* note 19, § 2.15, at 2-178.37.

[33] *Id.* § 2.15, at 2-178.38.

[34] *Id.*

[35] *Id.*

[36] H.R. REP. No. 94-1476, at 54 (1976), *as reprinted in* 1976 U.S.C.C.A.N. 5688.

[37] 1 NIMMER, *supra* note 19, § 2.15, at 2-178.38.

The leading case on point under the 1909 Act is *Eltra v. Ringer*.[38] Both the District Court for the Eastern District of Virginia and the Fourth Circuit Court of Appeals held typefaces to be uncopyrightable.[39] The case was an attempt to clarify the copyrightability of typefaces in the face of the Copyright Office's practice of refusing registration for typeface designs. However, as Professor Nimmer notes, the grounds for the *Eltra* courts' respective holdings were not particularly strong.[40] He also questions whether the *Eltra* decision might have been overturned in subsequent litigation under the 1909 Act, had the 1976 Act not been implemented in the meantime.[41] The Fourth Circuit based its reasoning largely on Copyright Office regulations defining "works of art" under the 1909 Act to exclude purely utilitarian articles. The relevant regulation stated:

> If the sole intrinsic function of an article is its utility, the fact that the article is unique and attractively shaped will not qualify it as a work of art. However, if the shape of a utilitarian article incorporates features, such as artistic sculpture, carving, or pictorial representation, which can be identified separately and are capable of existing independently as a work of art, such features will be eligible for registration.[42]

The Fourth Circuit held that under this regulation: "[I]t is patent that typeface is an industrial design in which the design cannot exist independently and separately as a work of art. Because of this, typeface has never been considered entitled to copyright under the provisions of § 5(g)."[43]

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[38] 194 U.S.P.Q. (BNA) 198 (E.D. Va. 1976), *aff'd*, 579 F.2d 294 (4th Cir. 1978). For a detailed discussion of the *Eltra* case, see Carroll, *supra* note 10, at 154-66.

[39] *Eltra*, 194 U.S.P.Q. at 201-02.

[40] 1 NIMMER, *supra* note 19, § 2.15, at 2-183 ("Congressional acquiescence in an administrative interpretation inferred from legislative inaction is always a thin reed upon which to base statutory construction. Such inaction may be due to many factors having nothing to do with acquiescence in the substantive content of the administrative rule. Particularly is this true where the administrative agency itself continues its rule for reasons other than its own conviction that its rule is substantively correct. It is, then, open to some doubt as to whether future judicial decisions applying the 1909 Act will follow the *Eltra* holding.").

[41] *Id.*

[42] *Eltra*, 579 F.2d at 298 (expressly excluding "typefaces as typefaces" from copyright protection) (citing Copyright Regulation § 202.10(c), 37 C.F.R. § 202.1(e) (2009)).

[43] *Id.*

This argument against the copyrightability of typefaces may not be as strong as it seems. The Fourth Circuit cited longstanding congressional acquiescence in the Copyright Office's interpretation of § 5(g) of the 1909 Act as an example of congressional intent.[44] This is a weak argument, however.[45] Indeed, the district court had expressly stated that the typeface in question was a work of art under § 5(g) and that the Copyright Register's denial of copyrightability for typefaces in its regulations was erroneous.[46] Nonetheless, at the end of the day, the district court found congressional acquiescence in the Copyright Register's practice decisive, as well as the fact that in enacting the 1976 Act, Congress appears to have intended to maintain the status quo.[47] The Fourth Circuit did not agree with the district court that the Register's interpretation of § 5(g) was erroneous, but was ultimately persuaded by Congress's acquiescence.[48]

In the wake of *Eltra*, there is room for debate about the copyrightability of typefaces in the United States. Although some post-*Eltra* cases have supported the view that typefaces are not copyrightable, others suggest that the answer is unclear.[49] Some cases, like *Leonard Storch Enterprises, Inc. v. Mergenthaler Linotype Co.*,[50]

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[44] 1 NIMMER, *supra* note 19, § 2.15, at 2-183 ("[T]he appellate court, like the trial court, also relied upon 'the long acquiesence of Congress in the Regulation.' ").

[45] *Id.* ("The conclusion by the *Eltra* court appears most doubtful. As indicated above, the Copyright Office itself had previously expressed doubt as to whether its own Regulation correctly interpreted the law. The fact that the Copyright Office did not change its Regulation under the 1909 Act apparently had nothing to do with Congressional acquiescence, nor perhaps even with a belief that the Regulations were correct.").

[46] Eltra v. Ringer, 194 U.S.P.Q. (BNA) 198, 201 (E.D. Va. 1976).

[47] *Id.* at 202 ("The Court is aware that 'the views of a subsequent Congress form a hazardous basis for inferring intent of an earlier one.' [A]nd certainly Congress's inaction on amendatory legislation comes within these cautionary words. Nevertheless, the legislative history here is very relevant and is not just inaction, but actual acquiescence in the administrative interpretation given the Copyright Act." (citation omitted) (quoting United States v. Price, 361 U.S. 304, 313 (1960))).

[48] This view has, however, been criticized. *See* 1 NIMMER, *supra* note 19, § 2.15, at 2-183 ("The conclusion by the *Eltra* court appears most doubtful. As indicated above, the Copyright Office itself had previously expressed doubt as to whether its own Regulation correctly interpreted the law. The fact that the Copyright Office did not change its Regulation under the 1909 Act apparently had nothing to do with Congressional acquiescence, nor perhaps even with a belief that the Regulations were correct.").

[49] *See, e.g.*, Agfa Monotype Corp. v. Adobe Sys., Inc., 404 F. Supp. 2d 1030 (N.D. Ill. 2005) (avoiding issue of copyrightability of typefaces and focusing on anticircumvention provisions of DMCA).

[50] Leonard Storch Enters., Inc. v. Mergenthaler Linotype Co.*,* No. 78-C-238, 1979

follow *Eltra* in holding that typefaces are not copyrightable under the 1909 Act and presumably the 1976 Act.[51] However, cases that are more recent may bring that proposition into doubt.[52] The difficulty is that many of the more recent cases muddy the waters in terms of policy because they deal with digital typefaces. Such cases imply that even if the typeface designs themselves are not copyrightable, the associated software code is copyrightable. This might provide indirect and incidental copyright protection for the designs. Thus, if *Eltra* is correct that the Congressional intention is to exclude typefaces from the scope of copyrightable subject matter, the incidental extension of copyright to digital typefaces via protection of their code is potentially problematic as a matter of policy.[53]

In *Agfa Monotype Corp. v. Adobe Systems, Inc.*,[54] for example, the District Court for the Northern District of Illinois apparently did not entertain arguments about the copyrightability of a digital typeface in determining whether there had been an infringement of the anticircumvention provisions of the DMCA.[55] The court followed an earlier ruling that courts should only accept a claim for DMCA liability where a copyright holder demonstrates a "reasonable relationship between the circumvention at issue and a use relating to a property right for which the Copyright Act permits the copyright holder to withhold authorization."[56] Rather than concentrating on whether the plaintiffs had established a valid copyright in their typefaces, however, the court focused on whether the plaintiff had failed to prove actual circumvention of a technological protection measure.[57] The court did

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WL 1067 (E.D.N.Y. Apr. 5, 1979).

[51] *Id.* at *4 ("There can be little dispute that Mergenthaler's typeface designs are not copyrightable. In response to repeated requests the Copyright Office recently agreed to reconsider its longstanding policy of refusing copyright protection to typeface designs, and after extended public hearings adhered to that position. Its determination has been litigated by defendant and upheld by the Fourth Circuit. An opportunity to place such typefaces under the protection of federal copyright law was declined by Congress during the preparation of the Copyright Act of 1976." (citations omitted)).

[52] *See Agfa Monotype Corp.*, 404 F. Supp. 2d at 1040.

[53] Of course, copyrighting code and copyrighting the products generated by code are two different questions. However, there may be some situations in which they are tantamount to the same thing. This issue is taken up in more detail *infra* Part II.B.

[54] *Agfa Monotype Corp.*, 404 F. Supp. 2d at 1030.

[55] *See generally* 17 U.S.C. § 1201(a)(2)(A), (b)(1) (2006) (providing anticircumvention provisions of DMCA).

[56] *Agfa Monotype Corp.*, 404 F. Supp. 2d at 1035 (citing Chamberlain Group, Inc. v. Skylink Techs., Inc., 381 F.3d 1178, 1204 (Fed. Cir. 2004)).

[57] *Id.* at 1035-37. The court also rejected the plaintiff's argument that the

not address whether digital typeface designs are copyrightable subject matter under the 1976 Act. One could read this lack of discussion as an implicit acknowledgment that the plaintiff's typeface designs were copyrightable as such. Nevertheless, there is little direct judicial guidance about the copyrightability of digitally reproduced typeface designs, as distinct from their code.

B.   Typeface Copyrights: Policy Considerations

1.   Separability of Artistic and Functional Elements

In theory, there are good policy arguments both for and against typeface copyrights. As noted above, the statutory definition of "pictorial, graphic, and sculptural works" states that only the artistic elements of these works are copyrightable, not their functional elements.[58] In particular, the statute contemplates a separability test for aspects of the design of a useful article. Fonts and typefaces are problematic in this regard. On the one hand, fonts are useful articles, certainly with respect to the old-fashioned physical films and plates that embodied fonts in industrial age printing.[59] The question is whether — and if so, when — the artistic elements of a digital typeface design might be physically or conceptually separable from its functional attributes as building blocks of language or from the functional attributes of its software code.[60]

The answer is likely case specific. Many typefaces in and of themselves are not particularly artistic because they are the most obvious ways of expressing given letter forms. One might compare the letter "A" in the Times New Roman or Arial fonts ("A" and "A" respectively) with a more unusual font like Magneto ("𝒜"). Of

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defendants had developed technology "*primarily designed or produced* to circumvent" the plaintiff's encryption measures in contravention of the DMCA. *Id.* at 1036-37; *see also* 17 U.S.C. § 1201(a) (2006).

[58]   17 U.S.C. § 101 (2006); *see also supra* Part I.A.

[59]   *See generally* BRINGHURST, *supra* note 15, at 325 (describing predigital printing technologies involving wooden or metal plates and later celluloid film, all tangible functional articles).

[60]   LEAFFER, *supra* note 6, at 121-25 (discussion of physical and conceptual separability doctrines from copyright law); *see also* Robert Denicola, *Applied Art and Industrial Design: A Suggested Approach to Copyright in Useful Articles*, 67 MINN. L. REV. 707, 741 (1983) (advocating new approach to copyright's separability test that focuses on process of creation, suggesting that copyright should be reserved to features of item that reflect aesthetic perspective of artist or designer unconstrained by utilitarian environment in which she may be designing).

course, even this A is obviously recognizable as the upper case letter "A." If it were not easily recognizable as such, it would not be able to perform its function as a building block for text. There are more ornamental examples of typeface design; for example, the Christmas Lights and Christmas Tree examples set out in Figure 1.

Figure 1. Examples of Christmas Tree design and Christmas Lights design.
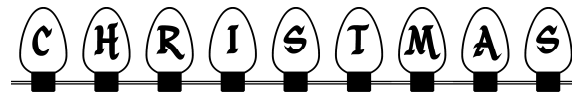
Christmas Lights[61]

Christmas Tree[62]

The letterforms in these typefaces are clearly recognizable as such, despite the decorative presentation. Again, they need to be recognizable as letters or they would not be able to perform their function. One might argue that if all letterforms are identifiable as letters, which are in turn identifiable as building blocks of language, then all typefaces should be uncopyrightable on functionality grounds. However, a number of designers would likely assert that there are at least some circumstances in which the creative aspects of a typeface should be separately protected as artistic works, despite the utilitarian purpose of the typeface overall.[63]

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[61] Fontsnthings.com, Christmas Fonts, http://www.fontsnthings.com/holiday/ christmas.shtml (last visited Sept. 11, 2008) (allowing for purchase).

[62] Simplythebest.net, Christmas Tree Font, http://simplythebest.net/fonts/fonts/ christmas_tree.html (last visited Sept. 11, 2008) (allowing for purchase).

[63] Of course, if copyright protection is unavailable, there may be other options for typeface designers. Design patents may play a role here, as might some state unfair competition or misappropriation laws. Fonts also might be protected through a combination of TPMs and contractual licensing, regardless of the availability of an underlying IP right. These possibilities are considered *infra* Part IV.

A typeface's artistic elements are usually not *physically* separable from the functional elements in the sense generally contemplated by copyright law. One of the leading cases on physical separability, *Mazer v. Stein*, illustrates this.[64] In *Mazer*, the United States Supreme Court upheld the copyrightability of statuettes of Balinese dancers used as bases for a functional item — a lamp.[65] The statuettes were physically separable from the lamps because one could literally separate the statuette portion from the lamp portion. However, most cases are not this simple.[66] Often courts must determine whether artistic elements may be conceptually, as opposed to physically, separated from the functional elements.[67] Typeface designs merit consideration under the conceptual separability jurisprudence.

Because one cannot physically separate typeface designs from reproductions of the typefaces themselves, they are effectively part of the letterforms they depict. A conceptual separation may make sense in some cases, but it would depend on how artistic the typeface actually is and, in a sense, how necessary its artistic elements are to the depiction of the underlying letterform. A variety of judicial approaches to conceptual separability has evolved over the years. Such approaches include the idea of separating the artistic and utilitarian functions into primary and secondary functions.[68] Other judicial formulations consider whether the item in question stimulates an artistic conception in a reasonable person that is separate from its

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[64] Mazer v. Stein, 347 U.S. 201 (1954).

[65] *See* LEAFFER, *supra* note 6, at 119-20 (discussing *Mazer* and some subsequent decisions on point).

[66] *See, e.g.*, Kieselstein-Cord v. Accessories by Pearl, 632 F.2d 989, 994 (2d Cir. 1980) (holding that ornamental surface designs of two belt buckles were conceptually separable from buckles' functional attributes because of purely aesthetic appeal of designs); Esquire v. Ringer, 591 F.2d 796, 806 (D.C. Cir. 1978) (holding that overall shape of outdoor lighting fixtures was not eligible for copyright protection as work of art because shape was not separable from functional attributes of fixtures).

[67] *See, e.g.*, *Kieselstein-Cord*, 632 F.2d at 993 (explaining aesthetic design of belt buckles was conceptually separable from their utilitarian function because they were sufficiently artistic to be considered conceptually as separable artistic component of buckles). For a detailed discussion of the problems associated with the separability test and suggestions for its reform, see generally Anne T. Briggs, *Hung Out to Dry: Clothing Design Protection Pitfalls in United States* Law, 24 HASTINGS COMM. & ENT. L.J. 169, 183-85 (surveying different judicial formulations of conceptual separability test in copyright law), and Denicola, *supra* note 60 (describing new approach to applying conceptual separability test in copyright law).

[68] *See Kieselstein-Cord*, 632 F.2d at 993; *see also* Carroll, *supra* note 10, at 151-53 (discussing potential application of this conceptual separability approach to typefaces).

utilitarian function.[69] Additionally, the Second Circuit court has asked whether the design of an article reflected the designer's artistic judgment as opposed to concerns that are more functional.[70]

Legal commentators suggest their own approaches to separability. For example, Professor Denicola proposes that copyright should be reserved to features of an item that reflect the aesthetic perspective of an artist or designer unconstrained by the utilitarian environment in which she may be designing.[71] His concern is less with physical or conceptual separation, but rather with how artistic a designer had actually managed to be within the constraints of a given product.[72] In the typeface industry, for instance, a designer will be significantly constrained by the shape of a given letter. Under Professor Denicola's test, one would need to consider how artistic the designer had managed to be, given these constraints.[73]

The Putty Peeps typeface illustrated in Figure 2 provides an example of where a designer has exercised significant creativity despite the constraints of the design process. This typeface utilizes putty-like versions of the human figure to create its letterforms.[74] The designer seems less constrained by letterforms than the designers of the Christmas-themed typefaces above, focusing instead on how to make putty-like people vaguely resemble given letterforms.[75] Here, one can argue the artistic elements are conceptually separable from the utilitarian functions of the letterforms. It is possible that the idea of using human forms as letters is sufficiently severable from the letterforms themselves to satisfy conceptual separability, and that the

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[69] Carol Barnhart, Inc. v. Econ. Cover, 773 F.2d 411, 414 (2d Cir. 1985); Carroll, *supra* note 10, at 151-53 (discussing potential application of this separability test to typefaces).

[70] Brandir Int'l, Inc. v. Cascade Pac. Lumber Co., 834 F.2d 1142, 1145 (2d Cir. 1987); Carroll, *supra* note 10, at 153-54.

[71] Denicola, *supra* note 60, at 741-43.

[72] *Id.*

[73] *See* Carroll, *supra* note 10, at 154 (describing potential application of Denicola separability test to typefaces). Professor Denicola referred to this test as the extent to which the design process was "unconstrained." Denicola, *supra* note 60, at 741-43.

[74] Myfonts.com, Putty Peeps, http://www.myfonts.com/fonts/mur/putty-peeps/ (last visited Dec. 1, 2008) (allowing for license).

[75] In fact, Professor Denicola has suggested that the copyrightability of the background designs of the Christmas fonts should be judged with reference to normal copyright standards for an original work of authorship. E-mail from Robert Denicola, Professor, to author (Feb. 15, 2009, 3:20 PM) (on file with author); *see* 1 NIMMER, *supra* note 19, § 2.01[A], at 2-7 ("[I]t is now clearly established, both as a matter of congressional intent and judicial construction, that the originality necessary to support a copyright merely calls for independent creation, not novelty.").

designer was not overly constrained by the given letterforms in developing the typeface. On the other hand, it is also arguable that though the Putty Peeps typeface is indeed creative, the shape of each letter's design is significantly constrained by the need to form a given letter. Thus, under Professor Denicola's test, it may be that the design process is too constrained to meet the separability requirements.[76]

Figure 2. Examples of Putty Peeps typeface.[77]
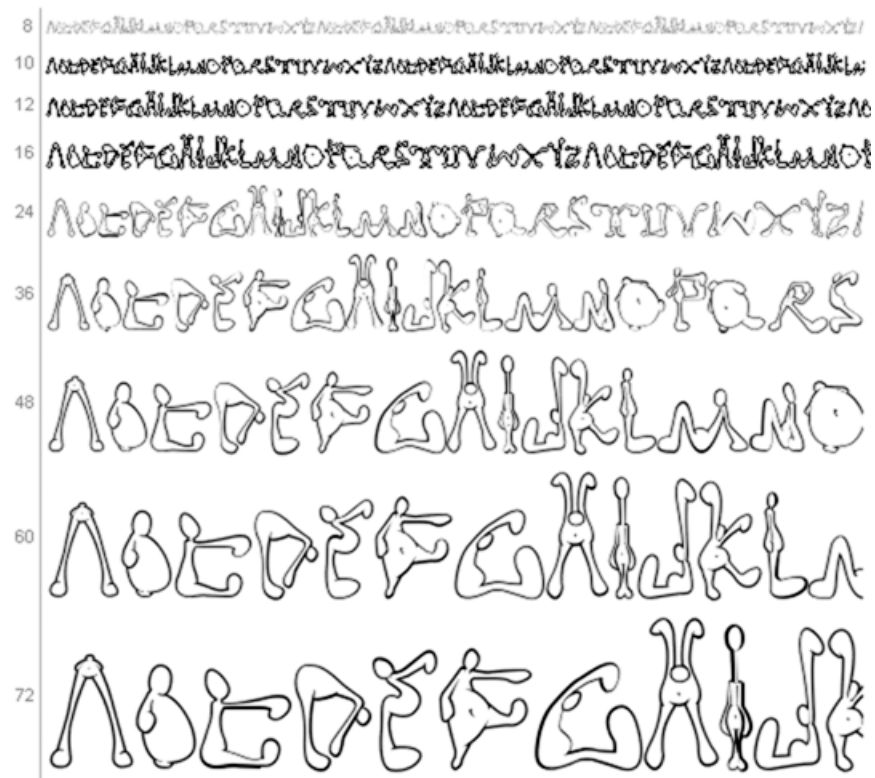
Interestingly, from a professional typeface designer's point of view, questions about typefaces such as Christmas Lights, Christmas Tree, and Putty Peeps, are probably moot. Although it may be true that copyright law is more likely to protect these typefaces than other less

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[76] *See* E-mail from Robert Denicola, Professor, to author, *supra* note 75.

[77] Myfonts.com, Putty Peeps, *supra* note 74.

overtly ornamental typefaces, many typeface designers would not find these designs particularly artistic or creative in a typographer's sense of the words. This is because typeface designers define creativity as the ability to merge the functional with the artistic, while copyright protection requires a separation of the two. Accordingly, a paradox is inherent in the application of copyright policy to the typeface industry. The designs that are the most valuable within the industry are often the most functional. A copyright policy that only protects highly ornamental but arguably less functional designs will be of little use to players in the industry, despite its potential appeal to designers who create largely ornamental designs like the Christmas Tree and Christmas Lights typefaces.

The following discussion considers some examples of letterform designs that are both artistic and functional. Several are functional in more than one respect. Consider, for example, the design of a nightlight for a child's bedroom where the base of the lamp is an alphabet letter denoting, say, the first letter of the child's name. Presumably, this three dimensional representation of a letterform — if sufficiently original for copyright purposes[78] — would be physically separable from the functional aspects of the lamp under *Mazer.*[79] However, there is another kind of functionality — that of the letterform itself. A letter "A," even as sculpted into a lamp base, is still a building block of language.

It is unlikely that the law intends the apparent copyright exclusions for typefaces to cover a letterform sculpture in a lamp base merely because the letter is attached to a physical item. In this case, the letter is arguably functioning as a work of art and should be copyrightable as such. Nevertheless, it is possible to argue that the lamp base should not be copyrightable because it comprises a building block of language and as such, serves the utilitarian function of expressing the first letter of a child's name. The distinction between this example and the *Mazer* case might be to distinguish between cases where letterforms *are* art, as opposed to situations where they serve as building blocks for text.[80]

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[78] The standard of originality required for copyright protection is relatively low. 1 NIMMER, *supra* note 19, § 2.01[A], at 2-7 ("[I]t is now clearly established, both as a matter of congressional intent and judicial construction, that the originality necessary to support a copyright merely calls for independent creation, not novelty.").

[79] *Cf.* Mazer v. Stein, 347 U.S. 201 (1954) (holding that statuettes were copyrightable even though they functioned as lamps because statuettes were physically separable from lamp base).

[80] Some forms of calligraphy may be good examples of where letterforms are considered "art" on their own merits as opposed to mere "building blocks of text." For

However, this line may be more difficult to draw in practice. Consider the representations in Figure 3 of the alphabet used to attach children's names to their bedroom doors.

Figure 3. "Hang-a-Name" Blocks.[81]

Here, the letterforms serve in a functional capacity both as building blocks of language and as a signage system for a bedroom door. Arguably, they are also artistic in that the design of the letters and accompanying pictures are original creations of the designer.[82] If a lamp base or door sign would otherwise be copyrightable — assuming sufficient originality in the design[83] — it seems bad policy to deny copyright protection merely because the article also happens to incorporate communicative text. Presumably, this is not the intention of the 1976 Act. Copyright policy aims to facilitate innovation in socially optimal ways. Thus, if the possibility of copyright protection incentivizes more designers of these kinds of items, the potential denial of protection here does not make sense.

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example, under Californian state law, calligraphy is copyrightable as a work of fine art. *See* CAL. CIV. CODE § 982(d)(1) (West 2006).

[81] StarBooks, Hang-A-Name Blocks, http://www.starbooks4u.com/product/gifts/45 (last visited Sept. 12, 2008) (allowing for purchase of "Hang-a-Name" blocks).

[82] 1 NIMMER, *supra* note 19, § 2.01[A], at 2-7 ("Although in some early copyright cases, the distinction was not recognized, it is now clearly established, both as a matter of congressional intent and judicial construction, that the originality necessary to support a copyright merely calls for independent creation, not novelty.").

[83] *See id.* § 2.10[A], at 2-7 to -12.

Three dimensional educational alphabet toys, such as the "alphabet train" in Figure 4, also present a challenge to current copyright policy. Like the blocks in Figure 3, these letters serve communicative functions as building blocks of text and as educational toys. There is at least some level of creativity in the presentation of letters in the train toy. However, the question remains — assuming sufficient originality in design — whether these utilitarian attributes bar the article from copyrightability.[84] In all of these examples, letters are simultaneously artistic and utilitarian. At the same time, there are two distinctly utilitarian functions for the typefaces — they serve as both building blocks of text and as lamp bases, toys, or door signs. Although one presumably cannot physically remove the aesthetic aspects of these items from their function as building blocks of language, there may be a potential conceptual separation.[85]

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[84] Interestingly, previous case law on the copyrightability of toys has suggested that toys may be copyrightable as pictorial, graphical, or sculptural works. 1 NIMMER, *supra* note 19, § 2.18[H][1], at 2-204.12(1) to -204.13. The assumption has been that toys per se are generally not subject to the useful articles test applicable to works of applied art because toys are not generally "useful articles." *Id.* ("If a toy qualifies as a pictorial, graphic or sculptural work, its copyrightability is not subject to the special requirements for 'useful articles' applicable to works of applied art. This for the reason that a toy is not a 'useful article' under the statutory definition because 'toys do not even have *an* intrinsic function other than the portrayal of the real item.' "). However, this previous authority does not focus on educational toys as opposed to dolls and models.

[85] If items like the Hang-A-Name blocks or alphabet train toy merely portray their own appearance or communicate information then they might not actually attract the conceptual separability test in the first place. It is, of course, possible that some of these examples might escape the conceptual separability test if they are not, in fact, useful articles as contemplated in the copyright legislation. *See generally* 17 U.S.C.A. § 101 (2009) (defining 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").

Figure 4. Alphabet Train Toy.[86]
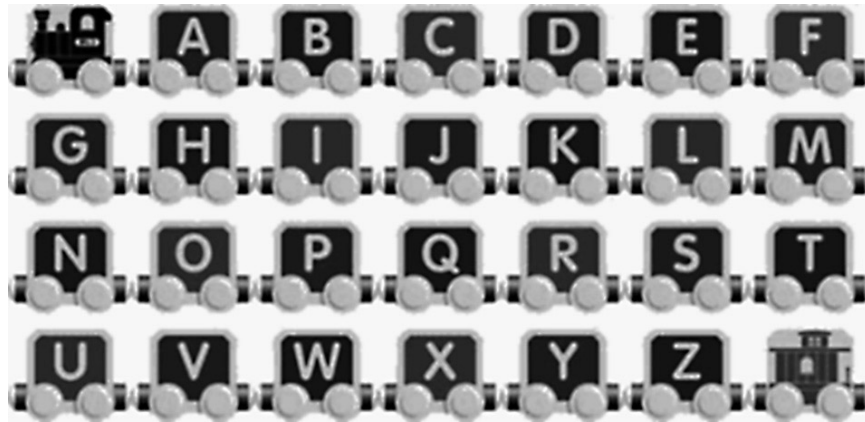
2.   Merger and Scènes à Faire

Another way to look at the problem of copyrightability of typefaces outside of the separability test is to consider the merger and scènes à faire doctrines, which prevent copyright monopolies over essential building blocks for expression. The premise of the merger doctrine is that if one inextricably merges a given idea with its expression, the expression is not copyrightable.[87] Otherwise, the copyright holder would effectively obtain a monopoly over the idea itself. Although it is unclear whether merger is a bar to initial copyrightability or whether it is a defense to a copyright infringement action, the underlying policy — prevention of monopolies over ideas — remains the same.[88]

In the typeface context, allowing the copyrighting of a typeface may be tantamount in certain cases to copyrighting the underlying letterform, an essential building block of language. However, there may be other cases in which the presentation of the letterform is unique in a particular typeface design such that it does not merge with its underlying letterform. For example, the Putty Peeps typeface design elements arguably do not merge with the underlying letterforms because the shapes of the letters are so distinct from the standard representations of given letter forms.[89] Alternatively, one

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[86] Sensory Edge.com, www.sensoryedge.com/chwodewich.html (last visited Oct. 20, 2009) (allowing for purchase).

[87] 1 NIMMER, *supra* note 19, § 13.03[B][3], at 13-86.

[88] *Id.* § 13.03[B][3], at 13-88.1.

[89] Myfonts.com, Putty Peeps, *supra* note 74. *See generally* 1 NIMMER, *supra* note 19,

might argue that in the digital age, because there is now an infinite variety of ways to design typefaces quickly and cheaply, no typeface design merges with the expression of a given letterform. There will always be other ways to express the relevant letterform. Unless designers copyrighted all possible variations of all letters, there could never be a monopoly in building blocks of language. Bearing in mind that a number of popular typefaces are now in the public domain, if copyright protection were prospective rather than retrospective, the copyrightability of new typefaces could never monopolize all uses of a given letterform.[90]

The scènes à faire doctrine is similar to the merger doctrine in that it attempts to prevent monopolies in expression associated with particular foundational ideas.[91] This doctrine generally applies to literary, dramatic, and musical works in which there are key themes within the art, such as stock characters, scenes, and settings, that individuals tend to repeat from work to work as a matter of course.[92] Compared to the merger doctrine, it is more challenging to apply the scènes à faire doctrine to typeface designs because it may be difficult to identify "stock" aspects of a typeface design that analogize with common characters, scenes and settings in literature. However, it is possible to argue that certain elements of a typeface design, such as serifs, are scènes à faire in the typeface design industry.[93] If so, it would follow that the reproduction of a public domain non-serif typeface with serifs added would not suffice to attract copyright protection for the new typeface.[94] Thus, the scènes à faire doctrine

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§ 13.03[B][3], at 13-85 to -88.5 (describing concept of merger doctrine).

[90] As noted in the Introduction, prospective extension of copyright law to typefaces would be necessary to mitigate concerns about monopolization of the public domain. It would also be consistent with moves of other previously IP-negative spaces, such as architecture, to a copyright protected status. *See* LEAFFER, *supra* note 6, at 133 (discussing prospective extension of copyright law to architecture).

[91] 4 NIMMER, *supra* note 19, § 13.03[B][4], at 13-88.5 to -88.7.

[92] *See id.*; *see also* Margit Livingston, *Inspiration or Imitation: Copyright Protection for Stage Directions*, 50 B.C. L. REV. 427, 465-68 (2009) (describing application of scènes à faire doctrine to theatrical staging).

[93] BRINGHURST, *supra* note 15, at 330 (defining "serif" as "stroke added to the beginning or end of one of the main strokes of a letter"). For example, the Times New Roman typeface has serifs, while the Arial typeface does not.

[94] This example is perhaps an over simplification as there are many different types of serifs that can be added to letterforms in a serif typeface. BRINGHURST, *supra* note 15, at 330 (definition of serif). Some new ways of adding distinctive serifs may, in fact, create a sufficiently original new typeface even if based on an existing non-serif typeface design. As Thomas Phinney put it, perhaps the idea of adding serifs to a non-serif typeface is not original for copyright purposes, but a particularly original specific

could operate alongside the merger doctrine to guard against undesirable monopolies in expression if copyright law was extended to typeface designs in the digital age.

3.   Typefaces and Compilations: Levels of Abstraction

One should also consider whether it makes sense to consider typeface designs as a constituent part of an otherwise copyrightable *compilation*. If typefaces are building blocks of literary text, and the substance of the resulting text itself is original for copyright purposes,[95] presumably copyright would protect the text as a whole.[96] A question arises as to whether there could be a valid policy justification for protecting some of the constituent parts of the text, such as the distinctive artistic character of the typeface used. There are many instances where an entire work and its constituent elements both qualify for copyright protection. Compilations of literary works, for example, may merit copyright protection as such, while their constituent elements — the underlying works — may also merit individual copyright protection.[97] An anthology of short stories by different authors, for instance, might attract copyright as an anthology, while individual authors may hold separate copyrights in their respective contributions.[98]

By analogy, typeface designs arguably should be copyrightable per se, as individual components of a copyrightable compilation in the form of a literary text. This reasoning ignores the different levels of abstraction between a letterform and a text versus a text and a compilation of texts. As Professor Burk notes, the question concerning levels of abstraction can be particularly significant in ascertaining whether something is insufficiently original or overly functional to merit copyright protection.[99] In particular, Professor Burk recognizes that in the digital world, every piece of content is ultimately reducible to bits, and that every bit is just a functional building block for

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example of serifs added to a non-serif typeface may pass muster under the scènes à faire test. Note from Thomas Phinney to author, *supra* note 12.

[95]   1 NIMMER, *supra* note 19, § 2.01[A], at 2-7 (noting that "the copyright standard for protection is originality").

[96]   17 U.S.C. § 102(a)(1) (2006) (extending copyright protection to "literary works").

[97]   *Id.* (copyright protection for independent literary works); *id.* § 103(a) (2006) (copyright protection for compilations and derivative works).

[98]   *Id.* § 103(a). The individual contributions would be protected under 17 U.S.C. § 102(a)(1) while the compilation would be protected under 17 U.S.C. § 103(a).

[99]   Burk, *supra* note 1, at 615.

something else.[100] Bits are the "1"s and "0"s that form the basis of all software code.[101] Every digital letterform ultimately reduces to bits. Thus, every digital text comprises digital letters, and every digital letter — whatever its typeface design — derives from software code, and all software code originates from bits. This raises questions regarding the level of abstraction at which one should consider copyrightability.

Assuming, for the moment, that it makes sense to apply the copyrightability question to the letterform stage of the equation, one may struggle to find a clear policy justification for why a sufficiently original typeface design should not be copyrightable. It may be the case that many, if not most, existing typefaces are insufficiently original to merit copyright protection. Typefaces like Times New Roman, Helvetica, and Arial may be too old, too common, or too closely associated with basic letterforms to attract copyright protection. Thus, it may be that copyright would only protect letterforms that are so ornamental as to be largely ineffective in communicating information to a reader.

However, this does not necessarily present a problem. In the area of software copyrights, very basic functional code may not be copyrightable because of the application of the merger or scénes á faire doctrines.[102] In other words, if a particular way of writing code is the only effective way, or the standard way of expressing a particular idea — which is often the case with encryption code, for example — then the code should not be copyrightable on that basis.[103] The aim of copyright law is to protect original creative works of authorship.[104]

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[100] *Id.* ("A single bit, a single pixel, merely functions as a building block.")

[101] DAVID BENDER, COMPUTER LAW § 2.03[2] (Matthew Bender & Co. 2009) (explaining binary nature of computer technology and requirement to reduce everything to "1"s and "0"s).

[102] Lexmark v. Static Control Components, 387 F.3d 522, 535-37 (6th Cir. 2004) (describing application of these doctrines in computer software context).

[103] *Id.* at 536 ("Generally speaking, 'lock-out' codes fall on the functional-idea rather than the original-expression side of the copyright line. Manufacturers of interoperable devices such as computers and software, game consoles and video games, printers and toner cartridges, or automobiles and replacement parts may employ a security system to bar the use of unauthorized components. To 'unlock' and permit operation of the primary device (*i.e.*, the computer, the game console, the printer, the car), the component must contain either a certain code sequence or be able to respond appropriately to an authentication process. To the extent compatibility requires that a particular code sequence be included in the component device to permit its use, the merger and scenes a faire doctrines generally preclude the code sequence from obtaining copyright protection.").

[104] *See* 17 U.S.C. § 102(a) (2006).

Thus, it may follow that particularly functional typeface designs, like particularly functional software code, should not be copyrightable. However, this does not mean that typefaces should be uncopyrightable per se. Rather, the field of typeface design, like the field of software coding, will generally only attract thin copyright protection.[105] This view is consistent with past developments in copyright law and with the stated policies underlying copyright law to promote artistic innovation.[106] Of course, thin copyright protection may not be a satisfying result for a number of professional typeface designers whose idea of originality and creativity is, by necessity, merged with the concept of functionality.[107]

II.   COPYRIGHT AND THE DIGITAL TYPEFACE INDUSTRY

A.   *Digital Age Changes in Market Structure*

Considering the applicability of copyright law to the digital typeface industry necessitates an understanding of the dramatic changes in structure of this industry. The transition to the digital realm has changed the players both in nature and in number. Prior to the digital age, various iterations of the physical industry existed, and each involved separated typeface design and font production functions.[108] Early in the development of typesetting, the printing of text required the use of wooden, and eventually metal, blocks created by foundries based on designs provided by typeface designers.[109] Later iterations involved reducing a graphical artist's typeface design to a glyph palette that was further reduced to the form of a celluloid filmstrip or wheel.[110]

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[105] Pamela Samuelson, *Why Copyright Law Excludes Systems and Processes from the Scope of Its Protection*, 85 TEX. L. REV. 1921, 1924 (2007) [hereinafter *Systems and Processes*] (noting appropriateness of thin copyright protection for software code).

[106] Mazer v. Stein, 347 U.S. 201, 219 (1954) (noting that "[t]he economic philosophy behind the clause empowering Congress to grant patents and copyrights is the conviction that encouragement of individual effort by personal gain is the best way to advance the public welfare through the talents of authors and inventors in science and the useful arts"); *see also* LEAFFER, *supra* note 6, at 22; 1 NIMMER, *supra* note 19, § 1.03[A], at 1-88.18.

[107] *See* Note from Thomas Phinney to author, *supra* note 12.

[108] CABARGA, *supra* note 17, at 12 ("Before computers, a font was called a *typeface* or *face*. *Font* or *fount* originally referred to the product of a foundry where hot metal is poured into molds, and *type font* referred to the complete character set in one specific point size and style of type within a type family.").

[109] BRINGHURST, *supra* note 15, at 325 (defining font in world of metal type as given alphabet in given size reduced to metal font plate); CABARGA, *supra* note 17, at 12.

[110] BRINGHURST, *supra* note 15, at 325.

However, in the digital world, the font is effectively both the glyph palette and the digital information encoding it.[111] Where a typeface designer produces her own typefaces via software such as FontLab Studio, FontForge, TypeTool, Fontographer, or Adobe Illustrator,[112] she is effectively both the typeface designer and foundry all in one. One can thus aggregate the two functions.[113] Alongside this aggregation comes a significant decrease in barriers to entry. Anyone who can afford one of these software packages or master an open source package can design her own type, increasing the number of players in the design market exponentially. Further, as individuals can license digital type cheaply and easily online, more designers enter the market and license their own wares. This evidences another aggregation of functions — designers can now license their own designs directly to customers and are no longer reliant on employment by design houses to do so.[114] This is much like the way in which authors and musicians can now effectively produce and market their own music and books online.[115] They no longer require intermediaries to manufacture and distribute their wares.

Another significant change to the typeface industry in the digital age is the increased anonymity of the players. This anonymity comes with a marked increase in industry participants, and refers to two meanings. First, designer-distributors can literally be anonymous online, because they do not have to interact with customers. Second, and more significantly, there is a kind of anonymity when a previously compact industry is suddenly comprised of many players. In the older and smaller iteration of the industry, participants generally knew each other and often had repeated business dealings. This allowed for the establishment of relatively well-developed norms, including

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[111] *Id.* at 325-26.

[112] *See* CABARGA, *supra* note 17, at 128-33 (describing usage of Adobe Illustrator); Fontforge.net, http://fontforge.sourceforge.net/ (last visited Mar. 27, 2009); Fontlab.com, Fontlab Studio, http://www.fontlab.com/font-editor/fontlab-studio/ (last visited Mar. 27, 2009); Fontlab.com, Fontographer, http://www.fontlab.com/font-editor/fontographer/ (last visited Mar. 27, 2009); Fontlab.com, TypeTool, http://www.fontlab.com/font-editor/typetool/ (last visited Mar. 27, 2009).

[113] This is true for the most part, although at the high end of the market, the functions are sometimes not aggregated and businesses do occasionally use separate people to design typefaces while a different set of people design the underlying code. *See* Note from Thomas Phinney to author, *supra* note 12.

[114] *See* CABARGA, *supra* note 17, at 228 (describing ways for freelance designers to get into business for themselves without need to contract with design house).

[115] *See, e.g.*, CHRISTOPHER ANDERSON, THE LONG TAIL: WHY THE FUTURE OF BUSINESS IS SELLING LESS OF MORE 6 (Hyperion 2006) (noting ability of amateur music and moviemakers to directly market to their own audience online).

appropriate and inappropriate usage of others' designs. In such industries, there can be less need for legal regulation, including IP protection, because industry participants can effectively self-regulate.

One typeface designer has written about the acceptance of "creative copying" in developing new typefaces.[116] He explains that as a matter of accepted practice: "Copying, or using 'reference' material, should be done as an aid, not as a crutch. Try never to copy anything verbatim. Besides being plagiaristic, it's just dirty pool."[117] These words suggest that although designers are concerned about unauthorized copying, they expect and understand that some degree of copying is necessary and accepted as a normative matter. Of course, as with all norms, individuals honor some more in the breach than in the observance.[118] Predigital type designers differ in their views as to how well respected the predigital norms against copying actually have been in practice.[119]

The transition to a more anonymous online industry of a much larger scale may negatively affect participants' awareness of, and conformity with, previous norms. A small group of players may have loosely accepted the idea that over-zealous copying of others' designs is "dirty pool."[120] A larger group of market participants, however, who have spent less time in the industry — and are perhaps only engaging in it as a hobby rather than a profession — may have less interest in identifying and conforming to existing norms. They may simply be unaware that such norms exist.[121] Additionally, norms regarding copying in the physical world presumably need to adapt to the realities of the digital industry. When there are fewer participants and fewer typefaces, it is likely easier to avoid unacceptable copying. However, with an almost infinite number of digital typefaces now available, there may well be lesser degrees of design separation between them. Thus, norms about copying must change in this context.[122]

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[116] CABARGA, *supra* note 17, at 38.

[117] *Id.*

[118] For example, Ulrich Stiehl suggests that the typeface design industry organization ATypI has participated in encouraging rather than discouraging their stated industry norms against font forgery. Ulrich Stiehl, ATypI: International Type Forgers Association, http://www.sanskritweb.net/forgers/atypi.htm (last visited Sept. 13, 2009).

[119] *See, e.g.*, Ulrich Stiehl, *supra* note 118 (noting apparent inconsistency in view on font forgery from members of one of leading type design organizations, ATypI).

[120] CABARGA, *supra* note 17, at 38.

[121] *See, e.g.*, Typophile, Use of Illegally Uploaded Fonts, http://typophile.com/ node/54673 (last visited Feb. 20, 2009) (expressing some uncertainty about what constitutes illegal downloading of others' digital fonts).

[122] Of course, one could argue the opposite by saying that if there are now infinite

A corresponding diversity of new customers matches the greater diversity in the number of typefaces and typeface designers in digital markets. In the predigital age, designers licensed physical fonts largely to commercial printers who published books, periodicals, newspapers, posters, and other forms of text.[123] In the digital typeface industry, the potential licensees of fonts have increased remarkably. Along with the desktop publishing revolution came desires of private individuals to access a variety of typefaces for their own purposes. Individuals now design their own websites, posters, party invitations, blogs, and the like.[124] This opens up large online markets for typefaces. Not only has the group of typeface designers and distributors aggregated and enlarged, so too has the group of prospective licensees for the wares of those designers and distributors.[125]

This new digital market structure raises the possibility that copyright policy should now afford greater latitude for copyrighting typefaces. The ability to assert a copyright in a digital typeface may give digital age typeface designers more comfort in releasing their works into online marketplaces where the threat of digital piracy is very real.[126] Even if designers do not intend to ever bring a copyright action due to cost and resource limitations, the ability to send a credible threat of a copyright infringement action to an alleged wrongdoer has some value. Additionally, if predigital norms against overzealous borrowing are lost as the number and anonymity of players increases in the digital market, copyright law might fill the void. If market players cannot rely on previous norms to keep each

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ways of creating new designs, there is no excuse for any copying. Nevertheless, this would still change the copying norms, albeit in the opposite direction. Arguably more anecdotal and empirical work needs to be done now to ascertain how these norms are developing, if at all, in practice. The development of norms in the digital font industry is considered in more detail *infra* Part IV.H. *See also* Typophile, *supra* note 121 (expressing some uncertainty about what constitutes illegal downloading of others' digital fonts).

[123] *See generally* CABARGA, *supra* note 17 (describing history of typeface industry).

[124] *See, e.g.*, Ascenderfonts.com, http://www.ascenderfonts.com (last visited Mar. 27, 2009) (aiming at licensing fonts to small private consumers); Fontmarketplace.com, www.fontmarketplace.com (last visited Mar. 27, 2009) (same). Information on font marketplaces for these companies from Telephone Interview with Ira Mirochnick, President of Ascender Corporation, in Cleveland, Ohio & Chi., Ill. (Feb. 4, 2009). *See* Ascendercorp.com, http://www.ascendercorp.com/ (last visited Sept. 13, 2009).

[125] *See* Telephone Interview with Ira Mirochnick, *supra* note 124.

[126] *See* Note from Thomas Finney to author, *supra* note 12 ("[F]ont piracy is huge, and almost certainly greater relative to sales than piracy of any other class of software. That's understandable, as fonts are small files, easily copied, and typically without any activation or licensing keys like other software.").

other in check, the threat of a copyright action might play a similar role in the digital world.

On the other side of the coin, the ready acceptance of copyrights in digital typefaces could potentially discourage innovation in the digital industry. Much of the work in this industry is incremental and builds on earlier work of previous designers.[127] If this is the case, locking up that work behind copyright law may stifle innovation. This is similar to arguments that commentators have made in the software code industry, where developments also tend to be incremental.[128] Thus, the ability to lock up code for lengthy periods under various IP regimes can be damaging to developments in relevant industries.[129] In the code industry, there has been some concern about patent thickets that stifle innovation in software development.[130] Copyright protection, with its lengthy duration, poses many similar problems.[131] Currently, the ability to copyright font software associated with typeface designs already raises some of these same concerns.

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[127] CABARGA, *supra* note 17, at 203 ("Looking backwards, whether thousands of years or to yesterday, becomes the vehicle through which seemingly new ideas spring into being. Think of it as recycling. When it comes to type design, with its necessary adherence to conventionalized letterforms and the need for some degree of legibility as its guiding constraint, mining the past for viable models is often seen as a necessary, if not proud tradition.").

[128] Pamela Samuelson et al., *A Manifesto Concerning the Legal Protection of Computer Programs*, 94 COLUM. L. REV. 2308, 2330-32 (1994) [hereinafter *Manifesto*] (describing ways in which innovation in computer programming is largely incremental and cumulative in character).

[129] Jacqueline Lipton, *IP's Problem Child: Shifting the Paradigms for Software Protection*, 58 HASTINGS L.J. 205, 208 (2006) [hereinafter *IP's Problem Child*] ("While some companies in the computer software industry are unquestionably flourishing in today's marketplace, they may be doing so by taking advantage of competitors who lack the wherewithal to combat software copyrights. These large software companies also utilize questionable software patents, restrictive digital rights management, and contractual measures to stifle competition. All of these barriers may be standing in the way of the incremental developments essential for software innovation.").

[130] David Evans & Anne Layne-Farrar, *Software Patents and Open Source: The Battle over Intellectual Property Rights*, 9 VA. J.L. & TECH. 10, 52-61 (2004) (describing concerns about development of patent thickets in software industry that could stifle innovation).

[131] *See* Lipton, *IP's Problem Child, supra* note 129, at 208.

B. *Copyright Law and Software Code: Implications for Digital Typeface Copyrights*

In the 1980s, policy makers addressed the contentious issue of the extent to which software code should be copyrightable.[132] At the end of the day, software code obtained thin copyright protection.[133] Nevertheless, even the relatively limited reach of copyright law to code had unforeseen consequences with which courts are still grappling today.[134] An additional consequence might be uncertainty concerning the copyrightability of software code associated with a digital typeface design. In 1992, the Copyright Register adopted regulations about this issue, noting:

> [T]he creation of scalable font output programs to produce harmonious fonts consisting of hundreds of characters typically involves many decisions in drafting the instructions that drive the printer. The expression of these decisions is neither limited by the unprotectible shape of the letters nor functionally mandated. This expression, assuming it meets the usual standard of authorship, is thus registrable as a computer program.[135]

Of course, there is a separate debate about the extent and circumstances in which computer code should be copyrightable in general. Professor Samuelson has raised concerns about early judicial failures to limit findings about the copyrightability of code under § 102(b) of the 1976 Act.[136] Congress intended § 102(b) to ensure that copyright protection does not extend to ideas, processes, and methods that are more appropriately covered by other laws such as patent and

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[132] *See id.* at 245; Samuelson, *Systems and Processes, supra* note 105, at 1961-67; Samuelson et al., *Manifesto, supra* note 128, at 2362.

[133] *See* 17 U.S.C. § 102(b) (2006) ("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."); Samuelson, *Systems and Processes, supra* note 105, at 1924 ("Thin copyright protection for [computer] programs is especially appropriate given the availability of patent protection for program innovations.").

[134] *See* Lipton, *IP's Problem Child, supra* note 129, 231-39 (discussing variety of these unseen consequences).

[135] Registrability of Computer Programs That Generate Typefaces, 57 Fed. Reg. 6201, 6202 (Feb. 21, 1992) (codified at 37 C.F.R. pt. 202 (1994)); *see also* Adobe Sys., Inc. v. S. Software, Inc., 45 U.S.P.Q.2d (BNA) 1827, 1830-31 (N.D. Cal. 1998) (citing regulations).

[136] Samuelson, *Systems and Processes, supra* note 105, at 1974.

trade secrecy.[137] Professor Samuelson argues that this includes computer code, which, as a result, should only obtain thin copyright protection.[138] Of course, the Copyright Office maintains the position that even if the code's output may not qualify for copyright protection, this does not render otherwise copyrightable code unregistrable.[139] Though this position seems reasonable, the Copyright Office must be vigilant to ensure that any code submitted for copyright registration, including code associated with typefaces, meets copyright's originality requirements.

If software copyrights, and in particular typeface related software copyrights, have the potential to stifle innovation, copyright law should arguably refrain from protecting code related in any way to typeface design. One might argue that either typefaces should be copyrightable as such, or they should not be copyrightable as a general policy matter. If they are to be copyrightable, even if they only receive thin copyright protection, the law should be clear on this point. If they are not copyrightable, then it may be necessary to reconsider the situation that allows indirect protection via copyrighting the associated code.

Much digital font code may lack sufficient originality to attract copyright protection. For example, font designers who do not actually write code but instead use programs such as FontLab Studio or TypeTool to create typefaces, may not create original code in the sense usually contemplated by copyright law. Their efforts are not in code writing; the code production is incidental to the generation of their typeface designs. Nevertheless, many of these designers appear to claim copyright in their end products.[140] There is a clear distinction between professional digital typeface design companies and amateur or semiprofessional typeface designers, who use off-the-shelf design software packages. The professional companies will tend to write detailed software code that allows fonts to be scalable and adaptable to different situations, while the hobbyist does not necessarily focus on the code-writing part of the equation. Thus, it might be perfectly

[137] *See* 17 U.S.C. § 102(b).

[138] *See* Samuelson, *Systems and Processes*, *supra* note 105, at 1924 ("Thin copyright protection for [computer] programs is especially appropriate given the availability of patent protection for program innovations.").

[139] Registrability of Computer Programs That Generate Typefaces, 57 Fed. Reg. at 6202; *Adobe Sys., Inc.*, 45 U.S.P.Q.2d at 1830-31.

[140] To see the extent to which designers of digital fonts claim copyrights in those fonts, it is only necessary to look at copyright notices attached to fonts on services such as Myfonts.com, http://www.myfonts.com (last visited Nov. 30, 2008).

reasonable to expect copyright protection for the valuable code-writing efforts of the professional font designers, while not extending the same protection to a designer who incidentally creates code through use of a standard software package. Therefore, the Copyright Office must consider the question of the copyrightability of code with a clearer focus than has been the case in the past, and to distinguish between the different kinds of code related to digital typefaces.

It is also important to recognize that even where one copyrights code, the copyright does not necessarily extend to the design of the resulting typeface per se. Through reverse engineering, or even independent coding, a designer can generate a very similar looking typeface with different code.[141] This is another reason why it is important to ascertain what digital typeface designers who claim copyrights are actually intending to protect — their designs or their code. If they are claiming copyrights in the code and not the resulting designs, a competitor who creates the same design with different code will not infringe the asserted copyright.[142] If, on the other hand, the designer intends to assert copyright in the designs as such, even the independent creation of new code that generates the same design may result in an infringement of the design. Accordingly, it is necessary in the digital age to clarify the extent to which copyright law extends to digital typeface designs and their associated software code.

To make these determinations, one must consider whether changes in market structure merit any changes in copyright policy. It may be that copyright protection was not necessary in the predigital world, but that changing market forces in the digital age require a reconsideration of this policy.[143] In the movie, music, and print industries, moves to digital market models necessitated enhanced protections for *existing* copyrights.[144] By contrast, the typeface industry

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[141] *See* Lipton, *IP's Problem Child*, *supra* note 129, at 212 ("Studying reverse engineering does shed some light on the level of protection software developers can realistically expect from copyright law. As noted by Professor Samuelson, it is very easy for a competitor to develop a program with identical functional behavior to the original but with completely different underlying literal code." (citation omitted)).

[142] In fact, many professional font designers are quite happy with this result. Ira Mirochnick of Ascender Corporation, for example, expressed a concern with unauthorized copying of detailed code, but was less concerned with copying of the resulting typeface design. Telephone Interview with Ira Mirochnick, *supra* note 124. The view appears to be that the copyright in the code gives the company the necessary head start in the market, after which it is not necessarily a problem if a competitor recreates the resulting typeface design from scratch without copying the protected code.

[143] *See supra* Part II.A.

[144] Some of these enhanced protections are found in the anti-circumvention and copyright management information protection provisions of the DMCA. 17 U.S.C.

would be an example of a market in which copyrights did not previously exist, but are now necessary because of market changes in the online industry.

III.   TYPEFACES AND THE DIGITAL MILLENNIUM COPYRIGHT ACT

While the typeface copyright question in the digital age remains unsettled, the DMCA poses interesting problems of its own relating to the protection of digital typefaces.[145] The acceptance of digital typeface copyrights and copyrights for their associated code could lead to overbroad protection of digital typefaces through the anticircumvention provisions of the DMCA.[146] Additionally, digital typeface designers might derive some protection for their works from the DMCA's copyright management information ("CMI") protections.[147]

Congress implemented the DMCA to assist copyright holders in obtaining protection from a number of digital age threats, such as large-scale digital copyright piracy.[148] Specifically, the DMCA seeks to support the use of CMI,[149] and the application of TPMs,[150] intended to

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§§ 1201-1202 (2006); *see also infra* Part III.

[145]   *See generally* 17 U.S.C. § 1201 (providing DMCA's anti-circumvention provisions).

[146]   *See generally* Pamela Samuelson, *Intellectual Property and the Digital Economy: Why the Anti-Circumvention Regulations Need to Be Revised,* 14 BERKELEY TECH. L.J. 519 (1999) [hereinafter *Digital Economy*] (discussing operation of anti-trafficking provisions of DMCA).

[147]   CMI can refer to either "content management information" or "copyright management information" depending on whether the work in question is copyrighted or not. The use of the term throughout this Article should be clear from the context.

[148]   LEAFFER, *supra* note 6, at 391-94 (describing congressional purposes in enacting DMCA).

[149]   17 U.S.C. § 1202 (setting out scope of protections for integrity of CMI attached to copyright works); LEAFFER, *supra* note 6, at 404-05 (describing congressional purposes in enacting CMI protections in copyright legislation). *See generally id.* at 404 ("The term CMI includes all identifying information involving the title and other information identifying the work, the name of the author or performer, the terms and conditions for the use of the work, and other identifying numbers or symbols referring to such information or links to such information.").

[150]   17 U.S.C. § 1201; LEAFFER, *supra* note 6, at 393-94 ("Section 1201 prohibits the circumvention and the manufacture or trafficking of technologies that are designed to circumvent technological safeguards, known collectively as 'technological protection measures' or 'TPMs.' Section 1201 distinguishes between TPMs that block unauthorized access to works, and those that control the unauthorized exercise of one or more of the exclusive rights to copyright. The former are 'gatekeeper' technologies that must be bypassed (lawfully or otherwise) if a user is to read, see, hear, or otherwise perceive a work to which they have been applied. The latter are technologies, usually the same technologies, that limit the further uses of copyrighted works — reproduction, adaptation, distribution, public performance, and public

control access to, and use of, digital copyright works. The DMCA defines "copyright management information" to include information that identifies a work,[151] its author,[152] its owner,[153] or that sets out terms and conditions under which the work may be used.[154] The DMCA prohibits the provision or distribution of false CMI,[155] as well as the removal or alteration of CMI from a work.[156] It also prohibits distribution of a work wherein an individual has knowingly removed or altered CMI.[157]

Assuming that digital typeface designs or their code are copyrightable, there is no reason why a copyright holder could not avail itself of CMI and the additional protections of the DMCA in respect of the CMI. In fact, the application of these provisions may serve the functions previously served by norms in the more compact physical industry, as they are a way of putting others on notice of a designer's asserted rights. Of course, CMI is employed as a purely technological measure in the industry, without the need for a copyright-based legal action behind it.[158] However, the ability to assert a legal right under the DMCA based on preserving the integrity of CMI serves a potentially important communicative function about the validity of CMI in the digital typeface context.

Outside of the CMI protections of the DMCA are the DMCA's anticircumvention provisions.[159] These provisions prohibit the circumvention of TPMs that control access to a work,[160] and discourage the trafficking of devices that hinder TPMs that control either access to,[161] or use of,[162] a work. Some criticize these provisions for effectively negating fair use in certain situations, and for their potentially overbroad application.[163] This is because it is possible now

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display — after which access has been obtained.").

[151] 17 U.S.C. § 1202(c)(1).

[152] *Id.* § 1202(c)(2).

[153] *Id.* § 1202(c)(3).

[154] *Id.* § 1202(c)(6).

[155] *Id.* § 1202(a).

[156] *Id.* § 1202(b)(1).

[157] *Id.* § 1202(b)(2)-(3).

[158] *See id.*

[159] *See id.* § 1201.

[160] *See id.* § 1201(a)(1)(A).

[161] *See id.* § 1201(a)(2).

[162] *See id.* § 1201(b)(1)(A)-(C).

[163] *See* Jacqueline D. Lipton, *Solving the Digital Piracy Puzzle: Disaggregating Fair Use from the DMCA's Anti-Device Provisions*, 19 HARV. J.L. & TECH. 111, 124-28 (2005); Anthony Reese, *Will Merging Access Controls and Rights Controls Undermine*

for holders of valuable, but noncopyrightable, works to take advantage of the DMCA's protections if the rights-holder has encrypted *some* copyrightable material alongside non-copyrightable material.[164]

With respect to the protection of digital typefaces, if the typeface designs or their associated code are copyrightable, then rights-holders can avail themselves of TPMs and the supporting provisions of the DMCA. However, as with CMI, even in circumstances where digital typeface designs or their associated code are not copyrightable, designers may utilize the technology effectively outside of copyright law to further control access to, and use of, their designs.[165] In these circumstances, typeface designers might still use the anti-circumvention provisions if they encrypt *some* copyrightable material — perhaps some additional copyrightable software code — alongside the encrypted typeface code. For example, code that generates a description of a particular typeface may not be necessary for the effective operation of the software, but may be sufficiently original for copyright purposes to attract the anticircumvention provisions of the DMCA.[166]

Some courts hold that in order to support a DMCA claim, a plaintiff must establish a link between the claim and a realistic threat of copyright infringement.[167] If this view were widely accepted, the

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the Structure of Anti-Circumvention Law?, 18 BERKELEY TECH. L.J. 619, 630-41 (2003); Jerome Reichman, Graeme Dinwoodie & Pamela Samuelson, *A Reverse Notice and Takedown Regime to Enable Public Interest Uses of Technically Protected Copyright Works*, 22 BERKELEY TECH. L.J. 981, 1004 (2007); Pamela Samuelson, *Digital Economy*, *supra* note 146, at 537.

[164] *See, e.g.*, LEAFFER, *supra* note 6, at 392 ("[I]t was feared that the administration's proposals [for the DMCA] would allow copyright owners to lock up public domain materials and frustrate the fair use rights of information consumers . . . . With its passage at the end of 1998, the DMCA represents a victory for copyright owners.").

[165] Apparently, TPMs are generally quite difficult to implement with respect to typeface software code:

> TPMs are technically very complex and difficult to implement for fonts (fonts are system-level resources, quite unlike music, videos or ebooks). Such measures *have* [sic] been enacted historically for fonts, but have been abandoned repeatedly as the costs exceeded the benefits. Currently, such measures are in place in East Asian markets, but appear to be gradually phasing out. Even if they wanted to, most font vendors do not have the technical/financial resources to implement a TPM.

Note from Thomas Phinney to author, *supra* note 12.

[166] *Id.*

[167] *See* Storage Tech. Corp. v. Custom Hardware Eng'g & Consulting, 421 F.3d 1307, 1318 (Fed. Cir. 2005) ("[C]ourts generally have found a violation of the DMCA only when the alleged access was intertwined with a right protected by the Copyright

ability of typeface designers to utilize the DMCA to protect uncopyrightable aspects of typeface designs would be limited, even encrypting those aspects alongside the copyrightable code. Importantly, the literal text of the DMCA does not require the plaintiff to establish such a link, and it is not clear whether future courts will continue to require it.[168]

IV. ALTERNATIVES TO COPYRIGHT

A. Design Patents

Another question one must address in determining the scope of copyright protection necessary for the digital typeface industry is whether there are available alternatives to copyright. One obvious possibility is design patent law. Section 171 of the Patent Act allows for the grant of a design patent for "any new, original and ornamental design for an article of manufacture."[169] Design patents last for fourteen years,[170] in contrast to standard utility patents that last for twenty years.[171] In the past, the Patent and Trademark Office ("Patent Office," "PTO") routinely granted design patents for the physical — usually metal — blocks produced by foundries that embodied typefaces.[172] In the current digital age, the question is whether the

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Act."); Chamberlain Group, Inc. v. Skylink Techs., Inc., 381 F.3d 1178, 1203 (Fed. Cir. 2004), *cert. denied*, 125 S. Ct. 1669 (2005) (holding that DMCA plaintiff must establish link between its anticircumvention claims and threat of copyright infringement to support its DMCA action); Agfa Monotype Corp. v. Adobe Sys., Inc., 404 F. Supp. 2d 1030, 1040 (N.D. Ill. 2005) (holding that there was no DMCA anticircumvention infringement in absence of effective technical protection measure and with no purpose to infringe underlying copyright).

[168] Jacqueline Lipton, *The Law of Unintended Consequences: The Digital Millennium Copyright Act and Interoperability*, 62 WASH. & LEE L. REV. 487, 543-44 (2005) ("[T]he point was made by judges in both the *Lexmark* and *Chamberlain* appeals that when no copyright action lies in an interoperability case, there is no relevant copyright for the plaintiff to protect under a DMCA claim. As noted above, this is not precisely what the DMCA says. There is no clear requirement of a successful copyright action to support a DMCA claim. There is only a requirement that the technological encryption measure in question effectively protects a copyright work." (citation omitted)).

[169] 35 U.S.C. § 171 (2006).

[170] *Id.* § 173 (2006) ("Patents for designs shall be granted for the term of fourteen years from the date of grant.").

[171] *Id.* § 154(a)(2) (2006).

[172] *Ex parte* Tayama, 24 U.S.P.Q.2 (BNA) 1614, 1618 (1992) ("The phrase 'type font' may be properly interpreted as referring to letter blocks or pieces used in a conventional printing press. The blocks or pieces constitute an article or articles of manufacture.").

same should be true of digital fonts. Because there is no physical
article of manufacture that embodies the font, it is unclear whether
design patent law can meaningfully apply. In *Adobe Systems, Inc. v.
Southern Software, Inc.*, the court held that such fonts do qualify as
statutory subject matter for design patent purposes.[173] The court
followed Patent Office guidelines issued in 1996 that dealt specifically
with digital fonts. The guidelines state:

> Traditionally, type fonts have been generated by solid blocks
> from which each letter or symbol was produced.
> Consequently, the PTO has historically granted design patents
> drawn to type fonts. PTO personnel should not reject claims
> for type fonts under Section 171 for failure to comply with the
> "article of manufacture" requirement on the basis that more
> modern methods of typesetting, including computer-
> generation, do not require solid printing blocks.[174]

Interestingly, the Patent Office adopted these guidelines largely to
dispel subject-matter patentability concerns about fonts when the
industry initially moved from three-dimensional blocks to two-
dimensional means of font production in the form of celluloid film in
the early to mid 1970s.[175]

In the context of celluloid film fonts, questions arose as to whether
these film fonts were suitable statutory subject matter for design
patents because they were not three-dimensional.[176] Instead of metal
plates, foundries used two-dimensional celluloid film to create fonts.
Accordingly, there was a more obvious separation between the
typeface design and foundry functions than there is today, even
though the foundry function had changed. The Patent Office

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[173] Adobe Sys., Inc. v. S. Software, Inc., 45 U.S.P.Q.2 (BNA) 1827, 1833 (N.D. Cal. 1998).

[174] Guidelines for Examination of Design Patent Applications for Computer-Generated Icons, 61 Fed. Reg. 11380, 11381 (Mar. 20, 1996).

[175] *See* Leonard Storch Enters., Inc. v. Mergenthaler Linotype Co., No. 78-C-238, 1979 WL 1067, at *5 (E.D.N.Y. 1979) ("A design patent is available to any article of manufacture containing a new, original and ornamental design. Approximately one thousand metallic fonts of type and a variety of other articles carrying characters have met at one time, the stringent criteria necessary to be awarded design patents. What is significant is that each of these articles is a three-dimensional object to which the letters and characters give shape or add embellishment. By contrast two dimensional film fonts cannot take on a distinctive appearance or shape merely by placing a design across its face. Film fonts, are, in this respect, similar to dress designs and it is highly questionable whether they could satisfy the requirements of a design patent." (citations omitted)).

[176] *See id.*

Guidelines addressed this problem by effectively accepting two-dimensional celluloid fonts as patentable under § 171.[177] However, the Guidelines went further in asserting that digital fonts could also be patentable under § 171, and explicitly contemplate that "more modern methods of typesetting, including computer-generation" may satisfy design patent requirements as articles of manufacture.[178] They draw no distinction between more modern typesetting methods that reflect earlier methods in maintaining separate typeface and foundry functions, and those more modern methods that may effectively aggregate these functions. In some cases, extending design patents in the latter situations may implicitly extend the reach of the patent to previously unpatentable typeface designs where the two functions aggregate in a given designer or design business.

Design patent protection for products of foundries — whether two- or three-dimensional — effectively extended protection to the resulting designs, because one could not create the designs without the plates, film, or software code. The digital industry merely blurs the lines between the design and foundry functions in many cases. In fact, the digital industry may benefit less from design patents than the physical industry because it is possible to create very similar looking typeface designs with very different software code. Thus, the protection of the code per se as a font under a design patent may not give a font designer much comfort in the digital world.

More to the point, design patent law also raises questions as to whether fonts meet the statutory novelty and nonobviousness criteria, assuming, of course, that they are statutory subject matter.[179] Much font software may be insufficiently novel or may be too obvious to attract design patent protection. These limitations of design patent law may lead to appropriate results if the concern is with fostering optimum levels of innovation in the digital font industry. Arguably, IP protection should not be too readily available for fonts because of concerns about the overpropertization of the building blocks of language. Unfortunately, there is little guidance as to when a font will be sufficiently novel or nonobvious to satisfy the requirements of design patent law.

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[177] *See* Guidelines for Examination of Design Patent Applications for Computer-Generated Icons, 61 Fed. Reg. at 11381.

[178] *Id.*

[179] *See* Carroll, *supra* note 10, at 172-73 (novelty requirement); *id.* at 173 (nonobviousness requirement). *See generally* 35 U.S.C. § 102 (2006) (providing novelty requirement for patentability); *id.* § 103 (2006) (providing non-obviousness requirement for patentability).

In any event, current industry practice suggests that design patents may not be a realistic alternative to copyright protection. A brief survey of online font marketplaces, such as fontspace.com and myfonts.com, suggests that most digital font developers rely on copyrights, contractual licenses, and to some extent trademarks, in their fonts, rather than design patents.[180] Font developers are generally concerned about the time and expense required to obtain a design patent as compared with a copyright.[181] Most font developers are lucky if the profits they make from their work reach five digits in their lifetime, so it is generally too expensive and time consuming to rely on design patents.[182] Designers may also be concerned with the potential risks and costs of a federal court invalidating challenged design patents.[183] In many other industries, design patents are not a viable alternative to copyright for these reasons.[184] Accordingly, typeface copyrights may be preferable to design patents on time, cost, and risk grounds.

It is possible for a digital font developer to attempt to claim patent protection for the code she has developed. Code is patentable subject matter if it otherwise meets the novelty and nonobviousness requirements of the patent act.[185] This is not limited to the realm of

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[180] *See* FontSpace.com, Ginga Font, http://www.fontspace.com/billy-argel/ginga (last visited Aug. 23, 2009); FontSpace.com, Web Site Terms and Conditions of Use, http://www.fontspace.com/terms/ (last visited Aug. 23, 2009); MyFonts.com, Helvetica Neue, http://new.myfonts.com/fonts/adobe/helvetica-neue/ (last visited Aug. 23, 2009); MyFonts.com, Terms and Conditions of Use, http://new.myfonts.com/info/terms-and-conditions/ (last visited Aug. 23, 2009).

[181] LEAFFER, *supra* note 6, at 126 ("Despite their seeming appropriateness, design patents have not afforded a practical means for the protection of industrial design. The reasons are the time and expense required to obtain a design patent, the difficulty that many designs have in meeting the standards of patentability, and their marked tendency of being declared invalid when challenged in federal court."); *cf.* Raustiala & Sprigman, *Piracy Paradox*, *supra* note 2, at 1704-05 (noting drawbacks of design patents in fashion industry as including difficulties of meeting patent novelty requirements, as well as time and cost involved in applying for such patent; noting in particular that United States Patent and Trademark Office rejects approximately half of all design patent applications).

[182] Note from Thomas Phinney to author, *supra* note 12.

[183] LEAFFER, *supra* note 6, at 126 (noting tendency of design patents to be declared invalid when challenged in federal court).

[184] *See, e.g.*, *id.* (noting that design patents have not been practical alternative to copyright for protecting industrial designs); Raustiala & Sprigman, *Piracy Paradox*, *supra* note 2, at 1705 (stating design patents are too slow and uncertain to provide useful protection to fashion designers in fashion industry).

[185] *See generally* 35 U.S.C. §§ 102, 103 (2006) (novelty and nonobviousness requirements); 1 CHISUM ON PATENTS § 1.03[6] (2009) (describing development of software patent law).

design patents. In fact, software can attract the protection of a utility patent with its full twenty-year term.[186] However, software code creates many of the same difficulties for patent law as it does for copyright law. Overzealous patenting of code can stifle innovation just as easily as overzealous copyrighting, subject of course to a competitor's ability to design around the protected idea.

B.   Trade Secrets

Trade secret protection for digital typefaces is unlikely. Trade secret law protects commercially valuable information against misappropriation, as long as that information is kept reasonably secret.[187] The digital world has raised significant challenges for trade secret law because of the ease with which one can lose digital confidences and widely distribute valuable information at the push of a button.[188] The law does not protect digital fonts any better than it protects any other valuable commercial information that exists online. Indeed, the law generally does not consider the typeface designs themselves as trade secrets because they are usually open to public view online. Their font code could potentially be a trade secret, but only if a court viewed attempts by the designer to keep the code secret — for example, by utilizing TPM — to be sufficient for the purposes of trade secret law. Even if the code were protectable in this way, this would be no bar to a competitor copying the design of a typeface with new underlying code. Trade secrets are therefore not likely to be particularly relevant to any ongoing debate about the protection of digital typefaces.

C.   Trademarks

Trademarks are another potential avenue for protecting some aspects of digital typefaces. However, it is unlikely that they will protect typeface designs as such. Trademarks generally protect the ability of a mark or logo to function as a source identifier by distinguishing one entity's products or services from those of

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[186] *See generally* 35 U.S.C. § 154(a)(2) (2006) (setting out twenty-year term for standard utility patents); 1 CHISUM ON PATENTS, *supra* note 185, § 1.03[6] (describing development of software patent law).

[187] *See, e.g.,* UNIF. TRADE SECRETS ACT § 1(4) (1985) (definition of "trade secret").

[188] *See* Elizabeth A. Rowe, *Introducing a Takedown for Trade Secrets on the Internet*, 2007 WIS. L. REV. 1041, 1046-48 (2007); Elizabeth A. Rowe, *Saving Trade Secret Disclosures on the Internet Through Sequential Preservation*, 42 WAKE FOREST L. REV. 1, 3-5 (2007).

another.[189] Thus, a particularly distinctive typeface presented in a striking way, such as the familiar Coca-Cola logo, may attract trademark protection. However, in this case, the typeface is attached to Coca-Cola's logo and the trademark would reside in the Coca-Cola Corporation, and not in the hands of the typeface designer. Manufacturers of particular products often commission typefaces.[190] Therefore, where trademark protection inheres in a typeface, that typeface is less likely to be associated with the typeface designer than with the business entity that commissioned its design.

In cases where a typeface designer has designed a typeface for her own business logo, she could potentially claim trademark rights in it. In rare cases, a well-known typeface is so connected with its designer that it may attain trademark status.[191] For example, in the graphic design business it is relatively common knowledge that the Swiss typeface designer, Max Miedinger, created the Helvetica font in the 1950s.[192] However, even if within the trade a typeface may be closely associated with its designer, this does not mean that recognition serves a general trademark function in the wider community in the sense of distinguishing that designer's work from the work of her competitors.

Of course, a typeface designer may trademark a distinctive name attached to a typeface.[193] One only need look at popular online font marketplaces, such as myfonts.com and fontspace.com, to see examples of trademark font names.[194] Consider, for example, the distinctive name "Putty Peeps" for a typeface design incorporating putty-like human body shapes.[195] This name can serve as a trademark that uniquely identifies the font as a product of its designer — in this case, the MUR digital foundry.[196] However, the trademark does not

[189] *See generally* GILSON ON TRADEMARKS § 1.03[1]-[2], at 1-22.1 to 1-22.2 (2009) (describing underlying policy rationales of modern trademark law).

[190] CABARGA, *supra* note 17, at 228-35 (describing business strategies for obtaining contracts to design fonts).

[191] In fact, professional type design houses in the digital age rely heavily on trademarks. Telephone Interview with Ira Mirochnick, *supra* note 124.

[192] BRINGHURST, *supra* note 15, at 97 ("Helvetica is a twentieth-century Swiss revision of a late nineteenth-century German Realist face. The first weights were drawn in 1956 by Max Miedinger, based on Berthold Foundry's old Odd-job Sanserif or Akzidenz Grotesk, as it is called in German.").

[193] *See, e.g.*, *supra* pp. 116-17, fig. 2 (noting that name of font is "Putty Peeps").

[194] Myfonts.com, *supra* note 140; FontSpace.com, http://www.fontspace.com (last visited Dec. 1, 2008).

[195] *See supra* Part I.B.1.

[196] *See* Myfonts.com, Mur, http://new.myfonts.com/foundry/m_u_r/ (last visited Dec. 1, 2008); Mur-design.com, MurMur, http://mur-design.com/09/?cat=6 (last visited Dec. 1, 2008).

provide protection for the creative attributes of the typeface. It merely identifies the typeface as belonging to the set of products created by a particular designer. Thus, trademark law will not protect the design efforts of a digital typeface designer per se.

D.   Unfair Competition Law

Outside of the more overtly proprietary legal actions described above, there may be alternative avenues of protection for typefaces. State unfair competition law is one possibility. In *Leonard Storch Enterprises, Inc. v. Mergenthaler Linotype Co.*, the court rejected design patent protection for two-dimensional celluloid film fonts, accepting instead the possibility that state unfair competition law covers such fonts. [197] In particular, the *Storch* court rejected the argument that federal copyright law preempted state unfair competition law in the font context.[198] If copyright law expressly rejected the protection of typefaces and fonts, there would be no room for state law to provide protection denied at the federal level. Considering the 1909 Act, the *Storch* court gave weight to the Fourth Circuit's decision in *Eltra*, and determined that the fonts in question were not copyrightable.[199] Nevertheless, it held that the federal copyright law did not preempt the state unfair competition claims.[200]

However, one might confine the reasoning in *Storch* to the annals of its reliance on the 1909 Act. With respect to the 1976 Copyright Act, some commentators have argued that state unfair competition laws are preempted by federal copyright legislation.[201] Thus, the apparent affirmative decision to remove typefaces from the ambit of copyright protection at the federal level might prevent the application of state unfair competition laws.[202] If typefaces were unequivocally copyright subject matter, this might still preempt the application of state laws protecting similar interests. However, at least in that situation, the designer would be getting something in the form of thin copyright protection. Under the current regime, it is unclear whether digital typefaces are copyrightable, and, at the same time, the copyright position arguably preempts the operation of state unfair competition

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[197]   Leonard Storch Enters., Inc. v. Mergenthaler Linotype Co., 1979 WL 1067, at *5 (E.D.N.Y. 1979).

[198]   *Id.* at *1.

[199]   *Id.* at *4-5.

[200]   *Id.* at *1.

[201]   *See* LEAFFER, *supra* note 6, at 544-46.

[202]   *See supra* Part I.A (discussing House Report on 1976 Act).

laws. Thus, the typeface designer ends up with nothing, despite the apparent threat of easy digital borrowing without attribution or compensation.

It may be that one secures optimum levels of innovation in the digital typeface industry without copyright or unfair competition law. However, this question requires closer examination before making a final determination. The digital age changes much about the typeface industry, particularly in terms of the market structure. The copyright-unfair competition matrix may now require re-evaluation in light of the realities of the digital typeface industry. Paradoxically, digital typeface developments suggest both overprotection and underprotection of the work of typeface designers. One possible example of overprotection is the potential for typeface designers to resort to DMCA protections for their work. However, designers may have much greater fears of underprotection in the digital world due to the ease with which one may copy and globally distribute digital typefaces at the push of a button. What is required now is a holistic look at the digital typeface industry with an eye to all relevant market forces, as well as legal and technological protections currently available for the work of typeface designers.

E.   Sui Generis *IP Protection*

It may be possible to remedy some of the current uncertainties surrounding the legal protection of digital typefaces by resorting to *sui generis* protection.[203] The United States Congress has considered *sui generis* protection for digital databases because of concerns that many of these databases fail to meet the originality requirements of copyright law.[204] In the typeface context, there have already been some

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[203] The term *sui generis* refers to a stand-alone form of protection developed for a specific product outside the standard forms of intellectual property. *See* BLACK'S LAW DICTIONARY 1475 (8th ed. 2004).

[204] *See generally* Feist Publ'ns v. Rural Tel. Serv. Co., 499 U.S. 340 (1991) (holding that white pages telephone book was insufficiently original to merit even low originality threshold for copyright protection because alphabetical listing of entries was unoriginal). *Sui generis* database laws have already been implemented in the European Union. *See* Council Directive 96/9, arts. 7-11, EUR. PARL. (EC), *available at* http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31996L0009:EN:HTML. However, these regulations have met with limited success in practice. *See Commission of the European Communities, DG Internal Market and Services Working Paper, First Evaluation of Directive 96/9/EC on the Legal Protection of Databases*, at 25-26 (Dec. 12, 2005), *available at* http://ec.europa.eu/internal_market/copyright/docs/databases/evaluation_report_en.pdf; *see also* Jacqueline Lipton, *Across the Pond and Back Again: Digital Database Protection in the European Union and the United States*, *in* 4 INTELLECTUAL

international efforts to create *sui generis* protection for typefaces.[205] However, the problem with such approaches is that they often make a confusing situation even more confusing. If there is significant uncertainty about existing legal protections, adding even more can make things more complex, particularly when it comes to establishing the relationship between new and existing rights. Thus, even if Congress ultimately adopts a *sui generis* approach, it is worth first clarifying the position on the copyrightability of typefaces, and preferably the position on design patenting and unfair competition. By clarifying the scope of existing protections, it is easier to establish whether and where there are gaps in existing protections that one must address. Moreover, it will be easier to determine whether policy makers should address those gaps via extensions of existing laws, or whether resorting to new *sui generis* measures may be more appropriate.

F.   Contract Law

Typeface designers may turn to contract law to protect their work. In the digital typeface industry, designers can use click-wrap licenses to protect their rights.[206] Click-wrap agreements allow typeface designers licensing their wares online to set out contractual terms that potential licensees must agree to in order to download and use their typefaces. This is not particularly onerous in practice, easily facilitated in the online market by online stores where designers can upload typefaces along with their license terms. The online stores then make the typefaces available for download along with the designers' preferred contractual license terms. Some online stores, such as myfonts.com,[207] will support licenses that limit the uses licensees can

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PROPERTY AND INFORMATION WEALTH 307-08 (Peter K. Yu ed., 2007).

[205] Vienna Agreement for the Protection of Type Faces and Their International Deposit, art. 3, June 12, 1973, http://www.austlii.edu.au/au/other/dfat/seldoc/1973/ 2203.html ("The Contracting States undertake, in accordance with the provisions of this Agreement, to ensure the protection of type faces, by establishing a special national deposit, or by adapting the deposit provided for in their national industrial design laws, or by their national copyright provisions. These kinds of protection may be cumulative.").

[206] *See* Specht v. Netscape Commc'ns Corp., 150 F. Supp. 2d 585, 593-94 (S.D.N.Y. 2001), *aff'd*, 306 F.3d 17 (2d Cir. 2002) ("A click-wrap license presents the user with a message on his or her computer screen, requiring that the user manifest his or her assent to the terms of the license agreement by clicking on an icon. The product cannot be obtained or used unless and until the icon is clicked."); *see also* ProCD, Inc. v. Zeidenberg, 86 F.3d 1447, 1455 (7th Cir. 1996) (upholding enforceability of click-wrap, as well as shrink-wrap license).

[207] MyFonts.com, *supra* note 140.

make of downloaded typefaces. Some businesses prefer freeware or shareware agreements,[208] while others support only licenses that are of an open source variety.[209]

Arguably, Congress's apparent decision to reject copyright protection for typefaces in 1976 should preempt contractual protection of similar interests in typefaces.[210] This preemption argument is similar to those made about state unfair competition law. However, some authority suggests that decisions to reject copyright protection for other items, such as nonoriginal databases,[211] would not necessarily preempt the operation of state contract law.[212] In *Pro-CD, Inc. v. Zeidenberg*, for example, Judge Easterbrook held that a contract protects different rights than a copyright.[213] Thus, the failure to protect a nonoriginal database under copyright law would not necessarily preempt the operation of a restrictive contractual license.

The main problem with relying on contractual licenses to protect a typeface designer's interests in her work will likely be enforcement in a global online market, rather than with validity of the license. Enforcement can be problematic online because of the difficulties in identifying individuals who make unauthorized use of a typeface outside the scope of the license. Even if the complainant is able to

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[208] *See, e.g.*, Fontspace.com, disclaimer, http://www.fontspace.com (last visited Nov. 21, 2008) ("All the fonts listed on this website are user-submitted and are checked periodically to ensure they are freeware, shareware, or under an open source license. For correct licensing, please contact the author of the font. If you see any fonts that are not under one of the above mentioned licenses, please contact us immediately.").

[209] *See generally* Shawn Potter, *Opening Up to Open Source*, 6 RICH. J.L. & TECH. 24, 24 (2000) ("Open source . . . projects are established and programmers communicate and contribute software building blocks to each other via the Internet. When a software program is completed by this method it is then offered to the public over the Internet, sometimes free of charge, but always free of the use restrictions common to most software.").

[210] *See supra* Part I.A.

[211] Non-original databases are those databases that are not sufficiently original in the selection or arrangement of their contents to attract copyright protection. For a detailed discussion of this issue, see Jacqueline Lipton, *Balancing Private Rights and Public Policies: Reconceptualizing Property Rights in Databases*, 18 BERKELEY TECH. L.J. 773, 805-16 (2003).

[212] LEAFFER, *supra* note 6, at 538-40 (discussing arguments about copyright preemption of state contract law).

[213] ProCD, Inc. v. Zeidenberg, 86 F.3d 1447, 1454 (7th Cir. 1996) ("A copyright is a right against the world. Contracts, by contrast, generally affect only their parties: strangers may do as they please, so contracts do not create 'exclusive rights.' Someone who found a copy of [the relevant software] on the street would not be affected by the shrinkwrap license . . . .").

identify and locate the defendant, there may be jurisdictional difficulties barring the action. For instance, it is likely very difficult for the designer to bring proceedings against a potential defendant who may be in a different corner of the world. Even if *ex parte* proceedings were possible, the likelihood of the complainant effectively enforcing a court order against a remote defendant is slim. Additionally, contracts will generally not be enforceable against third parties, although at least one scholar has argued that this may have to change in the digital world.[214]

G.   Technology

Developers and distributors of digital works can use TPMs either in concert with, or independently of, copyright law. If a work is copyrightable, such as digital movies and music, the DMCA's anticircumvention provisions support using TPMs to restrict the work's uses.[215] If the work is not copyrightable, TPMs can be utilized effectively even in the absence of DMCA protection. As long as TPMs are sufficiently robust, they will deter much unauthorized access to, and use of, an encrypted work. A typeface designer might utilize TPMs in concert with contractual licenses to help control downstream uses of her work. Of course, TPMs are never perfect, and today's encryption technology is only as good as the skills of tomorrow's hacker.[216]

While technology and contract will be useful for typeface designers even in the absence of copyright protection, the acceptance of copyright protection gives them a greater degree of comfort. Whether copyright is actually necessary to encourage innovation in the digital typeface industry is debatable. There is simply no evidence as to whether or not current uncertainties about the copyrightability of digital typefaces have negatively affected innovation in the online industry. In any event, font code is generally copyrightable today, and many digital typeface designers resort to claims of copyright in code, as well as utilizing contractual licenses, TPMs,[217] and the anticircumvention provisions of the DMCA.

Alternatively, digital typeface designers can use CMI to provide some measure of comfort. However, in the absence of copyright

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[214]   Molly Shaffer Van Houweling, *The New Servitudes*, 96 GEO. L.J. 885, 946-49 (2008).

[215]   *See* 17 U.S.C. § 1201 (2006).

[216]   DON TAPSCOTT & ANTHONY D. WILLIAMS, WIKINOMICS: HOW MASS COLLABORATION CHANGES EVERYTHING 281 (2008) ("Most technologies [sic] have long agreed that DRM is a lost cause — hackers reverse-engineer it just as fast as it gets produced.").

[217]   Although TPMs can be problematic in the font context because of system constraints. *See* Note from Thomas Phinney to author, *supra* note 12.

protection CMI should technically stand for "content management information" rather than "copyright management information." Although attaching CMI to works does not by itself create technical barriers to unauthorized use, it does serve a signaling function to others of the alleged ownership and preferred licensing terms attached to a work. If the CMI is easy to find, this at least minimizes the risk of innocent contraventions of a designer's preferred uses of her work.[218] The kind of information found in CMI might also assist in the creation of new norms for the digital typeface industry by signaling the preferences and expectations of market participants.

H. Norms

In the predigital typeface industry, there were at least some identifiable norms against overzealous borrowing of others' designs.[219] However, it will likely be more difficult to develop, identify, and enforce norms in the digital industry because of its exponentially expanded scope and scale, and the resultant anonymity of many of the participants.[220] CMI might help here, although the industry may be of such a magnitude that it does not make much difference in the final analysis. Sector-specific norms might also develop in particular digital typeface markets.

The operation of the online store fontspace.com provides an example of norms developing in a distinct segment of the digital typeface market.[221] This business promotes only the uploading and downloading of open source fonts. Every page of their website includes a disclaimer stating that fontspace.com only promotes the use of freeware and open source fonts, and that anyone who identifies a nonopen source font on the service should notify the operators immediately.[222] Another source for developing online norms in the digital industry may be online blogs where designers discuss appropriate behaviors with respect to downloading and using others' work. Over time, these discussions might evidence some consensus

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[218] In font software, there are usually standard fields for including CMI. *Id.*

[219] CABARGA, *supra* note 17, at 38 (describing industry norms against verbatim copying, as compared with using prior designers' work as "reference material").

[220] *See supra* Part II.A.

[221] FontSpace.com, *supra* note 194.

[222] *See id.* ("All the fonts listed on this website are user-submitted and are checked periodically to ensure they are freeware, shareware, or under an open source license. For correct licensing, please contact the author of the font. If you see any fonts that are not under one of the above mentioned licenses, please contact us immediately.").

about appropriate use of digital typefaces and fonts at least within certain sectors of the online industry.

Perhaps online norms will develop in a different way to the norms that emerged in the physical industry. It may be that the online industry is too large to accommodate general norms that are comprehensible to everyone. However, the online industry may segment into different sectors, each with its own set of norms. If this occurs, those who want to adhere to open source norms will gravitate to online services that support and informally enforce these norms, while those who seek models that are more commercial can gravitate to other services. Of course, even sectoral norms will not provide strong protections against those who are determined to make unauthorized use of others' work, but they at least serve to alert participants in relevant sectors of the digital industry as to acceptable behavior within that segment of the market.

Some designers complain about the development of sectoral norms in certain segments of the digital market that encourage unauthorized copying or borrowing of others' work.[223] Designers have identified "font sharing" groups whose norms support the idea of font piracy or font forgery on two grounds. First, they believe that their font piracy is not harmful because they would not have bought the fonts anyway.[224] Second, they claim that their use of the fonts is fair use for copyright purposes because they are not making any money from the fonts and their uses are not for commercial purposes.[225] Type design blogs are a useful source of information about the development of norms about acceptable versus unacceptable borrowing of others' design work.[226] It may be too early in the development of the global digital market to identify any norms with particular accuracy, but emerging norms may

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[223] *See, e.g.*, Ulrich Stiehl, The Font Forging Industry, http://www.sanskritweb.net/ forgers/#FORGERS (last visited Sept. 13, 2009) ("My website was launched in November 2004 starting with an introductory report about the 'Funny Font Forging Industry' . . . . None of the notorious font forging companies ever dared to sue me, because I describe the facts. I analysed [sic] more than 70,000 fonts, most of them forgeries, and documented them in innumerable PDF files comprising more than 5,000 pages covering numerous font forging companies. The design of my website is boring and my English is clumsy, but the facts described are pure dynamite. This website reveals that most font forgeries are not made by pupils or students, but by professional forgers in organized companies specialized in selling forgeries to dimwits and suckers in design studios and advertising agencies, who can be easily taken for a ride.").

[224] Note from Thomas Phinney to author, *supra* note 12.

[225] *Id.*

[226] *See, e.g.*, Typhophile.com, General Discussions, http://typophile.com/node/54673 (last visited Feb. 20, 2009) (expressing some uncertainty about what constitutes illegal downloading of others' digital fonts).

prove to be an important part of the operation of the digital industry in the future.

<center>CONCLUSION</center>

The digital typeface industry raises a number of questions current copyright law does not satisfactorily address. Although the copyright position on typefaces in the United States has been unclear, the historical consensus is that typefaces are not copyrightable.[227] Nevertheless, digital technologies and increasingly global digital markets may require a closer look by Congress, the Copyright Office, and the courts. The adoption of digital technologies raises a variety of new concerns in the digital typeface industry, including the threat of digital piracy and the loss of industry norms on copying as markets increase in size and players become more anonymous. Additionally, the adoption of copyright protection for typefaces in other jurisdictions creates some pressure for the United States to follow suit in what is becoming an international digital marketplace. Because copyright protection can potentially chill innovation, it is necessary to consider relevant market factors in more detail before making a determination about the need to extend copyright to digital typeface designs as such, or to their code. In making such an extension, copyrights granted for digital typefaces should only be thin. Copyrights should also only be available prospectively and not retroactively in order to mitigate concerns about propertization of the public domain.

Questions of copyrightability in the digital typeface industry may also raise general concerns about what happens to IP's previously negative spaces when industries move online. In this context, the copyrightability of software code for products once regarded as uncopyrightable potentially confuses the equation. Software copyrights can have the incidental effect of transforming what was once an IP-negative space into an IP-protected zone. While this Article focuses on the digital typeface industry, issues of an IP negative zone moving online are likely to arise in other fields as previously physical industries adopt digital market models. For example, the map making industry, while technically not an IP-negative space, has historically

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[227] LEAFFER, *supra* note 6, at 100 ("Examples of express exclusion [from the term 'works of authorship' for copyright purposes] are industrial design and typeface design, which Congress has explicitly indicated are not to be considered works of authorship.").

only obtained very thin copyright protection.[228] It may be possible in the age of Google Maps,[229] Mapquest,[230] and various GPS devices utilizing digital maps[231] that the underlying map-generating software code will attract copyright protection, thus altering the copyright matrix for this industry.

Some of IP's historically negative spaces might prove to be useful testing grounds for theories about the need for IP protections online more generally. If innovation was able to thrive in the absence of strong IP protections offline, it is important to identify what changes in market structure online might necessitate a change in the level of available IP protection. There is scant literature or case law examining questions about the impact of digitization on industries that historically thrived in the absence of strong IP protections. The above examination of the digital typeface industry is a compelling example of why law and policymakers should consider these issues in the future. If larger and more anonymous industries with fewer intermediaries and less barriers to entry necessitate changes in IP protection, it is worth conducting detailed examinations of relevant digital industries while they are still in relative infancy. This will allow appropriate levels of IP protection to be developed, and globally harmonized, before over or under protection chills the efforts of market participants.

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[228] *Id.* at 137-38 (discussing limited copyright for maps).

[229] *See* Google Maps, http://maps.google.com/maps?hl=en&tab=wl (last visited Dec. 31, 2008).

[230] *See* Mapquest, http://www.mapquest.com/beta (last visited Dec. 31, 2008).

[231] GPS stands for "global positioning system." A number of consumer products now incorporate GPS technology mapped on to pre-programmed local street maps. *See, e.g.*, Garmin, https://buy.garmin.com/shop/shop.do?cID=134 (last visited Dec. 31, 2008) (exhibiting Garmin range of devices).