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Trademark Infringement, Trademark Dilution, and the Decline in Sharing of Famous Brand Names: An Introduction and Empirical Study

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TRADEMARK INFRINGEMENT, TRADEMARK DILUTION, AND THE DECLINE IN SHARING OF FAMOUS BRAND NAMES: AN INTRODUCTION AND EMPIRICAL STUDY

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Many famous brand names have historically been shared among dozens or even hundreds of different companies.[1] Courts and commentators often cite well-known examples of sharing like Delta Airlines and Delta Faucets,[2] or United Airlines and United Van Lines,[3] but the list of companies sharing these brand names and many others is much, much longer. Trademark infringement law has traditionally accommodated brand-name sharing through doctrines that limit protection to closely related goods and to actual trading areas.[4] Modern developments in infringement law, however, have challenged those doctrines,[5] and trademark dilution legislation is arguably based on the theory that some brand names are harmed by, and should be protected against, any sharing at

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[1] We do not intend the terms "share" and "sharing," as we use them in this Article, to imply that one user of a brand name has granted permission to another, or that there is any agreement between multiple users of a brand name about their concurrent use. We are aware that "share" sometimes connotes permission or agreement, or even altruistic motivation, which is why, for example, the use of the phrase "file sharing" to describe peer-to-peer Internet distribution has been so contentious. We have not, however, found better terms to refer to multiple concurrent uses of a single brand name, and students of trademark law will recognize that the phrase "concurrent use" would be confusing because it has gained a particular meaning in the Lanham Act in connection with concurrent registrations. *See* 15 U.S.C. §§ 1052(d), 1067(a).

[2] *See, e.g.,* General Motors Corp. v. Autovation Technologies, 317 F. Supp. 2d 756, 761 (E.D. Mich. 2004)

[3] *See, e.g.,* Intermatic Inc v. Toeppen, 947 F. Supp. 1227, 1233 (N.D. Ill. 1996).

[4] *See infra* TAN 9-10.

[5] *See infra* TAN xx –xx.

all.[6] While some cheer this increased protection,[7] others fear that it will make brand-name sharing more difficult, and will thereby reduce the stock of brand names available to businesses.[8] Despite the long-running controversy, however, to our knowledge no one has attempted to construct a framework for analyzing brand-name sharing or to conduct empirical studies to determine whether broader trademark protection has actually affected rates of brand-name sharing.

This article provides an introduction to the study of brand-name sharing, and presents results from an empirical study of sharing rates among 131 famous brand names from 1940 through 2010, conducted through an examination of business names in the white pages telephone directories of Chicago, Philadelphia, and Manhattan. Perhaps the most dramatic finding of the study is that independent uses of the 131 brand names – that is, uses of those names by businesses other than those that made the names famous – have declined from 3000 to 1380 between 1960 and 2010, a 54% drop. The article then assesses potential causes for that decline. We evaluate five potential non-legal factors, including economic changes, family migration, decreased attractiveness of particular famous brands, changes in the popularity of business name types, and changes in cultural naming patterns. It then considers evidence that changes in trademark infringement and dilution law underlie some part of the decline. The article concludes that both legal and non-legal factors have likely played a role.

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[6] *See infra* TAN xx-xx.

[7] *See, e.g.*, Joshua Jones, *The "Inequities" of Dilution: How the Federal Judiciary May Use Principles of Equity to Frustrate the Intent of the Federal Trademark Dilution Act*, 91 J. PAT. TRADEMARK OFF. SOC'Y 200, 2002 (2009) ("The judicial response to this sudden infusion of dilution into state trademark jurisprudence was tepid at best."); Shahar J. Dilbary, *Famous Trademarks and the Rational Basis for Protecting "Irrational Beliefs,"* 14 GEO. MASON L. REV. 605 (2007); Tara D. Rose, *The High Price of Fame Deserves a Discount: A Call for Uniform Dilution Law in North America for the Protection of Well Known Trademarks*, 14 SW. J. OF L. & TRADE IN AM. 195, 197 (2007) ("Protection from trademark dilution is an important international concern requiring uniform protection. Uniform protection will create an incentive for manufacturers to produce quality products, resulting in accurate reputations on which the public can depend."); RUDOLF CALLMANN, THE LAW OF UNFAIR COMPETITION AND TRADEMARKS 1643 (2d ed. 1950) ("Dilution is an infection, which, if allowed to spread, will inevitably destroy the value of a mark altogether.").

[8] *See, e.g.*, Laura R. Bradford, *Emotion, Dilution, and the Trademark Consumer*, 23 BERKELEY J. L. & TECH. 1227, 1230 (2008) ("overly strict protection of mark familiarity through the law of trademark dilution can burden competitors who signal product quality and reliability"); Jesse A. Hofrichter, *Tool of the Trademark: Brand Criticism and Free Speech Problems with the Federal Trademark Dilution Revision Act of 2006*, 28 CARDOZO L. REV. 1923, 1926 (2007) (dilution law "may prove ineffective in application, and how [ ] will not adequately shield all protected speech from threats of litigation, resulting in a "chilling effect" on speech."); Julie Zando-Dennis, *Not Playing Around: The Chilling Power of the Federal Trademark Dilution Act of 1995*, 11 CARDOZO WOMEN'S L. J. 599, 602 ("the Supreme Court should declare the FTDA unconstitutional").

Part I of the Article reviews the history of brand-name sharing and of the legal doctrines that address it. Part II introduces the empirical study and explains its design. Since this study is unique, we provide a detailed justification for our methodology. Part III summarizes the results of the study, including totals and breakdowns by type of brand name, city, and year. Part IV considers potential non-legal causes of the decline in brand-name sharing rates. Part V assesses the argument that increased trademark infringement protection, and the introduction of dilution protection, were among the causes of the decline. Part VI concludes that any evaluation of extant law or proposal for future reform must account for the sharing phenomenon we describe. The complete database generated by the study, as well as all spreadsheets used to analyze the data, database documentation, and coding rules, are available online.[9]

I. AN INTRODUCTION TO BRAND-NAME SHARING AND ITS LEGAL TREATMENT

Trademark lawyers may dream of a world in which each separate source of goods or services is identified by a unique brand name, but the sharing of brand names was ubiquitous well before Congress ever passed a federal trademark law. Numerous business proprietors who shared a family name had affixed that name to their goods and services, and thus in a single city like Philadelphia one can find unrelated businesses operating under such names as Baker Chocolate and Cocoa, Baker Beauty Shop, Baker Clothes, Baker Funeral Home, and Baker Pickling Company. Scores of others who lived in the same area had affixed to their businesses the name of their city, their river, their mountain, or their street. In the Chicago neighborhood of Rogers Park, for example, businesses operate under such names as the Rogers Park Auto Body Shop, Rogers Park Coiffures, Rogers Park Fine Wines and Spirit, Rogers Park Insurance Group, and Rogers Park Locksmith. Yet others had adopted names that they hoped would convey reliability, innovation, status, thrift, or other desirable qualities. The American Ever Ready Company decided that "Eveready" was a good brand name for its products – in its case, flashlights and batteries -- but it was joined by many other companies: in the 1960 New York telephone book alone, fourteen businesses bore that name, including Eveready Delivery Service Inc., Eveready Match Co., Eveready Sewing Machine Co., and Eveready Television Service.

The judges and legislators who crafted trademark policy had to recognize the reality that names such as "Baker," Rogers Park," and "Eveready," though shared, were still serving as brand names, and could not be denied trademark protection altogether. They therefore crafted a series of doctrines that accommodated widespread sharing. The doctrine that protection for a trademark extended only to its area of geographical use enabled many

[9] *See* http://docs.law.gwu.edu/facweb/rbrauneis/brandnamesharing.asp

local businesses situated in different areas to share the same brand name.[10] And the doctrine that a trademark was only protected against use on goods and services of the same type enabled even those businesses whose geographical markets overlapped to share the same brand name, so long as they specialized in different fields of manufacture or trade.[11]

Although these doctrines were probably fashioned to accommodate a pre-existing reality rather than to promote an ideal, in time brand name sharing was recognized to have certain virtues. There is not an infinite stock of equally memorable, mellifluous, evocative, and fashionable brand names,[12] and thus arrangements that allow many businesses to share one brand name promote more efficient and equitable use of a scarce resource.[13] Indeed, the sharing of a brand name may contribute to its memorability, since completely unfamiliar names may be more difficult to remember.[14] In addition, there may be some

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[10] *See* Hanover Star Milling Co. v. Metcalf, 240 U.S. 403 (1916) (first user of mark does not gain priority in remote area); United Drug Co. v. Theodore Rectanus Co., 248 U.S. 90 (1918) (same);

[11] *See* Act of February 20, 1905, § 5, codified at 15 U.S.C. § 85 (denying registration to marks that are identical or similar to registered or known marks "appropriated to merchandise of the same descriptive properties"); Consumers Petroleum Co. v. Consumers Co. of Ill., 169 F.2d 153 (7th Cir,. 1948), *cert. denied,* 335 U.S. 902 (1949) (applying the 1905 Act rule)

[12] Just one of many constraints, for example, is that it is demonstrably easier to remember words that are meaningful than those that are not, and there is a limited stock of meaningful words. *See* Kim Robertson, *Strategically Desirable Brand Name Characteristics*, 1 J. OF PRODUCT AND BRAND MANAGEMENT 62, 64-65 (1992); Rabindra N. Kanungo, *Brand Awareness: Effects of Fittingness, Meaningfulness, and Product Utility*, 52 J. APPLIED PSYCHOLOGY 290, 294 (1968).

[13] The broader principle that good brand names are a scarce resource has been recognized on many occasions throughout the history of U.S. trademark law. For example, the elimination of the "token use" doctrine and the shortening of the registration renewal period in the Trademark Law Revision Act of 1988 were justified as measures to remove the amount of "deadwood" on the federal register, a "serious problem" because "[u]nused marks on the trademark register prevent others wishing to use those marks from doing so." Report of the House Judiciary Committee on H.R. 5372, 101-1028 (1988), p. 11. For academic recognition of this principle, see Stephen Carter, *The Trouble with Trademarks*, 99 YALE L. J. 759, 759 (1990). ("The traditional economic justification for trademark law rests on the premise that the set of available marks is virtually infinite and, in consequence, that the actual mark chosen by a firm to represent its goods is irrelevant. If that assumption turns out to be false—if even before the public comes to associate a mark with any particular goods or services, some marks are more desirable than others—then allowing protection of marks devoid of market significance may raise substantial barriers to entry by competitors.")

[14] Experiments have shown that in some contexts, a somewhat less common name such as "Felix" is easier to remember than a more common name such as "John." *See* Nicola Stanhope & Gillian Cohen, *Retrieval of Proper Names: Testing the Models*, 84 BRITISH J. OF PSYCHOLOGY 51, 64 (1993). However, we believe it intuitively to be true that completely unfamiliar foreign names are more difficult to remember upon first exposure. Readers whose only native language is English can ask themselves whether they find it more difficult to remember the name of a new acquaintance when it is say, a

value in not placing the meanings and associations connected with a word under the dominant control of a single commercial entity.[15]

In the second half of the twentieth century, however, the practice of brand name sharing has faced increasing challenges. First, under U.S. law, trademark rights are no longer always limited to the geographic area of actual use. Section 22 of the Lanham Act, passed in 1946, provided for the first time that a registration on the Principal Register would provide constructive nationwide notice of the registrant's claim of ownership in a mark.[16] Courts held that such notice eliminated the good faith that another user would need to establish or expand an exclusive right to use the mark on similar goods or services.[17] The result was that the first user to register the mark obtained the right to expand its use of the mark to every region of the United States that other users were not already operating. The first registrant thus had the power after expansion to limit others who were using the mark before the registration date to their historical trading area,[18] and to prevent those who commenced use after the date of registration from using the mark at all.[19]

At the same time, the Lanham Act extended these advantages of registration to many marks that had previously been excluded from registration under the Trademark Act of 1905. Perhaps most significantly, the 1905 Act had excluded from registration marks that consisted "merely in the name of an individual, firm, corporation or association . . . or merely in words . . . which are descriptive of the goods with which they are used . . . or merely a geographical name or term."[20] By contrast, the Lanham Act allows inherently

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Chinese name like Xiaoguang or Yangyue, a Hindu name like Anirudh or Sharmila, or a Thai name like Adirake or Malivalaya.

[15] *See* New Kids on the Block v. News America Publishing, Inc., 971 F.2d 302 (9th Cir. 1992) (putting "New Kids" mark under the complete control of the boy band would have deleterious economic consequences).

[16] Trademark Act of 1946, P.L. 79-489, 60 Stat. 427, § 22. The Federal Trademark Law Revision Act of 1988 confirmed and strengthened the nationwide rights granted by federal registration, by providing explicitly that "filing of the application to register [a] mark shall constitute constructive use of the mark, conferring a right of priority, nationwide in effect, on or in connection with the goods specified in the registration," subject to a number of exceptions. Trademark Law Revision Act of 1988, Pub.L. 100-667, 102 Stat. 3935 (effective Nov. 16, 1989), codified at 15 U.S.C. § 1057(c).

[17] *See, e.g.,* Dawn Donut Co. v. Hart's Food Stores, Inc., 267 F.2d 358, 362 (2d Cir. 1959); *In re* Beatrice Foods Co., 429 F.2d 466, 472 (C.C.P.A. 1970) ; Action Temporary Services, Inc. v. Labor Force, Inc., 870 F.2d 1563 (Fed. Cir. 1989).

[18] *See, e.g.,* Burger King of Florida, Inc. v. Hoots, 403 F.2d 904 (7th Cir. 1968).

[19] At least as soon as a senior registered user wants to expand into the geographic area of the junior user, it can obtain an injunction to force the junior user to cease use of the mark, a threat that would likely lead many junior users to change their brand names even before they were ordered to. *See* Dawn Donut Co. v. Hart's Food Stores, Inc., 267 F.2d 358, 362 (2d Cir. 1959). Moreover, more recent precedent has questioned whether the senior registered user need demonstrate use in the same geographical area before obtaining an injunction. *See* Circuit City Stores, Inc. v. Carmax, Inc., 165 F.3d 1047 (6th Cir. 1999).

[20] Act of February 20, 1905, 33 Stat. 724, § 5.

distinctive firm names to be registered immediately, and individual names, descriptive words, and geographical terms to be registered upon proof of acquired distinctiveness, so long as they are not deceptive.[21]

Secondly, as many commentators have detailed, the scope of infringement protection has increased substantially, from protection only against goods and services essentially identical to those with which the plaintiff's use is connected, to protection against goods and services that are much more distantly related.[22]

This expanded scope of protection along both geographic and subject-matter dimensions may be traceable in part to changes in judicial and legislative attitudes, including attitudes about whether granting broad trademark protection fosters monopolies. Yet changes in commercial realities have also played a role in the expansion. For example, because very small businesses can now offer goods for sale nationwide and globally on the Internet, small no longer necessarily means local. At the same time, as large conglomerates have become more common, consumers have become used to seeing a single corporate name in connection with a wide variety of products. And although umbrella branding of disparate goods has sometimes been an incidental result of corporate growth, it has also increasingly been the result of intentional branding strategies. Companies that have decided to build a brand around a lifestyle – Virgin, Calvin Klein, and Harley Davidson come to mind – market a wide variety of goods and services under a single brand name.

At least in theory, however, the most radical challenge to brand name sharing has come from the passage of state and federal trademark dilution statutes. Although the exact rationale for protection against trademark dilution is much debated,[23] proponents of such protection contend that there is value in concentrating all rights to use and control a brand name in a single business, regardless of whether other businesses would use that name on similar goods or services, or whether multiple independent uses would be likely to cause confusion among consumers.[24] In 1947, shortly after an attempt to include a federal anti-dilution provision in the Lanham Act failed, states began to pass anti-dilution statutes, and there are now 38 states that have such statutes.[25] In 1995, Congress passed the Federal Trademark Dilution Act, which became

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[21] *See* Trademark Act of 1946, §2(f).

[22] *See, e.g.*, Gerard Magliocca, *One and Inseparable: Dilution and Infringement in Trademark Law*, 85 MINN. L. REV. 949, 994-1006 (2001) (arguing that the likelihood of confusion broadened substantially by the 1960s, rendering state dilution statutes redundant and obsolete); Mark P. McKenna, *The Normative Foundations of Trademark Law*, 82 NOTRE DAME L. REV. 1839, 1913-14 (2007). The Lanham expressly provides protection against confusion as to "association, sponsorship or approval" in 35 U.S.C. § 1125(a).

[23] *See* DAVID F. WELKOWITZ, TRADEMARK DILUTION: FEDERAL, STATE, AND INTERNATIONAL LAW (2002).

[24] *See* supra note ___.

[25] *See* Caroline Chicoine & Jennifer Visintine, *The Role of State Trademark Dilution Statutes in Light of the Trademark Dilution Revision Act of 2006*, 96 TRADEMARK RPTR. 1195, 1195 (2006).

effective the following year.[26] Unlike previous trademark law, these statutes contemplate that some brand names will be protected against any sharing at all.

The state and federal anti-dilution laws, however, clearly do not contemplate granting absolute protection against sharing to all brand names. Rather, they offer that protection only to brand names which meet certain standards. Chief among those is the requirement of fame: the use of the brand name by the business seeking protection must be well-known. Since 2006, federal law has required that a brand name be "widely recognized by the general consuming public of the United States as a designation of source of the goods or services of the mark's owner."[27] Although federal law does not further specify what "widely recognized" means, Professor J. Thomas McCarthy has offered his opinion that "a minimum threshold survey response should be in the range of 75% of the general consuming public of the United States."[28] That is a very high standard, which will be met by a very low percentage of brand name users. Twenty-four of the 38 state anti-dilution laws currently in force, especially those modeled after the 1992 and 1996 Model State Trademark Bill, require that a brand name use be "famous in this state."[29] That standard would seem to be best interpreted as similar to the current federal standard, but applied to the consuming public of a particular state rather than all 50 of the United States. Three states have enacted a version of the 2007 Model State Trademark Bill, which changed the definition of "famous" to "widely recognized by the general consuming public of [the] state or a geographic area within [the] state."[30] That definition even more closely follows federal law in its insistence on wide recognition by the general consuming public, but opens up the possibility that the geographic focus might be on a portion of the state rather than the state as a whole. Finally, 11 states currently have anti-dilution statutes that draw language from the 1964 Model State Trademark Bill, which did not explicitly require fame, but authorized injunctive relief against the "likelihood of dilution" of the "distinctive quality" of a mark.[31] Although interpretation of this language is not uniform, it is clear that the fame of a mark is an important factor in determining whether the mark has a "distinctive quality" that could be subject to dilution.[32]

While the fame of a brand name is quite well established as a necessary condition of blanket protection against brand name sharing, it also seems clear from the statutes and cases that it is not a sufficient condition. It is almost certain, for example, that the general consuming public of the United States

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[26] *See* Federal Trademark Dilution Act, P.L. 104-98, 109 Stat. 985 (1995).
[27] 15 U.S.C. § 1125(c)(2)(A).
[28] 4 J. THOMAS MCCARTHY, MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION § 24:106 (4th ed.).
[29] *See* DAVID S. WELKOWITZ, TRADEMARK DILUTION 2009 CUMULATIVE SUPPLEMENT, Table 1-1 (State-by-State Comparison of Dilution Statutes) (2009).
[30] *See id.*
[31] *See id.*
[32] *See* WELKOWITZ, supra note ___, at 32-40 (discussing interpretation of statutes modeled on the 1964 Trademark Bill).

would recognize as famous brand names like "American" and "United" for airline transportation; yet it is also virtually certain that the owners of those marks could not obtain protection against dilution.[33] Exactly why they could not, and whether additional conditions are properly framed as requirements for eligibility or as factors in proving dilution, has been a matter of contention. As we will detail below, it does seem clear that two additional factors play a large role in determining whether relief will be granted: the extent to which a brand name is already shared among many users – often referred to as the extent of "third-party use" in the context of litigation between two users– and the degree of distinctiveness of the brand name, along the traditional spectrum from generic to coined. "American" and "United" do not fare well with either of these two factors. They are shared by many other businesses, and as applied to airline services, the names do not seem to be particularly distinctive: "American" seems to be descriptive of airline transportation that is based and largely provided in America, and "United" suggests that a number of independent service providers may have been consolidated. Yet, it is not clear exactly how and why these facts should be taken into account.

Consider, first, the degree of existing sharing, or third-party use. The Federal Trademark Dilution Act originally treated third-party use as a factor in determining whether a mark was famous, and therefore entitled to dilution protection at all.[34] The Trademark Dilution Reform Act eliminated third-party use as an explicit factor in determining fame, but at the same time it added third-party use as an explicit factor in determining whether the defendant's use was likely to cause dilution by blurring of the plaintiff's famous mark.[35] Meanwhile, courts that have applied state dilution statutes under which dilution is defined as a loss of "distinctive quality" have found that third-party uses make a mark less distinctive or weaker. For example, in the 1980 case of *Amstar Corp. Inc. v. Domino's Pizza, Inc.*,[36] the Fifth Circuit, applying Georgia law, considered whether the defendant's use of the mark "Domino" for pizza diluted the plaintiff's use of the same mark for sugar. It noted that the trial court record contained evidence of 72 third-party federal registrations for "Domino," and further evidence of 15 third-party uses of the mark from 1885 to the present.[37] The court held that the plaintiff had no claim against the defendant under Georgia's anti-dilution statute because "'Domino,' outside of

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[33] *See, e.g.*, Nabisco, Inc. v. PF Brands, Inc., 191 F.3d 208, 216 (2d Cir. 1999) (remarking that not all famous marks exhibit the distinctiveness required for dilution protection, and citing "American, National, Federal, Federated, First, United, Acme, Merit, [and] Ace" as examples).

[34] *See* P.L. 104-98, §3, 109 Stat. 985, 985 (1995), codified at 15 U.S.C. §1125(c)(1)(G) (1996) (directing courts to consider, in determining whether a mark is distinctive and famous, "the nature and extent of use of the same or similar marks by third parties."

[35] *See* P.L. 109-312, §2, 120 Stat. 1729, 1731 (2006), codified at 15 U.S.C. §1125(c)(2)(B)(iii) (2006) (directing courts to consider, among other factors, "[t]he extent to which the owner of the famous mark is engaged in substantially exclusive use of the mark").

[36] 615 F.2d 252 (5th Cir. 1980).

[37] *Id.* at 259.

plaintiff's line of sugars and portion-control items, has already become a weak mark."[38] The Court of Appeals of New York, interpreting the similarly worded New York dilution statute, considered the degree of third-party use as relevant to whether the plaintiff's use had gained secondary meaning, although it seems that the court was treating "secondary meaning" as akin to fame among the general public:

> A quick glance at the New York City phone directories will reveal the existence of at least 300 business entities in the metropolitan area incorporating the word "allied" in their trade name. In light of the large number of business entities using the generic term allied in their trade name, it cannot be said that the name "allied" has acquired a secondary meaning. We remain unconvinced that the public associates the word "allied" with the plaintiff's cleaning and maintenance service.[39]

Perhaps the relevance of third-party use can be explained in terms of psychological theories of dilution under which dilution is a particular phenomenon that occurs in the minds of consumers.[40] Yet it is also possible that legislators and courts are reacting to more disparate equitable factors. If the plaintiff adopted a brand name that was already in common use at the time of adoption, then it may seem that the plaintiff was not particularly concerned about the uniqueness of its brand name, and it should have to live with its

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[38] *Id*. at 265; *see also* RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 25, comment e (noting that "a trademark is sufficiently distinctive to be diluted by a nonconfusing use [only] if the mark retains its source significance when encountered outside of the context of the goods or services with which the mark is used by the trademark owner," and that "[c]oncurrent use by others makes it unlikely that consumers will form a single mental association between the mark and one specific user.").

[39] Allied Maintenance Corp. v. Allied Mechanical Trades, Inc., 42 N.Y.2d 538, 545-546, 369 N.E.2d 628, 633 (1977).

[40] For example, consumers may make associations between trademarks and certain types of products, such as an association between "Heineken" and "beer"; on one theory, dilution is the weakening of those associations. *See* Sara Stadler Nelson, *The Wages of Ubiquity in Trademark Law*, 88 IOWA L. REV. 71 (2003); Maureen Morrin & Jacob Jacoby, *Trademark Dilution: Empirical Measures for an Elusive Concept*, 19 J. PUB. POL'Y & MARKETING 265 (2000). Or maybe consumers make associations between trademarks and certain desirata such as sportiness or luxury or tradition, and dilution is the weakening of those associations. *See* Shahar J. Dilbary, FAMOUS TRADEMARKS AND THE RATIONAL BASIS FOR PROTECTING "IRRATIONAL BELIEFS," 14 GEO. MASON L. REV. 605 (2007). Or perhaps consumers become familiar and comfortable with whatever associations they make with particular marks, and dilution is the weakening of this comfort. *See* Laura Bradford, *Emotion, Dilution, and the Trademark Consumer*, 23 BERKELEY TECH. L. J. 1227 (2008). Although they differ, these theories all seek to reduce dilution to one particular type of phenomenon in the mind of the consumer, and contend that dilution occurs if and only if that phenomenon occurs, which is why we dub them "psychological theories."

decision.[41] If three hundred other businesses have chosen to adopt a particular brand name, then it may seem unfair not to let the three-hundred-and-first business do the same.

The same is true of the issue of distinctiveness. In the narrow sense of the placement of the mark along the generic-fanciful continuum, distinctiveness has always been treated as relevant, but exactly how and why has varied. The original Federal Trademark Dilution Act granted protection to marks that were "distinctive and famous."[42] The Second Circuit, parting with some other circuits,[43] interpreted that language to mean that distinctiveness was a requirement for protection separate from fame,[44] and later held that only marks which were inherently distinctive could claim protection under the Federal Trademark Dilution Act.[45] The Trademark Dilution Reform Act then made it clear that protection was not limited to inherently distinctive marks,[46] but at the same time it made clear that the *degree* of inherent distinctiveness – and of acquired distinctiveness – was a factor relevant to determining whether dilution had occurred.[47]

Here, too, one could attempt to explain the relevance of this factor in terms of a psychological theory of dilution, or one could understand it as an expression of more diverse judgments regarding efficiency and equity. If a company invests resources in coining a new word to serve as a brand name, and thereby avoids depleting the finite stock of existing words, then perhaps we should be less hesitant to protect it against sharing, whether or not such sharing is particularly likely to cause dilution by blurring. And if another company chooses to adopt that coined word as a brand name, it is more likely that it did so with the intention of taking advantage of some of the luster with which the first company imbued that name, and for those who think that the luster should belong to its creator, denying use of the name to the second adopter seems the fair result.

To complicate matters, the factors of fame, third-party use and distinctiveness are invariably listed by courts as factors in determining the

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[41] *Cf.* Sunbeam Lighting Corp. v. Sunbeam Corp., 183 F.2d 969 (9th Cir. 1950) ("If, in course of our free enterprise, someone would market an unworthy article outside plaintiff's field bearing the name Sunbeam it must be borne as not an unlikely circumstance following plaintiff's selection of a non-fanciful word popular with commercial concerns.").

[42] *See* P.L. 104-98, §3, 109 Stat. 985, 985 (1995), codified at 15 U.S.C. §1125(c)(1) (1996)

[43] *See* Times Mirror Magazines, Inc. v. Las Vegas Sports News, LLC, 212 F.3d 157, 167 (3d Cir. 2000), *cert. denied*, 531 U.S. 1071 (2001).

[44] *See* Nabisco, Inc. v. PF Brands, Inc., 191 F.3d 208, 215-16 (2d Cir. 1999).

[45] *See* TCPIP Holding Co. v. Haar Communications, Inc., 244 F.3d 88 (2d Cir. 2001).

[46] *See* P.L. 109-312, §2, 120 Stat. 1729, 1731 (2006), codified at 15 U.S.C. §1125(c)(1) (extending protection against dilution to "the owner of a famous mark that is distinctive, inherently or through acquired distinctiveness").

[47] *See id.*, codified at 15 U.S.C. §1125(c)(1)(B)(ii) (listing, among factors relevant to whether a plaintiff's mark was subject to dilution by blurring, "The degree of inherent or acquired distinctiveness of the famous mark").

likelihood of confusion, and thus also play a large role in determining the scope of trademark infringement protection.[48] If an arbitrary or fanciful brand name is famous, and there are few other users, a court is likely to grant infringement protection to the famous user against more distant lines of business.[49] Thus, from a functional point of view one could see dilution protection simply as an extension of infringement protection. Under infringement law, fame, distinctiveness, and thinness of third-party use all increase the subject-matter scope of protection. Dilution simply adds a categorical threshold: at some point, a level of fame, distinctiveness and rarity is reached at which no other user can share the brand name. If that threshold is set low, then the introduction of dilution protection will have a substantial effect on brand name sharing; but if it is set high, the introduction of dilution protection will have a less noticeable effect.

II. AN INTRODUCTION TO THE EMPIRICAL PROJECT

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[48] As every trademark law student soon learns, each circuit has its own list of factors to consider in determining whether there is a likelihood of confusion between two marks, but they invariably include both third-party use and distinctiveness, sometimes considered together as the factor of the "strength" of the mark. *See, e.g.*, Polaroid Corp. v. Polarad Elecs. Corp., 287 F.2d 492, 495 (2d Cir. 1961) (factors include "the strength of the mark"); AMF Inc. v. Sleekcraft Boats, 599 F.2d 341 (9th Cir. 1979) (factors include "the strength of the mark"); In re E.I. DuPont DeNemours & Co., 476 F.2d 1357 (C.C.P.A. 1973) (factors include "the number and nature of similar marks in use on similar goods");

[49] To be sure, in the trademark infringement context, courts often state that they consider third-party uses on similar goods and services much more relevant than such uses on dissimiliar goods and services. *See, e.g.,* Morningside Group Ltd. v. Morningside Capital Group, L.L.C., 182 F.3d 133, 139 (2d Cir. 1999) ("Use of a like mark in a different market for different products or services need not undermine the mark's strength in its own market"); Century 21 Real Estate Corp. v. Century Life of America, 970 F.2d 874, 877-878 (Fed. Cir. 1992). Some courts have even stated that third-party uses on dissimilar goods and services are completely irrelevant to the issue of infringement, such that evidence of such uses is properly excluded. *See* Eclipse Associates Ltd. v. Data General Corp., 894 F.2d 1114, 1119 (9th Cir. 1990) (holding that it was not error to exclude evidence of use of the plaintiff's mark "Eclipse" in fields unrelated to computers, such as floor cleaning products, commercial laundry folding equipment, and industrial process heating equipment).

The focus on uses on similar goods and services potentially distinguishes the inquiry into third-party uses in infringement cases from that in dilution cases. However, when the issue is how broadly a mark is protected against merely marginally similar uses, the number of third-party uses even on dissimilar goods should be relevant. *See* 2 J. THOMAS MCCARTHY, MCCARTHY ON TRADEMARKS 11:88 (4th ed.) ("some evidence of unrelated use is necessary where the alleged mark is in widespread use in many fields, such as ACME, NATIONAL or PREMIUM. That is, evidence of extensive third party use on a wide range of goods and services does tend to weaken strength and narrow the scope of protection.")

A. The Dearth and Potential Relevance of Empirical Work on Brand Name Sharing

Because brand name sharing has been a feature of commercial life for centuries, the challenges posed by recent developments in trademark infringement and dilution law, should have generated a substantial body of research on patterns and trends in brand name sharing. However, virtually all of the empirical work done on trademark infringement and dilution has focused on litigation, rather than actual brand name uses in the marketplace.[50] Indeed, the only report we have found of research on brand name sharing is a three and-a-half page article published in 1950 by George Kingsley Zipf, a Professor of Linguistics at Harvard University.[51]

Zipf had previously undertaken a study of word use frequency in spoken and written language. He had demonstrated that a very small number of words account for most word uses, and he devised a formula to predict the frequency distribution of those uses, which became known as "Zipf's law." Under Zipf's law, the second-most-frequently-used word has one-half the number of uses of the most-frequently-used word; the third has one-third the number of uses, and so on. Zipf sought out broader applications of this formula of distribution of frequency, and also attempted to explain the phenomenon of concentration by means of a psychological "Principal of Least Effort," according to which human beings follow well-known paths that lead them to reuse familiar words.[52] One of the applications on which Zipf focused was brand name uses. Zipf tallied the brand name uses in the 1947 edition of Thomas' Register of American Manufacturers, and found that the frequency

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[50] Empirical studies of trademark litigation include Barton Beebe, *The Continuing Debacle of U.S. Antidilution Law: Evidence from the First Year of Trademark Dilution Revision Act Case Law*, 24 SANTA CLARA COMPUTER & HIGH TECH L.J. 449 (2008); Justin J. Gunnell, *Goldilocks and the Three Federal Dilution Standards: An Empirical Review*, 17 TEX. INTELL. PROP. L.J. 101 (2008); Kenneth L. Port, *Trademark Extortion: The End of Trademark Law*, 65 WASH. & LEE L. REV. 585 (2008); Clarisa Long, DILUTION, 106 Colum. L. Rev. 1029 (2006); and Robert C. Bird, *The Impact of the Moseley Decision on Trademark Dilution Law*, May 17, 2006, http://ssrn.com/abstract =903003.

[51] George Kingsley Zipf, *A Note on Brand Names and Related Economic Phenomena*, 18 ECONOMETRICA 260 (1950). Other important work on rates of use of brand names, though not on rates of brand name sharing by multiple businesses, includes a series of articles by Monroe Friedman on the frequency of appearance of brand names in popular American novels, American and British hit plays, and American newspapers. *See* Monroe Friedman, *The changing language of a consumer society: brand name usage in popular American novels in the postwar era*, 11 J. OF CONSUMER RESEARCH 927 (1985); Monroe Friedman, *Brand-name use in news columns of American newspapers since 1964*, 63 JOURNALISM QUARTERLY 161 (1986); Monroe Friedman, *Commercial influences in popular literature: an empirical study of brand name usage in American and British hit plays in the postwar era*, 4 EMPIRICAL STUDIES OF THE ARTS 63 (1986).

[52] *See* GEORGE KINGSLEY ZIPF, HUMAN BEHAVIOR AND THE PRINCIPLE OF LEAST EFFORT (1949).

distribution of brand names in that register roughly fit his formula. Unfortunately, his article does not reveal what the most frequently used brand names were, nor does it provide any other information about the brand name uses that Zipf was tallying. Rather, the results of his research were conveyed in a single sentence in his article that reported the frequency distribution of brand names in the 1947 Thomas' Register.[53]

We think that there are many other questions that empirical work on brand name sharing might help to answer, although in some cases they are very difficult questions. Because the most radical form of protection against brand name sharing – trademark dilution protection – is typically granted only to famous brand names, a particularly interesting subset of these questions concerns the sharing of such famous names, or more precisely, of brand names of which a particular use has become famous. These questions include:

- As an historical matter, how common is it for brand names that have one famous use to be shared by other users? Are some types of famous brand names more susceptible to multiple uses than others? Answers to these questions would help us to better understand the phenomenon of famous brand name sharing, and would provide a baseline against which changes can be measured.
- Have there been changes in the rates of sharing of famous brand names over time? In particular, is there any evidence that the enactment of dilution laws, combined with broader application of trademark infringement law, has caused a reduction in the rate of sharing of famous brand names? Answers to such questions would help us understand how and why brand name sharing rates change, and whether major legislative efforts to provide additional protection against brand name sharing have been effective.
- Is there any evidence that suggests that changes in rates of sharing are caused by changes in the popularity of the famous uses of those names? An answer to this question would help us assess the validity of the contention, often advanced by famous users of brand names, that other users of that name have adopted it in an effort to benefit from the popularity of the famous use.
- Are high rates of sharing of a famous brand name correlated with a shorter life of the famous use of that brand name? Conversely, do famous uses of brand names last longer if they are sparsely shared? Answers to these questions would help us understand the gravity of the harm that brand name sharing is claimed to do to famous uses of those names.

We cannot hope with this initial study to provide definitive answers to all of these questions, but we can provide the first empirical study of brand sharing and begin to answer some of them.

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[53] *See* Zipf, *supra* note xx, at 261 ("The x-number of different brand-names in the United States (entire population in Thomas' Register) used by the same y-number of firms is approximately inversely proportional to y^2. [log y = -.4711 log x -1.890; 40.1587]")

B. The Scope and Design of the Study

The empirical study traced the number of uses of 131 different brand names in the white pages telephone books of three urban jurisdictions – the city of Chicago, the New York City borough of Manhattan, and the city of Philadelphia – in six different years: 1940, 1960, 1980, 1990, 2000, and 2010. As detailed below, we had reason to believe that all of the 131 brand names had one use that would qualify in some or all of those years as "famous to the general consuming public of the United States," thus satisfying the post-TDRA requirement for fame, which we believe to be the most stringent fame requirement ever incorporated into any state or federal law. Of those 131 brand names, we identified 45 names as having a use that was proven to be consistently famous over virtually the entire period of our study, since the use appeared both in a national brand recognition study conducted in 1920 and 1921, and in a follow-up study conducted in 1997. In the next two sections, we provide further detail about the brand names selected, and about the scope and methodology of the study.

1. The Brand Names Chosen for the Study

Most of our brand names came from a study published in 1923, and a follow-up study published in 1997. In 1920 and 1921, two New York University professors, George B. Hotchkiss & Richard B. Franken, conducted a study "of 100 representative commodities showing the names and brands that are most familiar to the public."[54] Hotchkiss and Franken surveyed 1024 college students – 512 men and 512 women. They provided their subjects with a list of 100 product categories, such as automobiles, canned fruits, insurance, and hosiery, and asked them to list the most prominent brands they associated with each category.[55] The responses of those subjects provide a snapshot of which brand names were best known in their product markets in the early 1920s. We excluded 34 of those 100 product categories for one of four reasons. First, in 13 of the categories less than 10% of the subjects mentioned any one brand name. In those cases, we decided, no brand name was likely famous enough to merit study. Second, in another 13 cases, the product category itself has become obsolete – consumers no longer buy corsets, or hair tonic, or collars separate from shirts regularly enough that a leading brand in those categories would likely be famous to the general public. Third, in seven cases, tracking brand name uses posed particular difficulties. For example, the leading brand of oil in the Hotchkiss study was "3 in 1," featuring numbers rather than words. Lastly, in one case, involving the category of linen, the leading "brand" mentioned by the subjects was "Irish," which was in reality not a brand but a place of origin.

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[54] GEORGE B. HOTCHKISS & RICHARD B. FRANKEN, THE LEADERSHIP OF ADVERTISED BRANDS (1923).
[55] *Id*. 8-21.

That left us with 66 product categories from the Hotchkiss and Franken study. We chose to track the top brand in each of those categories. Because some brands were leaders in more than one category – for example, "Waterman" led in both ink and pens[56] – the Hotchkiss and Franken study contributed 59 brand names.

In 1997, Professor Peter Golder published a follow-up study, tracking the longevity of the Hotchkiss and Franken brands in all 100 categories (though Golder also considered some categories to be obsolete).[57] Rather than conducting another survey, Golder used market share information to identify the most prominent brands in each category. In 20 of the 66 categories we selected from the Hotchkiss and Franken study, the leading brand identified by Golder was the same brand identified as most prominent by Hotchkiss and Franken. In the other 46 categories, it was different. However, in five cases, the new leading brand in the Golder study had been a leading brand in a different category in the Hotchkiss study.[58] As a result, the Golder study added 41 new brand names to our list (as explained below), for a total of 100 brand names from the Hotchkiss and Golder studies.[59]

Although the brand ranked number one in the Hotchkiss study retained its preeminence in only 20 categories included in the Golder study, the two studies reveal a much greater degree of brand continuity if a somewhat broader view is taken. This can be seen from two perspectives: first, by examining the fate of the brands that led in 46 categories in Hotchkiss but failed to retain their number one spot in Golder, and second, by examining the provenance of the brands that became the new leaders in those 46 categories in Golder.

In the case of the Hotchkiss leaders that lost their top spot, 16 of them appear in prominent, but slightly lower, positions in the Golder study – seven in the number two spot, six at number three, and one each at numbers four, five, and seven. Thus, in only 30 of the categories do the Hotchkiss brands disappear completely in Golder. And even then, "disappearing completely" likely carries too weighty a connotation. Six of the 30 categories feature brands that continue to appear in the Golder study in other categories, often closely related categories. Those brands are "Cross," "Goodyear," "Heinz," and "Waterman." Among the brands in the remaining 24 categories, many, we

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[56] The other leaders in multiple categories included "Colgate," which led in shaving soap and toothpaste; "Goodyear," which led in tires, raincoats and rubbers; and "Heinz," which led in baked beans, jelly or jam, and spaghetti.

[57] Peter Golder, *Historical Method in Marketing Research with New Evidence on Long-Term Market Share Stability*, 37 J. MARKETING RES. 156 (2000).

[58] Those brands, listed with the category they newly led in Golder and followed in parentheses by the category they led in Hotchkiss, include "Campbell's" in baked beans (soup); "Colgate" in toothbrushes (toothpaste); "Cross" in pens (leather goods); "Gillette" in shaving soap (razors); and "Hershey" in candies (chocolate).

[59] In fact, the 41 names we tracked from Golder include one further subtraction and one addition. On the one hand, we did not add the new leader in the category of hats in Golder (Logo Athletic). On the other hand, Golder subdivided the category of pens to include a new category of inexpensive pens, and we did add the leader in that new category, "Bic."

suspect, would still be found famous despite their failure to appear in the Golder study. These include Ivory and Palmolive soaps, Camel cigarettes, Baker's cocoa, Crane paper, and B.V.D. underwear. That leaves fewer than 20 brands of the original 66 that have simply ceased to exist.

In the case of the new brand leaders in the Golder study,10 of the 46 newly leading brands ranked number one in the Golder study had appeared in the Hotchkiss study – seven times as the number two brand, twice as number three, and once as number six. Thus in only 36 of the categories was Golder's number one brand completely new to that category. In three of those 36 cases, the Golder number one brand, though absent from the Hotchkiss study in that category, had appeared as the number one brand in a different category in the Hotchkiss study.[60] Finally, of the 33 remaining brands, fourteen were already in use in 1920, at the time of the Hotchkiss study, though they did not appear in that study.[61] Thus only 19 of the 46 brands that were new leaders in the Golder study commenced use after the Hotchkiss study.[62]

To the 100 brands we found in the Hotchkiss and Golder studies, we added 31 others, for a variety of reasons. First, we consulted a well-known review of internationally famous trademarks by Interbrand, *World's Greatest Brands*, which rates the strength of hundreds of diverse brands.[63] It lists

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[60] Those brands, listed with the category they newly led in Golder and followed in parentheses by the category they led in Hotchkiss, include "Colgate" in toothbrushes (toothpaste); "Cross" in pens (leather goods); and "Gillette" in shaving soap (razors).

[61] The date of first use data was gathered from trademark registrations filed with the U.S. Patent and Trademark Office.

[62] Although it is sometimes difficult to obtain accurate information about exactly when a particular use of a brand name commenced, it seems clear that some famous uses of brand names in our study commenced after the first year of our study, 1940, and of those, a few commenced after 1960, a year which we use heavily for comparisons with the last year in our study, 2010. One might well ask whether inclusion of such brand names in the study could lead to misleading results, depending on one's assumptions in interpreting study results. For example, if one were looking at the rates of independent uses of these brand names as evidence of potential "free-riding" on the fame of the famous uses, it would distort aggregate totals to include independent uses from a year in which the famous use had not yet commenced. And if one were looking at rates of independent uses for evidence of legal change that allowed famous users to reduce independent uses, it would similarly distort aggregate totals to include independent uses from a year in which the famous use had not yet commenced (and hence a year in which the famous user could not have had any ability to take legal action to enforce its trademark rights). Yet exclusion of new market leaders identified in the Golder study could also be misleading, since declines in independent uses of brand names that no longer had a famous use might be misinterpreted as the result of greater legal protection, when in fact they had been replaced by independent uses of brand names that were new market leaders. In the face of all of these possibilities, we decided that we would include brand names that had more recently gained fame, but would note separately the changes in their use rates. It turns out that these brand names had little effect on aggregate totals. *See, for example*, footnote 101 below.

[63] *SEE* WORLD'S GREATEST BRANDS, AN INTERNATIONAL REVIEW BY INTERBRAND (1992).

several older U.S. brands whose prominence extended from the 1920's or 1930's. Where we could confirm longevity of their fame in the *Encyclopedia of Consumer Brands*,[64] we added the Interbrand trademarks to our list, including such marks as Bacardi, Chanel, IBM, Mercedes-Benz, Rolex, Tampax, and Zippo. Concerned that our list lacked enough of the sort of luxury brand names most likely to be the object of independent use, we consulted another source, *Icons of the American Marketplace*,[65] to see if we could identify any long-lived brands that might have attracted more independent users than Ex-Lax or Tampax. Once again, after checking brand histories, we were able to add Cadillac and Harvard. Finally, we included the three iconic brands found in the legislative history generated by the passage of the FTDA[66] and used ubiquitously in examples by commentators: Buick, Bulova, and Schlitz.[67]

In addition to identifying famous marks that have held their fame over time, we searched the 1923 study for a number of additional marks that were once famous, but no longer dominate the brand marketplace. We added three marks that were famous in 1923, but have since lost their luster: Fatima (cigarettes), Packard (cars), and Uneeda (crackers).[68] Here is the resulting list of the 131 brand names the uses of which we traced:

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[64] JANICE JORGENSON (ED), ENCYCLOPEDIA OF CONSUMER BRANDS.

[65] ICONS OF THE AMERICAN MARKETPLACE (2007) (listing the most valuable and famous brands in the United States).

[66] *See* H.R. Rep. No. 104-374, at 2-3 (1995), as reprinted in 1996 U.S.C.C.A.N. 1029, 1029 (offering Schlitz Varnish, Buick Aspirin, Dupont Shoes, and Kodak Pianos as examples).

[67] *See* MCCARTHY, *supra* note xx, at 24:105 ("For example, the most popular list of offending examples against which antidilution laws are directed is: Dupont shoes, Buick aspirin, Schlitz Varnish, Kodak pianos and Bulova gowns.").

[68] In the Hotchkiss and Franken study, "Fatima" was the second most recognized brand for cigarettes, behind Camel *see* HOTCHKISS & FRANKEN, *supra* note xx, at 145; "Packard" was the third most recognized brand name for automobiles, behind Ford and Cadillac, *see id.* at 128; and "Uneeda," taken by itself, was the single most recognized brand for crackers, although Hotchkiss and Franken aggregated it with other Nabisco brands and deemed Nabisco the most recognized brand. *See id.* at 153.

TABLE 1
The 131 Brand Names Included in the Study

Aiwa	Comet	Goodyear	Lipton	Rolex
Arbuckle's Yuban	Corvette	Green Giant	London Fog	Rolls-Royce
B. V. D.	Crane	Guinness	Louisville Slugger	Royal
Bacardi	Creamette	Hammermill	Mack	Sanka
Baker's	Crest	Hanes	Marlboro	Schlitz
Baldwin	Crisco	Harley-Davidson	Mazda	Seiko
Beech-Nut	Cross	Hart Schaffner & Marx	Mennen	Sherwin-Williams
Bic	Del Monte	Harvard	Mercedes-Benz	Singer
Black and Decker	Dial	Heinz	Metropolitan	Skoal
Borden	Diamond	Hershey	Nabisco	Smith and Wesson
Breath-Savers	Dole	Holeproof	Nestle	Smucker's
Budweiser	Douglas	Huffy	Nike	Steinway
Buick	Dove	Huyler's	O'Doul's	Stetson
Bulova	Dr. Pepper	IBM	Old Dutch	Sunkist
Cadillac	Eagle	Indian	Oneida	Tampax
Camel	Elgin	Iver Johnson	Oreo	Tide
Campbell's	Eveready	Ivory	Packard	Tiffany
Carnation	Ex-Lax	Jack Daniels	Palmolive	Totes
Carter's	Fatima	Jell-O	Perrier	Uneeda
Chanel	Fels Naptha	Jif	Pontiac	Victor
Clabber Girl	Folger's	Johnson & Johnson	Postum	Waterman
Clorox	Ford	Kellogg's	Prophylactic	Welch's
Coach	Freightliner	Kodak	Prudential	Winchester
Coca-Cola	General Electric	L'Eggs	Remington	Windex
Colgate	Gillette	Levi Strauss	Rit	Wrigley
Colt	Gold Medal	Life-Savers	Rogers	Zales
				Zippo

2. Information Sources, Coding Rules, and Methodology

a. Telephone Books as Sources of Brand Name Uses. The primary information sources for our brand name sharing study were white pages telephone books (which we will hereafter call simply "telephone books.") We chose telephone books for a number of reasons. Over the period of our study, we assume that almost all businesses of any size had land line telephone service. Telephone companies generally had a default policy of publishing the

telephone number of every land line subscriber in their telephone books without additional charge, because the availability of phone numbers encouraged use of the telephone. We assume that very few businesses would have opted for an unpublished number, because they wanted customers and potential customers to be able to find them easily. Thus, telephone books should contain reasonably comprehensive records of business names in the areas they cover.

Telephone books also provide snapshots of business name uses in a particular year, thus enabling relatively close-grained studies of trends over time. They do so because they are typically issued on an annual basis, and because whenever a business ceases to exist or changes its name, the defunct listing is removed in the next annual edition of the book. By comparison, trademark registers reflect changes much more slowly, and are therefore relatively poor information sources for time studies. Trademark registrations on the federal trademark register, for example, must be first renewed between five and six years after initial registration, and thereafter only once every ten years;[69] before 1989, they only had to be renewed once every twenty years.[70] Thus, unless another business takes affirmative action to have a defunct trademark removed from the register on grounds of abandonment, it can remain on the federal register for a decade after it has become defunct, and before 1989 could have remained for two decades. Telephone books are also typically issued for particular jurisdictions, which is advantageous because we can compare uses over time in a particular area, and use other data about that area to aid in analyzing results.[71]

One limitation of telephone books is that they usually list telephone numbers by business name, and not all brand names are business names. For example, four of the brand names in the study – Crest, Comet, Ivory, and Tide – are famously used on products made by The Proctor & Gamble Company, not by Crest Inc., Comet Inc., Ivory Inc., or Tide, Inc. Some brand name uses are therefore not represented in a telephone book. While we recognize that telephone books are not complete records of brand name uses, the problem is likely minor. Of the 131 brand names in the study, 110 of them, or about 84%, appeared in the telephone books we studied as authorized uses, that is, in connection with the companies and products for which they are famous. In addition, some companies make it a practice to purchase an extra listing or a cross-reference under their most common brand names, so that consumers can more easily find them. Thus, for example, in the telephone books we looked at, the Eastman Kodak Company always had a listing under "Kodak" as well as "Eastman Kodak." Some brand name uses are undoubtedly not represented in telephone books, but as far as we know, there is no information source that

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[69] *See* 15 U.S.C. § 1058.

[70] *See* 15 U.S.C § 1058 (1988).

[71] We are aware that individuals and companies outside of the area covered by a telephone book have been able to purchase listings in that book. However, from observation we believe that to be a rare enough phenomenon not to significantly distort most results, and in any event we believe that the opportunity to purchase out-of-area listings has been constant, so that the results are not distorted by a change in policy.

reliably lists all brand name uses in a jurisdiction on a year-to-year basis, so we have to live with the limitations of available sources.

b. The Jurisdictions and Years Chosen. For this study, we decided to look at telephone books from two cities, Chicago and Philadelphia, and from the borough of Manhattan in New York City. All three have had very large populations and enormous commercial activity over the time period covered by the study. As far as we can tell, they also had stable geographical boundaries over that time period. In addition, we believed that we could easily obtain telephone books for these cities over our period of study.

We ended up looking at telephone books from all three jurisdictions for six target years: 1940, 1960, 1980, 1990, 2000, and 2010. We chose 1940 as a baseline year before the passage of the Lanham Act in 1946, and 1960 as a baseline year before anti-dilution laws should have had much impact. We then tracked uses once every decade beginning in 1980.

c. Rules Defining What Counts as a Brand Name Use. We established a detailed set of rules to determine what would count as a use of a brand name. The full set of these rules is available as an appendix online; we present the most important rules here.

- *Broad definition.* Generally, any name that began with one of 131 brand names in the study and that was recognizably the name of a business was included. Thus, "Campbell Joseph Inc.," "Campbell Manufacturing Co.," "Campbell Market," and "Campbell & Brown" would all be counted as uses of the brand name "Campbell." We also included all instances in the singular, plural, and possessive: "Campbell Market," "Campbell's Market," and Campbells Market" were all counted.
- *No individual professional listings.* One common type of listing in white pages telephone books features the full name of an individual, followed by the name of a profession or of goods or services in lower case letters, such as "Campbell, Maria F. lawyer" or "Baldwin John G. metal prods." In earlier telephone books, these listings were numerous and varied; in more recent books, they are less frequent, and usually limited to lawyers and doctors. These listings were excluded from the study, on the ground that they did not provide enough evidence that the individual's name was being used as a brand name.
- *No alternate spellings or variants.* We did not attempt to track alternate spellings of brand names, such as "Douglass," or "Forde," or other names that looked or sounded similar; only the exact brand names were included. This may well result in some undercounting, but a search for all similar variants would both require resources that we did not have, as well as additional rules for determining similarity that would be very difficult to formulate and apply consistently.
- *First word uses only.* We only searched for brand names when they were listed as the first word of the company name in the telephone book. Thus, for example, "Flowers by Campbell," "Brown & Campbell," and Joseph Campbell & Sons" would not be included as uses of the brand name "Campbell." On the other hand, businesses often choose to be listed with

their dominant brand name first – there may be listings for "Campbell Flowers By" and "Campbell Joseph & Sons" – and in that case they would be included.

- *Geographical and Semantic Compounds Excluded.* We did not count the occurrence of one of the names in our study as a brand name use when it was immediately followed by another word and the two words together formed a local place name. For example, three of the brand names in the study are "Douglas," "Ford" and "Rogers"; Chicago has neighborhoods called "Douglas Park" and "Rogers Park," and a shopping mall called "Ford City." Many businesses incorporate those complete place names in their own names; for example, we came across "Douglas Park Dollar and Food," "Ford City Bowling Center," and "Rogers Park Fine Wines and Spirits." Following an established rule of trademark law that "unitary marks" are to be considered as a whole,[72] we decided that each of these two-word place names would be experienced as a whole, and we therefore did not count uses of them as uses of the brand names "Douglas," "Ford," and "Rogers."

  Similarly, some brand names can be used as modifiers in semantic compounds. In our experience, the brand name that was used in this way most often was "Cross." "Cross" is a family name, and the famous use which placed it in our study is "Cross Pens," named after Alonzo Townsend Cross, the son of the company's founder. However, as a modifier, "cross" can also mean "across," "between" or "covering the whole of," and we found many business named, for example, "Cross Country Van Lines," "Cross Cultural Consulting," and "Cross Roads Travel Service." Following the same principle that composites are to be taken together, we decided not to count these as uses of the brand name "Cross." On the same logic, we also did not count such phrases as "Dial A Job," "Dial A Mattress," and "Dial a Prayer" as uses of "Dial."
- *Branches and departments not counted as separate uses.* Many telephone books contain multiple telephone number listings for a given business name, often because the business has multiple branches in different locations in the city, or has a number of different departments under a single main listing. We sometimes kept track of how many branches a business had, but for purposes of this study we did not count branches or departments as separate brand name uses. Thus, a business name could only count as one use of a brand name in that telephone book, no matter how many branches or departments it had. We did, however, count different affiliated companies separately: for example, "General Electric Credit Corp." and "General Electric X-Ray Corp." were counted as two separate (authorized) brand name uses. Thus, it is possible for a single telephone book to generate more than one authorized use.

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[72] See, e.g., Dena Corp. v. Belvedere Int'l Inc., 950 F.2d 1555, 1561 (Fed. Cir. 1991); TRADEMARK MANUAL OF EXAMINING PROCEDURE § 1213.05.

d. Information About and Classification of Brand Name Uses. For each brand name use found in a telephone book, a record was created. Each record includes the full name of the use found (e.g. "Campbell Foundry Co."); the brand name of which it is a use ("Campbell"); the city and year of the telephone book in which the use was found; and an indication of whether the use was "Authorized," "Independent," or "Unclear."[73]

A brand name use is "Authorized" if it is a use made by the company that made the name famous in the studies we consulted, or by an affliated or successor company or a licensee. A use is also "Authorized" if it is probably a nominative use, whether or not it is actually licensed. For example, "Corvette Auto Repairs," for a business specialized in repairing Chevrolet Corvettes, would be considered "Authorized" whether or not the use is licensed by General Motors. Any other use of the brand name as a business name is "Independent" – unauthorized by the owner of the famous use of the name and not a nominative use of that famous brand. Making judgments about whether a use is authorized or independent when presented only with information available in a telephone book may seem a difficult task. In practice, however, we think that in most cases it is possible to make very good guesses. In part, we were aided by the fact that telephone books contain business names, and business names are often longer than the brand names of their products – for example, the company responsible for making "Heinz" a famous brand name for food products is the "H. J. Heinz Company," not "Heinz Tailors." Telephone books also often contain short descriptions of the lines of business of the companies listed, such as "Heinz Mfg Co aluminum extrusions." True, some companies have become quite diversified, and in a number of cases we did additional research that identified that diversification. For example, the company that made "Borden" famous for milk at one time produced a wide variety of chemicals, and the company that produced "Colt" guns has manufactured many other things as well.[74] Nevertheless, we think it unlikely that a company such as the H.J. Heinz Co. ever owned a local tailor's shop, dry cleaners, or pharmacy, and thus in practice we are confident that our classifications are in very large part accurate. In those cases where we

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[7373] Each record also contains a number of fields intended to aid the research process, such as a field for noting later modifications of the record, and a field identifying the record's author.

[74] It turned out also to be important to recognize that many of the companies that made the brand names in our study famous also built buildings in the cities we studied. Thus, there are or were General Electric, Postum, Rolls-Royce, Singer and Steinway buildings in New York; Palmolive, Prudential, and Wrigley buildings in Chicago; and a Packard building in Philadelphia. We treated all uses made in connection with those buildings as authorized uses. More recently, a number of automobile companies have participated in the revival of the theater district in Chicago, and so the Cadillac Palace Theatre and the Ford Center for the Performing Arts are not independent uses, but are officially sponsored by the Cadillac Division of General Motors and the Ford Motor Company, respectively. On the other hand, the Pontiac Building in Chicago has never had any connection with the Pontiac Division of General Motors, and so the few uses connected with that building were treated as independent.

remained unsure even after additional research, we marked the use "Unclear," and did not count it as either an "Authorized" use or an "Independent" one. Between two and three percent of the uses landed in the "Unclear" category.

e. Methodology. The initial database entries were made by student research assistants, who were instructed as to the rules for inclusion and classification of brand name uses. Robert Brauneis then personally checked every database entry against the original sources, and made several thousand changes, including additions, deletions, and modifications. In some cases, issues that we had not anticipated arose as the work was done, and we formulated and distributed additional rules.

III. INDEPENDENT USES OF FAMOUS BRAND NAMES: AN OVERVIEW OF THE STUDY RESULTS.

This Part of the article will summarize the results of the empirical study. Because the study is concerned primarily with the sharing of brand names, we will focus mainly on uses of the brand names that were independent of the famous uses of those names. We will first consider totals across all brand names, cities, and years, and then analyze the data by type of brand name, by city, and by year.

A. Totals.

In total, in the six years and three cities covered by our study, we identified 14,249 uses of the study's 131 brand names. Of these, 1221 were "authorized" uses, 12,779 were "independent" uses, and 249 were "unclear." Thus, each brand name had an average of 109 uses, of which about 9 were authorized, 98 were independent, and two were unclear.[75] Those averages, however, mask a very wide variation between brand names. Although each brand name generated on average 98 independent uses, the median number of independent uses per brand name was only 9; 33 of the 131 brand names generated zero independent uses, 59 of the brand names less than 5 uses, and 71 of the brand names less than 18, or less than one per telephone book.[76] Only 25 brand names generated more than the average number of 98 independent uses. The brand name "Royal" accounted for the most independent uses, 2086 or 16.32% of the total; second came "Metropolitan," with 1583 uses, 12.39% of the total. Rounding out the top five were "Diamond," 1170 uses and 9.16%; "Eagle," 1069 uses and 8.37%; and "Baker," 674 uses and 5.27%.[77] These top five together account for 51.51% of all independent uses.

This may seem like an extraordinary concentration of uses in a very few brand names, but concentration on that order is not unusual. Indeed, in the study undertaken by George Kingsley Zipf, discussed above,[78] the distribution

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[75] [from spreadsheet Author Ct + Cell Check]
[76] [from spreadsheet CountsTotalRankByCity rows 135-139]
[77] [from spreadsheet CountsTotalRankByCity]
[78] *See supra* n. xx.

of brand name uses was concentrated even more tightly in the most popular names, roughly following what has become known as "Zipf's Law." The distribution of frequency of use among brand names in our sample does not quite fit Zipf's Law, because the curve is flatter – for example, the number of uses of the second-most-prevalent brand name is 76% of the number of uses of the most-prevalent name, and the number of uses of the third-most-prevalent brand name is 74% of the number of uses of the second-most-prevalent name. However, the distribution still shows a great deal of concentration, and the fact that the curve is flatter could just mean that the sample does not contain the most frequently used brand names in the United States, which is quite likely.[79]

B. Types of Brand Names.

Brand names can be classified in numerous ways. When studying words, linguists often consider four different components: phonology, orthography, morphology, and semantics.[80] With respect to brand names, one could consider how variations of each of these components correlated with rates of sharing. We will not consider here matters of phonology – of how brand names sound – or of orthography – of how brand names are spelled. We will, however, consider some aspects of morphology – or of how brand names are formed – and of semantics – of what brand names mean. Specifically, we will consider rates of sharing of three different groups of brand names: (1) single lexical words, that is to say, words that have a meaning defined in dictionaries;[81] (2) family names – names that occurred in the telephone books we studied as family names of individuals; and (3) words that fit into neither of the first two categories, because they are acronyms or compound, derived, coined, or foreign words.

1. Lexical Words. Twenty-five of the 131 brand names in the study, or 19% of those names, are lexical words. Though they account for a roughly proportionate share of authorized uses (20.29%), they account for 68.90% of the independent uses.[82] The top five brand names – Royal, Metropolitan, Eagle, Diamond, Baker, and Victor – are all lexical words. Although Royal, Eagle and Diamond are found as family names, Royal and Eagle are quite uncommon as family names, and Diamond is only moderately common.[83]

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[79] For example, American, United, National, and Acme were not among the 131 brands studied.

[80] *See* Tina M. Lowrey, L.J. Shrum & Tony M. Dubitsky, *The Relation Between Brand-Name Linguistic Characteristics and Brand-Name Memory*, 32 J. OF ADVERTISING 7 (2003)

[81] Linguists often use the term "generic word" as a synonym for "lexical word," but we have chosen to avoid the word "generic" in this context because of its prominence and different meaning in trademark law.

[82] [from spreadsheet CountsLexicalRankByCity]

[83] We counted individual residential listings for all brand names in the 1960 and 2010 telephone books. We found 60 of the 131 brand names in the study as family names in those individual residential listings. The total number of residential listings featuring those family names in the 1960 books were 12458. "Campbell," the most frequently

Thus, Baker is the first name on the list that probably owes much of its frequency to its use as a family name.[84] Only two lexical words, "prophylactic" and "skoal," generated no independent uses at all. One can only guess that in the former case, the fact that "prophylactic" has become a euphemism for "condom" is a great deterrent to its use as a brand name (and likely played a role in the demise of the once-famous brand of toothbrush). In the latter case, the relative obscurity of the imported term[85] and its use in connection with chewing tobacco are probable factors. Twenty-two of the other 23 lexical words generated at least the median number of nine independent uses, and 14 of them generated more than the average number of 98 independent uses. It should be no surprise that a lexical word is more likely to be adopted by multiple independent entities as a brand name, but these figures give some sense of the magnitude of increased likelihood.

2. Family names. Sixty of the 131 brand names, or about 46%, were found as family names in at least one telephone book in our study in 1960 or 2010. Some of them, such as Campbell, Carter, Baker, Ford and Rogers, were quite common, and others, such as Chanel, Comet, Crest, Huyler, and Smucker, were exceedingly uncommon.[86] This list would have been longer had we not made a judgment call about brand names that consist of two or more personal

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found family name, accounted for 1905 listings or 15.29% of the total, and the top five names accounted for 60% of the total. "Diamond," with 435 listings, accounted for 3.5% of the total; "Royal," with 52 listings, accounted for 0.42% of the total; and "Eagle,"with 37 listings, accounted for 0.30% of the total.

[84] "Baker" was the third-most-frequently found name among the 60 family names we found in the 1960 telephone books, with 1517 listings accounting for 12.18% of the total.

[85] Of all of the 25 lexical word brand names, "skoal" occurs least frequently in the Corpus of Contemporary American English, appearing only 49 times. "Prophylactic" is the third least-frequent, at 279 uses, with "carnation," at 229 uses, in between. By contrast "royal," for example, occurs 12,629 times. *See* Corpus of Contemporary American English, http://www.americancorpus.org. We checked to see whether there was any correlation, either negative or positive, between the rate of sharing of a lexical brand name and its frequency of use in English, as measured in the Corpus of Contemporary English. It turns out the relationship is almost so weak as to be random: a regression resulted in an R Square value of 0.0109 and a p-value of 0.6192.

[86] Five other brand names in our study appear as (very rare) family names in the 2000 United States Census, although we did not find them in any of the telephone books we searched: Crisco, Mennen, Oneida, Sanka, and Zippo. Three brand names were in fact the family names of the company founders, but appear neither in the 2000 United States Census nor in the telephone books we consulted: Bacardi, Bulova, and Nestlé. Although "O'Doul" sounds like an Irish name, it in fact does not exist in Ireland, and was apparently invented by the father of American baseball player Lefty O'Doul, who changed his name from Doul. *See* http://everything2.com /title/Lefty+O%2527Doul. As a result, there are exceedingly few people bearing the family name O'Doul, and it does not appear in the 2000 United States Census. Other brand names were derived from the family name(s) of the founder(s) through clipping – "Baron Bich" became "Bic" – amending -- Charles William Post made "Postum" – or abbreviation – "Bradley Voorhees & Day" became "B.V.D."

names strung together. Eleven of the brand names in our study fit that description: Black and Decker, Harley-Davidson, Hart Schaffner & Marx, Iver Johnson, Jack Daniels, Johnson & Johnson, Levi Strauss, Mercedes-Benz, Rolls-Royce, Sherwin-Williams, and Smith and Wesson. We decided that in four of those cases, the first name in the string was used often enough by itself to identify the brand that it would be useful to track it separately. Those include Harley, Levi, Mercedes, and Rolls. In the remaining cases, we concluded, it was not useful to track any of the names by themselves, since Smith and Wesson guns, for example, are never known as "Smiths," nor are Black and Decker flashlights known as "Blacks."

There is a substantial overlap between family names and lexical words: Eighteen brand names in the study fall within both the group of 25 that are lexical words and the group of 60 that are family names. Therefore, it may be useful to consider those both together with and separately from the family names that are not lexical words.[87] Of the 12,925 independent uses of the brand names in the study, 10,344, or 81%, were uses of names that we also found as family names.[88] However, 7060 of those uses were of the 18 names that were also lexical words, whereas only 3284 of those uses were of the 42 names that are not lexical words. As we mentioned above, while some of the names that are lexical words probably have high rates of sharing due to their use as family names – Baker, Victor, and Singer are prominent among these – others, such as Royal, Eagle, and Crest, are less likely to own much of their popularity to such use. Of the 42 brand names that are family names but not lexical words, the top six collectively account for 60% of the 3284 uses of names that fall under that description. Those names, which are all relatively common family names, are Rogers, Campbell, Carter, Douglas, Mack, and Baldwin. We will have more to say about the correlation between the rate of family name use and the rate of brand name use in Part IV below.

3. Acronyms and Compound, Derived, Coined and Foreign Words. Forty-two of the 131 brand names in the study are neither single lexical words nor family names. Twelve are compound names, formed by juxtaposing two lexical words, such as "Breath-Savers," "General Electric," "Gold Medal," "London Fog," or "Old Dutch." Twenty-six would probably qualify under modern trademark doctrine as "coined" or "fanciful" words. Some of these are quite recognizably formed from lexical words by processes of derivation, blending, or clipping: thus "Windex" is a brand of window cleaner, "Palmolive" a brand of soap, and "Ex-Lax" a brand of laxative. Others have little perceptible relationship to any lexical word: "Bic," "Kodak," and "Oreo," for example, are unlikely to call any particular meaning to mind. Two brand names, "B.V.D." and "IBM," are acronyms, and another two, "Aiwa" and "Seiko," are of foreign – in this case Japanese – derivation.[89]

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[87] A family name that is also a lexical word would, for example, be unlikely to qualify as "primarily merely a surname" under federal trademark law. *See* 15 U.S.C. §2(e)(4).

[88] See spreadsheet [CountsBrandNamesSurnames]

[89] Under the "doctrine of foreign equivalents" of U.S. trademark law, foreign terms should be translated into English and then treated as those English terms would be. In

Only four of these 42 brand names ever generated a substantial number of independent uses. Those four were Eveready (97 uses), Uneeda (66 uses) Gold Medal (49 uses), and Old Dutch (32 uses).[90] Of those, however, only Gold Medal has remained relatively steady, with 10 independent uses in 1960 and 8 in 2010. Eveready dropped from 21 independent uses in 1960 to 6 in 2010; Uneeda from 27 independent uses in 1960 to 2 in 2010; and Old Dutch from 12 in 1960 to one in 2010.[91]

Of the other 38 brand names in those categories, 20 never generated a single independent use, and in 2010, 34 of the 38 names had zero independent uses and the other four only had one. It is clear, then, either that most coined names are simply not attractive to would-be imitators, or that they enjoy broad trademark protection, and those who have coined them take advantage of that protection.

C. Cities. Of the 12,779 independent uses found in the study, 6687, or 52%, were found in Manhattan; 4040 (32%) were found in Chicago, and 2052 (16%) were found in Philadelphia.[92] Thus, Manhattan generated by far the largest number of independent uses, even though over the time period covered by the study, the population of Chicago was much larger, and that of Philadelphia began modestly larger and ended modestly smaller. In 1940, Manhattan had a population of 1,889,924, whereas Chicago had a population of 3,396,808 and Philadelphia a population of 1,913,334; [93] by 2009, the estimated population of Manhattan was 1,629,054,[94] while the estimated population of Chicago in 2006 was 2,833,321,[95] and the 2006 estimated population of Philadelphia was 1,448,394.[96] The greater number of independent uses per capita in Manhattan probably reflects the fact that Manhattan is the business center of a metropolitan area that is substantially larger than that of Chicago or Philadelphia.

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the case of "Seiko," however, that seems unlikely to lead to a single definite meaning; according to Seiko's official company history, the word means "exquisite," "minute," or "success," *see* http://en.wikipedia.org/wiki/Seiko, whereas as a girl's name, it means "sincere child." *See* http://babynamesworld.parentsconnect.com/meaning_of_Seiko.html.

[90] *See* spreadsheet [CountsDerivedByYear]

[91] *Id.*

[92] *See* [spreadsheet CountsTotalAlphaByCity].

[93] For the populations of Chicago and Philadelphia, *see* Campbell Gibson, Population of the 100 Largest Cities and Other Urban Places in the Unites States: 1790 to 1990, U.S. Bureau of the Census, Population Division Working Paper No. 27 (1998), available at http://www.census.gov/population/www/documentation/twps0027/twps0027.html; for the population of Manhattan, which is New York County in the State of New York, see http://www.census.gov/population/www/censusdata/cencounts/index.html.

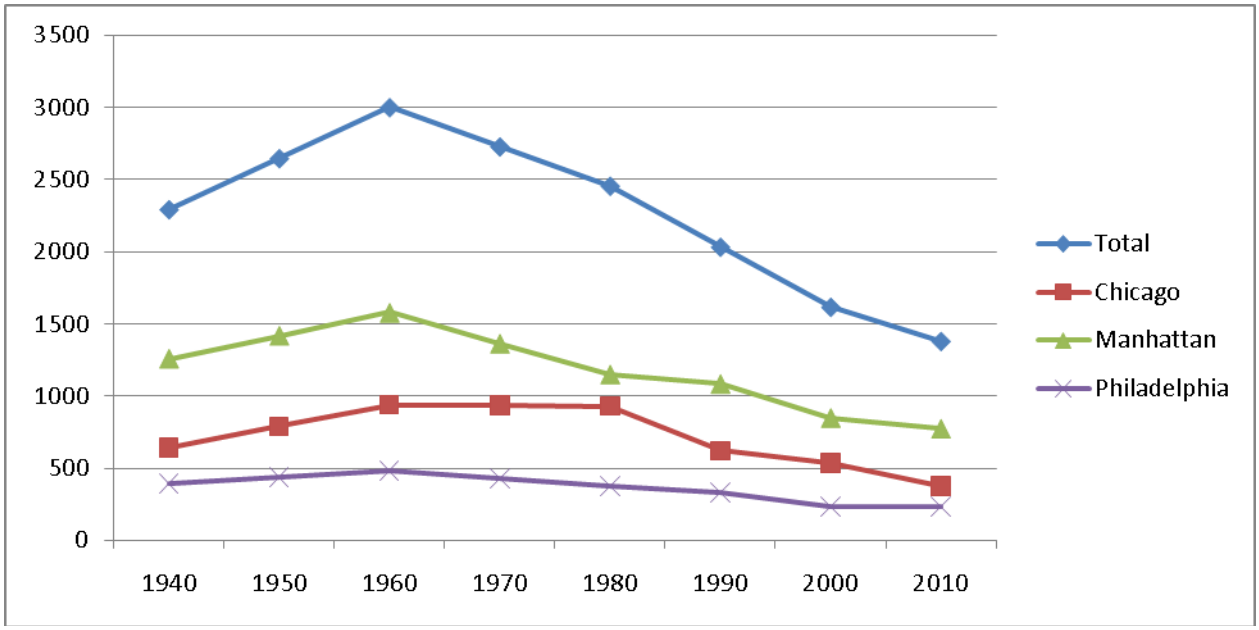
[94] *See* U.S. Census Bureau, State & County QuickFacts, New York County, New York, http://quickfacts.census.gov/qfd/states/36/36061.html.

[95] *See* U.S. Census Bureau, State & County QuickFacts, Chicago (city), Illinois, http://quickfacts.census.gov/qfd/states/17/1714000.html.

[96] *See* U.S. Census Bureau, State & County QuickFacts, Philadelphia (city), Pennsylvania, http://quickfacts.census.gov/qfd/states/42/4260000.html.

D. Time. The most dramatic perspective on the independent use data gathered in this study may be that of change over time. Across all three jurisdictions, the number of independent uses increased between 1940 to 1960, from 2293 to 3000, an increase of 31%. Thereafter, however, independent uses steadily declined: 2456 in 1980; 2033 in 1990; 1617 in 2000; and 1380 in 2010.[97] Thus, between 1960 and 2010, independent uses declined by 54%. Although there is some variation between the study's three jurisdictions, they follow the same basic trend. Chicago posted the largest percentage decline, 60%, from 938 to 374 uses. Philadelphia declined by 51%, for 483 uses to 235 uses, and Manhattan also declined by 51%, from 1579 uses to 771 uses.[98] These changes are graphically represented in Figure 1.

Figure 1
Independent Uses of 131 Brand Names in Three Jurisdictions, 1940-2010[99]



These declines were spread broadly across the 131 brand names in the study. Only 15 of the 131 names had a greater number of independent uses in 2010 than in 1960. Of those, eight were merely increases from zero uses to one use, and the others all involved brand names with relatively low numbers of independent uses.[100] The largest single gain was posted by the brand name

[97] *See* [spreadsheet Timechart]
[98] *See* [spreadsheet Timechart]
[99] The numbers for 1950 are averages of those for 1940 and 1960, rather than being based on empirical research; similarly, the numbers for 1970 are averages of the numbers for 1960 and 1980. They were inserted to maintain a uniform time scale across the figure.
[100] *See* [spreadsheet CountsUnauthChange 1960-2010]

"Tiffany," which had six independent uses in 1960 and 19 in 2010, a gain of 13.[101] Meanwhile, 71 of the 131 brand names, which collectively accounted for 98.47% of the independent uses in 1960 and 93.62% of the independent uses in 2010, saw declines in such uses.[102] Forty-five of the 131 names had zero independent uses in both 1960 and 2010; these accounted for all of the names the number of uses of which remained the same.[103] Thus, the last half-century saw a broad, steep decline in the number of independent uses of the famous brand names represented in this study. We now turn to the task of examining why this change occurred.

IV. NON-LEGAL CAUSES OF THE DECLINE IN INDEPENDENT USES OF BRAND NAMES

Part I of this Article explained that over the past five or six decades, trademark infringement protection has expanded and trademark dilution protection has arisen, giving owners of trademark rights in brand names, especially famous brand names, additional powers to prevent sharing of those names. Part III of this Article showed, among other things, that independent uses of the 131 brand names tracked in an empirical study have declined sharply and broadly over that same time period. One might conclude that increased trademark protection was entirely or largely responsible for the decline. The truth, however, is likely to be more complicated. First, many other factors may be at play, and it is important to consider what they might be, and to see whether we can estimate their likely influence. Second, the effect of legal change is likely to emerge incrementally in the market, so we must consider how quickly changes in law could have an effect on brand name sharing rates, and which brand name users could take advantage of those legal changes. We will consider the role of trademark law in the next Part. This Part will investigate three possible non-legal factors that could affect brand-name sharing rates: 1) economic changes in the municipalities studied; 2) family migration, which is made relevant by the many family names represented among the 131 names in our study; and 3) the possible decline in popularity over time of the brands studied. It will also briefly consider two other possible non-legal factors--structural shifts in the popularity of business name types and the cultural swing towards personalization.

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[101] *Id.*

[102] *Id.*

[103] *Id.* As far as we can tell, seven of the 131 brand names in the study had famous uses that commenced after 1960: Aiwa, Bic, Breath-Savers, Coach, L'Eggs, Nike, and O'Douls. Of these, five had no independent uses in either 1960 or 2010. Coach had four independent uses in 1960, and six in 2010; Nike had zero independent uses in 1960, and one in 2010. Thus, these brand names had very little effect on the aggregate totals. For further discussion of such brand names, see n. 61 above.

A. Economic Changes.

It is possible that the total number of businesses operating in the three jurisdictions in the study declined between 1960 and 2010. If that were true (assuming a stable distribution of brand names among those businesses), the number of businesses that shared any one brand name would decrease. Most obviously, the economies of the cities in question may have shrunk, resulting in a decline in the number of businesses. Second, the average size of the businesses in those cities may have increased and displaced multiple smaller businesses. For example, many independent pharmacies may have been replaced by branches of a single company that operates pharmacies under one brand name, such as Walgreens, CVS, or Rite Aid. For the year 1960, the project database contains 12 names of businesses that begin with one of the 131 brand names in the study and end with words like "Pharmacy," "Pharmacists," "Druggist," or "Drug Store"; by 2010, that number has dropped to six.[104] That decline may well be attributable to consolidation, rather than economic shrinkage or legal change. Another related possibility is that independently branded businesses were replaced by franchises that are independently owned but operated under a single brand name, such as Seven-Eleven, Burger King, or Holiday Inn.[105]

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[104] *See* [spreadsheet BusinessTypes]

[105] Many franchisors operate on a mixed basis, owning some of the locations that use the brand name, and licensing the brand name to owners of other locations. For a report on the top 200 franchisors and the percentage of locations to which each of them licenses the brand name through a franchise agreement, *see* Franchise Times, Franchise Times 2008 Top 200 Franchise Systems, http://www.franchisetimes.com/pdf/Franchise-Times-2008-Top-200.pdf.

Given limitations on available economic data,[106] we decided to return to the telephone books and use the number of overall business listings as a proxy for both economic shrinkage and business consolidation. We estimated the total number of brand name uses that appeared in the 1960 and 2010 white pages telephone books in all three jurisdictions. If the total number of brand name uses in the telephone books exhibited the same percentage decline as did the independent uses of the 131 brand names in our study, then the decline of independent uses would seem to be explained by some combination of economic contraction, economic concentration, or franchising activity.

Unfortunately, it is not easy to count or accurately estimate the total number of brand name uses in white pages telephone books. Counting is an extremely labor-intensive process: the telephone books in the study have on average about 1300 pages, and each page has upwards of 400 listings. We simply did not have the resources to undertake an actual count. An accurate estimate is also tricky. Most of the telephone books mix residential and business listings in alphabetical order. The mix is very "lumpy" – pages listing popular family names can contain almost entirely residential listings, pages listing popular business names or acronyms can contain almost entirely business listings, and one can find pages with a wide variety of residential to

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[106] Economic censuses have been conducted in the United States since 1810, but they have two limitations that impede their usefulness for this project. First, before 1948, regular economic censuses were limited for the most part to manufacturing industries, and thus excluded economic activity in retail, wholesale, transportation, communication, and other service industries. *See* William F. Micarelli, *Evolution of the United States Economic Censuses: The Nineteenth and Twentieth Centuries*, 15 GOVERNMENT INFORMATION QUARTERLY 335, 358 (1998). In 1948, the Bureau of the Census conducted the first census of the retail and wholesale trades, and of selected service industries, but this census continued to exclude some service industries that are particularly important to large cities, including the finance, insurance, and real estate industries. Those industries were not added until 1992, when a large expansion of the scope of the economic census enabled it to cover industries accounting for 98% of the gross domestic product of the United States, expanded from about 75% of GDP in 1987. *See id.* at 372; Paul T. Zeisset, *Disseminating Economic Census Data*, 15 GOVERNMENT INFORMATION QUARTERLY 303, 314 (1998). Because the scope of the economic census excluded a substantial percentage of economic activity until 1992, it is difficult to use census data to make historical comparisons regarding businesses of all types before that year.

Second, the basic unit of the economic census is the "establishment," defined as "a business or industrial unit at a single geographic location that produces or distributes goods or services—for example, a factory, store, or hotel." Shirin A. Ahmed, Lawrence A. Blum & Mark E. Wallace, *Conducting the Economic Census*, 15 GOVERNMENT INFORMATION QUARTERLY 275, 280 (1998). The key here is the idea of a "unit at a single geographic location"; many establishments may be owned by the same company, or a company may only own a single establishment. The economic census does not provide information about company or firm ownership of establishments at the city level. Therefore, we cannot draw conclusions about ownership patterns from census information.

business ratios in between those two extremes. Nor is it easy to generate a random sample, since each telephone book has a different number of pages and the number of listings per page varies widely, since some listings take up more space on the page than others.

We settled on counting the number of brand name uses on telephone book pages that covered the alphabetical range from approximately Bac to Ban, and then extrapolating from those results. This alphabetical range seemed not to be uncharacteristically dominated by either business or residential listings – it did not contain a business name like "American," or a family name like "Smith" – but we must admit that we lack a means for testing whether it is closely representative of the entire book. This alphabetical range occupies as many as ten pages in the 1960 Manhattan telephone book (which mixes residential and business listings), but only a single page in the 2010 Chicago and Philadelphia books (which have separate sections for residential and business listings, although the business section still contains many individual professional listings that we did not count as brand name uses).

The estimates so generated suggest that the total number of brand name uses represented in the telephone books did indeed decline between 1960 and 2010, as shown in Table 1.

TABLE 1
Brand Name Uses in White Pages Telephone Books[107]

	1960 Estimated Total	1960 Independent Uses of Studied Names	2010 Estimated Total	2010 Independent Uses of Studied Names	Percentage Change Total	Percentage Change Independent Uses of Studied Names
Chicago	69505	938	64242	374	-7.57%	-60.13%
Manhattan	118012	1579	101463	771	-14.02%	-51.17%
Philadelphia	42273	483	36581	267	-13.46%	-51.35%

However, Table 1 also shows that independent uses of the brand names in our study declined far more dramatically than brand names generally, and that the relationship between the two types of decline varies widely. In Philadelphia, independent uses of studied brand names declined at a bit less than four times the rate of the total decline, whereas in Chicago the studied

[107] For independent use data, see [spreadsheet TimeChart]; for estimated total brand names in white pages telephone books, see [workbook Telephone Books listings counts.xlsx]

brand name uses declined at over seven times the rate of the total decline. Thus, it seems quite clear that the declines we observed in independent uses of the studied brand names are not just a function of overall declines, and that we need to consider other factors.

B. Surname Uses and Family Migration.

As noted above, we found 60 of the 131 brand names in our study, or about 46% of those names, in use as surnames in the residential listings of Chicago, Manhattan, and Philadelphia. Uses of those names as brand names, however, accounted for about 81% of the independent brand name uses in those three cities in 1960.[108] Moreover, the rate of decline of surname brand uses closely tracked the overall decline in independent uses – 53.73% versus 54.00% -- so that the percentage of surname uses remained stable, rising less than one half of one percent from 1960 to 2010.[109] Thus, changes in independent brand name use rates might be tied to changes in the Chicago, Manhattan, and Philadelphia populations of those bearing the surnames represented in the study.

To provide a basis for testing this hypothesis, we counted the number of residential listings for each of the 60 surnames in the 1960 and 2010 telephone books in each of the three cities. The aggregate results are displayed in Table 2.

TABLE 2

Surname Listings Counts and Surname Brand Name Uses in White Pages Telephone Books[110]

	1960 Listings of 60 Surnames	1960 Independent Uses of 60 Surnames as Brand Names	2010 Listings of 60 Surnames	2010 Independent Uses of 60 Surnames as Brand Names	Percentage Change Listings of 60 Surnames	Percentage Change Independent Uses of 60 Surnames as Brand Names
Chicago	5543	790	3374	321	-39.13%	-59.37%
Manhattan	3290	1212	3123	599	-5.08%	-50.58%
Philadelp	3625	438	3031	209	-16.39%	-52.28%

[108] *See* [spreadsheet Surname Correl 3]
[109] *See id.*
[110] The figures for the Surname Brand Uses are from [spreadsheet Surname Correl 3]; the figures for surname listings are summarized on [spreadsheet Surname Correl 3], and are contained in the database Brand Names table.

hia						
TOTAL	12458	2440	9528	1129	-23.52%	-53.73%

If we examine the totals, aggregating the figures from all three cities, it appears as though there is a reasonably strong correlation between the change in the number of telephone listings of residents with one of the 60 studied surnames and the change in number of uses of those surnames as independent brand names. The telephone listings of residents of the three cities with one of the 60 surnames dropped 23.52% from 1960 to 2010, while the number of independent brand name uses of those surnames dropped 53.73%. Although it would be unreasonable to think that the decrease in listings could account for the entire decrease in independent brand name uses – each resident listed in the phone book could not be responsible for two businesses – it could still account for a large portion of the decrease.[111] The reality, however, is more complex. The three cities experienced similar decreases in independent brand name uses of the 60 surnames; they ranged from about 50% in Manhattan to about 59% in Chicago, a difference of only 9%. The variation in decreases of surname listings was, however, much greater. Manhattan lost only 5.08% of its 60-surname listings, while Philadelphia lost 16.39%, over three times as much, and Chicago lost a whopping 39.13%, almost eight times as much.[112] Since the cities' losses in both categories follow the same rank order, the data still suggest the possibility of a linear, causal relationship between loss in population and loss in brand name use, but a much smaller one. One would

[111] The decrease in residential listings could represent a substantially larger drop in population if the national averages for change in household size and change in percentage of households that had wireline telephone numbers held for all three cities. Between 1960 and 2008, the national average household size decreased from 3.29 to 2.62, while the percentage of households with telephone service increased from 74% to 95%. *See* Douglas Galbi, U.S. Historical Telephone Statistics, with economy-wide employment structure data, all-summary spreadsheet, http://galbithink.org/telcos/historical-telephone-stats.xls. On the other hand, by 2008, 20.2% of U.S. households had wireless-only telephone service. *Id.* If, as is most likely the case, those wireless numbers are not listed in white pages telephone books, while the wireline numbers largely are, then the percentage of households with listed numbers has remained close to flat between 1960 and 2008. Thus, we would really only need to correct for household size. Applying such a correction, the percentage decrease in population of the 60 surnames in the study would be 39.79% rather than 23.52%. (We do not know whether there has been a change in the percentage of wireline numbers that are unlisted, and if so, how large that change is.)

[112] By comparison, Manhattan's total population in 2010 was 4.08% lower than its population in 1960; Philadelphia's was 27.72% lower; and Chicago's was 19.64% lower. *See* U.S. Census Bureau, Historical Census Statistics On Population Totals By Race, 1790 to 1990, and By Hispanic Origin, 1970 to 1990, For Large Cities And Other Urban Places In The United States, http://www.census.gov/population/www/documentation/twps0076/twps0076.html; U.S. Census Bureau, Population Estimates Incorporated Places and Minor Civil Divisions, http://www.census.gov/popest/cities/SUB-EST2008.html.

have to attribute the bulk of the decreases – 49% -- to other causes, and as for the rest, it would take a loss of about 4% in residential surname listings to cause a loss of one further percent of independent brand name uses of the surnames.[113]

Surname Ratio Comparisons and the Factor of Race. If we look at the data in even more detail, we see further complications. The ratio of residential listings to brand name uses varies widely between surnames. With many of the surnames, this could be a function of the very small numbers of both resident listings and brand name uses. However, seven of the surnames had at least 100 residential listings in each city in both 1960 and 2010, and so might possibly exhibit somewhat more regularity. We looked at the residential listing to brand name use ratio for each of those seven surnames: Baker, Campbell, Carter, Douglas, Ford, Mack, and Rogers. In 1960, Manhattan had ratios ranging from 5.13 residential listings to one brand name use (Baker) to 11.06 residential listings to one brand name use (Mack); Chicago's range was from 6.02 to 1 (Douglas) to 28.36 to 1 (Carter); and Philadelphia's range was from 8.78 to 1 (Baker) to 47.46 to 1 (Carter).[114] Those ratios all significantly increased by 2010, and there was some change in the relative place of surnames as well.

We suspect that one factor that can explain much of these disparities is the possible lower rate of business formation by disadvantaged minority residents. The only information currently available on the race of holders of common surnames is from the United States Census for the year 2000. It shows that there is a substantial variation in the percentages of various races that hold the surnames in our study. For example, 82.08% of people with the surname "Baker" reported that they were white – the highest percentage of any of the seven surnames on which we focused. By contrast, only 60.51% of those with the surname "Carter," and 47.35% of those with the surname "Mack," reported that they were white, the two lowest percentages from among the seven surnames. It is very unlikely to be coincidence, then, that in all three cities, in both 1960 and 2010, "Baker" has a substantially lower ratio of residential listings to brand name uses than "Carter" or "Mack." In other words, Bakers were both more likely to be white and more likely to be business owners than Carters or Macks.

In some cases, the ranking of residential listing / brand name use ratios parallels the ranking of surnames by the percentages of white holders of those names almost exactly. One example is 1960 Manhattan data for the seven top surnames, on which we ran regression analyses. A regression equation that uses the number of residential listings as the sole independent variable and number of brand name uses as the dependent variable produces an R Square of .5977, and a p-value for the independent variable of .0415. That means, roughly, that the variation in residential listings amounts for about 59% of the variation in brand name uses, and there is only a four percent chance that the two variables are unrelated. If we add the 2000 Census percentages of white

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[113] See the summary output of the regression on line 49 of spreadsheet Surname Correl 3

[114] *See* [spreadsheet Surname Correl T7 1960-2010]

holders of each surname as a second variable, the R Square climbs to .9352, accounting for 93% of the variation in brand name uses, and the p value for the white holder percentages is a low .0103, but the p value for the residential listing numbers climbs to .2957. In other words, the brand name uses are actually correlated more tightly with the racial distribution of surname use then they are with the numbers of residents in Manhattan.[115]

The correlations are not quite as close with other years and cities, but it is also likely that the racial distributions of the surnames in the study are not nationally uniform or uniform across time, and so they may diverge substantially from the 2000 Census figures that are available. In the absence of more local information, we cannot come to more precise conclusions about the influence of race, but we have good reason to suspect that it is a substantial factor.

In sum, family migration has likely played some role in the decline of rates of brand-name sharing of the 60 brand names in our study that are also family names, and since uses of those brand names represent over 80% of all uses in our study, they have an impact on overall figures as well. However, given the wide difference between losses of the 60-surname population in the three cities, and the much smaller difference in losses of uses of those names as brand names, it appears that the family migration can only account for somewhere between two and twelve percent of the brand-name losses, which still leaves a large amount that must be attributed to other factors.

C. Variable Attractiveness of Brand Names Over Time

Advocates of broad protection for trademarks assert that second comers are attracted to successful marks and wish to appropriate the luster of the mark in order to increase business.[116] If this were true, then one would expect to see

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[115] For the regression results, see [spreadsheet Surname Correl T7 1960-2010 line 38] Because some of the surnames are also used as given names, we also looked at information about the historical incidence of baby names, gathered from social security records. For example, in a sample of 666392 social security records between 1920 and 1929, there were no children named "Baker" or "Campbell," but there were 43 boys names " Ford," 50 named "Carter," 310 named "Mack," 941 named "Douglas," and 1327 named "Rogers." *See* Douglas Galbi, Most Popular Given Names, US 1801-1999, http://www.galbithink.org/names/us200.htm. (We chose the decade 1920-1929 because we figured that business owners in 1960 would have been given their first names, on average, several decades earlier.) However, this variable did not do well as an addition to the regression equation; it increased the R Square by less than two one-hundredths of one percent, and had a p-value of .7837. *See* [spreadsheet Surname Correl T7 1960-2010 line 38]. In other words, it seems that very few people were naming businesses after their given names.

[116] *See* e.g. Mishawaka Rubber & Woolen Manufacturing Co. v. S.S. Kresge Co., 316 U.S. 203 (1942). ("The protection of trade-marks is the law's recognition of the psychological function of symbols. If it is true that we live by symbols, it is no less true that we purchase goods by them. A trade-mark is a merchandising short-cut which induces a purchaser to select what he wants, or what he has been led to believe he

a correlation between the popularity of a brand and the number of subsequent independent users of the brand name. In other words, CADILLAC, a more successful brand prior to the Japanese auto invasion, should have been a less attractive target for appropriation in the 2000's.[117] One would expect to see a decline in independent uses over a time period that correlated with the brand's decline in popularity. In fact, of the 53 total independent uses of CADILLAC after 1950 (almost all in Manhattan), 21 occurred in 1950, 26 in 1960, and only one occurred in 2005.

In several graphs below, we attempt to estimate the variation in popularity of 37 of our 131 brands by tracking how often the brand name is mentioned yearly in the *New York Times*, *Wall Street Journal*, and the *Washington Post* at regular intervals from 1960-2005.[118] The list of brands comes from an upcoming study of trademark dilution, measuring independent uses of brand names in non-telephone databases, including newspapers, state corporate/llc name databases, and trademark registers. For that study we selected 37 of the 131 marks that seemed most entitled to protection from trademark dilution. We dropped common surnames like Baker, Campbell,

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wants. The owner of a mark exploits this human propensity by making every effort to impregnate the atmosphere of the market with the drawing power of a congenial symbol. Whatever the means employed, the aim is the same--to convey through the mark, in the minds of potential customers, the desirability of the commodity upon which it appears. Once this is attained, the trade-mark owner has something of value. If another poaches upon the commercial magnetism of the symbol he has created, the owner can obtain legal redress."). The House report on proposed anti-dilution legislation state that the new cause of action would "recognize[ ] the substantial investment the owner has made in the mark and the commercial value and aura of the mark itself, protecting both from those who would appropriate the mark for their own gain." *See* House Rep. No. 104-374 at 3 (1995). *See also* Anne LaLonde, *Don't I Know You From Somewhere? Protection In The United States Of Foreign Trademarks That Are Well Known But Not Used There*, 98 TRADEMARK REP. 1379, 1416 (2008) ("Famous marks are particularly attractive to free riders . . . seeking to capitalize on the financial investment of the mark owner. Copying a famous mark, the Federal Circuit recognizes, gives free riders immediate recognition and substantially-reduced advertising costs."); Blake R. Bertagna, *Poaching Profits: An Examination Of The Ability Of A Trademark Owner To Recover An Infringer's Profits Under The Lanham Act As Amended In 199*9, 16 TEX. INTELL. PROP. L.J. 257, 292 (2008) ("[I]t is "famous marks" that are the ideal target for cybersquatters and "free-riders" since "famous marks. . . are more likely to be remembered and associated in the public mind" and are thus more attractive as targets for would-be copyists."), *citing* Recot Inc. v. Becton, 214 F.3d 1322, 1327 (Fed. Cir. 2000).

[117] Cadillac sales plummeted in the last 25 years. As a percentage of the total US car market, Cadillac sales constituted only 1.2% in 2008. *See* Ward's Automotive Yearbook 251 (2009). Percentage in prior years include: 2003 (1.3%), 1998 (2.2%), 1993 (2.4%), 1987 (3.7%), 1982 (4.3%), 1977 (4.0%), and 1972 (3.1%). *See respectively* Ward's Automotive Yearbook 242 (2004), 250 (1999), 204 (1994), 156 (1988), 70 (1983), 70 (1983), and 71 (1983).

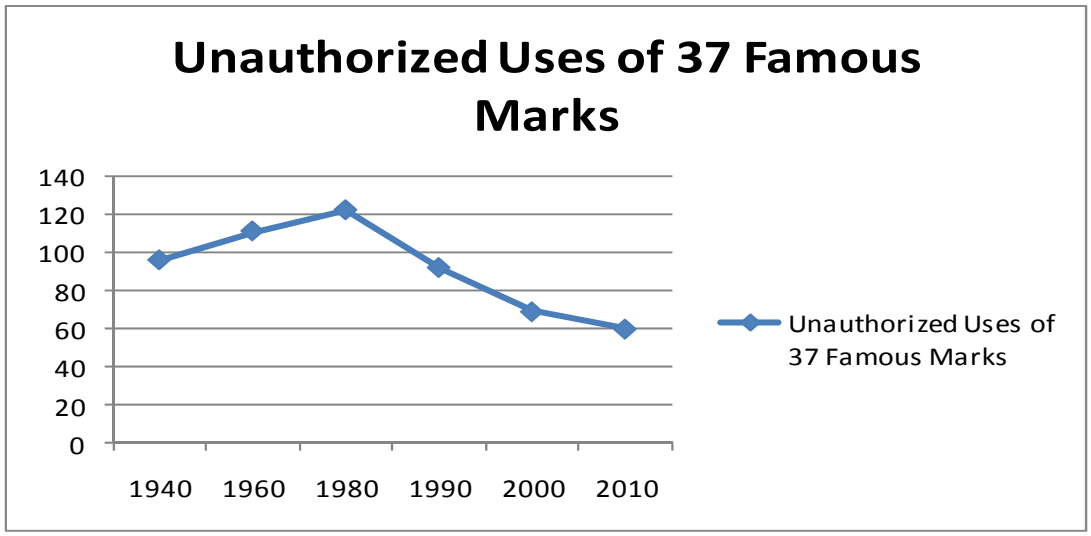
[118] *See* Historical Newspapers On-Line (Proquest) database at to http://www.proquest.com/en-US/catalogs/databases/detail/pq-hist-news.shtml

Carter, and Douglas, and omitted common word names like Royal, Metropolitan, Eagle, and Diamond, to focus on those marks that we thought courts would be most likely to protect from independent uses.[119] In other words, we chose a list of marks that should have benefited most clearly from the legal changes that we chronicle in Part I of this paper. The marks are:

BACARDI	GUINNESS	PERRIER
BUDWEISER	HARLEY-DAVIDSON	ROLEX
BUICK	HARVARD	SANKA
BULOVA	IBM	SCHLITZ
CADILLAC	JACK DANIELS	SHERWIN-WILLIAMS
CHANEL	JELL-O	STEINWAY
CLOROX	KODAK	ROLLS-ROYCE
COCA-COLA	LOUISVILLE SLUGGER	TAMPAX
CORVETTE	MAZDA	UNEEDA
DR. PEPPER	MERCEDES-BENZ	WINDEX
EX-LAX	OREO	ZIPPO
FATIMA	PACKARD	
GREEN GIANT	PALMOLIVE	

First, we should note that our sub-set of 37 marks followed the same general decline in independent uses as the full set of 131 marks, although the decline starts in 1980 instead of 1960.

Figure 2

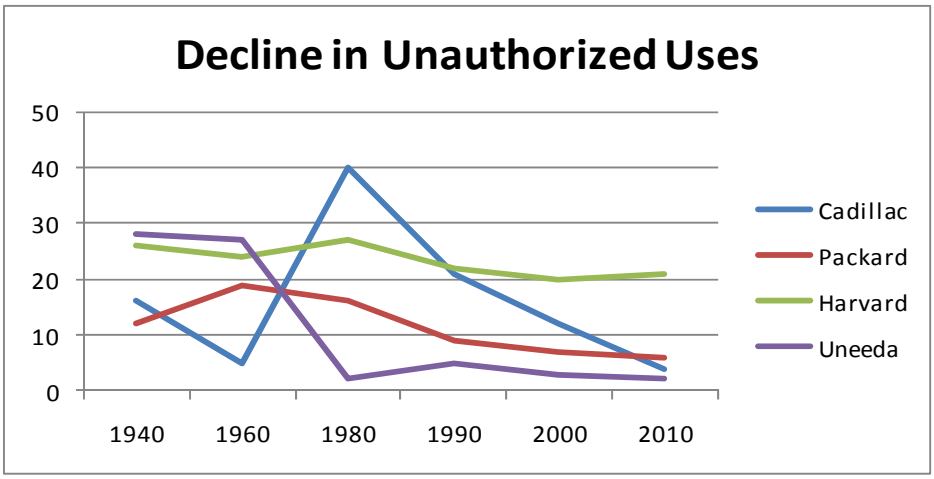


This decline in independent uses is driven strongly by three brands: CADILLAC, PACKARD, and UNEEDA. In the graph below, we also include

[119] Because of the "substantial exclusivity" factor, owners of marks like Baker, Campbell, Carter, Douglas, Royal, Metropolitan, Eagle, and Diamond have had little luck asserting rights under state or federal dilution statutes. *See* 4 J. THOMAS MCCARTHY, TRADEMARKS AND UNFAIR COMPETITION §§ 24.67 et seq.

HARVARD, which shows little change, as the most important other mark subject to substantial sharing during this period.

Figure 3



In order to determine whether the 37 famous marks also suffered a decline in attractiveness/popularity during the same 50-year period, we tracked each mark for one-year periods, four times per decade, from 1960 to 2005 in the *New York Times*, *Wall Street Journal*, and *Washington Post*, e.g. in 1960, 1963, 1965, 1968. We counted every time a brand name was mentioned as an approximate measure of the extent to which the brand was in the public consciousness in a particular year. Prominence in major newspapers is obviously a very rough proxy for brand popularity, but we note that courts and brand owners have long counted "consumer impressions" as a measure of brand consciousness[120] and even as a way to measure secondary meaning (mark strength) in trademark litigation.[121] Advertising theory in general discounts the content of advertisements and takes more seriously the number of times consumers encounter a brand name in any context.[122] In other words, the number of times a brand is mentioned in a national newspaper ("newspaper

[120] *See* Graeme Austin, *Tolerating Confusion about Confusion: Trademark Policy and Fair Use*, 50 ARIZ. L. REV. 157, 167 (2008) ([A]ccurate assessment of the strength of the mark in any dispute would be difficult without some reference to consumer impressions. Assessing the strength of a mark necessarily involves some kind of inquiry into how consumers respond to the messages about the trademark that its proprietor has conveyed, mostly through branding and promotion. Similarly, a firm achieves sufficient "fame" for the purposes of dilution doctrine when the trademark has sufficiently penetrated consumers' consciousness. Proxies are sometimes used in the course of this inquiry: courts might focus on how long the mark has been used in a particular marketing sector, or how many promotion and advertising dollars have been spent on it.")

[121] *See* J. THOMAS MCCARTHY, 2 MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION § 15:50 (4th ed. 2010)

[122] Kitch & Perlman case book.

hits") may provide fairly relevant information about brand/consumer associations and therefore the attractiveness of the brand to appropriators.

We counted a large number of newspaper hits for the 37 marks, peaking with 42,582 hits in 1970 and 43,758 hits in 1985. In raw numbers, there is a very significant decline, down to 8078 hits in the year 2005, with barely more than 10,000 hits in 2000 and 1995, but these figures do not account for change in the size of the newspapers from year to year, nor for the fact that after a certain point *Wall Street Journal* (1992) and *Washington Post* (1993) data are unavailable in the Historical Newspapers On-Line (Proquest) database. So, after 1993, we only measure hits in the *New York Times*.

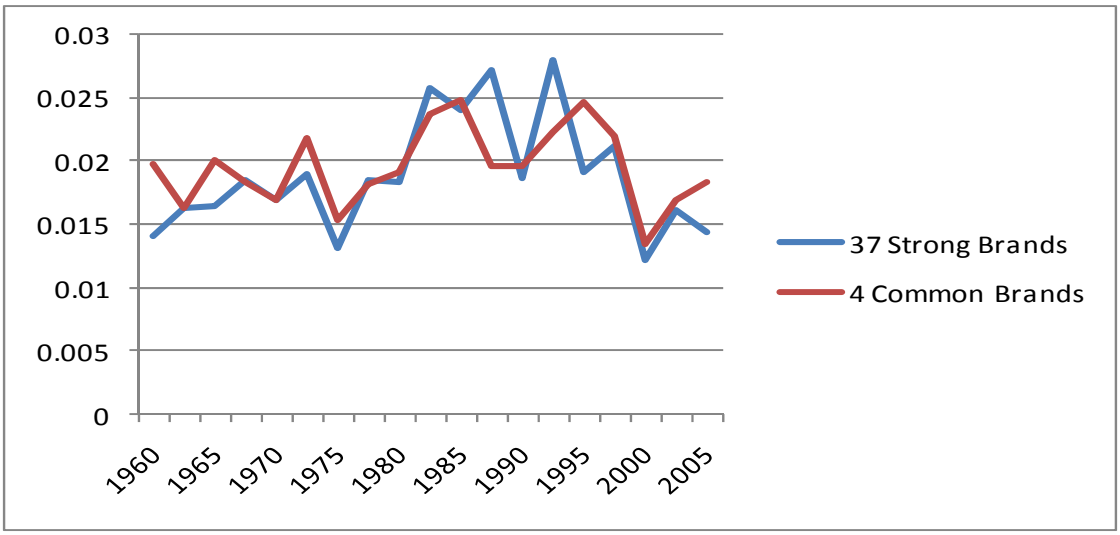
In order to account for changes in the contents of the newspaper database--a problem because fewer pages scanned means less data and presumably fewer hits--we used the five most common words in the English language as a baseline for the years studied. We tracked the words "the," "of," "a," "in," and "to" (together "most common words") in the same way we tracked the 37 brand names. If the newspaper database remained the same size, the number of hits for these words should not have varied much from year to year. Therefore, any change we saw in the number of common words should have been the result of a change in the size of the database due to the variable size of newspapers or due to the post-1992 absence of the *Wall Street Journal* and post-1993 absence of the *Washington Post*. What we see, for example, is that in 1990 the most common words were mentioned 1,937,000 times in the three newspaper database, but in 1993, the number drops to 1,352,890 and then to 583,000 in 1995. By comparing changes in the frequency of hits on the most common words with the frequency of hits on our 37 brand names, we are able to provide an accurate picture of real changes in the mentioning of the brands. In other words, we charted a real decline in brand names only if their rate of decline was greater than the rate of decline of the five most common words over the same period of time.

Figure 4 below presents the number of brand name hits as a proportion of the number of five-most-common-word hits. We list the real trend for our 37 marks as the line labeled, "strong brand." We also chart hits on four of the most common brand names from our entire list of 131 marks. The line labeled, "common brand," charts the frequency with which Diamond, Eagle, Metropolitan, and Royal are mentioned in relation to the five most common English words. Since those four marks were representative of those omitted, we were curious to see if they behaved any differently from the more exclusively controlled 37 famous brands.

Figure 4

Brand Names in Proportion to the Five Most Common Words

(Unadjusted)

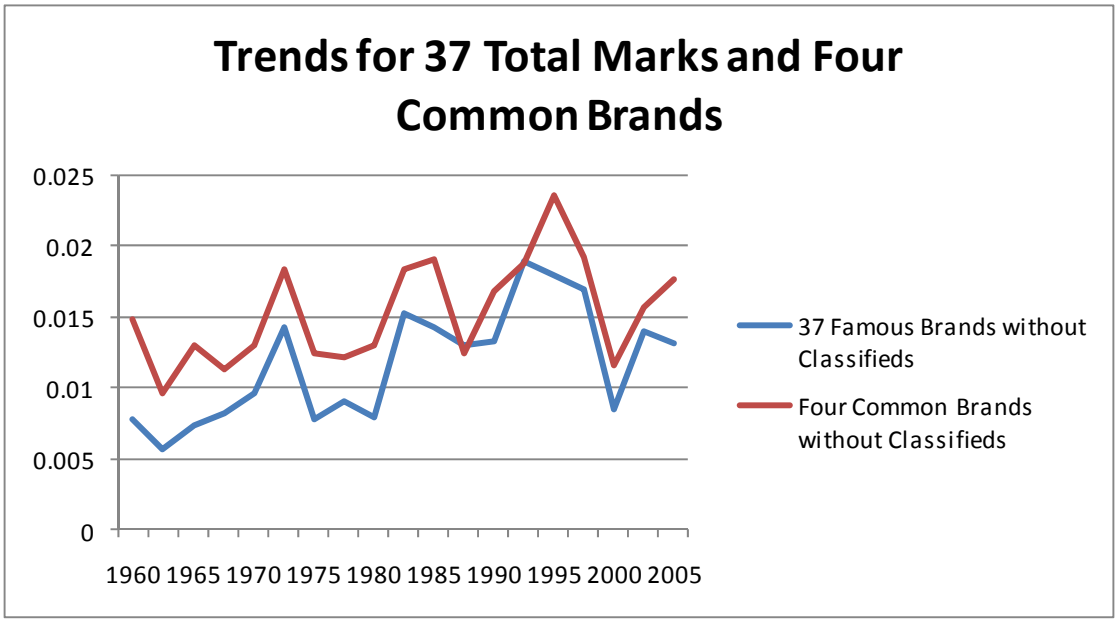


The graph seems to show the prominence of the brands rising from 1960, peaking from 1980-95 and then declining sharply to 2005. We grew to doubt, however, whether the data told a reliable story about brand popularity because the initial data used above included mentions of the brand names in classified advertising. We decided that we should rerun the numbers without the classified ads hits for several reasons. First, many of our most frequently mentioned brands were associated with goods that could be resold,[123] and a very high percentage of yearly "hits," sometimes as much as 50%, came from ads in the classified sections of the *New York Times* and *Washington Post*. When a brand is mentioned in the classified ads, it does not make an impression on a substantial number of consumers, as opposed to a large print ad or a story. Second, an appearance in the classifieds may suggest a loss in brand luster. For example, those seeking to sell their Cadillacs may be dissatisfied with them or looking to finance the purchase of a new Honda. The appearance of some brands in the classifieds may also be a measure of hard economic times. In some years, IBM and Steinway are mentioned frequently in the classifieds as sellers try to raise needed cash. Third, the *Wall Street Journal* does not have nearly so many pages of classified "for sale" ads as the other two papers, so when it drops out in 1993, the data becomes skewed. Fourth, and most importantly, after the mid-1990's the number of hits in classified ads plummets to a tiny fraction of previous levels. In 1993, for example, there were 1,970 classifieds ads for Cadillacs, but only 69 in 2005. As people begin to sell goods on-line instead of in newspapers, the loss of ads generates an artificial down-tick in brand prominence if one includes classifieds in the hit count.

If one omits classified ads from the adjusted hit count below, the graph changes looks quite different:

[123] Including Buick, Bulova, Cadillac, IBM, Kodak, Mazda, Mercedes-Benz, Packard, Rolex, Rolls-Royce, and Steinway.

Figure 5



The trend for both lines since 1960 is generally up, and significantly so.[124] In other words, in proportion to the five most commonly used words, the 37 brands we tracked appeared more frequently in newspapers over the course of the 50-year-period during which we saw a decline in independent use. Thus, for example, if we imagine that a reader of a daily newspaper spent about the same time reading the paper every day over that period, and therefore read about the same number of words per newspaper issue, she would encounter more mentions of the 37 brands in 2005 than in 1960.

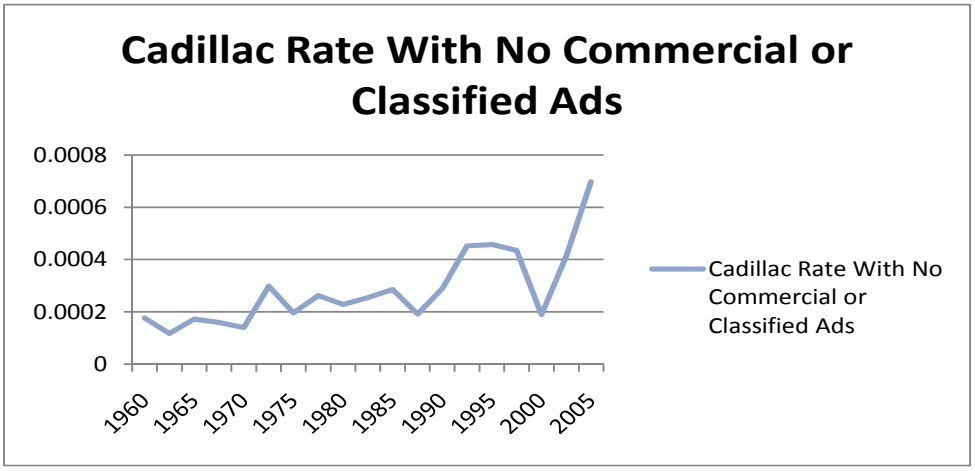
Of course, if the daily newspaper reader read the paper cover-to-cover every day over those 45 years, she would encounter fewer mentions in 2005 than in 1960. The raw number of mentions of the 37 brands decreased over the 50-year period, although not at nearly as high at rate as the total volume of text in the newspapers, as measured by the samples of the five most commonly used words. Yet, it is at least plausible that the average newspaper reader, during her incomplete perusal of the daily paper, was exposed in 2005 to a number of mentions of our 37 brands that equaled or exceeded the number to which she was exposed in 1960. If that is the case, then we have found no support for the theory that diminishing popularity drove the decline in brand sharing that we documented in the first part of the article. In fact, the newspaper data may provide some indirect support for the notion that increased protection for trademarks after 1960 drove the decline in brand sharing. The same increased protection may have given brand owners the confidence to advertise more extensively and promote their products to the public. The proportional increase

[124] [I'll have a stats footnote to drop here later]

in brand name mentions may be the result of investment spurred by an ever more friendly legal environment for owners of famous marks.

Finally, we wanted to ask one more question about CADILLAC, an important mark that saw a sharp decline in the number of independent uses from 1960-2010. We wondered whether GM might have propped up the mark through advertising to counter worries about dropping popularity as foreign cars begin to dominate the market. In other words, we wondered what would happen to CADILLAC hits if we omitted both commercial print and classified ads.

Figure 6



We feel strongly that it is proper to include commercial ads paid for by the brand owner in the newspaper hit count statistics. After all a consumer impression is made by a large print advertisement as well as by an unsolicited story. It would seem odd to measure brand prominence and brand value without counting the influence of advertising on consumers. Nonetheless, because we assumed that CADILLAC was a dying (or at least sickly) brand, we were surprised to see that its proportional increase in mentions was not driven by its own advertising expenditures. It also appears more frequently over time in regular news stories.

D. Structural Changes in the Popularity of Business Name Types.

Because we chose to focus mostly on brand names that have been in use for a century or more, many of our brand names reflect naming patterns that were prevalent long ago, but may no longer be prevalent. In an era when personal savings often provided the start-up capital for a business and family members provided labor, it was quite natural to use the family name as the name of the business. When start-up capital for a business is provided by outside investors who may not want to tie the identity of the business too closely to the founder, and when family members no longer dominate the business's labor force, the business may be less likely to take on a family name.

Thus, for example, a study of the top 100 global brands in 2005 showed that, of the 70 brands that had originated before 1945, 40 of them were the family name of the founder, whereas of the 30 brands that had originated after 1945, only 3 were the family name of the founder.[125] If the same trend were reflected in the telephone books we studied, much of the decline in brand name sharing rates that we have observed might be the result of shifts from family names to other names rather than overall declines in sharing rates, and perhaps there are other brand names we have not included that have become popular more recently. One might imagine, for example, the emergence of brand names related to jets, rockets and atoms in the post-World War II era, or brand names related to ecology and "greenness" in the post-Earth Day era. We suspect that the trend away from family names is less pronounced among the small businesses that dominate white pages telephone listings. To understand whether this is true, however, we would have to count uses of a much larger number of brand names, which is a very labor-intensive project, and therefore cannot be pursued within the scope of this Article. This factor, then, remains a topic for further research.

E. Personalization and the Flattening of Name Popularity.

Douglas Galbi has documented a significant trend towards less concentrated distribution of personal given names over the last two centuries, after many centuries of essentially unchanged distribution.[126] For example, 21.5% of the males born in 1800 in England and Wales were given the name John, making it the most popular name in that year; in that year, the top 10 given names for males accounted for 84.7% of the boys born in that year.[127] Samples of given names over the previous 500 years showed very similar concentrations. Yet since 1800, the percentages of the population given the most popular and the ten most popular names have both declined steadily, and by 1994, the most popular given name for males, James, was given to only 4.2% of the boys born in that year, and the top 10 names accounted for only 28.4% of the males born in that year.[128] Galbi describes this phenomenon in terms of an increased preference for personalization, and a decline of shared symbolic experience. Since the choice of a given name was unfettered by legal

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[125] *See* Allan K.K. Chan, Yue Yuan Huang & David X. Wu, Chinese Brand Names & Global Brand Names: Implications from Two Corpus Analyses 17, http://www.wbiconpro.com/13%5B1%5D.%20Allan-HK.pdf.

[126] *See* Douglas A. Galbi, Long Term Trends in Personal Given Name Frequencies in the UK, Version 1.11 (July 30, 2002) ("Long Term Trends"), http://www.galbithink.org/names.htm; Douglas A. Galbi, A New Account of Personalization and Effective Communication, version 1.1 (September 16, 2001), http://www.galbithink.org/pers.htm.

[127] *See* Galbi, Long Term Trends, *supra* note xxx, Table 3, Most Popular Names in England/Wales.

[128] *See id.*

constraints throughout this period, the reduced concentration of names cannot be explained as a function of legal change, but must stem from cultural factors.

Cultural forces at work in realigning the distribution of given names could also manifest themselves in business naming patterns. In that case, assuming that the stock of business names could itself be increased, as it can by coining previously nonexistent words, rates of brand name sharing might decrease across the board quite independently of legal influences. Indeed, the new legal rules that limit brand name sharing might not have been adopted if judges and legislators were not culturally comfortable with naming diversity and the phenomenon of newly coined names.

As we will detail in Part VII below, in our sample of 131 brand names, the distribution of brand names has actually become more concentrated. Although sharing rates for those names have declined broadly, they have declined less significantly for the names that started out with higher rates of sharing. Thus our sample, over the time period we studied, does not exhibit the decreased concentration that Galbi observes. A more comprehensive study of business naming concentration would require data about the total number of business names in use by businesses in a jurisdiction over time, and that is beyond the scope of this study.

VII. ANTI-DILUTION AND INFRINGEMENT LAWS AS CAUSES OF THE DECLINE IN INDEPENDENT USES OF FAMOUS BRAND NAMES.

We have noted that there has been a significant decline in the rate of independent uses of the 131 famous brand names tracked in this study. We have further noted that that decline does not seem to be entirely accounted for by the decline in the total number of brand names listed in the telephone books we studied, nor by the decline in residents who have as surnames the famous brand names we have chosen to study. Thus, increased trademark law protection seems to have a a role to play in the decline, but what sort of correlation might provide evidence that legal changes have played a role? We will consider two possibilities: correlation of declines in uses with the timing of legal changes, and correlation of the percentage decline in independent uses of each brand name with the initial number of independent uses. We will conclude that the first approach is not promising, but that the second approach is.

A. Correlating the Timing of Declines With the Dates of Legal Changes.

We know the precise dates that trademark dilution legislation became effective. The Federal Trademark Dilution Act became effective on January 16, 1996.[129] The states of Illinois and New York first enacted anti-dilution legislation in the mid-1950s: Illinois in 1953,[130] and New York in 1955.[131]

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[129] *See* P.L. 104-98, §5, 109 Stat. 985, 987 (1995).
[130] *See* 140 Ill. Comp. Stat. Ann ¶ 22 (effective 1953).

Pennsylvania first enacted anti-dilution legislation in 1984.[132] Shifts in judicial approaches to trademark infringement are more difficult to pinpoint, but one can try to identify key decisions; Gerard Magliocca, for example, argues that Judge Henry Friendly's opinion in the 1961 case of *Polaroid Corp. v. Polarad Elec. Corp.*[133] was pivotal in resolving a dispute in the Second Circuit in favor of broader infringement protection.

A search for sudden changes in brand name sharing rates immediately after these dates, however, will end in disappointment. When averaged across all three cities in the study, brand name sharing rates have dropped steadily for the last fifty years, at rates of between fifteen and twenty percent each decade between 1960 and 2010.[134] Although the rate of decline is slightly higher between 1990 and 2000 – the decade that federal dilution litigation is passed – there are no obvious sudden movements.

Yet the lack of sudden changes should not be taken as proof that increased trademark protection has had little or no effect. Rather, it seems likely that due to reluctance to apply new rules retroactively and the persistence of established independent uses, legislation and shifts in judicial attitude will only have a gradual effect on brand-name sharing rates. As for legislation, some courts have explicitly ruled that the Federal Trademark Dilution Act cannot be applied to trademark uses that began before its effective date.[135] Others have decided that injunctive relief may be available against such uses, but like all injunctive relief, "subject to the principles of equity," which would counsel against relief against uses that commenced a substantial time before enactment of the statute.[136] Under either approach, relief under federal dilution law is unlikely to be available against established uses.

Courts do not usually explicitly declare their own doctrinal shifts to be prospective only, but they can and do use doctrines of laches and acquiescence to limit the retroactive effect of expanded protection. The case of *Polaroid*

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[131] *See* N.Y. Gen. Bus. Law § 368-d (enacted 1955).
[132] *See* 54 Pa. C.S. § 1124 (enacted 1984).
[133] 287 F.2d 492 (2d Cir. 1961).
[134] *See supra* text accompanying notes 75-76.
[135] *See, e.g.*, Circuit City Stores, Inc. v. Office Max ,Inc., 949 F.Supp. 409, 415-18 (E.D. Va. 1996); Resorts of Pinehurst, Inc. v. Pinehurst National Development Corp., 973 F. Supp. 552, 554-60 (M.D.N.C. 1997); S Indus., Inc. v. Diamond Multimedia Sys., *Inc.*, 991 F. Supp. 1012, 1021 (N.D. Ill. 1998).
[136] *See* Viacom, Inc. v. Ingram Enterprises, Inc., 141 F.3d 886 (8th Cir. 1998). One court has also held that a plaintiff's federal dilution claim, made 30 years after defendant's commencement of use and 18 years after plaintiff should have known of that use, was barred by laches, when there had been a federal dilution claim available for 10 years and a state claim for more than 30 years. See Saul Zaentz Co. v. Wozniak Travel, Inc., 637 F. Supp. 2d 1096 (N.D. Cal. 2008); J. THOMAS MCCARTHY, MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION § 24:130 (4th ed.) (arguing that a defense of laches should be available against a federal dilution claim even if legislation has just made the federal claim available, so long as a substantially equivalent state dilution claim had been available but was not used by plaintiff).

Corp. v. Polarad Elec. Corp,[137] which Gerard Magliocca argues ushered in an era of broader infringement protection, provides a good example. Although the court recognized that infringement protection might be extended to more distantly related goods, it held that plaintiff Polaroid Corporation's claim was barred by laches. The court rejected Polaroid's argument that a laches bar would only arise if Polaroid engaged in affirmative conduct sanctioning Polarad's use, and concluded that an 11-year delay in taking legal action was sufficient, so long as Polarad was not making directly competing goods, but merely related goods. The decision thus expands the definition of related goods, but limits significantly the retroactive effect of the expansion.

If both legislation and judicial decisions have limited retroactive effect, then a key factor in the timing of the effect of legal changes is the rate of turnover of brand name uses: how frequently do older uses cease as businesses are dissolved, and how frequently do new uses arise as new businesses are created? Because our database includes a field containing each full business name, we were able to analyze rates of turnover of brand name uses.[138] Table 3 summarizes rates of turnover of brand name uses in all three cities in the study.

TABLE 3
Rates of Turnover of Independent Brand Name Uses in Chicago, Manhattan, and Philadelphia, 1940-2010

	All 131 Brand Names in the Study	Consistently Famous Names (in Hotchkiss and Golder)	Top 8 Consistently Famous Names (in initial uses)	Consistently Famous Names with between 11 and 20 initial uses
1940 to 1960	73.15%	66.17%	64.83%	67.35%
1960 and before to 1980	66.78%	67.21%	64.16%	58.29%
1980 and before to 1990	59.95%	59.96%	57.33%	66.72%

[137] 287 F.2d 492 (2d Cir. 1961).

[138] This required a great deal of proofreading and editing to ensure that the representations of a business name remained identical in different years. For example, we had to account for differing abbreviations, such as "Co" and "Corp" for "Corporation," or "Eng" and "Engrg" for "Engineering," and for the presence and absence of "Inc" (a business might be listed as "Crest Roofing Co" in one year, and "Crest Roofing Co Inc" in another).

1990 and before to 2000	50.46%	48.64%	48.01%	51.39%
2000 and before to 2010	38.31%	34.00%	33.23%	36.61%

The figure in each box represents the percentage of independent brand name uses that were found in the ending year of the period listed in the left-hand column, but not in the beginning year or in a previous period. Thus, for example, taking the far upper left-hand data cell, for all 131 brand names that we covered in the study, 73.15% of the brand name uses that appeared in the 1960 telephone books had not appeared in the 1940 telephone books. It is not surprising that the highest turnover rate is found between 1940 and 1960, for as the reader will recall, the total number of independent uses of the 131 brand names increased substantially during this period – from 2293 to 3000, an increase of 31% (though the turnover rate is still substantially higher than that increase). Turnover rates for all 131 brand names then decrease for all subsequent periods. The first two periods, of course, are twice as long as the last three. By 2010, only 38.31% of independent uses of the 131 brand names did not appear in 2000 or before. These turnover rates suggest that the effects of prospective legal changes would be delayed, but certainly not indefinitely: a prospective ban introduced in 2000 would have affected 38.31% of independent brand name uses by 2010. The turnover rates do suggest, however, that prospective legal changes will not result in immediate declines and make it more difficult to trace a specific portion of the decline in brand-name sharing to legal changes.

The second, third and fourth columns in Table 3 calculate turnover rates for specific subsets of the 131 brand names. The second column considers turnover rates for the 45 brand names that were leaders in their product areas in both the Hotchkiss and Golder studies, and therefore by one measure can be considered consistently famous. During all periods other than 1960 to 1980 these rates are somewhat lower. One conceivable explanation for the lower rates is that infringement and dilution protection of these brand names is hindering the appearance of new independent uses; but the rates are not dramatically lower, and indicate that many new uses of these names appeared as well. We will discuss the third and fourth columns of Figure 8 below.

B. Correlating Percentage Declines with Initial Numbers of Independent Uses.

Our second attempt to assess the impact of legal changes on brand-name sharing rates takes advantage of the prominence of third-party use of a brand name as a factor in assessing both infringement and dilution liability. As we discussed above in Part I, consideration of that factor is mandated by the Trademark Dilution Reform Act, which directs courts to consider "[t]he extent to which the owner of the famous mark is engaged in substantially exclusive

use of the mark;"[139] it is also an important factor in state dilution law, and in state and federal infringement law.

Because of the weight accorded the factor of "substantially exclusive use," it is almost certain that many of the brand names we studied, although "famous" in the sense that they are widely recognized by the general consuming public in the United States, would receive limited dilution protection. Some, indeed, would almost certainly receive no dilution protection at all. Although the TDRA treats the extent of third-party use as one factor to be balanced with others, many courts and commentators have concluded that if third-party use rises above a certain level, protection against dilution becomes completely unavailable.[140] If we knew exactly which brand names courts would refuse to protect on grounds of insufficiently exclusive use, we could use the rate of decline of independent uses of those brand names as a baseline.[141] Against that baseline, we would compare the rate of decline of independent uses of brand names that met the criterion of substantially exclusive use. If the rate of decline of the independent uses of those qualifying brand names was greater than the baseline rate, that would be evidence that the passage of dilution laws had had an effect.

Unfortunately, we do not know exactly which brand names would be denied protection due to third-party uses. No court has formulated a bright-line rule about how many independent uses would result in the denial of protection, and a simple count of uses would in any event not suffice, since uses by small, local businesses would surely not count against exclusivity as much as high-volume uses on a national scale.[142] Moreover, trademark infringement analysis also takes into account the extent of third-party uses in determining the scope of protection, and many have argued that infringement protection has expanded during the same period that dilution protection was introduced, particularly for those marks that are famous enough to qualify for protection against dilution.[143] Isolating the effect of new anti-dilution statutes is therefore difficult.

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[139] P.L. 109-312, §2, 120 Stat. 1729, 1731 (2006), codified at 15 U.S.C. §1125(c)(2)(B)(iii) (2006)

[140] *See* n. 15 *supra*.

[141] We make a guess with the 37 brands we graph in Figure 2.

[142] One formulation of a test to determine whether third-party uses would affect dilution protection was articulated by Anne Gundelfinger, testifying as the President of the International Trademark Association during a hearing on the TDRA. As she put it, the question is whether those uses "have . . . visibility to the average consumer." Testimony of Anne Gundlefinger, President, International Trademark Association, before House Subcommittee on Courts, the Internet and Intellectual Property, Committee on the Judiciary, February 17, 2005, (109th Cong., 1st Sess) ("[W]here other similar marks are already in wide use and have been over a lengthy period of time, it may be less likely that the junior use will have the effect of blurring the famous mark, unless those uses have little or no visibility to the average consumer.")

[143] *See* Barton Beebe, *The Continuing Debacle of U.S. Antidilution Law: Evidence from the First Year of Trademark Dilution Revision Act Case Law*, 24 SANTA CLARA COMPUTER & HIGH TECH L.J. 449, 463 (2008).

If, however, we limit our aspirations to determining if we can see some impact of legal change in general, without attempting to separate out the effects of anti-dilution statutes from those of increased infringement protection, it should be possible to formulate a testable hypothesis that takes into account the factor of third-party uses, even without knowing exactly the number and size of such uses that courts would find precluded dilution protection. *If increased legal protection has caused a reduction in independent uses, then the proportionate decline in independent uses should be greater with respect to those brand names that had fewer independent uses to begin with.*

With this hypothesis in mind, we attempted to compare rates of decline of independent uses among brand names that started out with a higher number of independent uses to rates of decline among brand names that started out with a lower number of such uses. We focused in particular on those 45 brand names that appeared in both the Hotchkiss and Golder studies, since the owners of those continuously famous names would have been in a position to take advantage of anti-dilution protection, though we also looked at changes in independent use rates among all 131 brand names.

Of the 45 continuously famous brand names, 37 had at least one independent use in 1960.[144] (Of the other eight consistently famous brand names that had no independent uses in 1960, seven had no independent uses in 2010 either; the sole exception, Life-Savers, had one independent use.)[145] In the aggregate, the 36 brand names had 1291 independent uses in 1960; in 2010, they had 535 independent uses, a decrease of 58.56%.[146] The results of our comparison of the 36 brand names are displayed in Figures 2 and 3. Both Figures arrange the brand names in order of the number of independent uses that they had in 1960, starting with the highest number on the left.

FIGURE 7

Independent Uses of Consistently Famous Marks in Chicago, Manhattan, and Philadelphia, 1960 & 2010[147]

[144] *See* [spreadsheet InHInG 1960-2010]
[145] *See id.*
[146] *See id.*
[147] From spreadsheet InHInG 1960-2010

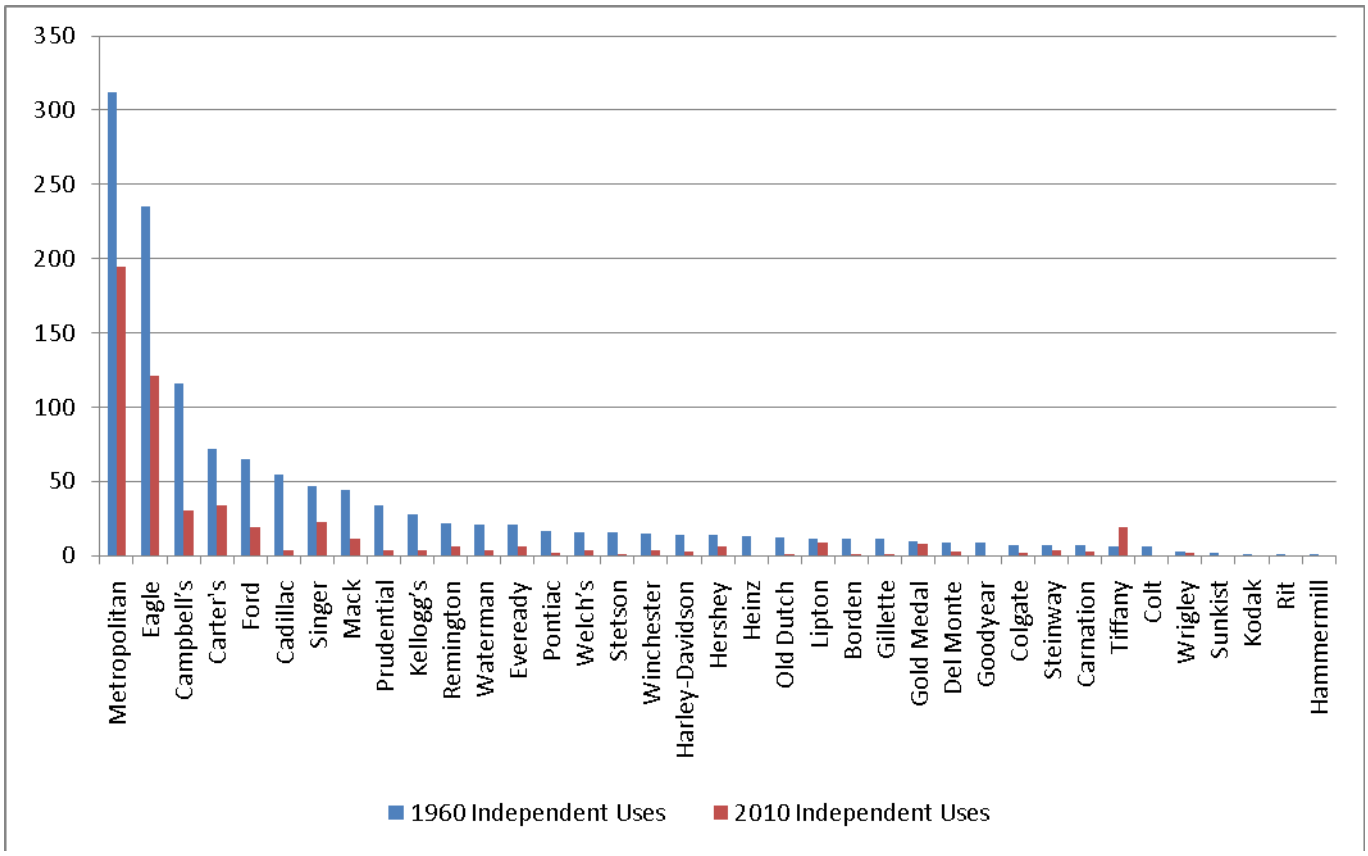
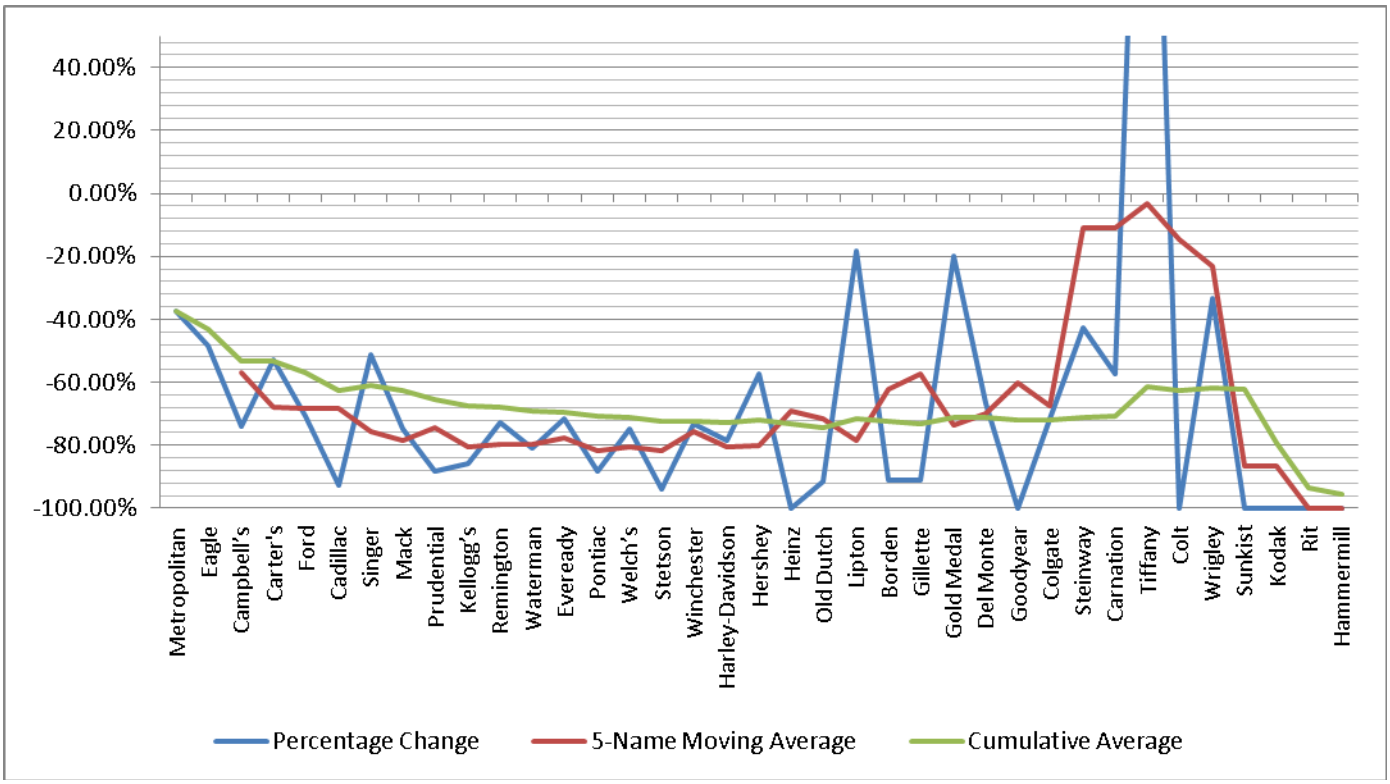


Figure 7 shows that, of all of the consistently famous brand names that had at least one independent use in 1960, only one, Tiffany, actually experienced an increase in independent uses, and only two, Lipton and Gold Medal, had roughly equal numbers of independent uses in both years. All other brand names experienced substantial decreases in independent uses.

It is difficult to visually compare rates of change in independent uses in Figure 7, but Figure 8 shows these somewhat more clearly. Figure 8 displays three lines. The blue line traces the percentage change in independent uses of each brand name in the same order as Figure 7. It shows that the two brand names with the highest number of independent uses in 1960 did indeed exhibit lower-than-average rates of decline: independent uses of Metropolitan declined by only about 38%, while independent uses of Eagle declined by about 49%. From there on, the line becomes a bit more erratic, as rates of change of individual brand names vary up and down, and that fluctuation increases as we reach brand names with very few initial uses in 1960, with the result that one fewer or greater use in 2010 can have a large percentage effect. The line leaves the figure area when it reaches "Tiffany," because that brand name experienced a 217% increase in independent uses between 1960 and 2010, from 6 to 19. Finally, the line is flat at a 100% decline for the last four brand names, because those names had either one or two uses in 1960 and no uses in 2010.

FIGURE 8

Percentage Changes in Rates of Independent Use of 36 Consistently Famous Marks in Chicago, Manhattan, and Philadelphia, 1960-2010



The other two lines attempt to smooth out that individual variation. The red line displays a five-name moving average; its position at each brand name is the result of averaging the rate of decline of that brand name and the two brand names to its left and to its right. That line demonstrates a small but fairly steady increase in rates of decline through about 19 of the 36 brand name. By the time we reach the twentieth brand name, Heinz, we are down to 13 independent uses in 1960, a very steep drop from the 312 independent uses in 1960 of Metropolitan. The five-name moving average line then starts to climb, because a few of the brand names that had between six and ten independent uses in 1960 declined significantly less, and in one case, the number of independent uses actually increased. It then falls at the end due to the last four drops from one or two uses to zero.

Finally, the green line displays the cumulative average percentage change for all brand names to the left of each point on the line. It also reveals a steady increase in percentage declines through about the nineteenth brand

name, followed by a gradual decrease until the final increase for the last four names.

This pattern of declines is consistent with our hypothesis that trademark law will have a greater effect on sharing rates of those famous brand names that began with a small enough number of independent uses that the owners could claim to be engaged in "substantially exclusive use" of their trademarks. The two brand names that began with over 200 independent uses experienced, on average, declines of 43%; the top eight brands, all of which began with more than 40 independent uses, experienced average declines of 63%; and those 15 brands that began with from 10 to 21 independent uses experienced average declines of 73%. If we decided that the factor of "substantially exclusive use" would moderately weigh against those brand names with more than 40 independent uses, whereas it would weigh substantially less against those brand names with less than 22 independent uses, we would conclude that changes in trademark protection account for at least 10% of the decline in independent uses of brand names. One might argue that 22 independent uses are far too many for a trademark owner to claim to be engaged in substantially exclusive use. Recall, however, that most of the uses found in telephone books are uses on a very small scale – single-location grocery stores, cleaning services, and the like – the markets of which are confined to particular cities or even particular neighborhoods of those cities. It is likely that a court could find that a substantial number of such uses "have little or no visibility to the average consumer,"[148] given that the "average consumer" in question must be constructed from consumers spread across the entire country.[149]

To obtain a different perspective on this data, we also ran a few regressions. First, we looked at the 21 consistently famous brand names that had at least a dozen independent uses in 1960, excluding those with a smaller number of initial independent uses on the theory that the sample size of those names was too small. We set the number of independent uses in 1960 as the independent variable and the percentage decline of those uses from 1960 to 2010 as the dependent variable. The result was an R Square of 0.458583 and a P-value of 0.00074, suggesting a very high probability that the initial number of uses accounted for roughly 45% of the percentage decline. We then ran the

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[148] *See supra* n. 96 (quoting testimony from the President of the International Trademark Association, Anne Gundelfinger, on the interpretation of "substantially exclusive use").

[149] One example of such a finding can be found in *Nike, Inc. v. Nikepal International, Inc.*, 2007 WL 2782030, 84 U.S.P.Q.2d 1820 (E.D. Cal. 2007). In that case, the defendant Nikepal argued that Nike, Inc. was not engaged in substantially exclusive use of the mark "Nike" because another company, Nike Hydraulics, Inc., had been continuously using the mark for 50 years and had held a federal registration for it since 1958. The court rejected that argument, noting that defendant's witness had himself not been personally familiar with Nike Hydraulics, Inc. before commencement of the litigation. *Id.* at *7. Most of the uses in white pages telephone books are not the subject of a federal registration and are on a far smaller scale than Nike Hydraulics, Inc.; Nikepal did not even attempt to look for uses on that scale, but confined itself to a search of the federal register.

same regression on the brand names that were not consistently famous – that appeared in the 1921 Hotchkiss study but not in the 1997 Golder study. Thirteen of those brand names had at least 12 independent uses. Once again setting the number of initial uses as the independent variable and the percentage decline as the dependent variable, we obtained an R Square of 0.073231 and a P-value of 0.371191. Thus, there was a much weaker relationship between number of initial uses and percentage decline among those brand names that had lost their fame some time in between 1921 and 1997. This, we think, is consistent with the hypothesis that legal change played some role in the decrease in independent uses. If the once-famous use of a brand name lost wide recognition or ceased altogether, it is less likely that any user would be in a position to claim broad infringement protection or dilution protection, and hence the initial number of independent uses would have little impact on the rate of decline over time, which is what the second regression seems to show. Only if a famous use was consistent would that user otherwise be in a position to claim broad infringement or dilution protection, thus making the degree of "substantial exclusive use" relevant to whether that protection could be obtained. Our first regression seems to demonstrate that relevance.

Of course, it is possible that there are explanations of the higher decreases among low-initial-independent-use brand names that have nothing to do with the increase in infringement protection and the introduction of dilution protection. Even if the decline in independent uses we document is driven by changes in the legal landscape, the evidence of a legal effect is only moderately strong, in part because the turnover rates for independent uses of consistently famous brand names with 11 to 20 initial uses are not dramatically lower than those for the eight consistently famous brand names with over 40 initial uses. As Table 3 shows, the turnover rates of the brand names with a smaller number of initial independent uses are actually higher during all periods but one. One interpretation of this could be that legal protection does not deter independent users from initial use, but does then eventually lead to discontinuance of some of those uses, resulting in a higher turnover rate. We do not, however, have any evidence that this is the correct interpretation.

It is worth mentioning that because third-party use is important in both infringement and dilution analysis, law can work to magnify the effect of the non-legal factors that are reducing brand-name sharing. In 1960, some brand names may have been shared by too many users to support a claim by the most famous of those users that it was engaging in "substantially exclusive use" of the name. Yet by 1990 or 2000, non-legal factors may have reduced the rate of sharing to a level at which the factor of substantially exclusive use would weigh more heavily in favor of the famous user. For example, at the time that the sportswear manufacturer Nike, Inc. first used the brand name "Nike" in 1973, there was not just one other federal registration for that name; rather, there were at least five.[150] In addition to Nike Hydraulics, there were registrations for

[150] There may have been more, because the U.S. Patent and Trademark Office online database does not contain records of all of the registrations that were cancelled before the 1990s.

NIKE adhesive tape dispensers,[151] for sandwiches,[152] for perfume,[153] and for a club.[154] These uses, however, have all ceased, presumably for reasons unrelated to trademark law, and that has left Nike, Inc. in a better position to claim that it is engaged in substantially exclusive use of the brand name "Nike," and thus to use trademark infringement and dilution law to prevent further sharing of that name.

VI. CONCLUSION

Although the sharing of brand names has been a feature of commercial life since time immemorial, and has long been recognized and accommodated by trademark law, scholars have paid little direct attention to brand-name sharing as a phenomenon and never noticed changing rates of brand-name sharing. This Article has attempted to provide an introduction to the study of brand-name sharing, and to present the results of an initial empirical study of the sharing of 131 brand names in three cities over a 70-year period. A major finding is the dramatic decline in sharing rates of these 131 names between 1960 and 2010. This Article has considered several potential non-legal causes of that decline, but also suggests that increased trademark infringement protection, and newly introduced trademark dilution protection, may have been responsible for a substantial portion of that decline. Further empirical work will help us to understand more about a phenomenon that has been a common feature of consumer experience, but now seems to be on the wane.

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[151] *See* U.S. Trademark Registration No. 622166.
[152] *See* U.S. Trademark Registration No. 771978.
[153] *See* U.S. Trademark Registration No. 775529.
[154] *See* U.S. Trademark Registration No. 862551.