According to functionality doctrine, trademark protection cannot be granted for any feature that is essential to a product’s use or purpose, or that affects the product’s cost or quality. But because of the placebo effect, even seemingly inert names and symbols are imbued with precisely this kind of power. In fact, a wide variety of real-world phenomena challenge the prevailing understanding of trademark functionality, from the social uses of high-fashion marks to the cost reductions enabled by certification marks. More fundamentally, a valuable trademark of any kind should act to reduce search costs for consumers and improve quality through reputation. And yet, rather than leading to invalidation, all of these well-documented functionalities are apparently tolerated by trademark law—sometimes merely ignored, but often celebrated explicitly.

This Article proposes a more unified theory of functionality: fragility. Some product features affect cost, quality, use, and purpose in ways that are non-fragile—the effects would persist even if every producer were to copy the same feature. But some features affect the product in ways that are fragile—the effects would be degraded or broken through unchecked copying. In reality, only non-fragile functionalities are actually prohibited, whereas fragile functionalities are permitted and even encouraged. In a manner surprisingly similar to patent or copyright law, trademark law appears to carefully distinguish between improvements that require its protection in order to manifest, and those that do not.

This fragility theory not only better explains real-world case outcomes and the functionality doctrine’s full history, but also offers a conceptual improvement that can
be applied to all types of trademarks. A generic term, for example, exhibits non-fragile linguistic functionality. Moreover, fragility theory provides consistent answers to divisive boundary issues in trademark law, such as overlapping protection under copyright, anti-dilution rights, and post-sale confusion doctrine. At the same time, recognizing this fragility pattern calls attention to potentially adverse consequences in terms of distributive justice and market competition—consequences that trademark law itself may not be able to remedy.

INTRODUCTION

A set of test subjects are randomly assigned to one of two treatment groups for their frequent headaches: generic or brand-name ibuprofen (Nurofen®). They are provided with multiple doses and instructed to take one for each of their headaches over the next few weeks, rating their pain relief and any side effects each time. In reality, for both groups, only half of the doses contain actual ibuprofen; the other half are covert placebos. Unsurprisingly, the generic-label placebo doses do not perform nearly as well as the generic-label doses with real active ingredients. The Nurofen-label
doses, however, exhibit no such difference. That is, whether they take a Nurofen-labeled placebo or the real thing, subjects report similarly high levels of pain relief and low incidence of side effects. Thus, as if by magic, a simple sugar pill with a trademark manages to perform just as well as the genuine, but generic-label, pharmaceutical.¹

Experiments performed with other medications yield similar outcomes. Subjects given trademark-branded anti-anxiety drugs, for example, present with lower blood pressure and less severe side effects than those given identical generics.² But the phenomenon is not limited to medicine. From athletic equipment¹ and test-taking materials⁴ to powdered drink mix⁵ and deli meat,⁶ otherwise identical products perform better when they are endowed with trademarked names, symbols, and designs. Through a variation of the placebo effect, human psychology transforms these seemingly inert names and logos into measurable product enhancements.

Fundamental trademark doctrine clashes with this scientific reality. It is a “well-established rule” that trademark protection is not available for functional product features.⁷ And, as the Supreme Court recently reaffirmed, “a product feature is functional . . . if it is essential to the use or purpose of the article or if it affects the cost or quality of the article.”⁸ The rationale for this functionality doctrine is fairly straightforward: trademarks (unlike

² See Kate Faasse, Tim Cundy, Greg Gamble & Keith J. Petrie, The Effect of an Apparent Change to a Branded or Generic Medication on Drug Effectiveness and Side Effects, 75 PSYCHOSOMATIC MED. 90, 93 (2013) (“The results of this study indicate that patients experience reduced effectiveness and increased medication-related side effects when changed from branded medication to drugs that are labeled as generic.”).
³ See Aaron M. Garvey, Frank Germann & Lisa E. Bolton, Performance Brand Placebos: How Brands Improve Performance and Consumers Take the Credit, 42 J. CONSUMER RSCH. 931, 936–37 (2016) (finding that subjects who used golf putters labeled with a well-recognized brand name took fewer strokes to sink a putt than subjects who used the same putters with low-brand-recognition labels or no labels).
⁴ See id. at 939 (finding that branded earplugs improved standardized test performance).
⁵ See Paula Varela, Gastón Ares, Ana Giménez & Adriana Gámbaro, Influence of Brand Information on Consumers’ Expectations and Liking of Powdered Drinks in Central Location Tests, 21 FOOD QUALITY & PREFERENCE 873, 879 (2010) (finding that consumers gave significantly higher scores to powdered drinks, particularly premium-branded drinks, in brand-informed taste tests than in blind taste tests).
⁷ TrafFix Devices, Inc. v. Mktg. Displays, Inc., 532 U.S. 23, 29 (2001); see generally J. THOMAS MCCARTHY, MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION § 7:63 (5th ed. 2020) (explaining that trademark protection is not available for “functional” features, meaning those that “make[] the product more useful for its purpose or contribute[] to economy of manufacture or use”).
patents and copyrights) do not have term limits, and it would do more harm than good to allow a producer to monopolize a useful product feature forever.\(^9\) Even if the feature is strongly associated with a single producer by the consuming public, it’s better to ensure that improvements to cost, quality, and use eventually pass into the public domain.

The application of functionality doctrine might appear straightforward as well, at least at first glance. For example, near the turn of the twentieth century, Norwich Pharmacal began selling its novel stomach medicine—a pink-colored, liquid preparation of bismuth subsalicylate—under the trademark “Pepto-Bismol.”\(^10\) The product proved enormously popular and, by the 1950s, Pepto-Bismol was “nationally recognized and . . . undoubtedly the leader in the field of stomach assuagement.”\(^11\) Naturally, this created an opportunity for imitators, and competitor Sterling Drug soon began selling a product, identical in “chemistry [and] color,” under the name “Pepsamar.”\(^12\) As the Second Circuit observed in the ensuing legal dispute, Norwich certainly could not obtain trademark protection for the bismuth subsalicylate composition itself: “[t]he medicinal ingredients, of course, are functional.”\(^13\) But Norwich also could not obtain trademark protection for the distinctive pink hue: “the pink color . . . present[s] a pleasing appearance to the customer and to the sufferer,” and “a disordered stomach will accept that which is pleasing.”\(^14\) That is, the court recognized the more subtle functionality of the color pink’s “psycho-somatic effect.”\(^15\)

Norwich’s power to exclude competitors was thus limited to the mere name “Pepto-Bismol”—an assumedly harmless monopoly. But the placebo effect described above strongly suggests that a Pepto-Bismol by any other name will not actually be as effective, identical chemistry and color notwithstanding. So, functionality doctrine blocked trademark protection for some of Pepto-Bismol’s features that “affect[] . . . quality,”\(^16\) but not all—despite the court’s explicit recognition of psychosomatic power.

Contemporary cases have followed this unusual, seemingly contradictory pattern of allowing trademark protection for some features that affect quality but not others. Shire U.S.’s ADHD drug Adderall® is now off-patent, for

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\(^9\) See, e.g., infra notes 47-48 and accompanying text.


\(^12\) Id.

\(^13\) Id. at 572 n.7.

\(^14\) Id. at 572 (internal quotation marks omitted) (quoting Trial Court Opinion, 167 F. Supp. 427, 433 (N.D.N.Y. 1958)).

\(^15\) Id. at 572 n.7.

example, so generic manufacturers are free to sell chemically identical amphetamine salt tablets. And generic manufacturers are also free to mimic the color and shape of Adderall tablets, because there is a “clinical functionality that exists where a generic drug bears [visual] similarity to its branded version”—“enhance[d] patient safety [based on] psychological acceptance.” Nevertheless, none of the generic manufacturers may use the name “Adderall” for their tablets; Shire alone will wield the psychological power of that name, perhaps in perpetuity.

Trademark law’s apparent tolerance of this placebo functionality is a puzzle that contradicts the plain terms of Supreme Court precedent, but it is surprisingly not unique. On the contrary, there are a wide variety of product features that would seem to be functional under the Court’s definition, yet obtain trademark protection without much scrutiny. Consider a Louis Vuitton clutch. At least some—perhaps most—of the purpose of this kind of high-status luxury item is conspicuous consumption. When consumers wear the clutch in public, they display its trademark features, such as the famous V print, which other observers recognize. The consumer is thus able to convey social status and economic power. The V-printed clutch, in other words, has a “use or purpose” entirely separate from its basic ability to hold cards or keys. Independent of the product’s physical integrity, carrying capacity, or durability, the trademark print itself performs a highly sought-after social function. Nevertheless, the famous logo and print marks associated with luxury brands do not appear to be in any serious danger of invalidation for functionality.

Further examples abound, from certification marks reducing the costs of industrial organization, to shape and color marks affecting the quality of interoperability. But this doctrinal puzzle goes well beyond the specifics of any particular fact pattern to the basic features shared by all trademarks. It is bedrock legal theory that trademarks act to reduce search costs for consumers as well as provide a reputational incentive for producers to

20 TrafFix, 532 U.S. at 32 (internal quotation marks omitted) (quoting Qualitex, 514 U.S. at 165).
21 See infra subsection II.B.iii.
22 See infra subsection II.B.v.
23 See GRAEME B. DINWOODIE & MARK D. JANIS, TRADEMARKS AND UNFAIR COMPETITION: LAW AND POLICY 15 (2d ed. 2007) (noting that a traditional justification for trademark protection is to give consumers confidence that they “will get the product[s] which [they]
improve and maintain product quality. Any worthwhile trademark, in other words, “affects the cost or quality” of the underlying article—and should thus be invalidated as functional. This cannot be the correct result, yet it is paradoxically demanded by the governing case law.

Perhaps unsurprisingly then, despite a century of jurisprudence (and two decades since the last relevant Supreme Court opinion), functionality doctrine has proved nearly impossible to define in practice. The doctrine is, at its core, based on a facially incoherent standard that cannot mean what it says, leaving no actual guidance to courts and administrators below. If only some effects on cost, quality, and use are actually impermissible, then which ones? The case law seems to accommodate a multitude of answers. Perhaps those that rise to the level of patentability. Perhaps those that suppress competition. Perhaps those that are utilitarian, rather than aesthetic. The various combinations, weights, and definitions that could be assigned to these criteria lead to a multiplicity of rules and standards in turn.

The history of functionality doctrine shows precisely this kind of disarray. Faced with the task of actually adjudicating functionality, charitable judges describe the doctrine as “checkered,” lacking “clarity,” and simply “confusing.” As one district court judge expressed after a bench trial on the matter: “Even a summary of the law defining the various components of this concept would be voluminous.” The Supreme Court’s own holdings are


25 See, e.g., infra notes 90, 113 and accompanying text.

26 See, e.g., infra notes 45, 77, 99, 121-23.

27 See, e.g., Au-Tomotive Gold, Inc. v. Volkswagen of Am., Inc., 457 F.3d 1062, 1064 (9th Cir. 2006) (“The doctrine . . . has a somewhat checkered history.”).

28 See, e.g., TrafFix, 532 U.S. at 32 (internal quotation marks omitted) (quoting Qualitex, 514 U.S. at 165).

29 See, e.g., infra notes 73, 91-96, 113, 115 and accompanying text.

30 See, e.g., infra notes 45, 77, 99, 121-23.

31 See, e.g., Eppendorf-Netheler-Hinz GMBH v. Ritter GMBH, 289 F.3d 351, 355 (5th Cir. 2002) (“However, the definition of ‘functionality’ has not enjoyed such clarity.”).

32 See, e.g., In re DC Comics, Inc., 689 F.2d 1042, 1049 n.5 (C.C.P.A. 1982) (“Although the sundry facts involved in various disputes aid in distinguishing some cases from others, attempted definitions . . . remain somewhat confusing.”).
limited to brief dicta or cryptic attempts at synthesis and revision; circuit splits emerge and are barely papered over, only to reemerge again; and even the USPTO acts in some tension with prevailing case law.\footnote{See infra notes 113–14 and accompanying text.}

This Article suggests a novel theory of functionality doctrine that is grounded in the full history of precedent, coherently applicable to all trademarks, and—most importantly—descriptively accurate to real-world eligibility outcomes. That is: a functionality theory centered on fragility. There are some product features that affect cost, quality, use, or purpose in ways that are non-fragile; the feature can be copied by all producers simultaneously without weakening or destroying its effects. The chemical compounds ibuprofen and amphetamine sulfate are functional in this sense. There is no difference in their pharmacological efficacy, administered blind, whether the compounds are produced by one company or one thousand. So too with, e.g., Pepto-Bismol's pink color—the psychosomatic soothing effect does not depend on exclusivity. And in fact, trademark protection for these compounds and colors is not permitted. But the names “Nurofen,” “Adderall,” and “Pepto-Bismol” are only functional in a fragile way; allowing every producer the freedom to use them would eventually eliminate the positive consumer associations and beliefs that gave rise to placebo effects in the first place. As a result, trademark protection is granted without a second thought.

Likewise, a Louis Vuitton clutch might have many functional attributes that are non-fragile, such as a more durable leather or an easier-to-manufacture clasp. Other producers can duplicate those features without somehow decreasing the Louis Vuitton clutch's durability or increasing its manufacturing costs. And again, trademark protection for such features would not be permitted. The $V$ print, on the other hand, clearly loses its social effects if every producer is free to use it. It would no longer convey anything meaningful about wealth or exclusivity if it regularly appeared on cheap and common items. There is a demonstrable function to the $V$ print, but it is intrinsically fragile. It disappears without the protection offered by trademark law itself—and accordingly, that protection will be granted.

A fragility theory of functionality more coherently explains the recognition and celebration of trademarks’ common search-cost and quality-reputation effects. These functionalities are fragile as well, so they do not bar trademark protection. The Coca-Cola® mark, for example, reduces search costs for consumers by allowing them to quickly and reliably locate genuine Coca-Cola Company products. But if every soda manufacturer were free to use the same mark, it would cease to serve as a meaningful and credible signal in the marketplace. In a similar fashion, the Coca-Cola Company has a strong incentive to ensure consumers have positive experiences with Coca-Cola-
branded products, but only if other companies are not able to free-ride on that goodwill. Absent trademark protection, the incentives for quality driven by reputation largely disappear.

Fragility also manages to unify functionality doctrine with the rest of trademark law—and the rest of intellectual property. Within trademark law, a fragility theory of functionality turns out to map perfectly onto the treatment of more traditional marks like names and symbols. “Generic” names and symbols can never receive protection, for example, even in the presence of secondary meaning—just like functional marks. The Coca-Cola Company can’t, for example, obtain a trademark on the word “soda” for its carbonated beverages, regardless of its dominance in that market. Genericness, then, is simply a non-fragile form of linguistic functionality. The existence of a uniform, shared signifier like “soda” allows all such producers to easily describe—and consumers to easily locate—the correct category of products or services. Whether it’s seen on a grocery-aisle sign, typed into a search bar, or written on an aluminum can, the word “soda” facilitates transactions by helping relevant buyers and sellers identify each other. This efficiency is not fragile; on the contrary, it is at its highest when the signifier is used by all producers in the market. In intellectual property more broadly, this concept of fragility has strong parallels to the incentive theory more commonly associated with and embraced by patent law and copyright law. That is, just as patent and copyright seem to distinguish between creations that do and don’t require the incentive effects of patent or

\(^{34}\) See, e.g., Abercrombie & Fitch Co. v. Hunting World, Inc., 537 F.2d 4, 9 (2d Cir. 1976) (“This means that even proof of secondary meaning, by virtue of which some ‘merely descriptive’ marks may be registered, cannot transform a generic term into a subject for trademark.”).

\(^{35}\) See, e.g., TrafFix Devices, Inc. v. Mktg. Displays, Inc., 532 U.S. 23, 34-35 (2001) (“The Lanham Act . . . does not protect trade dress in a functional design simply because an investment has been made to encourage the public to associate [it] with a single manufacturer or seller.”).

\(^{36}\) See, e.g., Graham v. John Deere Co. of Kan. City, 383 U.S. 1, 9 (1966) (“The patent monopoly was not designed to secure to the inventor his natural right in his discoveries. Rather, it was a reward, an inducement, to bring forth new knowledge.”); CRAIG ALLEN NARD, THE LAW OF PATENTS 2 (1st ed. 2008) (“Our patent laws operate as part of an interdependent mix of incentives and restraints . . . offering a potential financial reward as an inducement to invent . . .”); Michael Abramowicz & John F. Duffy, The Inducement Standard of Patentability, 120 YALE L.J. 1590, 1593-94 (2011) (describing the explanatory power of the “inducement standard” with respect to the nonobviousness requirement of patentability).

\(^{37}\) See, e.g., Twentieth Century Music Corp. v. Aiken, 422 U.S. 151, 156 (1975) (“The immediate effect of our copyright law is to secure a fair return for an ‘author’s’ creative labor. But the ultimate aim is, by this incentive, to stimulate artistic creativity for the general public good.”); Sara K. Stadler, Incentive and Expectation in Copyright, 58 HASTINGS L.J. 433, 433 (2007) (“Nothing is more fundamental to copyright law than the concept of incentives.”); Justin Hughes, Fair Use Across Time, 50 UCLA L. REV. 775, 797 (2003) (“[I]ncentive language . . . pervades the Supreme Court’s copyright jurisprudence; and it is through incentive language that judges are most empowered to make copyright law work as it should.”) (quoting Stewart E. Sterk, Rhetoric and Reality in Copyright Law, 94 MICH. L. REV. 1197, 1203 (1996)).
copyright protection to exist, trademark law seems to distinguish between enhancements that do and don't require its protection to manifest.

This Article proceeds in three parts. Part I presents the history of functionality in trademark law up to the present, not only to provide context for the unfamiliar reader, but to highlight the themes that have consistently animated the doctrine over time. Lower courts' precise interpretations of functionality have varied considerably, making the overall body of case law appear shambolic. But from the beginning, the Supreme Court has demonstrated a strong preference for bright-line heuristics, an intentional focus on welfare maximization, and a clear understanding of marks and dress as conceptually unified.

Part II begins by examining the problems with the Supreme Court's current test for functionality—in brief, that it fails to provide guidance to lower courts or accurately describe case outcomes. Part II then offers an alternative theory of functionality, based on fragility, and provides a series of real-world examples and case studies to show its descriptive merits. The placebo and social functionalities introduced above are presented in full, alongside organizational, design, and interlocking functionalities. This fragility theory, moreover, is shown to account for even more basic concepts in trademark law—genericness and secondary meaning.

Part III transitions from this largely descriptive theory to further application and normative examination. In particular, a fragility theory of functionality provides trademark law with internally consistent answers to some highly contested questions: overlapping protection under copyright law and protection against dilution or post-sale confusion. In short: the non-fragile functionalities of copyrighted material indicate that redundant protection under trademark law should generally not be permitted; by contrast, the fragile functionalities of well-established marks provide a bounded justification for maintaining anti-dilution and post-sale confusion protections.

Part III concludes by directly addressing the normative consequences of a fragility model of trademark functionality. As will be shown, offering trademark protection despite the presence of fragile functionalities can be welfare-enhancing in many cases. But at the same time, fragile functionalities may generate anticompetitive effects in the marketplace and lead to deeply regressive distributional consequences. Though a complete proposal for ameliorative measures is beyond the scope of this Article, an unusual case from antitrust law indicates a potential starting point for future research.
I. A BRIEF HISTORY OF TRADEMARK FUNCTIONALITY

The Lanham Act, passed in 1946, still provides the basic framework for contemporary trademark law in the United States.38 Functionality doctrine, however, dates back even further—to the earliest federal trademark statutes and state competition laws. Though a perfectly complete history of the doctrine is beyond the scope of this Article, its broad arcs are worth examining for two reasons beyond background alone. First, despite significant changes to functionality doctrine over time, there are consistent themes in the Supreme Court’s jurisprudence that a descriptive theory should ideally account for: bright-line heuristics are preferred over more complex analyses; the ultimate goal is welfare maximization; and all types of marks and dress are conceptually linked. Second, today’s intercircuit disagreements—such as the bitter divisions over “aesthetic” and “utilitarian” functionality—are not new or transitory. Their origins can be traced back to the earliest periods of trade dress protection, and they are no closer to resolution today than they were decades ago. A more fundamental change in theory is required.

A. Pre-Lanham Act Cases

Today, the term “trademark” is used broadly to include not only “marks” in the sense of names, symbols, and seals marking a product and associated with it, but also “dress,” meaning the physical packaging and overall appearance of the product itself.39 The Coca-Cola Company, for example, currently holds a trademark not only on the name “Coca-Cola” for beverages,40 but also on the particular three-dimensional, curvy shape of its iconic glass soda bottles.41 In early case law, the distinction between these two categories was of much greater significance: marks enjoyed full protection

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39 See, e.g., Wal-Mart Stores, Inc. v. Samara Bros., Inc., 529 U.S. 205, 209 (2000) (“The breadth of the definition of marks registrable under § 2 . . . has been held to embrace not just word marks . . . and symbol marks . . ., but also ‘trade dress’—a category that originally included only the packaging . . . but in recent years has been expanded . . . to encompass the design of a product.”); see generally 15 U.S.C. § 1127 (emphasis added) (defining “trademark” as “any word, name, symbol, or device, or any combination thereof”).
40 COCA-COLA, Registration No. 0,238,145; The mark consists of the word Coca-Cola in a cursive, stylized font, Registration No. 1,350,924.
41 The trademark consists of the distinctively shaped contour, or confirmation, and design of the bottle as shown, Registration No. 0,696,147.
against copying under the Lanham Act’s statutory predecessors, while trade dress generally did not.42

Instead, plaintiffs looking to protect their trade dress sought relief under common-law principles governing unfair competition. By the turn of the twentieth century, it was well established that the risk of consumer harm via deception—producers “palming off” or “passing off” their goods as someone else’s through mimicry—demanded some measure of protection for dress. The distinct shape and color of one company’s coffee mill,43 the particular blue-marble paper cover of another’s letter files,44 and even the unique cone shape of a bakery’s bread loaves45 could enjoy protection against copying under the aegis of consumer welfare. In the Supreme Court’s words:

Rival manufacturers may lawfully compete for the patronage of the public in the quality and price of their goods, [and] in the beauty and tastefulness of their enclosing packages . . . but they have no right, by imitative devices, to beguile the public into buying their wares under the impression they are buying those of their rivals.46

At the same time, courts feared extending brand protection beyond the traditional kinds of marks like words, symbols, and seals. If done overzealously, they warned, such protection could “terminate or hopelessly cripple any competition” between the incumbent producer and its rivals.47 In particular, judges expressed concern that trade dress protection could make an end-run around patent law by monopolizing useful product features—an

42 See, e.g., Davis v. Davis, 27 F. 490, 492 (C.C.D. Mass. 1886) (“[T]he trade-mark must be something other than, and separate from, the merchandise.”); Fairbanks v. Jacobus, 8 F. Cas. 951, 952 (C.C.S.D.N.Y. 1871) (“[A] trade-mark is always something indicative of origin or ownership, by adoption and repute, and is something different from the article itself which the mark designates.”); Moorman v. Hoge, 17 F. Cas. 715, 718 (C.C.D. Cal. 1871) (“[T]he size or shape of the barrel, box, or package can scarcely be considered a mark.”); cf. A. Leschen & Sons Rope Co. v. Broderick & Bascom Rope Co., 201 U.S. 166, 170–71 (1906) (“Certainly a trade-mark could not be claimed of a rope, the entire surface of which was colored; and if color be made the essential feature, it should be so defined, or connected with some symbol or design, that other manufacturers may know what they may safely do.”).

43 Enterprise Mfg. Co. of Pa. v. Landers, Frary & Clark, 124 F. 923, 924 (C.C.D. Conn. 1903), aff’d, 131 F. 240 (2d Cir. 1904).

44 Globe-Wernicke Co. v. Brown & Besly, 121 F. 90, 91 (7th Cir. 1902).


47 Shredded Wheat Co. v. Humphrey Cornell Co., 250 F. 960, 964–65 (2d Cir. 1918) (“The question is always commercial; we ought not to impose any burdens which, either by changing the appearance of the article itself, or by imposing expense upon its production, will operate to give the plaintiff such advantage in the market as will substantially handicap his competitors.”).
especially dangerous outcome, given the former’s lack of term limits.\textsuperscript{48} It was this tension—between protecting consumers from deception and avoiding unnecessary, harmful monopolies—that gave rise to nascent functionality doctrine.

The term “functional” began to appear commonly in the case law by the first few decades of the twentieth century, though the circuits quickly diverged on their precise formulation of the concept. The Seventh Circuit, for example, only afforded trade dress protection to features that constituted mere “ornamentation,” as opposed to “utilitarian . . . details.”\textsuperscript{49} In a similar vein, the Eighth Circuit focused on the product’s intended purpose, emphasizing the freedom to “make use of any material in the most available and efficient form,” to “best serve[] the mechanical uses for which [the] merchandise was designed.”\textsuperscript{50} But other jurisdictions denied trade dress protection to even purely aesthetic features, depending on market realities; as Judge Learned Hand wrote:

\textit{[T]he design . . . may well be a part of the reason why the buyer chooses [a product.] To deny the second comer the right to use that design seems rather to step beyond the principle which protects only such symbols as are representative of the plaintiff’s manufacture, nor does it seem an entirely adequate answer to say that the features enjoined are nonfunctional. It is only when the mechanical operativeness of the thing is certainly all that determines the buyer’s choice that such a criterion is safe.}\textsuperscript{51}

Thus, in the Second Circuit, a silk manufacturer could not seek redress against a competitor that copied its fashionable and fanciful patterns,\textsuperscript{52} precisely because those patterns contributed to the products’ success and popularity among consumers.

\textsuperscript{48} Pope Automatic Merch. Co. v. McCrum-Howell Co., 191 F. 979, 981-82 (7th Cir. 1911), cert denied, 233 U.S. 750 (1912) (discussing the need to avoid granting a “gratuitous[. . .] monopoly,” one “more effective than that of [a] patent in the ratio of eternity to 17 years”); see, e.g., Keystone Type Foundry v. Portland Pub. Co., 186 F. 690, 692 (1st Cir. 1911) (citing Flagg Mfg. Co. v. Holway, 59 N.E. 667 (Mass. 1901)) (“In the absence of a patent, the freedom of manufacture cannot be cut down under the name of preventing unfair competition.”); Marvel Co. v. Pearl, 133 F. 160, 161 (2d Cir. 1904) (“In the absence of protection by patent, no person can monopolize or appropriate to the exclusion of others elements of mechanical construction which are essential to the successful practical operation of a manufacture, or which primarily serve to promote its efficiency for the purpose to which it is devoted.”).

\textsuperscript{49} Modern Grinder Mfg. Co. v. Dazey Churn & Mfg. Co., 22 F.2d 950, 952 (7th Cir. 1927); see also Daniel v. Elec. Hose & Rubber Co., 231 F. 827, 833 (3d Cir. 1916) (permitting the copying of a corrugation pattern for rubber hose, finding that the pattern possessed “structural value”).


\textsuperscript{52} Cheney Bros. v. Doris Silk Corp., 35 F.2d 279, 279-80 (2d Cir. 1929), cert. denied, 281 U.S. 728 (1930).
Though the exact scope of trade dress functionality differed across courts, two unifying themes were clear from the beginning: the parallels to trademark scope, and the ultimate focus on the consuming public. In the world of trademarks, “generic” and “merely descriptive” words for products had long been recognized as beyond the scope of protection, whereas “fanciful” or “arbitrary” terms were easily found eligible for protection. When discussing the functionality of trade dress, early courts often justified denying or granting protection on identical terms. Regarding consumers, if a defendant could modify the disputed feature in some way that disrupted the likelihood of buyers’ confusion—such as by changing its location, shape, or color—while nevertheless retaining the feature’s advantages, the courts were generally willing to grant protection to the original. Put

53 See, e.g., Canal Co. v. Clark, 80 U.S. (13 Wall.) 311, 323 (1872) (“Nor can a generic name, or a name merely descriptive of an article of trade, of its qualities, ingredients, or characteristics, be employed as a trade-mark and the exclusive use of it be entitled to legal protection.”).

54 See, e.g., Saxlehner v. Eisner & Mendelson Co., 179 U.S. 19, 30 (1900) (“Saxlehner was the first to appropriate and use the name ‘Hunyadi’ as a trademark for bitter waters, and . . . such name being neither descriptive nor geographical, but purely arbitrary and fanciful as applied to medicinal waters, was the proper subject of a trademark.”).

55 See, e.g., Champion Spark Plug Co., 233 F. at 115 (“In such cases the . . . question is always whether the points of similarity are essential features of the thing sold. When they are, the right to copy them is necessarily involved in the right to sell that particular thing; if the plaintiff is affected, it is his mischance that his manufacture has not become associated with some arbitrary and unessential feature . . . .”); Daniel v. Elec. Hose & Rubber Co., 231 F. 827, 830 (3rd Cir. 1916) (“[T]he defendant . . . was at full liberty to . . . appropriate any device or form . . . which was designative in a generic manner of the distinctive style of hose manufactured by the plaintiff.”); Lektro-Shave Corp. v. Gen. Shaver Corp., 19 F. Supp. 843, 844 (D. Conn. 1937) (“It is well settled . . . that a manufacturer has good right to make any unpatented article embodying therein necessary functional parts . . . ; but, if he incorporates what is distinctive, ornamental, fanciful, or merely peculiar to another’s product, he may trespass.”); Diamond Match Co. v. Saginaw Match Co., 142 F. 727, 729 (6th Cir. 1906) (“The head of two colors is in no proper sense a part of the dress of the match . . . . In use the tip must be distinguished from the head, for the match should be struck on the tip and not on the head . . . . The head and tip thus distinguished, each by its own color, is therefore a common characteristic . . . . not specific, but generic, and properly applies to all tipped matches.”).

56 See, e.g., McGill Mfg. Co. v. Leviton Mfg. Co., 43 F.2d 607, 608 (E.D.N.Y. 1930) (“It is true that the visible protruding insulation serves a functional purpose, because it prevents contact between the emanating wires and the shell. An examination of the devices shows that such functional requirement does not necessitate placing these openings in any certain specified place.”).

57 See, e.g., Lektro-Shave Corp., 19 F. Supp. at 845 (“[A]s far as defendant’s movable cutter is concerned, the cylindrical shape is unnecessary . . . . Obviously, any other shape could be used in defendant’s shaver head and . . . operate just as efficiently . . . .”).

58 See, e.g., Pope Automatic Merch. Co. v. McCrum-Howell Co., 191 F. 979, 981 (7th Cir. 1911) (“In both [vacuum] cleaners the metal is unpainted. If appellants should be compelled to paint their [vacuum] cleaner a distinctive color, they would increase their manufacturing cost and would . . . lose one of the main advantages . . . .”).

59 See generally Mark Alan Thurmon, The Rise and Fall of Trademark Law’s Functionality Doctrine, 56 Fla. L. Rev. 243, 268 (2004) (“This analysis became the cornerstone of the functionality doctrine. If equally effective alternatives to a particular feature were available to competitors, the feature was deemed non-functional.”); A. Samuel Oddi, Product Simulation: From Tort to Intellectual
differently, functionality depended on balancing the risk of consumer harm by confusion against harm by monopolization. To some degree, these two themes shared an intellectual foundation: “generic” features are those that most people would expect to be included when purchasing a given type of product, much as “generic” words are those that most people would use to refer to a given type of product. In both circumstances, competitors can scarcely avoid relying on the generic word or feature without significantly handicapping themselves in the marketplace—and leaving consumers worse off.

By 1938, the Restatement of Torts acknowledged a distinction between “functional” and “nonfunctional” product features in its discussion of passing off and attempted to synthesize the varying strands of case law: “unprivileged imitation” of functional product features was permissible, so long as the imitator took “reasonable steps to inform prospective purchasers” of the true origin of their goods. A product feature was, in turn, defined as functional if it “affects the[] purpose, action or performance, or the facility or economy of processing, handling or us[e].” In particular, the associated comment suggested that even purely aesthetic features could be functional:

When goods are bought largely for their aesthetic value, their features may be functional because they definitely contribute to that value and thus aid the performance of an object for which the goods are intended . . . . A candy box in the shape of a heart may be functional, because of its significance as a gift to a beloved one . . . . The determination of whether or not such features are functional depends upon the question of fact whether prohibition of imitation by others will . . . substantially hinder . . . competition.

But the Restatement did not explicitly discuss the relevance of alternative, workaround designs, putting it in tension with some circuits’ clear precedent.

That same year, the Supreme Court first delved into functionality doctrine in Kellogg Co. v. National Biscuit Co. In 1930, plaintiff Nabisco acquired the longstanding Shredded Wheat Company, including its “Shredded Wheat” trademark for whole wheat cereal biscuits. Two years later, Nabisco sought to enjoin newcomer Kellogg from using the “Shredded Wheat” mark to describe its own product, as well as manufacturing its

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60 Restatement (First) of Torts § 741 (1938) (Am. L. Inst. 1934).
61 Id. § 742.
62 Id. § 742 cmt. a.
63 See generally Thurman, supra note 59, at 273 (“This too marked an important change, as early courts had come to focus heavily on the availability of alternative designs. There was no explanation of why or how the Restatement reporters decided to define functionality in this way . . . .”).
64 305 U.S. 111 (1938).
product in a visually identical, pillow-shaped biscuit form. Nabisco initially succeeded, but the Court reversed both aspects of the injunction on appeal, treating the trademark and trade dress issues as conceptually parallel.

At the outset, the Court observed that the original shredded wheat machines were previously covered by since-expired Shredded Wheat Company patents. It was under the monopoly of those patents that the term “Shredded Wheat” became strongly associated with the machines' product and, because nobody else could yet use the machines, the Shredded Wheat Company. Hence, the Court reasoned, the “Shredded Wheat” term needed to follow the now freely usable machines: “It equally follows from the cessation of the monopoly and the falling of the patented device into the domain of things public that . . . there must also necessarily pass to the public the generic designation of the thing which has arisen during the monopoly.”

The Court applied the same logic to the biscuits’ pillow-shape; the original shredded wheat machines were “designed to produce only the pillow-shaped biscuits,” so “the form in which the article became known to the public” needed to follow the machines into the public domain. As the Court explained, preventing Kellogg from producing an identically named or shaped product would be the practical equivalent of extending the Shredded Wheat Company's patents into perpetuity; in other words, it would violate the principle “that on the expiration of a patent, the monopoly granted by it ceases to exist, and the right to make the thing formerly covered . . . becomes public property.”

The Court offered additional support for its decision, using the term “functional” for the first time: “[T]he pillow-shape must be used [by Kellogg] for another reason. The evidence is persuasive that this form is functional—that the cost of the biscuit would be increased and its high quality lessened if some other form were substituted for the pillow-shape.” Hence, even though Kellogg was “undoubtedly sharing in the goodwill of the article known as ‘Shredded Wheat’”—a market “created by the skill and judgment of” the original Shredded Wheat Company—the functional components of that product constituted “a right possessed by all,” and in “the free exercise of which the consuming public is deeply interested.”

The Supreme Court’s initial foray into functionality doctrine thus solidified the themes that had emerged in the lower courts. Although the doctrine continued to apply to trade dress only, the Court drew clear parallels

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65 Id. at 114-115.
66 Id. at 118 (quoting Singer Mfg. Co. v. June Mfg. Co., 163 U.S. 169, 185 (1896)).
67 Id. at 119.
68 Id. at 120 (quoting Singer Mfg. Co. v. June Mfg. Co., 163 U.S. 169, 185 (1896)).
69 Id. at 122.
70 Id.
to the classification of word marks. Generic biscuit terms and generic biscuit shapes alike could not receive protection. At the same time, a fundamental concern for consumers—from their entitlement to the full public domain, to their interest in the exercise of full competition—carries through the Court's language and decision. But a new theme also emerged, one that carries through to the present: a preference for heuristics over more detailed analyses. The Kellogg Court did not directly engage in something like market empirics or welfare economics. Rather, because the feature in question previously enjoyed patent protection and appeared to affect the cost and quality of the overall product, the Court presumed that granting the everlasting protection of trademark law would ultimately hurt the public.

B. From the Lanham Act to Qualitex

The Federal Trademark Act of 1946, better known as the Lanham Act, offered a wealth of changes to the extant federal structure for trademark protection. For example, whereas prior statutes allowed trademarks to persist in perpetuity by default, the Lanham Act required a reaffirmation of continued use every six years to avoid automatic cancellation. This requirement resulted in a cleaner registry, with fewer lingering, phantom marks. Most importantly for this discussion, the Lanham Act also essentially unified the treatment of marks and dress by expanding the overall definition of trademarks: “any word, name, symbol, or device[,] or any combination thereof adopted and used by a manufacturer or merchant to identify his goods . . . .”

This “device” phrasing was subsequently interpreted by the USPTO to bring trade dress into the general trademark fold, bringing functionality doctrine along with it. In particular, even though functionality doctrine still applied against trade dress first and foremost, and almost never against pure marks, courts continued to rely heavily on conceptual parallels between the

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72 See id. § 8(a) (“[T]he registration of any mark . . . shall be canceled . . . unless within one year next preceding the expiration of such six years the registrant shall file in the Patent Office an affidavit showing that said mark is still in use . . . .”).
73 Id. § 45 (emphasis added).
74 See, e.g., Ex parte Haig & Haig Ltd., 118 U.S.P.Q. 229, 230-31 (Comm'r Pat. 1958) (“Where the record shows that a container of distinct appearance is adopted for the purpose of identifying an applicant's brand . . . , the contour or conformation of the container may be a trademark—a symbol or device—which distinguishes the applicant's goods . . . .”) (emphasis added); In re Duro-Test Corp., 134 USPQ 137, 138 (T.T.A.B. 1962) (“[T]he Act of 1946 . . . provides that for the purposes of registration on the supplemental register, a mark may consist of any configuration of goods . . . .”).
75 See Alexandra J. Roberts, Tagmarks, 105 CALIF. L. REV. 599, 625 (2017) (“The concept of functionality is usually limited to trade dress and seldom applied to word marks.”); Dan L. Burk, Cybermarks, 94 MINN. L. REV. 1375, 1410 (2010) (arguing that computer-operational words like
two.\textsuperscript{76} But over the next several decades, courts adjudicating infringement actions under the Lanham Act struggled to find functionality’s precise contours—and continued to reach divergent results across jurisdictions.

For example, the Eighth Circuit considered the existence of competitive alternatives highly relevant to functionality analysis, going so far as to define functionality explicitly in those terms: "The question in each case is whether protection against imitation will hinder the competitor in competition."\textsuperscript{77} The Third Circuit, on the other hand, tended to reject evidence demonstrating the actual effects on competition, focusing instead on whether the feature at issue affected the product’s purpose or cost—to any degree.\textsuperscript{78} Regarding aesthetic considerations, the Ninth Circuit forbade trademark protection for purely ornamental designs on china, due to their functionality in terms of visual appeal.\textsuperscript{79} The Eighth Circuit appeared to take a similar approach.\textsuperscript{80} But other courts remained deeply skeptical that aesthetic appeal could ever constitute functionality and were loath to bar trademark protection for such features.\textsuperscript{81}

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\textsuperscript{76} See, e.g., Zippo Mfg. Co. v. Rogers Imports, Inc., 216 F. Supp. 670, 698 (S.D.N.Y. 1963) ("Defendant contends that the shape and appearance of the Zippo lighter has become generic . . ."); Audio Fid., Inc. v. High Fid. Recordings, Inc., 283 F.2d 551, 553 (9th Cir. 1960) ("[T]he appellant’s record jacket was attractive and desirable, but not . . . arbitrary or fanciful . . ."); Fotomat Corp. v. Photo Drive-Thru, Inc., 425 F. Supp. 693, 699 (D.N.J. 1977) ("The Court also finds that the kiosks are significantly different in all aspects of the design which are nonfunctional or fanciful, artistic and arbitrary . . .").

\textsuperscript{77} Truck Equip. Serv. Co. v. Fruehauf Corp., 536 F.2d 1210, 1218 (8th Cir. 1976) (emphasis added); see also id. ("[P]rohibition against the copying of [the feature] will not affect [defendant’s] competitive position in the marketplace.").

\textsuperscript{78} See, e.g., Vaughan Novelty Mfg. Co. v. G.G. Greene Mfg. Corp., 202 F.2d 172, 175 n.10 (3d Cir. 1953) ("[P]laintiff’s argument that there are many different shapes and sizes which defendants could use and still produce a workable can opener. This is true, but the same could be said of the pillow-shaped shredded wheat biscuit . . ."); Sylvania Elec. Prods. v. Dura Elec. Lamp Co., 247 F.2d 730, 731 (3d Cir. 1957) ("Plaintiffs in unfair competition cases are always able to conceive of other courses which defendants might have pursued.").

\textsuperscript{79} Pagliero v. Wallace China Co., 198 F.2d 339, 343-44 (9th Cir. 1952) ("These criteria require the classification of the designs in question here as functional . . . [O]ne of the essential selling features of hotel china, if, indeed, not the primary, is the design. The attractiveness and eye-appeal of the design sells the china.").

\textsuperscript{80} See generally Thurmon, supra note 59, at 304-07 (discussing J.C. Penney Co v. H.D. Lee Mercantile Co., 120 F.2d 949 (8th Cir. 1941), and Aromatique, Inc. v. Gold Seal, Inc., 28 F.3d 863, 874 (8th Cir. 1994)).

\textsuperscript{81} To wit, the Third Circuit cited the Ninth Circuit’s approach in Pagliero as an example of overbreadth that it deliberately sought to avoid. Keene Corp. v. Paraflex Indus., Inc., 653 F.2d 822, 825 (3d Cir. 1981) (stating that "[t]he difficulty with accepting such a broad view of aesthetic functionality," such as that found in the Ninth Circuit’s Pagliero decision, "is that it provides a disincentive for the development of imaginative and attractive design. The more appealing the design, the less protection it would receive"); see also Sicilia Di R. Biebow & Co. v. Cox, 732 F.2d 417, 428-29 (5th Cir. 1984); Ferrari S.P.A. Esercizio Fabbriche Automobili e Corse v. Roberts, 944 F.2d 1235, 1247 (6th Cir. 1991); Brunswick Corp. v. British Seagull Ltd., 35 F.3d 1527, 1532 (Fed. Cir. 1994).
It would take nearly fifty years of intercircuit division after *Kellogg* for the Supreme Court to again step in, first in a succinct footnote. In *Inwood Laboratories, Inc. v. Ives Laboratories, Inc.*, the Court stated simply: “In general terms, a product feature is functional if it is essential to the use or purpose of the article or if it affects the cost or quality of the article.” In addition to *Kellogg*, the Court cited *Sears, Roebuck & Co. v. Stiffel Co.* in support of this proposition—specifically, the portion of that opinion governing the preemption of state unfair competition law by federal patent law. Thus, despite the passage of a half-century, the same bright-line heuristics from *Kellogg* remained essentially intact. Trademark protection would not extend to product features that affected cost or quality (or “purpose” and “use”), in addition to product features that were (or could have been) patented. The more divisive questions of how to weigh competitive alternatives or whether to conceptually separate aesthetic and utilitarian appeal, meanwhile, remained unaddressed.

Another passing reference to functionality in Supreme Court dicta would follow a decade thereafter. In *Two Pesos, Inc. v. Taco Cabana, Inc.*, though not actually reaching the issue of functionality, the Court cited the test used by the court below with seeming approval—despite its departure from *Inwood*:

> The Fifth Circuit holds that a design is legally functional, and thus unprotectable, if it is one of a limited number of equally efficient options available to competitors and free competition would be unduly hindered by according the design trademark protection . . . . This serves to assure that competition will not be stifled by the exhaustion of a limited number of [options].

*Two Pesos* is thus unusual when viewed in isolation; without a demonstrable hindrance on competition, the feature’s effects on cost, quality, use, or purpose (and perhaps even its patentability) appear to be irrelevant to trademark eligibility.

Almost immediately after *Two Pesos*, however, the Supreme Court addressed functionality much more substantially and reiterated the centrality of its own heuristic approach. *Qualitex Co v. Jacobson Products Co.* is perhaps best known for holding that a color itself (there, the green-gold hue of

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1994) (citing *In re DC Comics, Inc.*, 689 F.2d 1042 (C.C.P.A. 1982)) (“[T]he Court of Customs and Patent Appeals specifically rejected the notion that purely aesthetic features can in themselves confer . . . functionality on a proposed mark . . . .”).


83 *Sears, Roebuck & Co. v. Stiffel Co.*, 376 U.S. 225, 231 (1964) (“Just as a State cannot encroach upon the federal patent laws directly, it cannot, under some other law, such as that forbidding unfair competition, give protection of a kind that clashes with the objectives of the federal patent laws.”).


85 Id. at 775.

Qualitex’s dry cleaning pads) could meet the requirements for trademark protection. Defendant Jacobson, however, raised functionality as a central counterargument. And in rejecting that argument, the Court gave clear primacy to Inwood’s bright-line heuristic, treating Two Pesos’s competition analysis as a mere elaboration:

This Court consequently has explained that, “[i]n general terms, a product feature is functional,” and cannot serve as a trademark, “if it is essential to the use or purpose of the article or if it affects the cost or quality of the article,” that is, if exclusive use of the feature would put competitors at a significant non-reputation-related disadvantage.

Indeed, the cost-quality-purpose-use test was treated as dispositive with respect to the matter at hand: “[T]his latter fact—the fact that sometimes color is not essential to a product’s use or purpose and does not affect cost or quality—indicates that the doctrine of ‘functionality’ does not create an absolute bar to the use of color alone as a mark.”

The Court, referencing both the search-cost reductions and quality-reputation incentives of trademarks, once again framed its decision a matter of improving and safeguarding welfare. Simultaneously, the Court emphasized how its conclusion rested on a unified conception of all kinds of trademarks, including trade dress: “It is the source-distinguishing ability of a mark—not its ontological status as a color, shape, fragrance, word, or sign—that permits it to serve these basic purposes.” The Court likewise opined at length on the boundaries between trademark and patent law vis-à-vis competition, noting in particular that “[i]t is the province of patent law, not trademark law, to encourage invention by granting inventors a monopoly over new product designs or functions for a limited time.”

Overall, the back-and-forth of Inwood and Two Pesos—combined with Qualitex’s merger of language from both—did little to unify the lower courts on how to actually decide individual cases of functionality. At the same time, the overarching themes from the earliest cases still essentially carried through this middle period: an underlying focus on welfare, an understanding of

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87 Id. at 160-61.
88 Id. at 165 (emphasis added) (quoting Inwood Lab’ys, Inc. v. Ives Lab’ys, Inc., 456 U.S. 844, 850 (1982)).
89 Id.
90 Id. at 163-64 (quoting 1 J. McCarthy, MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION § 2.01[2] (3d ed. 1994)) (“[T]rademark law, by preventing others from copying a source-identifying mark, ‘reduce[s] the customer’s costs of shopping and making purchasing decisions’ . . . . At the same time, the law helps assure a producer that it (and not an imitating competitor) will reap the financial, reputation-related rewards associated with a desirable product.”).
91 Id.
92 Id. at 164-65.
marks and dress as conceptually unified, and a preference for bright-line rules. The modern era, punctuated by the Supreme Court’s most recent opinion discussing functionality, fits the same pattern—but still shows significant confusion among the lower courts.

C. TrafFix and the Present

The circuit courts immediately split in their interpretations of Inwood and Two Pesos in light of Qualitex. The First Circuit, for example, continued to treat Inwood’s cost, quality, use, and purpose test as fully dispositive.93 The Tenth Circuit also maintained a bright-line rule, but one leveled against trademark protection for patented (or seemingly patentable) features instead.94 A set of circuits—including, at minimum, the Fifth,95 Sixth,96 Ninth,97 and Federal98—instead treated the theme of enhancing legitimate competition as a superseding standard: “The appropriate question is whether the particular product configuration is a competitive necessity . . . . Having any effect on cost or quality is not enough.”99 At the time, the Restatements of Law tended to incorporate this approach.100

Meanwhile, the mere notion of aesthetic functionality continued to be a major point of contention between jurisdictions. Qualitex and its predecessors were especially ambiguous on this matter; though the Qualitex Court cited to a restatement comment that used the term “aesthetic functionality” when

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93 See, e.g., I.P. Lund Trading ApS v. Kohler Co., 163 F.3d 27, 37 n.5 (1st Cir. 1998) (quoting Qualitex, 514 U.S. at 165) (“A design is, inter alia, non-functional if it is not ‘essential to the use or purpose of the article’ and does not ‘affect[] the cost or quality of the article.’”).
94 See, e.g., Vornado Air Circulation Sys., Inc. v. Duracraft Corp., 58 F.3d 1498, 1500 (10th Cir. 1995) (“Where a product configuration is a significant inventive component of an invention covered by a utility patent . . . it cannot receive trade dress protection.”).
95 See, e.g., Sunbeam Products, Inc. v. West Bend Co., 123 F.3d 246, 255 (5th Cir. 1997) (quoting Sicilia Di R. Biebow & Co. v. Cox, 732 F.2d 417, 429 (5th Cir. 1984)) (“The ultimate inquiry concerning functionality . . . is whether characterizing a feature or configuration as protected will hinder competition or impinge upon the rights of others to compete effectively in the sale of goods.”).
97 See, e.g., Clamp Mfg. Co. v. Enco Mfg. Co., 870 F.2d 512, 516 (9th Cir. 1989) (internal quotations omitted) (“The requirement of nonfunctionality is based on the . . . fundamental right to compete . . . .”).
98 See, e.g., In re Bose Corp., 772 F.2d 866, 872 (Fed. Cir. 1985) (observing that where “competition is hindered” sufficiently by trademarking, a feature is functional).
99 Marketing Displays, Inc., 200 F.3d at 940.
100 See, e.g., RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 17cmt. a (AM. L. INST. 1993) (“Thus, in determining whether a particular design is ‘functional’ and therefore ineligible for protection as a trademark, the ultimate inquiry is whether a prohibition against copying will significantly hinder competition by others.”).
discussing color trademarks in general, the Court itself never adopted the concept. Indeed, the Court’s actual analysis of Qualitex’s green-gold cleaning pads seemed to consider effects that were only utilitarian (such as staining risk or production cost), with no mention of general aesthetic appeal or visual attraction. Thus, in the years after Qualitex, some courts confidently labeled aesthetic functionality an “unnecessary and illogical” doctrine, one that “denie[s] trade dress protection to design features whose only sin was to delight the senses.” Other courts, equally confident, defended the notion robustly: “It would be arbitrary as well as puritanical and even philistine to deny that one function of modern consumer packaging is to be beautiful . . . . A producer cannot in the name of trade dress prevent his competitors from making their products as visually entrancing as his own.” The Fifth Circuit, noting the significant confusion and ambiguity, chose a third option—dodging the question entirely.

In 2001, six years after Qualitex, the Supreme Court stepped in again. TrafFix Devices, Inc. v Marketing Displays, Inc. offers the Supreme Court’s most recent—and thorough—direct discussion of functionality doctrine to date. Plaintiff Marketing Displays, Inc. (“MDI”) held patents on its design for temporary traffic and outdoor signs: two coiled springs, spaced apart, attaching the sign to its base. This ‘dual-spring design’ allowed for flexion, preventing the sign from blowing over “despite adverse wind conditions.” After the patents expired, defendant TrafFix began selling signs with a similar spring mechanism. MDI sued for, inter alia, trade dress infringement based

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102 See id. at 166 (emphasis in original) (quoting Qualitex Co. v. Jacobson Prods. Co., 21 U.S.P.Q.2d (BNA) 1457, 1460 (C.D. Cal. 1995)) (“The green-gold color serves no other function. Although it is important to use some color on press pads to avoid noticeable stains, the court found ‘no competitive need in the press pad industry for the green-gold color, since other colors are equally usable.’”); see generally MCCARTHY, supra note 7, § 7:80 (“The TrafFix Court made what was, to this author, the amazing and incomprehensible statement that in the 1995 Qualitex case, ‘aesthetic functionality was the central question.’”).

103 Krueger Int’l., Inc. v. Nightingale Inc., 915 F. Supp. 595, 606 (S.D.N.Y. 1996); see also Gucci Timepieces Am., Inc. v. Yidah Watch Co., 1998 WL 650078, at *3 (C.D. Cal. 1998) (“Aesthetic functionality is a discredited theory which has been used only sparingly . . . .”).

104 PubNus Int’l, Ltd. v. Landoll, Inc., 164 F.3d 337, 339 (7th Cir. 1998) (emphasis added); see also Landscape Forms, Inc. v. Columbia Cascade Co., 113 F.3d 373, 377 (2d Cir. 1997) (“Traditionally applied to prevent the recognition of trademark protection for useful features of a product, the functionality doctrine extends to the aesthetic aspects of a product’s design.”).

105 See, e.g., Pebble Beach Co. v. Tour 18 I Ltd., 155 F.3d 526, 540 n.6 (5th Cir. 1998) (“Without deciding the viability of aesthetic functionality in this circuit, we note that . . . . the golf-hole designs at issue are not aesthetically functional.”).


107 See U.S. Patent No. 3,646,696; U.S. Patent No. 3,662,482 (claiming a poster display device supported by an unanchored base and springs).

108 TrafFix, 532 U.S. at 25.
on the design, which it argued had become a distinctive indicator to consumers of MDI products.\footnote{Id. at 26; see also Mktg. Displays, Inc. v. TrafFix Devices, Inc., 971 F. Supp. 262, 278 (E.D. Mich. 1997).}

The Court rejected trademark eligibility for the dual-spring design on the basis of functionality, making three key doctrinal moves in the process. First, though the Court noted that the patentability of a feature “has vital significance” and constitutes “strong evidence” of functionality, it held that patentability was not fully dispositive; a plaintiff might show, for example, that the feature “is merely an ornamental, incidental, or arbitrary aspect” of the particular device at hand despite its utility in other contexts.\footnote{TrafFix, 532 U.S. at 29-30.} Second, the Court more explicitly subordinated any competition analysis to \textit{Inwood’s} cost-quality-use-purpose heuristic by directly acknowledging, for the first time, the long-disputed distinction between aesthetic and non-aesthetic product features:

Discussing trademarks, we have said “[i]n general terms, a product feature is functional, and cannot serve as a trademark, ‘if it is essential to the use or purpose of the article or if it affects the cost or quality of the article.’” Expanding upon the meaning of this phrase, we have observed that a functional feature is one the “exclusive use of [which] would put competitors at a significant non-reputation-related disadvantage.” \ldots The \textit{Qualitex} decision did not purport to displace [the cost-quality-purpose-use] rule. Instead, it quoted the rule as \textit{Inwood} had set it forth. It is proper to inquire into a “significant non-reputation-related disadvantage” \textit{in cases of esthetic functionality}, the question involved in \textit{Qualitex}. Where the design is functional under the \textit{Inwood} formulation there is no need to proceed further to consider if there is a competitive necessity for the feature.\footnote{Id. at 32-33 (emphasis added) (citations omitted).}

The Court thus explained that the existence of “other design possibilities” or workaround alternatives is only to be considered after the primary \textit{Inwood} test for functionality.\footnote{Id. at 33.} If the \textit{Inwood} cost-quality-use-purpose test is met on its face, alternative designs are irrelevant: “Here, the functionality of the spring design means that competitors need not explore whether other spring juxtapositions might be used \ldots Other designs need not be attempted.”\footnote{Id. at 33-34.}

Finally, the Supreme Court reiterated its familiar focus on welfare maximization. In brief, “protection for trade dress exists to promote competition’ on beneficial terms, by balancing the risk of “confusion \ldots as to the origin, sponsorship, or approval of \ldots goods” against “the recognition that in many instances \ldots [a]llowing competitors to copy will have salutary
effects,” such as “significant advances in technology.”\textsuperscript{114} For example, in rejecting the suggestion that TrafFix could make a new design, concealing its similar-looking springs with a cover, the Court observed that “buyers are assured the product serves its purpose by seeing the operative mechanism”; “[i]t would be . . . something of a paradox, were we to require the manufacturer to conceal the very item the user seeks.”\textsuperscript{115} The interlocking interests of buyers and sellers, in other words, remained key.

The Court has not directly addressed functionality doctrine since TrafFix, though it continues to quote the cost-quality-use-purpose language with approval.\textsuperscript{116} Nevertheless, nearly two decades later, the details remain in disarray. First and foremost, circuit courts continue to diverge in their precise treatment of competitive effects in functionality analysis. The Federal Circuit, for example, immediately held that its pre-TrafFix analytical framework would remain undisturbed—an unweighted, multifactor test seemingly at odds with the Court’s holding.\textsuperscript{117} This holding has been cited by the USPTO with approval, and features prominently in its Trademark Manual of Examining Procedure.\textsuperscript{118} The Ninth Circuit took a similar approach, retaining its overriding focus on competition: “[T]he ultimate issue on functionality is whether [plaintiff’s] ‘particular integration of elements leaves a multitude of alternatives to the . . . industry . . . .’”\textsuperscript{119} Meanwhile, other circuits concluded that TrafFix required them to scrap their existing case law outright, and to lean in fully to a bright-line approach. The Fifth Circuit, for example, observed that its prior focus on effective competition had been unambiguously “supersede[d]” by TrafFix.\textsuperscript{120} The Seventh Circuit likewise stated that “TrafFix rejected an equation of functionality with necessity; it is enough that the design be useful.”\textsuperscript{121}

Second, the Supreme Court’s passing mention of aesthetic functionality did little to unify the lower courts’ long-divided treatment of the issue. The Second Circuit, for instance, continues to embrace the notion fully, holding

\begin{itemize}
\item \textsuperscript{114} Id. at 28–29 (internal quotations omitted).
\item \textsuperscript{115} Id. at 34.
\item \textsuperscript{116} See, e.g., U.S. Pat. & Trademark Off. v. Booking.com, 140 S. Ct. 2298, 2306 (2020) (quoting TrafFix, 532 U.S. at 32).
\item \textsuperscript{117} Valu Eng’g, Inc. v. Rexnord Corp., 278 F.3d 1268, 1274–76 (Fed. Cir. 2002) (stating that the factors the Federal Circuit applies when considering if a product design is functional are”(1) the existence of a utility patent disclosing the utilitarian advantages of the design; (2) advertising materials in which the originator of the design touts . . . utilitarian advantages; (3) the availability to competitors of functionally equivalent designs; and (4) facts indicating that the design results in a comparatively simple or cheap method of manufacturing the product”).
\item \textsuperscript{118} See TMEP § 1202.02(a)(iii)(A) (Rev. 1, Oct. 2018) (citing Valu. Eng’g, Inc.’s discussion of TrafFix).
\item \textsuperscript{119} Clicks Billiards Inc. v. Sixshooters Inc., 251 F.3d 1252, 1261 (9th Cir. 2001) (emphasis added).
\item \textsuperscript{120} Eppendorf-Netheler-Hinz GmbH v. Ritter GmbH, 289 F.3d 351, 356 (5th Cir. 2002).
\item \textsuperscript{121} Eco Mfg. LLC v. Honeywell Int’l, Inc., 357 F.3d 649, 854–55 (7th Cir. 2003).
\end{itemize}
that even aesthetic features can be “essential to the use or purpose” of a product, or “affect[] its cost or quality.” The Seventh Circuit holds much the same, and the Eleventh Circuit seems to agree. The Fifth Circuit, on the other hand, “has consistently rejected the concept of aesthetic functionality” in its entirety—and “do[es] not believe that the Court’s dictum in TrafFix requires [it] to abandon [that] long-settled view.” The Federal Circuit has expressed similar skepticism; indeed, despite its singular importance in reviewing trademark application appeals, the Federal Circuit has not referred to the concept of aesthetic functionality in any trademark cases for over fifteen years. Some circuits simply continue to hedge on the matter, whether explicitly as a matter of avoidance, or as the consequence of ambiguous, back-and-forth case law in practice.

Thus, despite more than a century of grappling with the concept—and repeated interventions by the Supreme Court—functionality doctrine remains a cryptic, confusing patchwork. But the lower courts are not merely being intransigent. As will be shown in Part II, their division is in many ways a necessary consequence of the Court’s failure to recognize the full potential of trademarks’ power. These edge cases demonstrate economic, social, and psychological phenomena that challenge the current understanding of functionality doctrine. At the same time, they suggest a new and more unified model, based on fragility. A more robust discussion of the normative

123 See, e.g., Jay Franco & Sons, Inc. v. Franek, 615 F.3d 855, 860 (7th Cir. 2010) (“Fashion is a form of function. A design’s aesthetic appeal can be as functional as its tangible characteristics.”); Eco Mfg., 357 F.3d at 654 (“Aesthetic appeal can be functional; often we value products for their looks.”).
124 See, e.g., Dippin’ Dots, Inc. v. Frosty Bites Distrib., LLC, 369 F.3d 1197, 1203 n.7, (11th Cir. 2004) (“Likewise, the color, shape, and size of dippin’ dots are ‘aesthetic functions’ . . . .”).
126 See Valu Eng’g, Inc. v. Rexnord Corp., 278 F.3d 1268, 1276 n.4 (Fed. Cir. 2002) (emphasis in original) (arguing that, contrary to the Supreme Court’s own language, “aesthetic functionality was not the central question in the Qualitex case,” and avoiding reliance on the doctrine).
127 Id. But see Auto. Body Parts Ass’n v. Ford Global Tech., LLC, 930 F.3d 1314, 1319-20 (Fed. Cir. 2019) (using the term “aesthetic functionality” once in the context of a design patent dispute to reject appellant’s argument).
128 See, e.g., Maker’s Mark Distillery, Inc. v. Diageo North Am., Inc., 679 F.3d 410, 418 (6th Cir. 2012) (“It seems we have not yet plainly stated which test we would apply under aesthetic functionality doctrine, or that we have even adopted aesthetic functionality doctrine at all. We need not decide these questions today.”).
129 See Justin Hughes, Cognitive and Aesthetic Functionality in Trademark Law, 36 CARDOZO L. REV. 1227, 1245 n.97 (2015) (“Ninth Circuit panels [have] wandered across a spectrum of positions from denying aesthetic functionality exists . . . . to applying the doctrine vigorously.”); Mark P. McKenna, (Dys)Functionality, 48 Hous. L. Rev. 823, 849 (2011) (“The Ninth Circuit takes a different position on the doctrine nearly every time it comes up.”).
consequences, both good and bad, of following such an approach to functionality is reserved for Part III. But this reformulation turns out to be, at minimum, more descriptively accurate with respect to current case outcomes and the arc of functionality jurisprudence to date.

II. A FRAGILITY THEORY OF FUNCTIONALITY

A. The Trouble with TrafFix

Recall the current test for functionality, coming first from Inwood and reaffirmed in TrafFix: a product feature is functional if it is essential to the use or purpose of the product, or if it affects the cost or quality of the product. On the one hand, this may not be a necessary condition for functionality, as the Supreme Court acknowledged the relevance of competitive disadvantages and alternatives in certain cases. But, in the Supreme Court’s own words, effects on cost or quality—or being essential to use or purpose—are fully sufficient conditions for functionality to be found: “there is no need to proceed further” once that test is met.

There is an immediate problem with this formulation: all trademarks affect cost and quality. Full stop. Trademarks reduce search costs for consumers by providing a “consistent signal,” allowing consumers to immediately and reliably use their prior product experiences and extrinsic information (such as reviews or word-of-mouth recommendations) to guide purchasing decisions. A hypothetical consumer who wants to specifically purchase Starbucks coffee is able to quickly and easily confirm that they are getting the genuine product when they see the green-and-white logo on a storefront or bottle. They are thus saved from having to engage in more costly measures to ensure authenticity, such as asking the store proprietor for proof of a legitimate franchise agreement, cross-referencing ingredient lists and manufacturing locations, or simply repeated trial and error.

131 TrafFix, 523 U.S. at 32-33.
132 Id. at 33.
Trademarks also improve product quality, by creating an incentive for producers to "keep up a good reputation" for their goods and services.\textsuperscript{134} To take the same example, Starbucks has little reason to invest in quality ingredients and service if inferior coffee chains are free to appropriate its marks. Consumers would have no way of reliably distinguishing genuine Starbucks coffee from lower-quality imitations prior to purchasing, putting downward pressure on prices and making investments in product quality fundamentally unprofitable.

These search-cost and quality-incentive benefits of trademarks are bedrock principles of the field, not mere academic curiosities or post-hoc justifications. They feature prominently in trademark jurisprudence itself; an expressed intention to maintain them is even, at times, the sole explanation given for adopting one rule or interpretation over another.\textsuperscript{135} The test stated in \textit{TrafFix}—labeling "a product feature [as] functional . . . if it . . . affects the cost or quality of the article"\textsuperscript{136}—cannot, therefore, be read literally without contradicting the entire corpus of trademark law to date. If \textit{all} effects on cost or quality are impermissibly functional, then any trademark with even a modicum of public recognition would be invalid.

This readily explains the disarray in functionality law amongst the lower circuits. If only \textit{some} effects on cost or quality are actually impermissible, then which ones? The Supreme Court’s jurisprudence seems to accommodate a multitude of answers. Perhaps those that rise to the level of patentability. Perhaps those that suppress competition. Perhaps those that are utilitarian, rather than aesthetic. The various combinations, weights, and thresholds that could be assigned to these criteria in turn generate further confusion.

The other half of \textit{TrafFix}’s test for functionality—whether the feature in question is essential to the use or purpose of the product—is no less difficult to square with the inherent nature of trademarks. In short: real-world consumers quite frequently purchase products for the purpose of using a trademark, rather than the underlying product itself. Conspicuous consumption is perhaps the most straightforward example. Consider a luxury,


\textsuperscript{136} TrafFix, 523 U.S. at 32.
high-status item like a Louis Vuitton purse; when wearing the purse, a consumer displays its trademarked aspects (such as the famous V print), which most observers immediately recognize. The consumer is thereby able to convey social cachet and economic power. This kind of use is fairly described as “essential”—certainly from the perspective of the consumer’s purchasing decision and price point. That is, a purse from an unrecognizable brand that is otherwise equal in objective quality, material, and ability to hold items is highly unlikely to be a satisfactory substitute for the Louis Vuitton buyer (at least not without a tremendous discount in retail price).

High-end fashion is an extreme case of consumers’ desire to use marks in and of themselves, but it’s far from the only example. Humans have a universal need to form a coherent and distinct sense of self—and in modern, urban society, that need is increasingly met through consumption.138 By protecting trademarks from unchecked copying, the law inherently strengthens their power to meet this need and differentiate product users from the masses. Other recognizable symbols can easily lose their salience through overuse and co-opting, but trademarks can be rigorously policed and curated with the threat of legal action. As a result, “many of our most powerful and unambiguous forms of social distinction, if not more broadly of lived meaning, come to us now” through marks.139

Much like the cost and quality effects described above, these social uses and purposes of trademarks are well known to the courts—and fully


138 See, e.g., Barton Beebe, Intellectual Property Law and the Sumptuary Code, 123 HARV. L. REV. 809, 820 (2010) (“Over the past century, and particularly in . . . urban, industrialized societies . . ., individuals have increasingly acted on this motivation [to differentiate themselves] through the consumption of what they perceive to be and what they believe others perceive to be differentiating goods.”); MIKE FEATHERSTONE, CONSUMER CULTURE AND POSTMODERNISM 86 (2d ed. 2007) (“The modern individual within consumer culture is made conscious that he speaks not only with his clothes, but with his home, furnishings, decoration, car and other activities which are to be read and classified in terms of the presence and absence of taste.”); Kelly Tepper Tian & Karyn McKenzie, The Long-Term Predictive Validity of the Consumers’ Need for Uniqueness Scale, 10 J. CONSUMER PSYCH. 171, 172 (2001) (“Conceptually defined, consumers’ need for uniqueness refers to individuals’ pursuit of differentness relative to others that is achieved through . . . consumer goods for the purpose of developing and enhancing one’s personal and social identity.”); Wilfred Amaldoss & Sanjay Jain, Pricing of Conspicuous Goods: A Competitive Analysis of Social Effects, 42 J. MKTG. RSCH. 30, 30 (2005) (emphasis added) (“An important implication of [uniqueness research] is that people could potentially choose to buy a different product merely for the sake of being different from other consumers, rather than to display their wealth or social status.”).

139 Beebe, supra note 138, at 879.
accepted.\textsuperscript{140} The rear-pocket stitching pattern on Levi’s jeans may not be copied, for example, because their “sales [would] be affected adversely by . . . buyers’ \textit{ultimate} realization that the pattern is no longer exclusive.”\textsuperscript{141} Likewise, Gucci’s watch designs may not be duplicated, because consumers “will be discouraged from acquiring a genuine Gucci . . . [i]f the items have become too commonplace and no longer possess the prestige and status associated with them.”\textsuperscript{142} The judiciary even recognizes the social salience and cachet of GMC truck grills: “[T]he purchaser of an original may be harmed if the widespread existence of knockoffs decreases the original’s value by making the previously scarce commonplace . . .”\textsuperscript{143}

Once again, then, the functionality test in \textit{TrafFix} cannot mean what it says—not without contradicting much of the existing case law and invalidating the most recognizable and socially meaningful marks that exist today. In the Ninth Circuit’s words:

\begin{quote}
[T]rademarks have assumed an exalted status of their own in today’s consumer culture that cannot neatly be reduced to the historic function of trademark to designate source. Consumers sometimes buy products bearing marks such as the Nike Swoosh, the Playboy bunny ears, the Mercedes tri-point star, the Ferrari stallion, and countless sports franchise logos, for the appeal of the mark itself, without regard to whether it signifies the origin or sponsorship of the product.\textsuperscript{144}
\end{quote}

And yet, it observes paradoxically, “courts have been loathe to declare unique, identifying logos and names as functional.”\textsuperscript{145} Indeed, courts reject such (rarely made) arguments with little explanation.\textsuperscript{146}

There are glosses on the text of \textit{TrafFix} that approximate solutions, but none are truly satisfactory. For example, one might argue that, as a threshold matter, functionality doctrine simply does not apply to traditional marks like words and symbols—only to dress. As noted in Part I, the division between trademarks and trade dress was originally quite stark, and functionality doctrine arose first from the latter field. Hence, excepting marks from functionality has some historical basis; but at the same time, doing so ignores the long-term trend towards unification of dress and marks overall—whether

\begin{footnotes}
\textsuperscript{140} See infra Section II.B (discussing dilution and post-sale confusion in greater detail).
\textsuperscript{143} Gen. Motors Corp. v. Keystone Auto. Indus., 453 F.3d 351, 358 (6th Cir. 2006).
\textsuperscript{144} Au-Tomotive Gold, Inc. v. Volkswagen of Am., Inc., 457 F.3d 1062, 1067 (9th Cir. 2006).
\textsuperscript{145} Id. at 1068.
\textsuperscript{146} See, e.g., Vuitton et Fils S.A. v. J. Young Enters. 644 F.2d 769, 774 (9th Cir. 1981); Bos. Pro. Hockey Ass’n v. Dallas Cap & Emblem Mfg., Inc., 510 F.2d 1004, 1012 (5th Cir 1975).
\end{footnotes}
Moreover, there may be normative issues presented by cabining functionality doctrine in such a way, given the realities of the digital era. Professor Dan Burk argues, for example, that words and phrases like domain names, metatags, and search terms ought to be considered functional since they are computer-operational. Professor Alexandra Roberts makes a similar point against the registrability of certain hashtags—visible and recognizable to users, yet also clearly capable of “organizing content and facilitating search.” At a minimum, excepting word and symbol marks from functionality doctrine fails to fully solve the overinclusion problem of TrafFix’s stated test: all trade dress should still be invalid under its terms.

One might instead seek refuge in the utilitarian-aesthetic distinction. The Court’s formulation of aesthetic functionality offers more of a limiting principle: “[W]e have observed that a functional feature is one the ‘exclusive use of [which] would put competitors at a significant non-reputation-related disadvantage.’ . . . It is proper to inquire into a ‘significant non-reputation-related disadvantage’ in cases of esthetic functionality . . . .” The traditional search-cost and quality-incentive benefits of trademarks are clearly “reputation related,” after all. But then one is faced with the critical question of when the “non-reputation-related” rule for aesthetic functionality actually applies; as the Court emphasizes, “[w]here the design is functional under the [cost-quality-use-purpose] formulation there is no need to proceed further to consider if there is a competitive necessity . . . .”

One interpretation is that TrafFix effectively sets forth a two-stage test: first, a check for functionality via effects on the cost, quality, use, and purpose of the product; second, a check for functionality via non-reputation-related disadvantages for competitors. If the mark fails at stage one, it is utilitarian-functional; if the mark fails at stage two, it is aesthetic-functional. On its face, the “proceed further” language of TrafFix seems to suggest this kind of approach. Note, though, that this interpretation means the term “aesthetic” acts largely as a label for the sake of convenience, rather than a term invested with much independent meaning. Some circuits appear to have adopted this semantic stance, which is equivalent to rejecting a meaningful aesthetic-

147 See supra Part I (outlining the historical development of functionality doctrine).
148 See Burk, supra note 75, at 1385.
149 See Roberts, supra note 75, at 626.
151 Id. at 33 (emphasis added).
152 See, e.g., Au-Tomotive Gold, Inc. v. Volkswagen of Am., Inc., 457 F.3d 1062, 1072 (9th Cir. 2006) (“[T]he test for functionality proceeds in two steps.”).
utilitarian distinction in all but name. For the same reason, observe that this interpretation fails to solve the problem of overinclusion at all—any mark should simply fail at the first, utilitarian stage for (at a minimum) its search-cost and quality-incentive effects. The second, aesthetic stage of the test is never reached.

Another reading of TrafFix is that the utilitarian-aesthetic distinction carries its own significance as an initial differentiator, even if it was left undefined by the Court. That is, product features are first sorted into either the “utilitarian” or “aesthetic” bucket, and only that bucket’s test for functionality applies. The Second Circuit, for example, restricts application of the non-reputation-related disadvantage inquiry to “ornamental features”—those that “do[] not serve a purpose in the design of a product.” The Fifth Circuit still rejects aesthetic functionality (in the sense that anything sorted into the aesthetic bucket is automatically non-functional), but it likewise relies on the idea of ornamentation, anything above and beyond a product’s bare use:

The school colors and other indicia used here do not make the t-shirts “work.” The t-shirts would function just as well as articles of clothing without the colors and designs . . . . [Defendant] contends that the shirts allow groups of people to bond and show support for a philosophy or goal; facilitate the expression of loyalty to the school . . . ; and identify the wearer as a fan . . . . These claimed functional uses are nothing more than the kind of aesthetic uses . . . [that our] circuit has consistently rejected . . . .

Even when a court does not explicitly state its basis for choosing the aesthetic bucket over the utilitarian one, the undercurrent is often the same: aesthetic features are “pure[] ornamenta[tion]” or matters of visual “appeal,” contrasted against a product’s mechanical utility or tangible characteristics.

This interpretation faces severe criticism from commentators in its own right, and scholars have sought to re-label or re-cast the doctrine in more

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153 See, e.g., Valu Eng’g, Inc. v. Rexnord Corp., 278 F.3d 1268, 1276 & n.4 (Fed. Cir. 2002) (adopting the “significant non-reputation-related disadvantage” test, but declining to label the inquiry as “aesthetic”); Hughes, supra note 129 at 1244 (“The Federal Circuit has also seemed hesitant to embrace the doctrine, although their hesitancy reads more like a terminological objection . . . .”); see also Maker’s Mark Distillery, Inc. v. Diageo N. Am., Inc., 679 F.3d 410, 418 (6th Cir. 2012) (not deciding whether “we have even adopted aesthetic functionality doctrine at all,” but supporting the competitive disadvantage test and recognizing that, “regardless . . . , the outcome is the same”).


157 Jay Franco & Sons, Inc. v. Franek, 615 F.3d 855, 860 (7th Cir. 2010).
straightforward ways. In particular, critics are quick to highlight the widespread demand for (and use of) supposedly ornamental trademarks in and of themselves. The example of conspicuous consumption given earlier is once again instructive. It would be willful blindness to insist that the fundamental purpose of, say, Burberry-print slacks is just to cover the human body’s lower half and avoid public indecency laws. The prominent display of Burberry’s most famous and iconic design is neither an afterthought nor abstract flourish—it is the raison d’être for producer and consumer alike. If “utilitarian” is to have any sensible meaning in the context of product design, it must surely include, at minimum, full consideration as to how the product is utilized.

The utilitarian-aesthetic problem, in that sense, runs much deeper. Even without a famous or high-status mark, many products are purchased to be visually pleasant. In the case of decorative items like desk sculptures and throw pillows, it may be quite literally the only purpose of the item. And even when the other purposes of the item are significant, visual appeal can be an equally important precondition for buyers. Consider someone purchasing a car: there are any number of performance metrics like fuel efficiency or acceleration that are surely important, not least of which is the life-and-death matter of safety statistics on the road. And yet, amongst real-world consumers, color still dominates the purchasing calculus. Working backwards from these kinds of market incentives, any rational producer is keeping visual appeal no less in mind than raw, mechanical function. Put differently, relying on the aesthetic-utilitarian dichotomy means treating form and function as orthogonal—a position at odds with real consumer behavior, and long since rejected by actual professional designers.

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158 See, e.g., Hughes, supra note 129, at 1247 (“[T]he cases we call ‘aesthetic’ functionality are more properly understood as cognitive or psychological functionality.”); Mark A. Lemley & Mark P. McKenna, Is Pepsi Really a Substitute for Coke? Market Definition in Antitrust and IP, 100 GEO. L.J. 2055, 2063 (2012) (distinguishing between “aesthetic and mechanical functionality”).

159 See, e.g., Jeremy N. Sheff, Veblen Brands, 96 MINN. L. REV. 769, 794-804 (2012) (discussing the logic of trademark law with respect to status goods); Beebe, supra note 138, at 814 (2010) (characterizing the purpose of intellectual property law as “to preserve and stabilize our modern sumptuary code”).

160 See, e.g., Michelle Krebs, Moods of 5 Decades, Color by Color, N.Y. TIMES (Oct. 16, 1997) https://www.nytimes.com/1997/10/16/automobiles/moods-of-5-decades-color-by-color.html [https://perma.cc/825V-G8CS] (“[N]early a third of those questioned said they would switch vehicle brands if they couldn’t get the color they wanted. In another survey, ... nearly half the respondents said they would switch cars if they couldn’t find their first color choice.”); What Are the Best Car Colors to Buy?, KELLEY BLUE BOOK (July 18, 2019), https://www.kbb.com/articles/car-advice/what-are-the-best-car-colors-to-buy [https://perma.cc/9YB9-FW7E] (“It also follows that less popular colors depreciate your vehicle’s value ... from hundreds to thousands of dollars ... .”)

161 The architect Frank Lloyd Wright, for example, famously stated that “form and function are one,” riffing on Louis Sullivan’s now-disfavored mantra of “form follows function.” Form Follows
A more satisfying, holistic, and accurate approach to functionality is to instead recognize the traditional search-cost and quality-incentive effects of trademarks as species within a larger genus of trademark benefits. That is: benefits that are incapable of being shared across producers. It is these fragile forms of what would otherwise be labeled functionality that appear to be tolerated (and even celebrated) in actual trademark jurisprudence. Observe that this reconceptualization neatly accommodates the traditional benefits of trademarks and conspicuous consumption habits alike. Coca-Cola’s stylized name mark affects the cost of its soda, insofar as it reduces search costs. The trademark also affects the quality of its soda, insofar as it incentivizes building a positive reputation with consumers. But Coca-Cola’s trademark will do neither of those things if multiple, unrelated soda manufacturers are free to use it. Likewise, Louis Vuitton’s \( \mathcal{V} \) print trademark affects the use or purpose of an emblazoned purse, insofar as consumers want to conspicuously display wealth and differentiate themselves. The trademark, however, will clearly fail to do so if any purse manufacturer is free to use it—if not immediately, then shortly after the public catches on.

These species of fragile functionality can be contrasted against a more prototypical, non-fragile example. Imagine a producer of countertop popcorn poppers seeks trademark protection for the particular shape of their poppers’ lids:

Figure 1: Popcorn Popper Lid

The clear, angled lid may be distinct and recognizable to purchasing consumers, but it also impacts the product’s actual use: the clarity enables those interested to “watch the corn as it pops,” and the downward angle
The major cases described thus far provide further examples. The superior wind resistance of MDI’s dual-spring sign design is not lessened in any way by other outdoor sign manufacturers copying it. Likewise, the lower production cost of Nabisco’s pillow-shaped biscuits is not somehow raised by other shredded wheat companies using an identical shape. In brief, when courts do label a product feature as ineligible for trademark protection due to functionality, it is on the basis of non-fragile—that is, freely shareable—advantages.

This fragility theory, moreover, links the concept of functionality back to genericness. As noted earlier, courts have long drawn parallels between generic names and symbols ineligible for trademark protection and “generic” (that is, functional) product features ineligible for trade dress protection. The connection between the two is more than superficial: generic names and symbols are functional, in the sense that they confer non-fragile benefits by way of reduced search costs. Specifically, the existence of a uniform, shared signifier allows producers to easily describe (and consumers to easily locate) the correct product or service in general. “Cellophane,” for example, efficiently and unambiguously communicates a certain class of products in a way that “transparent, regenerated cellulose sheets” never could. If a single producer were instead given exclusive control over the term, “[c]ompetitors would have difficulty informing consumers that they were competitors, because they would be unable, without elaborate and possibly confusing paraphrase, to give the name of the product they were selling.” So the benefit of a generic term is instead shared freely, to avoid “excessive costs of information on competitors and consumers” alike.

163 Id. at 11.
164 Id.
167 See generally DuPont Cellophane Co. v. Waxed Prods. Co., 85 F.2d 75, 80 (2d Cir. 1936) (“The course of conduct of the complainant and its predecessors, and especially complainant’s advertising campaign, tended to make cellophane a generic term descriptive of the product rather than of its origin and, in our opinion, made it so to at least a very large part of the trade.”).
168 Door Sys., Inc. v. Pro-Line Door Sys., Inc., 87 F.3d 169, 171 (7th Cir. 1996).
169 Id.; see also WILLIAM M. LANDES & RICHARD A. POSNER, THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW 193-94 (2003) (“The negative effect on the supply of
The next section offers a series of real-world examples of fragile functionality. First and foremost, these examples serve as further evidence of TrafFix’s descriptive shortcomings, insofar as they are all valid trademarks. But the examples also serve as a demonstration of how widespread, diverse, and persistent—even inevitable—these kinds of functionalities are. Moreover, these examples serve to highlight and preview some of the consequences of protecting fragile functionalities, examined more directly in Part III.

B. Fragile Functionalities

1. Placebo Functionality

Recall the experiment outlined in the introduction to this article. Test subjects taking the Nurofen-branded ibuprofen self-report greater pain relief and fewer side effects than the control group taking generic ibuprofen. This brand effect is so strong, moreover, that when the experiment is repeated—with Nurofen-labeled placebos replacing the actual Nurofen—the result still holds. A sugar pill with a trademark is able to outperform the genuine, but unbranded, pharmaceutical.

Similar experiments consistently replicate the trademark-name advantage in the context of pain treatment, but the effect manifests broadly across consumer goods as well. Food marketing research in particular offers myriad demonstrations of the experience-enhancing power of trademarks. Subjects rate the taste of a well-known brand’s turkey slices as higher than identical slices given a fake, unknown brand name. Likewise for powdered drink mixes: comparing the results between blind and labeled taste-tests indicates that brand information often exerts a greater impact than the actual ingredients. Along similar lines, subjects rate the taste of Perrier as superior

trademarks from denying protection to generic terms is slight and almost certainly outweighed by the benefits from pitching a trademark into the public domain when it becomes generic. For this reduces the costs of communication by making it cheaper for competitors of the (former) trademark owner to inform the consumer that they are selling the same product.

170 Faasse et al., supra note 1, at 187.

171 Id.

172 For many of the examples in this subsection, the author is indebted to Professor Jake Linford’s compilation and analysis of research on the placebo effects of trademarks. See Jake Linford, Placebo Marks, 47 PEPP. L. REV. 45 (2019).


174 Makens, supra note 6, at 263.

175 Varela et al., supra note 5, at 879 (finding well-known brand names to significantly improve tasting scores, but only when visible to the taster).
to “Old Fashioned Seltzer”—but only when the labels are showing.176 And subjects’ claimed preferences between beer brands can be softened, or even reversed, by removing the labels prior to taste-testing.177 Even Coca-Cola itself, perhaps one of the most recognizable and uniform tastes in the world, receives higher taste-test scores when explicitly labeled as such, rather than unidentified.178

These examples rely on self-reported, subjective sensations like pain and taste. But the scientific literature is replete with examples where the trademark placebo effect is so powerful it goes beyond enhancing the consumers’ internal experience—it confers an externally verifiable advantage. Returning to medicine, in one such experiment, high blood-pressure patients were switched from Betaprol to either Novaprol or a generic.179 All drugs were, in fact, placebos, but the generic group presented with higher blood pressure and a greater incidence of side effects than the Novaprol group.180 The patients did not merely feel different; their blood pressure as measured by physicians showed significant group–level differences.

Likewise, the placebo effect of trademarks on consumer goods can measurably improve task completion. Subjects given a Nike–branded golf club require fewer strokes on average to sink a putt than subjects given an unbranded, but otherwise perfectly identical, club.181 Subjects given 3M–branded earplugs achieve higher scores on a noise-disrupted math test than subjects given the same—though unlabeled—earplugs.182 The effect manifests even between similarly prominent marks, where one brand has a closer association with the task at hand: on cognition tests, subjects told that they are consuming Red Bull (“Silver Edition Lime”) outperform subjects told that they are consuming Sprite, regardless of which beverage they were actually given.183

179 Faasse et al., supra note 1, at 91.
180 Id. at 91–93.
181 Garvey et al., supra note 4, at 947.
182 Id. at 939.
Trademarks, in other words, are able to improve not only the consumer's subjective impressions—from perceived pain relief to the caliber of taste—but also objective metrics like blood pressure and test scores. In TrafFix terms, all of these marks clearly "affect[] the . . . quality of the article." 184 A generic ibuprofen would need to be substantially improved in other respects—greater bioavailability or an easier-to-swallow shape—just to reach the same level of total product quality as Nurofen. A no-name golf club would need better aerodynamics or grip control just to deliver the same results as an otherwise identical Nike club. And a new energy drink might require more active ingredients just to provide the same buzz as Red Bull. In that sense, all of the marks referenced in this section should theoretically be ineligible for protection on functionality grounds.

At the same time, observe that the placebo effect relies on consumers' mental associations with the underlying brand—and is therefore fragile. If the mark were used freely by all producers, it would cease to actually signify anything to the consumer. Hence, in the experiments described thus far, real trademarks outperform fake ones,185 and trademarks linked to task-relevant brand identities outperform task-irrelevant ones.186 The placebo effect demands authenticity; subjects using goods perceived as counterfeits perform more poorly on measured tasks.187 That performance reduction, moreover, persists even if the subjects are subsequently given the real deal—so, for example, a test-taker that previously used a “fake” Parker pen will still make more errors when given a “real” Parker pen than control test-takers.188 In short, the quality enhancement associated with placebo functionality largely cannot be shared without dissipating. And because the placebo effect is fragile, it does not trigger ineligibility under functionality doctrine.

2. Social Functionality

Consider again a hypothetical consumer's decision to purchase an expensive fashion item—say, a Louis Vuitton briefcase, complete with the trademarked V print emblazoned on all sides. Doubtless, the print enables the

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185 See, e.g., supra notes 174-176.
186 See, e.g., Schmidt et al., supra note 183; see also Garvey et al., supra note 4, at 943 (finding that “Nike” golf club users required significantly fewer strokes to sink varying putts than identical “Gucci” golf club users).
187 Moty Amar, Dan Ariely, Ziv Carmon & Haiyang Yang, How Counterfeits Infect Genuine Products: The Role of Moral Disgust, 28 J. CONSUMER PSYCH. 329 (2018); see also Linford, supra note 172, at 72 (“[E]xperiments suggest that this performance enhancing effect might be reduced or eliminated if consumers encounter counterfeit goods imitating high-performance branded goods.”).
188 Amar et al., supra note 187, at 334, 336-37.
consumer to more quickly locate the intended, authentic product to buy. And some consumers may find the briefcase more attractive, regardless of the print’s latent “Louis Vuitton” meaning, simply due to the print’s visual design. Either way, the briefcase’s print carries a social meaning: it signals attributes about the consumer to other observers. That is, while wearing the briefcase, the consumer is viewed (at least, by some) as more wealthy, high-status, and fashionable. A socially aware consumer knows this and deliberately courts it; their purchasing decision is strongly informed by that outcome in the first place. In that sense, the social effect of the mark is a key part of the briefcase’s use. This is why the consumer is willing to pay a premium on the briefcase in significant excess of its intrinsic, pre-social qualities (such as its materials, durability, or visual appeal).

In short: “firms produce trademarks as status goods, [and] consumers consume trademarks to signal status.” Economic models from as early as the 19th century recognize and attempt to capture this phenomenon of status-signaling consumption, and real-world data tends to confirm its existence empirically. For example, take the market for purses: status-seeking consumers are significantly more likely to rank “conspicuously” branded items as more valuable than “inconspicuously” branded ones from the same producer; they are also more likely to choose the conspicuous option among two purses of otherwise identical price and value. Likewise, in the world of makeup, price is a much stronger determinant of demand for makeup products that are brand-invisible (e.g., a facial cleanser applied at home) than it is for makeup products that are brand-visible (e.g., a lipstick tube that might be taken out and reapplied in public). That is, consumers are much less dissuaded by high prices if they know they might get to show off the purchase in public. Even the world of banking is not immune: an analysis of credit card transaction data, for example, showed that elite-status cards are significantly more likely to be used in brand-visible contexts (e.g., restaurants, bars, and clubs, where the card is physically shown to nearby patrons and staff).

191 Young Jee Han, Joseph C. Nunes & Xavier Drèze, Signaling Status with Luxury Goods: The Role of Brand Prominence, 74 J. MKTG. 15, 24-25 (2010).
The examples thus far revolve around luxury, exclusive goods, but socially conspicuous trademarks vary considerably. As economists, sociologists, and pundits alike have long recognized, demonstrations of charity can have much the same status-enhancing effect as outright demonstrations of wealth—philanthropic activity is not always an entirely selfless act. Immodest alms-giving may be as old as humanity—consider the tale of Jesus rebuking the self-exalting Pharisee—but it has flowered spectacularly of recent, and taken on a particularly marks-based model, from small looped ribbons on lapels to attire that is charity- or activist-branded outright.

With that in mind, consider the trademark for Product Red, a brand that partners with consumer-facing companies to fund HIV/AIDS projects. These companies (such as Beats Electronics) will sell a separate version of their existing product (such as Beats headphones) with the (PRODUCT) mark and distinct scarlet color to enhance the product’s popularity. In exchange, a portion of the sale goes back to Product Red as royalty, to fund its humanitarian efforts. Or consider TOMS shoes—a company well known for its philanthropic activities, including investing one-third of all profits in grassroots organizations and causes. The shoes themselves have a recognizable espadrille design, in addition to the trademarked (and readily visible) TOMS tags and logos. When customers wear Product Red headphones or TOMS shoes in public, they use not only the good’s intrinsic features—its ability to play music or protect one’s feet—but also the communicative function mediated by the good’s conspicuous marks. That is,

194 See, e.g., STEVE DUCK, RETHINKING RELATIONSHIPS 162 (2011) (“Conspicuous consumption may thus take the form of conspicuous giving, and although it may be an excellent outcome for the recipients, the main point for the giver is that you are seen to be a giver or a consumer, even if the effect is ultimately helpful.”); Amihai Glazer & Kai A. Konrad, A Signaling Explanation for Charity, 86 AM. ECON. REV. 1009, 1020-21 (1996) (“The data on charitable giving support the hypothesis that donors donate at least partly for signaling purposes rather than only to aid the recipient or to obtain satisfactions unrelated to status.”); cf. Margrit Talpalaru, Blake Mycoskie, TOMS, and Life Narratives of Conspicuous Giving, 37 BIOGRAPHY 168, 170 (2014) (“Conspicuous giving, then, has less to do with narrowing the income gap, eradicating world hunger, and curing cancer, than it has with providing corporations a way to determine and sanction the right way of behaving and participating within the system.”).

195 PATRICK WEST, CONSPICUOUS COMPASSION: WHY SOMETIMES IT REALLY IS CRUEL TO BE KIND 1-3 (2004).


199 How (Red) Works, supra note 197.

the marks are used to project desirable attributes in a social context: *I am charitable; I am socially conscious; I am a good person.* Without the trademarks, these goods cannot accomplish that same projection, and so their additional function would largely disappear.

These trademarks are “essential to the use or purpose” of the underlying products. For some extreme consumers, this essentiality reaches the level of a necessary condition for purchase; a Louis Vuitton briefcase with no externally recognizable markings, labels, or prints may be able to fulfill a number of uses (it can, of course, still hold papers), but it simply will not substitute for the purposes of a status seeker. Either way, the observational and experimental data cited above suggests that even average consumers find the potential social signals of products just as important as their intrinsic, tangible qualities. It is difficult, then, to ignore these social uses as somehow non-essential—they are a form of functionality under the terms of *TrafFix*. The “purpose” language in particular seems to easily capture the examples of conspicuous charity. What is the purpose of a pair of (PRODUCT) headphones? An answer that does not include “advancing the cause against HIV/AIDS” is obviously incomplete. The product would not exist, but for that goal. And the headphones *only* fulfill that purpose through Product Red’s trademark licensing regime.

Just like the placebo effect, however, the social effects of marks are fragile. The public’s association between the mark and the underlying brand is part and parcel of the credible social signal. If that association were undermined through open use of the mark, the social signal would cease to be meaningful. When any company is free to use the Project Red logo or color without funding humanitarian projects—perhaps even engaging in irresponsible activities themselves with respect to labor, environmental impact, and so on—then even authentic Project Red apparel conveys very little to observers about the wearer’s charitability. Likewise, when any company is free to use Louis Vuitton’s signature prints on their more affordable briefcases, then briefcases bearing those prints will no longer convey wealth or prestige to nearly the same degree. And because the social functionality of these marks cannot be shared without degrading—that is, because it is fragile—it does not lead to trademark ineligibility.

### III. ORGANIZATIONAL FUNCTIONALITY

Certification marks provide another set of cost-reduction examples—examples that run afoul of a facial reading of *TrafFix*. These marks are used to indicate a product’s “regional or other origin, material, mode of

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manufacture, quality, accuracy, or other characteristics.” In practice, a third-party organization typically controls licensing for the mark, and sets forth certain benchmarks or regulations that must be met for a company to use the mark on its products. For example, the USB Implementers Forum controls various marks indicating USB compatibility.

Figure 2: Example of USB Compatibility Mark

An electronics company that wants to license these marks for its product or packaging must first pass testing from USB-IF to ensure interoperability with the USB technology (and, for some SUPERSPEED marks, specific data transfer rates). Another common example is certification marks for geographic origin—consider the following marks owned by Napa Valley Vintners and the Idaho Potato Commission.

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202 15 U.S.C. § 1127; see also 15 U.S.C. § 1054 (“[C]ertification marks . . . shall be registrable under this chapter, in the same manner and with the same effect as are trademarks . . . . Applications and procedure under this section shall conform as nearly as practicable to those prescribed for the registration of trademarks.”).

203 See USB-IF Licensed Mark(s) Requirements, USB, https://www.usb.org/sites/default/files/trademark_license_agreement_licensed_mark_requirements_final_as_of_november_30_2018_locked_0.pdf (last updated Nov. 30, 2018) (displaying the various marks permitted to show USB compatibility).

204 SUPERSPEED CERTIFIED USB, Registration No. 3,894,350.


These organizations exclusively license their marks to companies that produce wine and potatoes within their respective territories.

Both archetypes offer significant cost reductions to producers on at least two levels. First and foremost, they enable producers to cheaply (but reliably) convey certain product attributes. With a third party certifying, say, USB data transfer speed, there is less of a need for any one USB product manufacturer to invest in its own product demonstrations, in-store testing, return guarantees, or trial periods. Those costs are essentially externalized to the third party that manages testing. Likewise, for geographic origin, vintners are free to spend less money on websites, documentation, and advertising proving their connection to Napa's historic wine scene—the well-policed mark does all the work for them.

Second, these marks reduce the costs of interfirm coordination and cooperation. Take the Idaho Potato Commission, for example. In addition to managing its various marks, the Commission invests in significant advertising (both television and print), lobbying, and even industrial research activity.210

Figure 3: Napa Valley Vintners208 and the Idaho Potato Commission209 Marks

[Image]

208 The mark consists of the letter “N” embedded within four contiguous circles, Registration No. 2,985,207.
209 CERTIFIED GENUINE IDAHO POTATOES GROWN IN IDAHO, Registration No. 4,221,402.
Napa Valley Vintners engages in similar efforts. Certification marks provide a convenient mechanism to promote buy-in and reduce the free-riding that might otherwise occur from these efforts. When “Idaho potatoes” or “Napa Valley wine” is promoted, every producer in the region stands to benefit, whether they contributed to those efforts or not. By creating a single, recognizable mark for these classes of products, there can be some degree of forced contribution: licensing fees fund industry-level activities, and producers that fail to buy in are at a comparative disadvantage in the marketplace without the mark. The potential savings with regards to industrial organization are considerable.

Again, in TrafFix terms, all of these marks clearly “affect[] the cost . . . of the article.” Their underlying products are, effectively, cheaper to produce than they would be in a world without the mark and, hence, should theoretically be ineligible for protection on functionality grounds. But at the same time, the nature of these cost-advantage mechanisms means that they are not capable of being freely shared. If producers are free to erroneously certify USB compatibility or Napa Valley terroir, then the certification is no longer a credible signal to consumers. In turn, this means producers will have to return to more costly ways of conveying their product attributes. Likewise, if any producer can free-ride on the efforts of the rest of the industry or region, then there will be little buy-in on any efficient cooperation. Because these functions of certification marks are fragile, they do not constitute actual barriers to trademark eligibility.

IV. DESIGN FUNCTIONALITY

Consider a particular shape of lighter:

211 Industry Advocacy, Napa Valley Vintners, https://napavintners.com/about/industry_advocacy.asp ("[W]e advocate on behalf of our members on all relevant issues and at all levels of government: local, state, federal, and even internationally.").

212 Indeed, if the mark is sufficiently prominent, it’s likely that consumers will not believe a product’s claimed origin without it. They may see a bottle of wine that says in plain text “Napa, California,” compare it to the many others bearing official Napa Valley Vintner marks, and assume the former is capitalizing on some technicality at best (e.g., the vineyard is within the legal boundaries of Napa County, but on inferior, non-historic land).

Zippo® holds a trademark on this lighter shape. By making the shape itself the signifier, Zippo is able to introduce considerable variation in the designs of its lighters—even incorporating other brands—without reducing their immediate recognizability:

The shape trademark, in other words, allows Zippo to create novel and intricately designed lighters without the need to keep the word “Zippo” writ large on the product body. Absent the shape trademark, Zippo would need to either spend more on advertising and packaging, incur workaround design...

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214 The drawing shows a lighter having slightly rounded edges and corners, and a curvature in the shape of a slight arc in the top of the lighter, Registration No. 2,666,241.
215 Id.
costs, or offer fewer options in order to achieve the same level of brand prominence.

The popular Funko® toy brand exhibits a similar dynamic. The base doll shapes are trademarked, and readily recognized in the figurine community:

Figure 6: Doll Shape Trademarked by Funko®

Funko licenses characters from a variety of companies for its dolls, from Marvel to Pokemon. And by protecting and maintaining the doll style itself, Funko is always able to retain its own brand recognition—without the need for any additional tags, labels, or accessories:

Figure 7: Pokemon doll in the Distinctive Funko Style

217 The mark consists of a three-dimensional configuration of a full length figure featuring an over-sized head, wide-spaced eyes, and a proportionally shortened and narrowed body, Registration No. 5,333,118; The mark consists of a three-dimensional configuration of a full length figure featuring an over-sized head, wide-spaced eyes, and a proportionally shortened and narrowed body, Registration No. 5,333,117.

218 See trademarks cited supra note 217.


This approach may be contrasted in particular against an older, significantly popular toy line: Beanie Babies. The primary feature ensuring their brand recognizability was a separately attached, heart-shaped Ty® tag—which incurred its own additional manufacturing costs above and beyond that of the product itself.\textsuperscript{221} The tag could also be removed after purchase, reducing brand visibility (and resale value) in a way that cannot comparably be done with a Zippo lighter or the shape of a Funko doll.

As a result of their trademarks, these companies are thus able to more cheaply make a greater diversity of products. In that sense, product “cost” is being “affected”\textsuperscript{222}—and so too is product quality. The quality enhancements offered by unobtrusive branding may be relatively small, such as the elimination of an annoying-to-remove label sticker or a hole-creating punch tag. But they may also be more considerable, as in the case of products intended to be on display. In a counter trend to the conspicuous consumption and giving mentioned earlier, there are at least some consumers that deliberately avoid highly visible logos\textsuperscript{223} to embrace a minimalist aesthetic, to comport with an anti-capitalist ideology, or perhaps to simply avoid feeling like a walking billboard. A producer that can simultaneously accommodate those desires while not losing true recognizability is at a distinct advantage.

But concurrently, the benefits of these marks are fragile; they depend upon the ability to restrict usage. If the distinct shapes of Zippo lighters and Funko dolls were free for all producers to use, the immediate recognizability of those particular brands would be lost. Relying on alternative forms of branding—or greater advertising, or design-around solutions—may be more costly, with the end product potentially less desirable to consumers. Accordingly, this kind of functionality is tolerated, and does not actually prevent trademark eligibility in practice.

\section*{V. Interlocking Functionality}

Trademarked features can affect the interoperability of certain products and, as a result, reduce the costs of controlling complementary markets. For

\begin{footnotesize}
\begin{itemize}
  \item \textsuperscript{221} Beanie Babies, TY, https://shop.ty.com/catalog/beanie-babies [https://perma.cc/B9W6-M2SL].
\end{itemize}
\end{footnotesize}
example, the Lego Group holds trademarks on the particular shape of its basic building block unit ("brick"), as well as the design of its toy persons:

**Figure 8: Block Shape and Person Design Trademarked by Lego**

![Figure 8](https://www.lego.com/cdn/cs/aboutus/assets/blt2278c721e58e900/LEGOCompanyProfile_2020.pdf)

As a result of both trademarks, it is substantially more difficult for competitor toy companies to create products that are compatible with existing Lego sets. For the brick shape in particular, the mark explicitly includes its interlocking mechanism of pegs and sockets. For the Lego people, every feature is scaled and shaped to suit countless Lego objects: hats and hair both snap on to the head’s peg and conform to its cylindrical curvature; accessories socket into the C-shaped hands; and chairs rely on the legs’ holes and position relative to the remainder of the body. Competitors trying to make their products equally compatible with Lego items would need to design around

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224 The mark consists of a three dimensional rectangular solid brick shape with two rows of four cylindrical projections or studs on the upper surface, which is the configuration of the goods, Registration No. 4,222,057.

225 The mark consists of the three-dimensional configuration of a toy figure featuring a cylindrical head, on top of a cylindrical neck, on top of a trapezoidal torso of uniform thickness, with flat sides and a flat back, where arms are mounted slightly below the upper surface of the torso, on top of a rectangular plate, on top of legs which bulge frontwards at the top and are otherwise rectangular with uniform thickness, on top of flat square feet, Registration No. 4,903,968.

226 *See trademarks cited *supra* notes 224-25.*

227 Indeed, Lego’s parallel EU trademark on the brick shape was rejected on precisely such grounds. *See Case C-48/09 P, Lego Juris A/S v. Off. for Harmonisation in the Internal Mkt., 2010 E.C.R. I-8403, ¶ 73 (“[T]he most important element of the sign composed of the Lego brick consists in the two rows of studs . . . . [which are] necessary to obtain the intended technical result of . . . assembly . . . .”).

these marks while still trying to incorporate all relevant mechanical features. Naturally, this is a delicate tightrope to walk—one risking the considerable damages of a trademark infringement judgment and the loss of any sunk costs in manufacturing, design, and advertising up to that point.

Comparable mechanisms for policing downstream product markets are considerably more expensive to implement. By way of contrast, consider the approach that Keurig adopted for its coffee pods and brewers. The success of their original line of brewers led to a robust market for cheap, unlicensed third-party pods. In response, the “Keurig 2.0” line of brewers, released in 2014, included infrared scanners in its pod compartment; the device would refuse to brew unless an officially licensed Keurig pod, stamped with a particular reflective ink, was used.229

Keurig ultimately abandoned its particular system due to consumer backlash,230 but that system is far from unique today. HP and Epson, for example, both include technology in their computer printers to reject third-party (or original, but third-party-refilled) ink cartridges.231 Nintendo, along with the other major video game console manufacturers, uses software and hardware alike to prevent unlicensed or pirated game cartridges from working with its consoles.232 Where cheap, trademarked features instead control compatibility, the cost savings are potentially substantial. But, as with the other examples in this Section, the cost reduction is fragile—it is lost if all producers are able to freely use the mark. Without control over the brick- and person-shape marks, Lego no longer cheaply controls the market for interoperable products. Alternative measures are likely much more costly; imagine a potential “Lego 2.0,” featuring RFID verification between electromagnetic blocks.

229 See Annie Gasparro, Keurig Stumbles with New K-Cup Brewer, WALL ST. J. (Feb. 4, 2015, 7:47 PM), https://www.wsj.com/articles/keurig-warns-currency-to-hurt-full-year-results-1423687665 [https://perma.cc/JAGF-EKKF] (describing how the Keurig 2.0 was designed to be incompatible with pods made by other companies that do not carry the Keurig seal on the box).


There are, of course, less extreme versions of this interlocking functionality. Consider a consumer that simply wants certain items to visually match, or to complete a set. In those circumstances, trademarked prints, colors, and logos help determine quality in the sense of suitability. For example, one might want to color-coordinate their earrings with a necklace; if the earrings are in trademark Tiffany Blue, then a matching necklace will only be found at Tiffany & Co. as well. The color is doing far more than merely indicating source or origin—it is precisely what enables the necklace to fulfill the consumer’s need.

For a similar phenomenon, consider the trend of matching logos throughout an outfit—say, an all-Nike or all-Adidas ensemble. In such cases, items with a different logo or symbol will clearly not be compatible. Nor is this effect limited to fashion and jewelry; courts have recognized, for example, that tractor owners quite strongly prefer their attached equipment to match. If the tractor is John Deere Green-and-Yellow, then the tractor owner can only go to John Deere for a thresher in the same color scheme. And because of the tractor owner’s preference for a match, the thresher’s colors will affect its quality from their perspective.

But if these color and symbol marks were not protected, the original producers would not be using them consistently in the first place—such that

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233 The mark consists of a shade of blue often referred to as robin’s-egg blue which is used on boxes. The matter shown in broken lines represents boxes of various sizes and serves to show positioning of the mark. No claim is made to shape of the boxes, Registration No. 2,359,351.


235 See, e.g., Deere & Co. v. Farmhand, Inc., 560 F. Supp. 85, 91 (S.D. Iowa 1982) (“There was abundant evidence at trial to the effect that farmers desire to ‘match’ their loaders to their tractors... Generally, farmers are concerned with the aesthetics of their farm machinery and prefer to match their loader to their tractor.”).

236 See, e.g., The mark consists of a green vehicle body or frame with yellow wheels... The drawing is lined for a bright green color, sometimes known as “John Deere” green, and a bright yellow color, and claim is made for such colors, Registration No. 1,502,103; The drawing is lined for a bright green color, and a bright yellow color, and claim is made for such colors, Registration No. 1,503,576; The color(s) green and yellow is/are claimed as a feature of the mark. The mark consists of the color combination green and yellow in which green is applied to an exterior surface of the machine and yellow is applied to the wheels, Registration No. 3,857,095.

237 See Deere & Co. v. FIMCO, Inc., 239 F. Supp. 3d 964, 999-1003 (W.D. Ky. 2017) (finding John Deere’s color trademark valid, non-functional, and infringed by FIMCO). The district court in Farmhand reached a different result—finding John Deere’s color mark aesthetically functional. Farmhand, 560 F. Supp. at 98. Because that case precedes the entirety of the Supreme Court’s jurisprudence on functionality (save the Kellogg shredded wheat case), including especially Qualitex and TrafFix, it carries little descriptive significance or weight today. FIMCO, 239 F. Supp. 3d at 999-1002 (“[T]his thirty-five year old decision was rendered long before the Supreme Court addressed the aesthetic functionality doctrine in Qualitex... and TrafFix... .”).
their match-value would disappear. John Deere Green-and-Yellow provides no advantage in matching with John Deere equipment when that equipment is a different color in the first place (or multiple, inconsistent colors across products). The effects these marks have on quality for match-conscious consumers are therefore fragile, in the same way as the other examples throughout this section. In that sense, this phenomenon may be contrasted directly against the commonly cited Brunswick case—in which the PTO found the color black to be functional for outboard boat motors. As the PTO explained: “[B]lack is more desirable . . . because it is color compatible with a wider variety of boat colors and because objects colored black appear smaller than they do when they are painted other lighter or brighter colors.” These quality effects did trigger the bar of functionality, but observe that they are clearly non-fragile. The optical illusion of black objects appearing smaller does not depend upon trademark exclusivity, and neither does black’s universal color compatibility. If all producers of boat motors offered the color black as an option, these beneficial effects on quality would still persist.

VI. REFORMULATING THE LAW

The examples presented in the previous section—from pharmaceuticals to farm equipment—share much in common despite their variety. These marks all run afoul of the stated functionality test in TrafFix, as they demonstrably impact the underlying products’ cost, quality, use, or purpose. They are all, nevertheless, live trademarks in no apparent danger of invalidation. The reason for their viability appears to be another characteristic that they share: the effects that these marks exhibit on goods cannot be freely shared across producers. That is, the benefits and advantages are fragile—they would be destroyed through unrestricted use of the mark at issue.

To reiterate, this fragility is also found in the traditional, recognized, and celebrated functions of trademarks: search-cost reduction and quality-reputation incentives. If every beverage manufacturer is free to use the Coca-Cola logo, it will be considerably more costly for consumers to successfully locate the real deal. Likewise, Coca-Cola’s incentive to build up a positive reputation by investing in quality will largely vanish due to free-riding imposters. The logo’s effects on cost and quality are thus predicated on trademark protection in the first place—and so functionality doctrine does not bar validity.

At a minimum, then, it is a descriptive improvement to rewrite the test for functionality as follows: In general terms, a product feature is functional,

239 Id. at 1199.
and cannot serve as a trademark, if it is essential to the use or purpose of the article or if it affects the cost of quality of the article. Any use, purpose, or effect that is dependent on trademark exclusivity itself, however, will not be considered.

Observe that, in a mixed case—a product feature that exhibits both fragile and non-fragile effects—trademark protection would not be permitted. The fragile effects would be ignored, but the non-fragile effects would remain to trigger the test. This is analogous to the Supreme Court’s longstanding holding that secondary meaning (that is, proof that the mark exhibits search-cost and quality-incentive functions) does not save a mark that is functional for other reasons as well: “The Lanham Act . . . does not protect trade dress in a functional design simply because an investment has been made to encourage the public to associate [it] with a single manufacturer or seller.”

On the whole, this reformulation more accurately reflects the apparent tolerance of marks that otherwise clearly violate the text of TrafFix, from the traditional functions shared by all trademarks to the more unusual and context-specific examples presented in the previous Section.

Re-casting the test for functionality in this way also comports with the full history and purpose of the doctrine. Recall the themes outlined in Part I, reiterated throughout the Supreme Court’s century-plus of jurisprudence on the matter: a preference for bright-line heuristics, a focus on welfare maximization, and an understanding of marks and dress as conceptually unified. Although a fuller analysis is reserved for the next Part, the fragility test for functionality does appear optimized to work as a welfare-enhancing heuristic. Any product improvements that can be shared are not afforded protection, ensuring that they are spread as widely as possible; it is only the improvements that could not be shared anyway that will receive trademark exclusivity. And because mixed cases lead to invalidity, producers will be encouraged to focus their branding efforts on features without preexisting, non-fragile functionality. Finally, unlike the original test of TrafFix, this reformulation is capable of being applied universally to marks and dress alike, sensibly and without the aforementioned issues of overinclusion. As noted earlier, it is capable of taking over identically for the other major bar to trademark protection: genericness. Observe in particular the parallel for mixed cases under current doctrine: generic marks, like other marks with non-fragile functionality, cannot be saved by demonstrating the fragile functionality of secondary meaning.

241 See, e.g., Abercrombie & Fitch Co. v. Hunting World, Inc., 537 F.2d 4, 9 (2d. Cir. 1976) (“This means that even proof of secondary meaning, by virtue of which some ‘merely descriptive’ marks may be registered, cannot transform a generic term into a subject for trademark.”).
The fragility test for functionality should also satisfy those who are rightly suspicious of extending trademark protection to inventions that are eligible for utility patents. The Court itself rejected true mutual exclusivity between the two fields, but nevertheless recognized a strong presumption against overlap in most cases: “Where the expired patent claimed the features in question, one who seeks to establish trade dress protection must carry the heavy burden of showing that the feature is not functional, for instance by showing that it is merely an ornamental, incidental, or arbitrary aspect of the device.” The same result holds under the fragility test for functionality. Patentable improvements are non-fragile by definition; to obtain a patent, an inventor needs to enable replication by others with ordinary skill in the art. So unless the patented feature is being used on the product for reasons wholly irrelevant to that improvement—as pure ornamentation or arbitrary flourish—it will of course affect the cost, quality, use, or purpose of the product, and trademark protection will not issue. In other words, the fragility test for functionality retains the channeling ability of the doctrine (and its benefits, often discussed in the intellectual property literature writ large).

Re-orienting around the concept of fragility likewise allows for dispensing with the distinction between aesthetic and utilitarian functionality—a distinction only half-embraced and half-rejected by the Supreme Court and circuit courts alike in the first place. In particular, line-drawing between aesthetic and utilitarian features (to the extent it could ever have been

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242 TrafFix, 532 U.S. at 29-30.

243 Id. at 29-30 (emphasis added).


245 See, e.g., Mark P. McKenna, An Alternate Approach to Channeling?, 51 WM. & MARY L. REV. 873, 884-90 (2009) (“Is it a problem that different modes of intellectual property protection can serve as alternative appropriation mechanisms? In my view it is . . .”); Christopher Buccafusco, Mark A. Lemley & Jonathan S. Masur, Intelligent Design, 68 DUKE L.J. 75, 120 (2007) (“Trade dress protection, once obtained, can last forever. Accordingly, if designers are ever able to sneak functional elements past trade dress law’s functionality screen, they can obtain rights that significantly hinder competition and innovation.”); cf. Viva R. Moffat, The Copyright/Patent Boundary, 48 U. RICHMOND L. REV. 611, 615 (2014) (“[T]his article borrows from trademark law . . . [which] has a channeling doctrine and a relatively bright-line rule animated by the overarching policy concern of excluding functional items from trademark law in order to preserve the patent bargain . . .”).

coherently done to begin with) is no longer needed to keep functionality doctrine from swallowing all marks, and testing for fragility is a more generalized and descriptively accurate version of forbidding “non-reputation-related” barriers to competition.\textsuperscript{247} For example, placebo functionality relies on the consumer’s psychological associations with the mark, as does social functionality. They are both, in that sense, related to producer reputation. Thus, assuming \textit{TrafFix}'s aesthetic test were to be applied to a placebo—or socially functional product feature—the feature might be allowed trademark protection, matching the real-world landscape of outcomes. But other forms of fragile functionality do not easily fit into the narrow description of “reputation-related.” At least some aspects of organizational functionality, and perhaps all of design and interlocking functionality, have nothing to do with reputation per se. Even in a world where nobody has heard of Tiffany & Co., for example, Tiffany Blue would still be a perfect match for Tiffany Blue. Hence, even if \textit{TrafFix}'s aesthetic test were to be applied, features exhibiting those forms of functionality would potentially be barred from trademark protection—a contradiction against real-world results.

Moreover, unlike the “non-reputation-related” test for aesthetic functionality, the fragility formulation is actually a heuristic. That is, it does not require a sophisticated, costly examination of anticompetitive effects. Recall that only “significant non-reputation-related disadvantage[s]” are proscribed by the current test for aesthetic functionality.\textsuperscript{248} This is not an invitation for guesswork or armchair speculation. In the Second Circuit, for example, judges are instructed to “carefully weigh ‘the competitive benefits of protecting the source-identifying aspects of a mark against the ‘competitive costs of precluding competitors from using the feature’”—a “highly fact-specific” analysis.\textsuperscript{249} Indeed, the detailed analysis required under the current test for aesthetic functionality appears to most closely resemble something like an antitrust case proceeding under the rule of reason.\textsuperscript{250} The same court, for example, describes the heart of rule-of-reason cases as “determining whether a restraint[‘s] . . . anticompetitive effects outweigh its

\textsuperscript{247} \textit{TrafFix}, 532 U.S. at 32 (quoting Qualitex Co. v. Jacobson Prods. Co., 514 U.S. 159, 165 (1996)).


\textsuperscript{250} See \textit{Bd. of Trade of the City of Chi. v. United States}, 246 U.S. 231, 238 (1918) (“[T]he court must ordinarily consider the facts peculiar to the business to which the restraint is applied . . . [and] the nature of the restraint and its effect, actual or probable. The history of the restraint, the evil believed to exist, the reason for adopting the particular remedy, the purpose or end sought to be attained, are all relevant facts.”).
procompetitive effects.”251 Taken to completion, this kind of analysis is notoriously uncertain, time-consuming, and costly252—the precise opposite of a heuristic. In other words, if the current test for aesthetic functionality is to be taken seriously, it would require nesting the most challenging form of antitrust inquiry within trademark validity decisionmaking. By contrast, recall the fragility examples presented thus far: their reliance on trademark exclusivity to function is nearly self-evident, or well-established in prior scientific literature. And where it is not, it could be demonstrated with no more sophisticated tools than those readily familiar to trademark adjudicators, lawyers, and firms: consumer surveys and studies.253

IV. APPLICATIONS AND EFFECTS OF A FRAGILITY STANDARD FOR TRADEMARKS

The examples and analyses presented thus far suggest that trademark law is fumbling towards a consensus: protecting beneficial enhancements if and only if those enhancements require ongoing protection to manifest. Put differently, trademark law seems to exclusively protect fragile forms of functionality. The extent of this latent agreement, however, should not be overstated. The pattern is strong, but imperfect, as reflected in a number of contentious disputes on the outer boundaries of case law and policy.

This final Part begins by applying the fragility theory of functionality to two particularly divisive questions in trademark law—overlapping protection under copyright law and protection against dilution or post-sale confusion—in order to suggest doctrinally coherent answers. In short, copyrighted

251 United States v. Apple, Inc., 791 F.3d 290, 321 (2d Cir. 2015) (quoting Alt. Richfield Co. v. USA Petroleum Co., 495 U.S. 328, 342 (1990)); see, e.g., ZF Meritor, LLC v. Eaton Corp., 696 F.3d 254, 273 (3d Cir. 2012) (discussing “balancing . . . the procompetitive justifications” of a practice “against its anticompetitive effects”); In re Sulfuric Acid Antitrust Litig., 703 F.3d 1004, 1011 (7th Cir. 2012) (“The rule of reason directs an assessment of the total economic effects of a restrictive practice that is plausibly argued to increase competition or other economic values on balance.”); Am. Ad Mgmt., Inc. v. GTE Corp., 92 F.3d 781, 789 (9th Cir. 1996) (“[T]he restraint is unreasonable as determined by balancing the restraint and any justifications or pro-competitive effects of the restraint.”).


material generally exhibits non-fragile functionalities that should prohibit redundant protection under trademark law. By contrast, the fragile functionalities of prestige and fame provide a more conceptually sound justification for maintaining anti-dilution and post-sale protections for marks. The discussion thus shifts from strictly positive to at least weakly normative; the description and synthesis from Parts I and II are extended to propose further applications that are, at the very least, internally consistent.

This Part concludes by addressing more robust normative considerations head-on, focusing on the consequences of fully embracing a fragility theory of trademark functionality. As will be shown, offering trademark protection despite the presence of fragile functionalities can be welfare-enhancing in many cases. But at the same time, fragile functionalities are apt to generate anticompetitive effects in the marketplace and lead to deeply regressive distributional consequences. Attempting to prohibit fragile functionalities would almost certainly be impractical, welfare-reducing, or both—but these consequences are difficult to ignore. Though a complete proposal for ameliorative measures is beyond the scope of this Article, an unusual case from antitrust law is presented to suggest a potential starting point for future research and theory.

A. Fragility and Copyright

In most situations, a fragility theory of trademark functionality suggests that trademark law should not grant overlapping protection to copyrightable material. To be clear, the area of potential overlap is already limited; although all “original works of authorship fixed in any tangible medium of expression” fall within copyright’s scope,254 most trademarks tend to fall short of that basic requirement. “Words and short phrases such as names, titles, and slogans” are not copyrightable, including “variations of typographic ornamentation, lettering[,] or coloring,”255 due to a perceived lack of creative original authorship.256 So from “Apple” and “Think Different” to “Nike” and “Just Do It,” overlapping copyright protection is not a genuine concern. Likewise,

“[m]any logos are deemed not to contain the requisite level of originality”—such that simple icons like the once-bitten apple and swoosh are out as well.257

More complex and expressive trademarks, however, can and do rise to the level of copyrightable subject matter.258 Iconic characters are perhaps the most common case for such overlapping rights in practice, and serve as a useful example.259 Consider the creative expression of original authorship that is Mr. Peanut: “If an artist creates a fanciful picture of a humanized peanut dressed in formal attire complete with top hat, cane, monocle[,] and spats, that is a picture eligible for copyright.”260 But Mr. Peanut is also a valid trademark,261 “well-known in the trade and to the general public as an indication of origin for [Planters’] products.”262 Or consider Mickey Mouse: a character protected under copyright law seemingly ad infinitum,263 while simultaneously used as a trademark by Disney "to identify and distinguish the source of goods or services (e.g.,] an image of Mickey Mouse on a watch)."264 From The Hobbit to The Simpsons, pursuing dual protection has largely "become routine among practitioners"—generating significant debate and pushback in turn.265

Under a fragility theory of functionality, this kind of copyright—trademark overlap clearly should not be permissible in most cases. The value of the original authorial expression that is required by definition for copyright

257 Viva R. Moffat, Mutant Copyrights and Backdoor Patents: The Problem of Overlapping Intellectual Property Protection, 19 BERKELEY TECH. L.J. 1473, 1506 (2004); see, e.g., Yankee Candle Co. v. Bridgewater Candle Co., 259 F.3d 25, 35 (1st Cir. 2001) (“This collection of common geometric shapes with a particular photographic technique is not sufficiently original to qualify for copyright protection.”); see also 37 C.F.R. § 202.1(a) (2021) (excluding “familiar symbols or designs” from copyrightable subject matter).


259 See, e.g., Moffat, supra note 257, at 1506-09; Frederick Warne & Co. v. Book Sales, Inc., 481 F. Supp. 191, 196 (S.D.N.Y. 1979) (“Dual protection under copyright and trademark laws is particularly appropriate for graphic representations of characters.”).

260 MCCARTHY, supra note 7, § 6:18.

261 Id. § 6:18 n.7; see, e.g., MR. PEANUT, Registration No. 4,071,025; MR. PEANUT, Registration No. 2,366,818.


protection will nearly always influence the cost, quality, use, or purpose of an embodying item. And that value is non-fragile; it exists independent of any potential trademark exclusivity. A school backpack with the character Batman on it, for example, appeals to young students precisely because it has Batman on it. Whether it was specifically produced under the supervision of Warner Brothers Entertainment Company or not is wholly irrelevant. It strains the imagination to conjure up a hypothetical purchaser of a character-emblazoned t-shirt, mug, poster, watch, or other such item for whom the character’s presence was not valued in and of itself.

Indeed, as the Ninth Circuit recognized while adjudicating overlapping claims of infringement for unauthorized Betty Boop merchandise, the character “constitute[s] the actual benefit that the consumer wishes to purchase”—an unambiguously “functional product.”266 Plaintiff Fleischer Studios could not, in fact, “show a single instance in which a customer was misled about the origin, sponsorship, or endorsement” of the merchandise at issue.267 The customers knew it came from elsewhere, but they simply didn’t care. This logic applies with greater force still to other forms of copyrightable subject matter in general; one need only look at the rampant piracy of music, games, and movies to see what little importance exclusivity of origin carries. On the contrary, peer-to-peer file distribution networks—from Napster to BitTorrent—rely precisely on consumers downloading, copying, and uploading atomized content chunks as a faceless swarm of nodes.268

Recall that patentable subject matter can only receive trademark protection under very narrow circumstances: when it is used as a completely arbitrary embellishment to the product rather than for the utility of its innovation.269 Otherwise, the non-fragile functionality that inheres to a patentable improvement blocks trademark eligibility. Concurrent fragile

266 Fleischer Studios, Inc. v. A.V.E.L.A., Inc., 636 F.3d 1115, 1123-24 (9th Cir. 2011), withdrawn and reh’g denied, 654 F.3d 958 (9th Cir. 2011); see also Fleischer Studios, Inc. v. A.V.E.L.A., Inc., 925 F. Supp. 2d 1067, 1074-75 (C.D. Cal. 2012) (“In this regard, the Betty Boop mark as adapted . . . is a decorative component: it is part and parcel of the aesthetic design of those goods . . . . Defendants’ use of the Betty Boop mark is an aesthetically functional use . . . .”).

267 Fleischer Studios, 636 F.3d at 1124.

268 See Nazareno Andrade, Elizeu Santos-Neto, Francisco Brasilheiro & Matei Ripeanu, Resource Demand and Supply in BitTorrent Content-Sharing Communities, 53 COMPUT. NETWORKS 516-17 (2009) (discussing BitTorrent’s popularity and how users use the platform download files); Jahn Arne Johnsen, Lars Erik Karlsen & Sebjorn Sather Birkeland, Peer-to-Peer Networking with BitTorrent (Dec. 2005) (Student Paper, Norwegian University of Science and Technology, Department of Telematics) http://web.cs.ucla.edu/classes/cs217/05BitTorrent.pdf [https://perma.cc/QBS3-UYS]; (discussing how BitTorrent indiscriminately scour the internet for different parts of a specific file from different users). For recent support, see Whitson Gordon, How to Use BitTorrent, PC MAG (Sept. 11, 2019), https://www pcmag.com/how-to/how-to-use-bitorrent [https://perma.cc/MAJ6-KLY].

functionalities like secondary meaning may exist as well (that is, consumers may genuinely associate the innovation with a particular producer), but they will not save such a mark from invalidation. So too with copyrightable material under a fragility theory of functionality: only in highly unusual cases, where a piece of copyrighted content is added to a product arbitrarily rather than to capitalize on demand for the value of its expressive content, can overlap with trademark be permitted. It is tellingly difficult to imagine such a scenario in reality, but something like Betty-Boop-branded windshield wiper fluid or tax preparation services might fit the mold.

Just as with patent law, the Supreme Court has already recognized that freely permitting overlapping protection “causes the Lanham Act to conflict with the law of copyright”:

The rights of a patentee or copyright holder are part of a “carefully crafted bargain,” under which, once the patent or copyright monopoly has expired, the public may use the invention or work at will and without attribution. Thus, in construing the Lanham Act, we have been “careful to caution against misuse or over-extension” of trademark and related protections into areas traditionally occupied by patent or copyright . . . . [A]llowing a cause of action [on these facts] would create a species of mutant copyright law that limits the public’s “federal right to ‘copy and to use’ expired copyrights.”

In other words, to paraphrase the early functionality case law regarding patents, trademark law should not gratuitously create monopolies more effective than that of copyright—in the ratio of eternity to 70 years.

But the Supreme Court’s observation, a highly straightforward symmetry of channeling, is not reflected in actual case outcomes—largely because of courts’ disagreement and confusion over aesthetic functionality as a category. The frequently cited case of In re DC Comics, Inc. is a particularly apt example. There, the USPTO had rejected trademark protection for 3-D representations of Superman, Batman, and the Joker to be used on toy dolls, finding that the copyrighted characters were necessarily functional as “indispensable elements of the commercial appeal of the product.” The Federal Circuit’s predecessor court reversed, describing the USPTO’s decision as “obscur[ing] the distinction between utilitarian and aesthetic functionality”—and reiterating its own position that the latter serves as no

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271 See Pope Automatic Merch. Co., v. McCrum Howell Co., 191 F. 979, 982 (7th Cir. 1911); see supra note 48 and accompanying text.
272 689 F.2d 1042 (C.C.P.A. 1982).
273 Id. at 1045 (quoting In re DC Comics Inc., 211 U.S.P.Q. 834, 837 (T.T.A.B. 1981)).
bar to trademark eligibility. In special concurrence, Judge Nies highlighted the dangers in permitting such overlap, regardless of doctrinal labels: “[I]f a copyrighted doll design is also a trademark for itself, there is question whether the quid pro quo for the protection granted under the copyright statute has been given, if, upon expiration of the copyright, the design cannot be used at all by others.” But ultimately, Judge Nies “await[ed] resolution in an appropriate case and . . . merely note[d] the problem”—one that has yet to come.

To summarize, whereas a fragility theory makes abundantly clear the most internally consistent approach to mediating the copyright—trademark boundary, the false dichotomies in existing functionality doctrine have obfuscated and further contributed to disarray.

B. Fragility, Dilution, and Post-Sale Confusion

In the case of copyrighted subject matter, a fragility theory of functionality suggests fencing out trademark rights. With respect to dilution and post-sale confusion doctrine, however, it instead suggests a unified justification (or, perhaps, apology). Since Professor Frank I. Schechter’s seminal 1927 article popularized the term, the idea of trademark dilution has proved enormously controversial. So too with post-sale confusion, from its 1955 inception in the Second Circuit up to the present day. In short, both doctrines are typically characterized as an incongruous expansion in trademark rights, fundamentally out of step with the rest of the law. But

274 See Frank I. Schechter, The Rational Basis of Trademark Protection, 40 HARV. L. REV. 813, 832 (1927) (describing the Odol court’s holding that the “[c]omplainant’s ability to compete with other manufacturers . . . will be impaired if the significance of its mark is lessened”).


Kenneth L. Port, The Commodification of Trademarks: Some Final Thoughts on Trademark Dilution, 46 HOFSTRA L. REV. 669, 681 (2017) (“It is clear that the vast majority of the hundreds of articles produced regarding the controversial topic of trademark dilution have viewed it negatively.”); Beebe, supra note 138, at 849-51 (describing “the antidilution cause of action itself” as "a failure").


277 See Mastercrafters Clock & Radio Co. v. Vacheron & Constantin-LeCoultre Watches, Inc., 221 F.2d 464, 466 (2d Cir. 1955) (noting that the “likelihood of . . . confusion” in distinguishing clocks made by plaintiff and defendant “render[s] plaintiff’s conduct actionable”).
there is a genuine theoretical consistency—that of protecting fragile functionalities—that directly undercuts this critique.

As codified by the Federal Trademark Dilution Act\footnote{Federal Trademark Dilution Act of 1995, Pub. L. No. 104-98, 109 Stat. 985 (1996) (codified in scattered sections of 15 U.S.C.).} and Trademark Dilution Revision Act,\footnote{Trademark Dilution Revision Act of 2006, Pub. L. No. 109-312, 120 Stat. 1730 (codified in scattered sections of 15 U.S.C.).} anti-dilution rights protect “the owner of a famous mark” from unauthorized use “that is likely to cause... blurring or... tarnishment...” regardless of the presence or absence of actual or likely confusion, of competition, or of actual economic injury.\footnote{15 U.S.C. § 1125(c)(1).} Dilution by “blurring” refers to uses “that impair[] the distinctiveness of the famous mark,” whereas dilution by “tarnishment” refers to uses that “harm[] the reputation of the famous mark.”\footnote{Id. § 1125(c)(2)(B)-(C) (emphases added).} Dilution by blurring is, in other words, about weakening the association between a famous mark and its goods or services, regardless of whether the infringer actually competes with the mark owner or genuinely tricks customers. No one is apt to be truly fooled by “Buick”-branded aspirin\footnote{See H.R. REP. NO. 104-374, at 3 (1995), as reprinted in 1995 U.S.C.C.A.N. 1029, 1030 (providing background for new trademark legislation suggesting that dilution, unlike trademark infringement, does not rely upon the likelihood of confusion).} or “Blockbuster”-branded fireworks,\footnote{See Viacom Inc. v. Ingram Enters., Inc., 141 F.3d 886, 887-88 (8th Cir. 1998) (noting that although the district court denied trademark infringement claims, the Blockbuster trademark is protected against “subsequent uses that tarnish or disparage or blur the distinctiveness of the mark”).} but the marks’ “capacity to identify and distinguish” is plainly reduced.\footnote{See Ringling Bros.-Barnum & Bailey Combined Shows, Inc. v. Utah Div. of Travel Dev., 955 F. Supp. 605, 605-06, 616 (E.D. Va. 1997) (adjudicating dilution by blurring of the joint circus’ “GREATEST SHOW ON EARTH” mark by the state travel agency’s “GREATEST SNOW ON EARTH” mark), overruled in part by Moseley v. V Secret Catalogue, 537 U.S. 418 (2003)).} Permitting “Chanel”-branded real estate services, for example, will eventually cause consumers to associate the mark with high-fashion items and home-buying, rather than strictly the former.\footnote{See Chanel, Inc. v. Makarczyk, 110 U.S.P.Q.2d 2013 (T.T.A.B. 2014).}

Dilution by tarnishment, in contrast, is about weakening the perceived caliber of goods and services bearing the famous mark—again, regardless of actual effects on competition or purchaser confusion. A pornographic website named “Barbie’s Playpen,” for example, “may well tarnish the image of Mattel’s BARBIE products in the minds of... consumers,” despite the low likelihood that an observer would think the children’s toy manufacturer was genuinely responsible for the site.\footnote{Mattel, Inc. v. Internet Dimensions, Inc., 2000 WL 973745, at *5-7 (S.D.N.Y. July 13, 2000); see also V Secret Catalogue, Inc. v. Moseley, 558 F. Supp. 2d 734, 737, 750 (W.D. Ky. 2008) (finding

\begin{footnotes}
\footnote{15 U.S.C. § 1125(c)(1).}
\footnote{Id. § 1125(c)(2)(B)-(C) (emphases added).}
\footnote{See H.R. REP. NO. 104-374, at 3 (1995), as reprinted in 1995 U.S.C.C.A.N. 1029, 1030 (providing background for new trademark legislation suggesting that dilution, unlike trademark infringement, does not rely upon the likelihood of confusion).}
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the viewer to “Enjoy Cocaine” in the same color and typeface as Coca-Cola’s logo, thereby associating “such a noxious substance as cocaine” with the “wholesome beverage” of Coca-Cola (which, though manufactured using coca leaves, has not contained any traces of the illicit narcotic for over a century). Put differently, linking the mark “to products of shoddy quality,” or portraying it “in an unwholesome or unsavory context likely to evoke unflattering thoughts about the owner’s product,” will eventually cause consumers to associate the mark with a “lack of quality or lack of prestige.”

Post-sale confusion, finally, refers to claims of trademark infringement “based on confusion of consumers other than direct purchasers,” such as “observers of those wearing an accused article.” For example, “no one would ever expect to purchase, nor intend to purchase a genuine Rolex watch for $25 at a flea market.” Any would-be customer is clearly in on the ruse, and happily buying an imitation. But once these “Rolexes” have been purchased and are worn in public, subsequent observers—“believing them to be genuine Rolex watches”—“might find themselves unimpressed with the quality . . . and consequently be inhibited from purchasing the real time piece.” Likewise, those “who see . . . the Rolex trademarks on so many wrists might find themselves discouraged from acquiring a genuine because the items have become too common place and no longer possess the prestige once associated with them.” The precise doctrinal contours vary, but only one federal circuit court (the D.C. Circuit) has yet to explicitly recognize this notion of post-sale confusion in some form. And though high fashion items

“Victor’s Secret,” a store for “adult videos as well as sex toys,” to tarnish the reputation of “Victoria’s Secret” as a “well-respected retailer of high-quality women’s lingerie”.


See Coca-Cola Co. v. Koke Co., 254 U.S. 143, 145-46 (1920) (noting that coca leaves are only used in the production of Coca-Cola after a “drastic process that removes from them every characteristic substance except a little tannin and still less chlorophyll”).

Deere & Co. v. MTD Prods., Inc., 41 F.3d 39, 43 (2d Cir. 1994).


Id. at 495. Professor Jeremy Sheff offers a highly useful systematized account of post-sale confusion doctrine in the courts, referring to this particular subtype of harm as “bystander confusion.” Jeremy N. Sheff, Veblen Brands, 96 MINN. L. REV. 769, 773-74 (2012).

Rolex Watch U.S.A., Inc., 645 F. Supp. at 495. In Professor Sheff’s account, this is referred to as “status confusion.” Sheff, supra note 295, at 774.

are prototypical cases, successful claims have involved products ranging from writing pens to auto body kits to hockey merchandise.

What anti-dilution and post-sale confusion protections have in common is their shift in focus away from the most well-recognized and celebrated functions of trademarks: reducing search costs and providing a reputational incentive for quality. In the absence of purchaser confusion, neither function is likely to be substantially impaired—mistakes are not being made in accurately finding genuine products to buy, experience, and recall when buying again. But dilution dispenses with confusion as a prerequisite entirely, and post-sale confusion by definition does not concern itself with the purchaser’s point of view. Understandably, then, critics are relatively quick to characterize these forms of protection as an aberration from the rest of trademark law. Dilution doctrine, skeptics say, “threatens to sever trademark law from its policy moorings,” and perhaps “lacks a coherent policy foundation” altogether. Along similar lines, post-sale confusion is labeled

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298 See, e.g., Hermès Int’l v. Lederer de Paris Fifth Ave., Inc., 219 F.3d 104, 106, 108 (2d Cir. 2000) (discussing whether an injunction should be issued to prevent Lederer from selling replicas of Hermès handbags, which have an average retail value of $5,000); see also Polo Fashions, 816 F.2d at 147 (affirming the judgment of damages for Polo Fashions, “a well-known fashion house” with a “reputation for quality”).

299 See, e.g., A.T. Cross Co. v. Jonathan Bradley Pens, Inc., 470 F.2d 689, 690 (2d Cir. 1972) (analyzing whether there was trademark infringement of plaintiff’s mechanical pens and pencils); T&T Mfg. Co. v. A.T. Cross Co., 587 F.2d 533, 535-36 (1st Cir. 1978) (same).


301 See, e.g., Bos. Prof’l Hockey Ass’n v. Dall. Cap & Emblem Mfg., Inc., 310 F.2d 1004, 1012 (5th Cir. 1962) (emphatically added) (recognizing that “a sports fan in his local sporting goods store[] would not be likely to think that defendant’s emblems were manufactured by or had some connection with plaintiffs,” but nevertheless that “the public would identify them as being the teams’ trademarks”).

302 Robert G. Bone, A Skeptical View of the Trademark Dilution Revision Act, 11 INTELL. PROP. L. BULL. 187, 187-188 (2007); see, e.g., Mark A. Lemley, The Modern Lanham Act and the Death of Common Sense, 108 YALE L.J. 1687, 1698 (1999) (“The most obvious example of doctrinal creep in trademark law is dilution . . . .”); Kenneth L. Port, The “Unnatural” Expansion of Trademark Rights: Is a Federal Dilution Statute Necessary?, 85 TRADEMARK REP. 525, 526 (1995) (arguing that the dilution cause of action “grossly expands trademark rights, and . . . is only justified by a now out-dated and discredited version of natural rights”); David S. Welkowitz, Reexamining Trademark Dilution, 44 VAND. L. REV. 531, 532 (1991) (“The protection offered by [anti-dilution] statutes differs from traditional trademark protection because they do not require a showing that consumers are likely to be confused . . . . This form of protection has the potential for granting a virtual exclusive property right in a trademark to its owner, something that traditional trademark law has eschewed.”); John Wolff, Non-Competing Goods in Trademark Law, 37 COLUM. L. REV. 582, 602 (1937) (“The very incongruiousness of Schechter’s theory with the tradition and the fundamental principles of the common law [of unfair competition and trademarks] forms the chief obstacle to its general acceptance . . . .”).
an “unnecessary” doctrine that “is not aligned with the core principles of trademark law.”

But what anti-dilution and post-sale confusion also have in common is their capacity to protect the fragile functionalities of well-established trademarks. Recall, for example, how placebo functionality is mediated by consumer associations: the boost to quality appears to rely both on the brand’s distinctiveness as well as its overall reputation. A Nike-branded golf club confers a putting advantage above and beyond a Gucci-branded golf club; a Red-Bull-branded drink confers a cognitive advantage above and beyond a Sprite-branded drink. Where there is dilution by blurring, unrelated new goods and services have been added to consumers’ associations—so “Nike” ceases to immediately convey “sporting excellence” because there are Nike-branded diapers on the market and “Red Bull” ceases to immediately convey “energy and focus” because there are Red-Bull-branded sleeping masks. The effects of dilution by tarnishment are perhaps even more straightforward. When something as simple as the color pink can enhance the soothing effects of medicine, it’s difficult to imagine that linking the brand to unsavory or offensive subject matter won’t have the opposite effect. Likewise, even when consumers are not actually confused as to authenticity, negative reactions to counterfeit items appear to be “contagious, reaching authentic goods and negating any performance-enhancing effect” by creating false subconscious associations of inferiority.

Social functionality may be affected by dilution in similar ways, but it clearly depends on the viability of post-sale confusion doctrine in particular. Whether purchased knowingly or not, the circulation of cheap and shoddy “Louis Vuitton” handbags directly undermines the mark’s ability to “stake a

303 Connie Davis Powell, We All Know It's a Knock-Off! Re-Evaluating the Need for the Post-Sale Confusion Doctrine in Trademark Law, 14 N.C. J.L. & TECH. 1, 3-4 (2012); see, e.g., Sheff, supra note 295, at 775-76 (2012) (describing post-sale confusion doctrine as “an odd role for trademark law to play,” at odds with “the conventional theoretical account of trademarks,” and arguing that it “be discarded entirely”); Mark A. Lemley & Mark McKenna, Irrelevant Confusion, 62 STAN. L. REV. 413, 445 n.125 (2010) (criticizing the post-sale confusion doctrine because it is unclear whether confusion “actually affects purchasing decisions”); cf. Kal Raustiala & Christopher Jon Sprigman, Rethinking Post-Sale Confusion, 108 TRADEMARK REP. 881, 884 (2018) (arguing that current post-sale confusion doctrine fails to map onto “the core purposes of trademark law, which are to allow consumers to economize on search costs, and to facilitate producers’ incentives to invest in product quality”).

304 See supra note 186 and accompanying text.

305 See generally Linford, supra note 172, at 95 (acknowledging that dilution by blurring “might unravel the psychological performance bump” of certain brand-mediated placebo effects).

306 See supra notes 10-15 and accompanying text.

307 Linford, supra note 172, at 96; see generally supra notes 187-88 and accompanying text.
The same can be said for marks that convey charitability instead. Over time, the existence of knock-off (PRODUCT) headphones or TOMS shoes means that wearing a pair no longer guarantees that any contribution has been made towards positive ends. It is the perspective of observers—not purchasers—that determines social functionality; post-sale confusion allows trademark infringement to address that perspective.

Without belaboring the point, analogous claims can be made with respect to organizational, design, and interlocking functionality as well. Even if the original purchaser is not confused by a fake “USB-ready” device, for example, there may be others exposed to its poor performance—observers, borrowers, secondhand buyers, repairmen—who quickly conclude that the certification is meaningless. Or consider dinner guests and restaurant patrons served utterly undrinkable fake “Napa Valley” wines; whatever power exists in the mark to promote industry buy-in will steadily evaporate. Interlocking functionality is likewise vulnerable even in the absence of purchaser confusion. Even obviously fake “Lego” bricks or “Keurig” pods that successfully interlock reduce the true brand owner’s control over downstream markets. And if it fails to interlock with the real product (or perhaps even damages it), consumers may erroneously blame the real product rather than the imitator (or, through warranty, shift the costs of replacement and repair to the true brand owner). Design functionality, meanwhile, is a direct product of distinctiveness—and even wholly unrelated goods that copy the same design reduce that distinctiveness. If the characteristic shape of, say, a Zippo lighter no longer immediately conveys the Zippo brand, then it becomes necessary to rely on more costly and limiting ways of ensuring brand prominence.

To reiterate, this is far from a full-throated defense of anti-dilution and post-sale confusion protections. But to the extent that they are responsible—indeed, wholly necessary—for protecting fragile functionalities, they cannot truly be considered an aberration relative to the rest of trademark law. As demonstrated throughout this Article, search-cost reductions and quality-reputation incentives are at their core analogous to more exotic phenomena like placebo effects and conspicuous consumption. Enabling those phenomena to manifest through exclusivity of marks is not an incoherent result. On the contrary, these forms of additional protection suggest that the

\footnote{Shieff, supra note 159, at 774; see also Beebe, supra note 138, at 851-55 ("[T]he doctrine of post-sale confusion . . . holds that even if consumers are not confused at the point of sale as to the true source of the goods that they are purchasing, other consumers may be confused as to the source of those goods after the sale.").}

\footnote{See supra notes 215-223 and accompanying text.}
negative space of trademark law actually exhibits a meaningful connection to its positive scope: non-fragile functionalities defeat trademark eligibility, but fragile functionalities are the reason for trademark protection in all its variable forms.

C. Fragility and Welfare Effects

A few brief examples follow, to demonstrate the very real benefits—and potential harms—of a trademark system that tolerates and protects fragile functionalities broadly. First, consider a hypothetical pharmaceutical market with only two goods: the unbranded, generic version of drug “X” and the identical, formerly patented version that is trademarked “XTRA,” sold by PharmCo. Any company is free to make and sell drug X, so competition among generics is robust. But XTRA, as a result of placebo effect functionality, is superior to the generic version to at least some degree—patients report fewer side effects and greater pain relief. Accordingly, though the precise differential varies from person to person, any given consumer receives an equal or greater amount of utility from XTRA than from drug X.

Thus, take a simple numerical example for the demand side of the market, assuming each consumer wants (at most) one pill of drug X per time period:

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<th>Generic Utility</th>
<th>XTRA Utility</th>
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</tr>
<tr>
<td>E</td>
<td>9</td>
<td>14</td>
</tr>
</tbody>
</table>

Assume also, for the time being, that all manufacturers face an identical marginal cost of $1 per pill, with trivial fixed costs. The generic manufacturers exist in a state of perfect competition, so their price will tend to settle on or around that same $1 point. In contrast, PharmCo enjoys some leeway in the exact price that it is able to charge for XTRA, since it is acting as a quasi-monopolist. That being said, pricing XTRA too high means that consumers will substitute for the readily available drug X.

Assuming PharmCo is pricing rationally—that is to say, maximizing profits—it would price at $4. Doing so, it garners sales from consumers D and E, for a total of $8 in revenue, and $6 in profit. Consumers A, B, and C choose
the generic, since their utility differential is less than the difference in cost. The following surpluses result:

Table 2: PharmCo and Generic Surplus

<table>
<thead>
<tr>
<th>Consumer / Producer</th>
<th>Surplus</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>2</td>
</tr>
<tr>
<td>B</td>
<td>4</td>
</tr>
<tr>
<td>C</td>
<td>4</td>
</tr>
<tr>
<td>D</td>
<td>8</td>
</tr>
<tr>
<td>E</td>
<td>10</td>
</tr>
<tr>
<td>PharmCo</td>
<td>6</td>
</tr>
<tr>
<td>Generics</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>28</td>
</tr>
</tbody>
</table>

Compare this outcome to a scenario where XTRA does not exist—only generics. Again, perfect competition suggests that the price per pill will stabilize at $1. The consumers’ utility from taking generic drug X is unchanged. The following surpluses result:

Table 3: Generic-Only Surplus

<table>
<thead>
<tr>
<th>Consumer or Producer</th>
<th>Surplus</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>2</td>
</tr>
<tr>
<td>B</td>
<td>4</td>
</tr>
<tr>
<td>C</td>
<td>4</td>
</tr>
<tr>
<td>D</td>
<td>6</td>
</tr>
<tr>
<td>E</td>
<td>8</td>
</tr>
<tr>
<td>Generics</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>24</td>
</tr>
</tbody>
</table>

Not only is total surplus lower, but two consumers are clearly worse off—D and E—and no consumer is in a better position. Real value has been lost, merely by taking away the quality enhancement associated with XTRA’s placebo effect.

Now, it may actually be the case that PharmCo faces higher costs than the generic manufacturers. Maintaining the XTRA trademark—including advertising and, if need be, legal enforcement—creates expenditures that the other companies need not worry about, and in all other respects the products
are identical. Some of these costs (like advertising) might be largely fixed regardless of units sold, whereas others may be true marginal costs (like stamping a logo onto each pill). But even so, as long as the placebo effect creates a sufficiently large boost to utility, there is enough room for a greater price differential to support the XTRA market. Indeed, in the numerical example above, even if PharmCo's marginal cost per pill were double that of the generic ($2), little would change: it would still price at $4, receive D and E as customers, and generate $8 in revenue. PharmCo's profits would decrease to $4, and total surplus would accordingly drop to 26—both still higher than in the world without XTRA.310

Returning to certification marks provides another example. Imagine a new type of hi-fidelity audio jack, SONAport, created by a standards—setting organization using several different patented technologies. SONAport becomes fairly popular, and product manufacturers begin to implement the technology on everything from desktop computers to cheap, disposable plug-in devices. Unfortunately, this leads to considerable variation in quality—some products visually appear to (or on their packaging claim to) have SONAport compatibility, but attempting actual audio play yields only poor-quality noise, static, or silence. Even good-faith implementing manufacturers have mixed performance results because the technology is still novel and challenging to implement. Over time, consumers looking for SONAport products are averse to purchasing from any manufacturer without either a well-established name in the electronic audio market or a very generous trial period and return policy. As a result, only a small number of companies are able to successfully sell devices implementing the standard, and at a relatively higher cost—a poor result for producers and consumers alike.

Imagine instead that the patent owners band together to create a certification mark, SONAready, certifying devices’ successful operability with SONAport. They are able to do so fairly cheaply and easily; voluntarily submitted product test samples and boilerplate licensing agreements do most of the work, and they are already on the lookout for infringers due to their stake in the underlying patents. The patent owners, moreover, have a natural financial incentive to police such a mark: by ensuring customers’ interactions with SONAport are smooth and seamless, they are helping to grow the reputation and demand for their technology, with more royalties to follow. By credibly signaling SONAport compatibility, the mark enables a greater number of manufacturers to successfully market SONAport products at a lower cost. As a result, the overall price for those products is lower. There may be spillover effects as well. Insofar as the mark allows smaller, less well-

310 Note, moreover, that this example relies on none of the other benefits typically associated with trademarks, such as reductions in search costs or reputation-based incentives toward quality.
established manufacturers to compete more easily with larger ones, the mark may have procompetitive and equalizing effects in the wider audio electronics market. In short, permitting fragile forms of trademark functionality can potentially be welfare-enhancing.

But at the same time, there may be significant distributional costs. For example, recall the earplugs experiment showing placebo functionality; subjects given 3M-branded earplugs achieved higher scores on a noise-disrupted math test than subjects given identical (but unlabeled) earplugs. Another experiment by the same authors found that, among subjects who reported that stress tended to inhibit their productivity, a Kaplan GMAT preparation app was more helpful than an identical, but fictionally branded, “Laserprep” app. Like the numerical examples presented above, permitting this form of functionality may translate into higher test score averages overall—but it also widens the achievement gap between rich and poor. In a world where test scores and grades feed into zero-sum competitions for greater opportunities, students who can’t afford name-brand school supplies may be subject to a real, metacognitive, and possibly even self-reinforcing disadvantage.

Likewise, consider the various medical examples of placebo functionality. Costlier, name-brand pharmaceuticals outperform their cheaper, generic counterparts. Those who can afford the former will experience less pain and greater therapeutic effect; those who can’t will suffer the difference. Inequitable access to medical resources is, no doubt, a much larger and more severe problem than the trademark differential alone; potentially life-saving treatments may be denied entirely on the basis of ability to pay. But contrast the trademark differential with another cause of inequitable access due to intellectual property: patents. Granting inventors a temporary monopoly position over their invention means higher prices and greater scarcity for buyers in the short term. But in the long run, per incentive theory, as those

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311 See Garvey et al., supra note 3, at 939 (“[P]erformance brand heightens state self-esteem and, as a result, (1) reduces anxiety and thereby improves performance, and (2) increases consumer attributions for performance to the self . . . .”).

312 Id. at 939-42 (“When individuals held the belief that stress is debilitating, a stronger performance brand resulted in a positive performance placebo . . . in which decreased anxiety resulted in enhanced performance.”).

313 See supra notes 170-73, 179-80 and accompanying text.

314 See NARD, supra note 36, at 2 (2008) (stating that, via financial rewards, patent laws incentivize invention, information disclosure, licensing, and the investment of capital in the innovation process); Sipe, supra note 244, at 1046 (“A system of patent law thus offers a mechanism by which to incentivize innovation and capitalize on the overall benefits to the economy as a whole.”); STUDY OF SUBCOMM. ON PATS., TRADEMARKS, & COPYRIGHTS OF THE COMM. ON THE JUDICIARY, 85TH CONG., AN ECONOMIC REVIEW OF THE PATENT SYSTEM, 33 (Comm. Print 1958) (prepared by Fritz Machlup) (“The thesis that the patent system may produce effective profit incentives for inventive activity and thereby promote progress in the technical arts is widely accepted.”).
monopoly profits drive greater innovation and formerly patented inventions pass into the public domain, *everyone*’s access is gradually improved. In other words, the prohibitively expensive, patented therapy of today will eventually become commonplace and cheaply available to all. Patents, at least in theory, could thus satisfy something like John Rawls’s maximin principle for distributive justice.\textsuperscript{315} That same moral justification, however, cannot be given to the trademark differential—there is no mechanism in the law itself for eventually spreading or sharing access with those less well off. Instead, it is exclusively those with greater resources who benefit, in perpetuity.

Consider, too, the overall effects of tolerating fragile types of functionality on marketplace competition. Placebo and social functionalities suggest that new market entrants face an artificial barrier to entry due to trademarks alone. Even if the products are otherwise identical, consumers may perceive the unbranded or newcomer-branded versions as automatically inferior and be unwilling to pay a comparable price. Interlocking functionality can act as an even more complete exclusion, depending on how strict consumers’ preferences are with respect to matching colors, fitting toy parts together, and so on. In this sense, interlocking functionality risks many of the same competitive harms as tying arrangements—selling one product “on the condition that the buyer also purchases a different (or tied) product.”\textsuperscript{316} Organizational functionality goes yet another step further, better enabling a group of firms to advance their collective interests. Their group efforts—from advertising to lobbying—could naturally be to the detriment of those in a competing industry or region (consider wines just outside of Napa Valley, or breweries inside). To wit, even within a certification mark’s nominal scope, certification marks can be wielded or redefined “to exclude certain businesses inconsistently or arbitrarily,” with the effect of suppressing competition.\textsuperscript{317} By enforcing exclusive control over fragile functionalities, the long-term result

\begin{itemize}
  \item \textsuperscript{315} See \textsc{John Rawls, A Theory of Justice} 302 (1971) (holding that, for “[s]ocial and economic inequalities” to be justified, they must ultimately be for “the greatest benefit of the least advantaged”); see also \textsc{Robert P. Merges, Justifying Intellectual Property} 109-20 (2011) (mapping Rawlsian principles onto patent and copyright law).
  \item \textsuperscript{316} \textsc{N. Pac. Ry. Co. v. United States}, 356 U.S. 1, 5-6 (1958). Such arrangements have long been recognized as having a “creeping” tendency to “create a monopoly.” \textsc{Int’l Salt Co. v. United States}, 332 U.S. 392, 396 (1947); see also \textsc{Jefferson Parish Hosp. Dist. No. 2 v. Hyde}, 466 U.S. 2, 9 (1984) (“It is far too late in the history of our antitrust jurisprudence to question the proposition that certain tying arrangements pose an unacceptable risk of stifling competition and therefore are unreasonable . . . .”), superseded by statute on other grounds, \textsc{Patent Misuse Reform Act of 1988, Pub. L. No. 100-703, 102 Stat. 467 (codified at 35 U.S.C. § 271(d)).}
  \item \textsuperscript{317} \textsc{Jeanne C. Fromer, The Unregulated Certification Mark(et), 69 Stan. L. Rev. 121, 123 (2017).}
\end{itemize}
in some sectors may be quasi-monopolistic: reduced output, higher prices, and harm to consumers and would-be producers alike.\footnote{This issue is likely exacerbated by trademark doctrines that accord additional privileges to particularly longstanding and wealthy firms—like dilution’s limited application to “famous” marks. \textit{See supra} note 283 and accompanying text.}

That being said, even if one finds the distributional and anticompetitive consequences of fragile functionalities concerning, it is a separate question whether trademark law itself ought to address them. As outlined in the next section, the answer to that question is almost certainly no. The practical and conceptual challenges that would come from proscribing fragile functionality (while simultaneously maintaining the traditional reasons for having a trademark regime at all) are considerable. A better answer, as it turns out, may lie in the complementary legal regime of antitrust law instead.

**D. Breaking Fragility**

To start, imagine a hypothetical trademark regime that forbids fragile and non-fragile functionality alike, as a rule. That is, imagine if courts took the terms of \textit{TrafFix} at true face value: “[A] product feature is functional, and cannot serve as a trademark, if it is essential to the use or purpose of the article or if it affects the cost or quality of the article.”\footnote{TrafFix Devices Inc. v. Mktg. Displays Inc., 532 U.S. 23, 24 (2001) (quoting Qualitex v. Jacobson Prods. Co., 514 U.S. 159, 165 (1995)) (internal quotation marks omitted).} As noted earlier, this regime would seem to forbid any trademark that successfully performs its traditional, celebrated functions of reducing search costs or incentivizing quality through reputation.\footnote{\textit{See supra} notes 133-35 and accompanying text.} Even if a trademark lacked secondary meaning at the time of application, as soon as it gained such recognition among the consuming public, it would have to be invalidated as functional. In such a world, it’s difficult to imagine any firm incurring the costs of branding at all—with an accompanying parade of horribles in the marketplace as a result.

So then assume that the courts or Congress simply make an exception for the traditional functions of marks, but otherwise continue to enforce a prohibition against fragile and non-fragile functionalities alike. Observe that all \textit{certification} marks would still eventually be invalidated for their distinct cost-saving and quality-improvement effects, categorized earlier as a kind of organizational functionality.\footnote{\textit{See supra} notes 210-13 and accompanying text.} As with the traditional functions of marks overall, these are well-recognized and celebrated effects.\footnote{\textit{See, e.g.}, Fromer, \textit{supra} note 317, at 127-28 (“Certification marks serve a similar role [as trademarks] in providing shorthand information to consumers that certified goods or services comply with standards about which they might care, such as complex religious rules for being kosher.”). The courts might,
therefore, make another carveout exception from the overall rule to allow for certification marks to carry out their clearly intended function.

Even if these particular species of fragile functionality can be set aside, however, the remaining ones still appear largely unavoidable for trademark owners. Consider placebo functionality. The positive effects on health, taste, performance, and other metrics manifest as a result of consumer belief (conscious or otherwise) in the superior quality of the product. But again, this is precisely the same belief that is contemplated by having a trademark system at all. It does not seem possible for a producer to, on the one hand, communicate to consumers that its product is excellent (thereby fulfilling the traditional reputation-quality function of marks) and, on the other hand, prevent the psychosomatic consequences of that message being internalized by the consumer. In a similar vein, consider social functionality. The cultural cachet associated with high-status brands is, in many ways, a natural by-product of building a longstanding reputation for quality. So too with conspicuously charitable marks—the company’s deliberately cultivated reputation, in terms of business practices and giving, is the reason its mark carries social meaning. Even more challenging, marks can develop a cultural significance wholly independent of a producer’s intentions. Sidney Swartz, who created the iconic Original Yellow Timberland Boot in 1973—a waterproof design targeted specifically at New Englanders—could hardly have predicted its rise in recent decades as a coast-to-coast, hip-hop style icon.\(^{323}\) Even if a producer somehow manages to thread the needle of establishing a valuable reputation without simultaneously courting social functionality, the consumers might just create it themselves. In a world with these seemingly unavoidable invalidation risks, the incentives to engage in branding at all largely disappear.

Design and interlocking functionality are less universal, and so in some ways less problematic for this hypothetical trademark regime as a whole. But they too are largely unavoidable, at least within certain classes of marks. A trademark based on a product’s overall shape allows for certain cost savings. A color mark creates certain match-quality advantages. Per the examples given earlier, many logos likely do as well.\(^{324}\) A trademark regime that even carefully forbids fragile functionality, in other words, may still foreclose entire categories of nontraditional marks. What would remain is, at best, a substantially less rich and diverse landscape for trademarks. For the reasons given above, it more likely would mean no trademarks at all.

\(^{323}\) *Secrets of an Icon: The Original Yellow Boot™*, TIMBERLAND https://www.timberland.com/blog/archive/original-yellow-boot.html [https://perma.cc/NRC2-GGBM].

\(^{324}\) See supra notes 233-38 and accompanying text.
E. Improving Fragility

Invalidating trademarks that exhibit fragile functionalities may not be possible without unraveling the entire system, but an unusual case in the field of antitrust law suggests an avenue for future research into ameliorative solutions where needed.

As outlined earlier in this Part, granting one producer (or a group of producers) exclusive control over a fragile functionality can have anticompetitive effects. Those effects might, in some circumstances, be large enough to swamp the welfare gains from preserving the fragile functionality in the first place. At the same time, nesting a full market competition analysis within trademark validity decision making—truly adjudicating the balance on a case-by-case basis for every application or dispute—cannot be the correct approach. As a matter of positive law, the Supreme Court’s preference for practical heuristics in trademark functionality is clearly established.\(^\text{325}\) And as a matter of normative goals, the complexity and cost of these (necessarily frequent) analyses would pose their own major threat to efficiency. Moreover, at least with respect to processing trademark applications and appeals, there is simply a lack of relevant expertise and human resources; as of this writing, the PTO has only seven economists on staff.\(^\text{326}\) There were over four hundred thousand new trademark registrations in FY2020.\(^\text{327}\)

Rather than task trademark doctrine and adjudicators with fine-tuning competition directly, antitrust law may be able to shoulder the burden. In particular, the doctrine governing essential facilities is a surprisingly intuitive fit to address the more egregiously anticompetitive cases of fragile functionality. In brief, the essential facilities doctrine prevents “one firm with monopoly control over an asset that serves as a vital input for its competitors [from] refus[ing] to grant a competitor access.”\(^\text{328}\) For example, in the first Supreme Court case on the issue, one group of railroads held exclusive control over the only bridges and switching yards accessing St. Louis; the Court held

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\(^{325}\) See supra Part I.


\(^{328}\) Robert Pitofsky, Donna Patterson & Jonathan Hooks, The Essential Facilities Doctrine Under U.S. Antitrust Law, 70 ANTITRUST L.J. 443, 447 (2002); see also Alaska Airlines, Inc. v. United Airlines, Inc., 948 F.2d 536, 542 (9th Cir. 1991) (“[T]he essential facilities doctrine imposes liability when one firm, which controls an essential facility, denies a second firm reasonable access to a product or service that the second firm must obtain in order to compete with the first.”); Byars v. Bluff City News Co., 609 F.2d 843, 856 (6th Cir. 1979) (“[A] business or group of businesses which controls a scarce facility has an obligation to give competitors reasonable access to it.”).
that the group was obligated to grant reasonable access to competing railroads, since a failure to do so would "close the door to competition" in the region entirely.\(^{329}\) Many of the successful essential facilities cases involve these kinds of bottleneck, physical assets: a telecommunications company required to provide access to its local service network for long-distance competition;\(^ {330}\) a stadium owner prevented from excluding competing franchises or sports leagues;\(^ {331}\) or an electric utility obligated to sell power wholesale to municipalities competing in the retail market.\(^ {332}\) But the exclusive control conferred by intellectual property law has also given rise to a number of cases. Copyrighted news content,\(^ {333}\) telephone directory listings,\(^ {334}\) software,\(^ {335}\) and even movie promotional materials\(^ {336}\) have all, for example, been subject to essential facilities scrutiny.

To be clear, there is no essential facilities case law directly on point for trademarks in particular. But the idea is far from foreign to antitrust history.

\(^{330}\) See MCI Commc'ns Corp. v. AT&T Co., 708 F.2d 1081, 1132-33 (7th Cir. 1983) ("[T]he antitrust laws have imposed on firms controlling an essential facility the obligation to make the facility available on non-discriminatory terms.").
\(^{331}\) See Hecht v. Pro-Football, Inc., 570 F.2d 982, 992 (D.C. Cir. 1977) ("The essential facility doctrine, also called the 'bottleneck principle,' states that 'where facilities cannot practically be duplicated by would-be competitors, those in possession of them must allow them to be shared on fair terms."); Fishman v. Est. of Wirtz, 807 F.2d 520, 539-40 (7th Cir. 1986) (affirming a trial court finding that Chicago Stadium was an essential facility and that refusing to allow competitors to lease it violated the essential facility doctrine).
\(^{332}\) See Otter Tail Power Co. v. United States, 410 U.S. 366, 377-79 (1973) ("The record makes abundantly clear that Otter Tail used its monopoly power in the towns in its service area to foreclose competition or gain a competitive advantage, or to destroy a competitor, all in violation of the antitrust law.").
\(^{333}\) See, e.g., Associated Press v. United States, 326 U.S. 1, 21-22 (1945) ("[A]greement between AP and the Canadian Press, under which AP secured exclusive right to receive the news reports of the Canadian Press and its members, was also, when taken in connection with the restrictive membership agreements, in violation of the Sherman Act.").
\(^{334}\) See, e.g., BellSouth Advert. & Publ'g Corp. v. Donnelly Info. Publ'g, Inc., 719 F. Supp. 1551, 1562 (S.D. Fla. 1988), rev'd on other grounds, 999 F.2d 1436 (11th Cir. 1993) (describing accusations of antitrust violations in the context of a corporation refusing to provide a competitor with business classifications and updates essential to competing in the telephone directory business); Rural Tel. Serv. Co. v. Feist Publ'ns, Inc., 737 F. Supp. 610, 617-20 (D. Kan. 1990), rev'd on other grounds, 506 F.2d 765 (10th Cir. 1992) (suggesting that white page listings could be essential facilities, though evidence in the present case "fell far short of that adduced in other essential facilities cases").
\(^{336}\) See, e.g., Foster Exch., Inc. v. Nat'l Screen Serv. Corp., 431 F.2d 334, 338-40 (5th Cir. 1970) (discussing the alleged monopolistic behavior of a company that produced standard accessories for motion pictures).
Consider the Federal Trade Commission’s complaint in *In the Matter of Borden, Inc.*, against the maker of ReaLemon juice:

[Borden] has adopted and placed into effect and carried out various policies, acts and practices to lessen, restrain, eliminate and prevent the distribution or sale of reconstituted lemon juice . . . in the United States. Among such monopolistic policies, acts and practices, [Borden] engaged in the following: . . .

(e) Erecting barriers to entry into the reconstituted lemon juice market through extensive trademark promotion and advertising which has *artificially differentiated* Borden’s reconstituted lemon juice from comparable products of its competitors . . . 337

In determining the appropriate relief, the administrative law judge’s initial decision stated that “[f]or competition to enter the processed lemon juice industry, the barrier to entry which inheres in the ReaLemon trademark must be eliminated.”338 Reasoning by analogy to various patent and copyright cases, the administrative law judge held that “the only effective relief . . . requires the licensing of the ReaLemon brand name to others wishing to enter the production, marketing and sale of processed reconstituted lemon juice.”339 The FTC’s final order did not go so far as to impose this mandatory licensing, finding it unnecessary on top of the other remedies imposed, but explicitly stated such a remedy would be appropriate in more extreme or persistent cases.340 And the Sixth Circuit, when affirming the final order, appeared inclined to agree.341

Antitrust law is better suited, in many ways, to determine whether a trademark’s power poses an unacceptable threat to competition. As noted earlier, the careful balancing of pro- and anti-competitive effects is familiar territory to antitrust doctrine, with its rule-of-reason framework developed and honed through more than a century of case law.342 The Department of Justice and FTC, moreover, have precisely the relevant expertise needed to

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337 Borden, Inc., 92 F.T.C. 669, 671 (1978) (complaint) (emphasis added); see also id. at 763 (initial decision) (“[T]he price differences between ReaLemon lemon juice and competing brands reflected artificial differentiation due to brand acceptance, length of time in the market, etc. . . . [rather than] genuine and actual product differences.”).

338 Id. at 774.

339 Id. at 775.

340 Id. at 807 (final order) (“While an order requiring licensing or suspension of a trademark may be ordered as a means of dissipating . . . monopoly power, we are mindful that the remedy is a severe one, and should be imposed only where less drastic means appear unlikely to suffice.”).

341 Borden, Inc. v. FTC, 674 F.2d 498, 512 (6th Cir. 1982), vacated and remanded, 461 U.S. 940 (1983) (affirming the final order and recognizing that, at least in the abstract, trademarks with such power could “unreasonably restrict competition” as prohibited by the antitrust laws).

342 See supra notes 236-251 and accompanying text.
perform sophisticated market analyses—analyses that would be outside the current capacity of the USPTO. Indeed, well beyond essential facilities doctrine in particular, antitrust enforcers seem more than willing to engage with and regulate the proper boundaries of intellectual property rights vis-à-vis open and fair competition.

The ReaLemon case was, to say the least, highly controversial. In particular, after political turnover among the commissioners and chairman, the FTC ultimately reached settlement with Borden through a weaker, modified order that largely repudiated the earlier holding. Even at a basic level, it would require considerable intellectual effort to adequately address how antitrust law might be sensibly, predictably, and systematically applied to trademark ownership at all. But as the evidence of trademarks' psychological, social, and economic power has only grown, it may be worth the inquiry. If one is deeply concerned about the anticompetitive effects of the phenomena described throughout this Article, antitrust law has the potential to provide a more comprehensive and sound approach than trademark law itself can hope to offer.

343 See, e.g., ANTITRUST MODERNIZATION COMM’N, REPORT AND RECOMMENDATIONS 47 (2007), https://govinfo.library.unt.edu/amc/report_recommendation/amc_final_report.pdf [https://perma.cc/VGE3-JZH] (determining that the expanded merger review process used since the 1970s “has led to the development of substantial expertise within” the DOJ and FTC); Diane S. Owen, Economists in the Antitrust Division, CSWEP NEWS, no. 1, 2016, at 7, https://www.justice.gov/atr/file/economists-in-the-antitrust-division/download [https://perma.cc/6QAN-FRRC] (“Every merger and conduct investigation has at least one economist on it from the outset, and complex or data-rich matters can have six or eight with different areas of responsibility divided up by interest and skills.”).


345 See, e.g., J. Thomas McCarthy, Trademarks, Antitrust, and the Federal Trade Commission, 13 J. MARSHALL L. REV. 151, 153-57 (1979) (rejecting the FTC’s conclusion and stating that “it is very wrong and paternalistic to refuse to take consumer demand as a given and to second-guess it by characterizing demand based on brand loyalty as ‘irrational’ or ‘imaginary’”); Yale Brozen, New FTC Policy from Obsolete Economic Doctrine, 41 ANTITRUST L.J. 477, 477-78 (1972) (arguing that the FTC’s notions that “the cost of products to consumers is high because of advertising and that advertising is a barrier to entry behind whose shelter firms behave monopolistically . . . are both old and obsolete” and, furthermore, “discarded in economic analysis as erroneous—as inconsistent with economic theory and as unfounded”).

CONCLUSION

More than a century of case law and repeated interventions by the Supreme Court have failed to produce a truly coherent theory of trademark functionality. The courts remain split in myriad ways, no less now than they were at the very beginning. The doctrine’s core formulation—prohibiting trademark protection for product features that affect cost or quality, or are essential to use or purpose—offers little help. The precedent can’t mean what it actually says, not without clashing against longstanding trademark principles and well-documented trademark phenomena.

At the same time, the most challenging edge cases suggest a more accurate and holistic theory of trademark functionality, one based on fragility. Fragile functionalities—effects on cost, quality, use, or purpose that depend on exclusivity—are permitted and celebrated. Only non-fragile functionalities, which can be freely shared without dissipating, actually bar eligibility. Reorienting around the concept of fragility not only better explains real-world case outcomes, but also unifies the treatment of marks and dress—and moots longstanding intercircuit disagreements. It suggests consistent answers, moreover, for some of the more divisive boundary issues in trademark law and policy today.

A fragility test for functionality does appear to act as a generally welfare-enhancing heuristic, comporting with the full history and purpose of the doctrine. But to be sure, permitting trademark protection for fragile functionalities will almost certainly lead to anticompetitive or regressive distributional effects in certain cases. As a matter of theory and practicability, the solutions to those problems likely need to be found in other fields of law—and, though deeply controversial and complex, antitrust may be one such area for future work.