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Functionality in Design Protection Systems

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FUNCTIONALITY IN DESIGN PROTECTION SYSTEMS

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*We can forgive a man for making a useful thing as long as he does not admire it. The only excuse for making a useless thing is that one admires it intensely.*¹

I. INTRODUCTION

Doctrines that regulate the boundaries between forms of intellectual property protection—“channeling” doctrines, as some have called them²—are important in many areas of intellectual property law. They are of particular interest in design. Design is protected under a patchwork of potentially overlapping intellectual property regimes, including, under U.S. law, copyright, trademark, design patent, and (for boat hull designs) a design registration scheme.³ In Europe, in addition to *sui generis* design registration protection at the Community level, unregistered design rights, copyright, and trademark protection may be available for designs.⁴

Both in U.S. and EU law, the functionality doctrine is the chief mechanism for mediating between the utility patent regime and regimes available to protect designs (e.g., design patent, design registration, and trademark). In the U.S., the most familiar setting for functionality disputes is in trademark law, particularly in connection with claims of trade dress involving product shapes. Courts perceive trade dress functionality to play a vital role in channeling certain types of innovation out of the trademark regime and into the utility patent regime, where rights are of relatively short duration:

The functionality doctrine prevents trademark law, which seeks to promote competition by protecting a firm’s reputation, from instead inhibiting legitimate competition by allowing a producer to control a useful product feature. It is the province of [utility] patent law, not trademark law, to encourage invention by granting inventors a monopoly over new product designs or functions for a limited time . . . after which competitors are free to use the innovation. If a product’s functional features could be used as trademarks, however, a monopoly over such features could be

¹ OSCAR WILDE, *THE PICTURE OF DORIAN GRAY* 17 (1890).

² See, e.g., Mark P. McKenna, *An Alternate Approach to Channeling?*, 51 WM. & MARY L. REV. 873 (2009).

³ See GRAEME B. DINWOODIE & MARK D. JANIS, *TRADE DRESS AND DESIGN LAW* ch. 1 (3d ed. 2010) (presenting an overview of the available forms of protection and some of the common boundary issues).

⁴ *Id.* at ch. 7 (describing Community design protection).

obtained without regard to whether they qualify as patents and could be extended forever (because trademarks may be renewed in perpetuity).⁵

Courts have invoked trade dress functionality in a number of recent trade dress cases,⁶ and scholars have continued to debate the precise contours of functionality in the trademark regime.⁷

Scholars have paid comparatively little attention to the role of functionality doctrine in design protection systems such as the U.S. design patent system and the EU Community Design regime.⁸ Most importantly, there is little evidence that any overarching vision of functionality as a channeling mechanism in this setting has ever crystallized.⁹

In this Article, we critically evaluate judicial application of the functionality doctrine, focusing on the U.S. design patent and EU design protection regimes. We argue that the doctrine as applied in these settings is aimless and inconsistent. Some simple doctrinal refinements would help, particularly in the U.S., where the Federal Circuit should definitively adopt the “dictated by” standard and should distinguish explicitly between functionality for invalidity purposes and functionality for scope purposes.

⁵ *Qualitex Co. v. Jacobson Prods. Co.*, 514 U.S. 159, 164–65 (1995).

⁶ *See, e.g., In re Becton, Dickinson & Co.*, 675 F.3d 1368, 1376–77 (Fed. Cir. 2012) (upholding functionality rejection); *Rosetta Stone Ltd. v. Google, Inc.*, 676 F.3d 144, 162 (4th Cir. 2012) (rejecting the argument that functionality shielded from trademark liability the use of Rosetta Stone’s marks as keywords); *Christian Louboutin S.A. v. Yves Saint Laurent America, Inc.*, 778 F. Supp. 2d 445 (S.D.N.Y. 2011) (appeal pending).

⁷ *See, e.g., Mark P. McKenna, (Dys)functionality*, 48 HOUS. L. REV. 823 (2011); Amy B. Cohen, *Following the Direction of Traffix: Trade Dress Law and Functionality Revisited*, 50 IDEA 593 (2010); Dan Burk *Cybermarks*, 94 MINN. L. REV. 1375 (2010); Harold L. Weinberg, *An Alternate Functionality Reality*, 17 J. INTELL. PROP. L. 321 (2010).

⁸ There has been some commentary. *See, e.g., Orit Fischman Afori, The Role of the Non-Functionality Requirement in Design Law*, 20 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 847 (2010); Perry J. Saidman, *Functionality and Design Patent Validity and Infringement*, 91 J. PAT. & TRADEMARK OFF. SOC’Y 313 (2009) [hereinafter Saidman, *Functionality*]; Perry J. Saidman, *The Crisis in the Law of Designs*, 89 J. PAT. & TRADEMARK OFF. SOC’Y 301 (2007) [hereinafter Saidman, *The Crisis in the Law of Designs*]; Steven A. Church, Note, *The Weakening of the Presumption of Validity for Design Patents: Continued Confusion Under the Functionality and Matter of Concern Doctrines*, 30 IND. L. REV. 499 (1997); Christopher J. Gaspar, Note, *The Federal Circuit Locks Down the Ornamentality Requirement: Best Lock v. Ilco Unican*, 23 J. CORP. L. 179 (1997); Perry J. Saidman & John M. Hintz, *The Doctrine of Functionality in Design Patent Cases*, 19 U. BALT. L. REV. 352 (1989).

⁹ In the U.S., it might seem obvious to say that functionality in the design patent system channels innovation out of design patents to utility patents, mirroring trade dress functionality. But given a design patent’s relatively short term and confined scope compared to utility patent protection, one might wonder how much enthusiasm we ought to have for such a mechanism.

II. FUNCTIONALITY IN U.S. DESIGN PATENT JURISPRUDENCE: A CRITICAL APPRAISAL

The U.S. design patent provisions call for designs to be *ornamental*¹⁰ in order to obtain protection. The term “non-functional” does not appear. In some cases, albeit the minority today, courts have attempted to assess ornamentality directly.¹¹ In most modern design patent cases, courts invoke the ornamentality requirement but analyze the issue by referring to non-functionality, treating it as the converse of ornamentality.¹² Neither rubric has proven successful. Ornamentality presents problems of subjectivity and administrative costs. Functionality generates deeper doctrinal problems and lacks a coherent normative vision.

A. THE UNATTRACTIVE RUBRIC OF “ORNAMENTALITY”

Judicial experience with the ornamentality rubric to date has suggested that its apparent benefits are minimal relative to its administrative costs. Two trends are evident from the cases that attempt to use ornamentality as a governing rubric. First, ornamentality may invite unconstrained judicial speculation into artistic merit, triggering a search for limiting principles (the same problem that bedevils the functionality doctrine). Second, ornamentality may devolve into a fairly trivial calculus of visibility. Both prospects are unattractive.

1. *Ornamentality as Artistic Beauty.* Congress inserted the ornamentality requirement in 1902 upon the request of Patent Commissioner Allen.¹³ The

¹⁰ 35 U.S.C. § 171.

¹¹ See *infra* II.A.

¹² See *infra* II.B.

¹³ See S. Rep. No. 57-1139, at 1-3 (1902) (including a letter from Commissioner Allen to the Department of the Interior noting his involvement with S. 4647). The Commissioner had originally proposed an “artistic” requirement, as opposed to “ornamentality.” See S. 4647 (1902) (granting protection to “any new, original, and artistic design for an article of manufacture”); S. Rep. No. 57-1139, at 1 (noting the Senate’s Committee on Patents amended the bill). Although the Committee never articulated why the bill was amended, this language was probably adopted in conformity with a prominent Second Circuit decision, *Rowe v. Blodgett & Clapp Co.* See 112 F. 61 (2d Cir. 1901) (quoting (then) district court Judge Townsend, “I decide this case upon the broader ground that patents for designs are intended to apply to matters of *ornament*, in which the utility depends upon the pleasing effect imparted to the eye, and not upon any new function” (emphasis added)); S. Rep. No. 57-1139 (highlighting *Rowe v. Blodgett*). However, terms such as “ornamental” and “artistic” were often used synonymously in the context of design patent adjudication. See *Ex parte Crane*, 1869 Dec. Comm’r Pat. 7 (1869), reprinted in WILLIAM EDGAR SIMONDS, *THE LAW OF DESIGN PATENTS* 60 (1874) (noting that the statute “does not say ‘ornamental’ design, or ‘artistic’ shape or configuration, and I am unable to perceive any good reasons why designs for utility are not fairly and properly embraced within the statute as well as

commissioner sought to alleviate confusion stemming from the inclusion of the term “useful” in connection with one of the design patent statute’s classes of eligible subject matter.¹⁴ The courts and the Patent Office had drawn upon utility patent jurisprudence to formulate many of the design patent law’s patentability conditions,¹⁵ so it was only to be expected that courts would look to utility patent law’s conception of the utility requirement to inform the meaning of “useful” in the design patent statute.¹⁶ Commissioner Allen seemed to view the ornamentality criterion as an important channeling device, ensuring that design patent law would occupy

its proper philosophical position in the field of intellectual production, having upon the one side of it, the statute providing protection to mechanical constructions possessing utility of mechanical function [(i.e., utility patent law)], and, upon the other side, the copyright law, whereby objects of art are protected, reserving to itself the position of protecting objects of new and artistic quality pertaining, however, to commerce, but not justifying their existence upon functional utility.¹⁷

Early interpretations of the new requirement equated ornamentality with aesthetic appeal.¹⁸ Some decisions measured aesthetic appeal by purporting to

those relating to ornamentation merely”). For background on the 1902 Act’s legislative history, see Jason Du Mont, *A Non-Obvious Design: Reexamining the Origins of the Design Patent Standard*, 45 GONZAGA L. REV. 531, 590 n.350 (2009–2010).

¹⁴ S. Rep. No. 57-1139, at 1; Rev. St. § 4929 (referring to “any new, useful, and original shape or configuration of any article of manufacture”); see also *Lehnbeuter v. Holthaus*, 105 U.S. 94, 96 (1882) (cementing this confusion by declaring that patentability rested on whether the design was “new and useful”).

¹⁵ See HECTOR T. FENTON, *THE LAW OF PATENTS FOR DESIGNS* 15 (1889) (stating, “It is now tolerably well settled that design patents stand on as high a plane as other patents . . .”). The design patent statute’s incorporation clause helped pave the way for application of utility patent precedent to design. However, it is not clear that this provision was originally intended to do so. See generally Du Mont, *supra* note 13 (tracing the incorporation clause’s complete history). Today, the incorporation clause mandates that “provisions of this title relating to [utility] patents for inventions shall apply to patents for designs, except as otherwise provided.” 35 U.S.C. § 171.

¹⁶ *Lehnbeuter*, 105 U.S. at 96–97 (noting that design patents could meet the utility requirement by proving infringement and relying on the utility patent case *Mowry v. Whitney*, 81 U.S. 620 (1871)); *Westinghouse Electric & Mfg. Co. v. Triumph Electric Co.*, 97 F. 99, 102 (6th Cir. 1899) (suggesting that the usefulness condition had been invoked “merely . . . to indicate that things which were vicious and had a tendency to corrupt, and in this sense were not useful, were not to be covered by the statute,” a formulation apparently borrowed from the utility standard of *Lowell v. Lewis*, 15 F. Cas. 1018 (C.C. Mass. 1817), a utility patent case).

¹⁷ S. Rep. No. 57-1139, at 3 (1902).

¹⁸ Some early decisions attempted to build on the old case law of the usefulness requirement—

assess the designer's subjective intent, asking whether the designer had incorporated discrete features for the purpose of ornamentation or embellishment.¹⁹ This rhetoric persisted for many years.²⁰

Other decisions framed the analysis by inquiring whether a purchaser of the article bearing the design would have been motivated to purchase the article based on the aesthetic appeal of the design.²¹ The court might simply ask whether the article was purchased because of the way it looked or because of what it did.²²

particularly cases holding that a design was "useful" if it satisfied aesthetic preferences. *See, e.g., Ex Parte Schulze-Berge*, 42 O.G. 293 (1888) (asserting that "[i]nvention in this field of art relates to the intangible, and its power consists in its ability to awaken pleasant and agreeable sensations, conceptions, and thoughts, and the *usefulness* involved is that which brings about these results" (emphasis in original)). *See also* SIMONDS, *supra* note 13, at 185 (collecting authority).

¹⁹ *See, e.g., Ex Parte Hartshorn*, 104 O.G. 1395 (1903), *reprinted in* U.S. GOVERNMENT PRINTING OFFICE, DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS IN PATENT AND TRADE-MARK AND COPYRIGHT CASES 172 (1904) (rejecting an application claiming a design for a wooden-shaped roller). Commissioner Allen concluded that nothing had been placed upon this article of manufacture for the purpose of ornamentation The construction shown is created for the accomplishment of a mechanical result, and while it would have been possible to place upon this article some ornamental design for its embellishment the construction presented here seems void of any such design. . . .

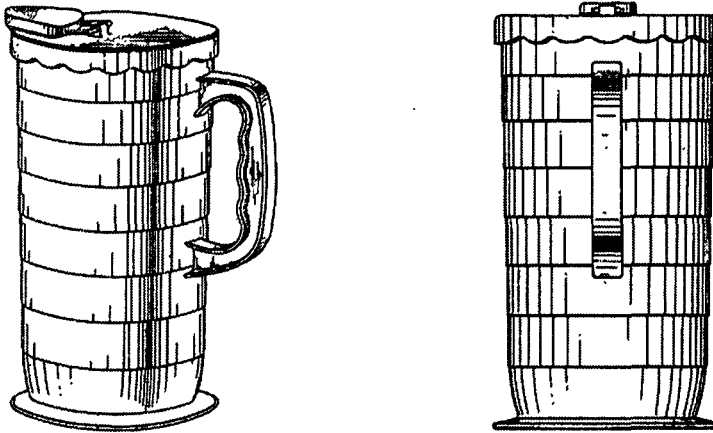
Id. at 171-72.

²⁰ *See, e.g., In re Carletti*, 328 F.2d 1020, 1022 (C.C.P.A. 1964) (asking whether the article of manufacture was "created for the purpose of ornamenting").

²¹ *Bolte & Weyer Co. v. Knight Light Co.*, 180 F. 412, 416 (7th Cir. 1910) (asserting that the lamp design at issue "[i]n itself . . . is no ornament" and that "[n]o person of taste would choose it for house decoration, unless it be to hide something of utility more undesirable in form"); *Williams Calk Co. v. Kemmerer*, 145 F. 928, 929 (3d Cir. 1906) (analyzing a design patent on a design for a horseshoe calk, commenting that "[i]t is impossible to suppose that it should be bought or used because of its aesthetic features. Its success as a calk would depend upon its useful, and not its artistic, character.").

²² *See, e.g., R.E. Dietz Co. v. Burr & Starkweather Co.*, 243 F. 592, 594 (2d Cir. 1917) (stating that "McArthur's lantern, or any lantern looking like that of the design, does not appeal to the aesthetic sense, and represents nothing more than a convenient shape for an article always purchased and used for what it will do—not for its looks"); *Nat'l Elec. Supply Co. v. United States*, 64 Ct. Cl. 617 (Ct. Cl. 1928) (invalidating a generator design patent; finding no ornamentation that would have indicated that the generator at issue was an "article of beauty," and accepting the defendant's argument based on *R.E. Dietz Co.*). A similar standard appeared, and later was generally rejected, in the context of aesthetic functionality for trade dress. *See Pagliero v. Wallace China Co.*, 198 F.2d 339, 343 (9th Cir. 1952) (asserting that a feature could be deemed functional if it was "an important ingredient in the commercial success" of a product or an "essential selling feature[]" of the product); *cf. Wallace Int'l Silversmiths, Inc. v. Godinger Silver Art Co.*, 916 F.2d 76, 81 (2d Cir. 1990), *cert. denied*, 499 U.S. 976 (1991) (rejecting the *Pagliero* standard and inquiring whether affording trademark protection to the ornamental feature would "significantly hinder competition by limiting the range of adequate available designs").

Whether articulated as a matter of a designer's probable intent or one of consumer preference, in many cases the rhetoric of ornamentality was a rather thin disguise for the exercise of raw artistic judgments from the bench. One court invalidated a design patent because the design was "lacking in symmetry, wanting in grace, and destitute of any appeal to the senses or emotions."²³ Another court faulted a plastic pitcher design (shown below) for lacking a "dominant artistic motif" and for failing to be "the product of aesthetic skill and artistic conception."²⁴ The pitcher was "not unattractive," but that was insufficient to satisfy the ornamentality requirement.²⁵



Other judges refused to be drawn in. A CCPA decision upheld the validity of a design patent on a concrete mixer design, commenting that "the beauty and ornamentation requisite in design patents is not confined to such as may be found in the 'aesthetic or fine arts.'"²⁶ The CCPA seemed to set the bar for beauty quite low, commenting that Congress passed the design patent statute to eliminate "much of the unsightly repulsiveness that characterizes many

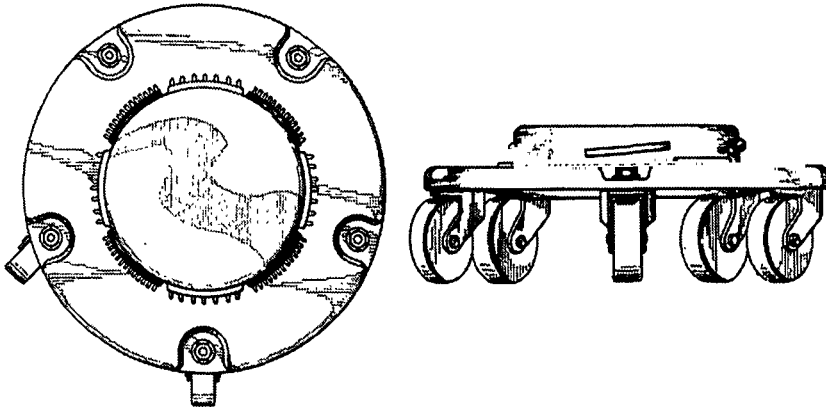
²³ *In re Stimpson*, 24 F.2d 1012, 1012 (C.A.D.C. 1928) (adding that the design had "no human interest, other than that aroused by the utilitarian nature of the machine").

²⁴ *Blisscraft of Hollywood v. United Plastics Co.*, 294 F.2d 694, 696 (C.A.N.Y. 1961).

²⁵ *Id.*

²⁶ *In re Koehring*, 37 F.2d 421, 422 (C.C.P.A. 1930). The court distinguished between "the ornamentation or beauty of a tool or mechanical device" and the beauty of "paintings, sculpture, and artistic objects, and which excites the aesthetic sense of artists alone". *Cf. Hartshorn*, 104 O.G. 1395, reprinted in U.S. GOVERNMENT PRINTING OFFICE, *supra* note 19, at 172 (remarking that "[d]esigns belong to the fine arts").

machines.”²⁷ Similarly, in the Eighth Circuit, a trash can dolly design sold under the trademark “Brute” (shown below) passed muster under the ornamentality requirement because it was not affirmatively ugly.²⁸



Learned Hand, in typical fashion, had anticipated the problem of tying ornamentality to judges’ aesthetic preferences—but he simultaneously perpetuated it. Remarking that “in aesthetics there are no standards,”²⁹ he recognized that the ornamentality analysis in a given case could not turn simply on the aesthetic sensibilities that an individual judge “may personally chance to possess.”³⁰ However, the ornamentality requirement did call for evidence of “at least a rudimentary aesthetic appeal. . . .”³¹ Attempting to apply this standard to a design for a tricycle, Learned Hand seemed to revert to his own subjective aesthetic assessment, although he purported to adopt a child’s perspective:

The plaintiff’s tricycle has neither proportion, ornament, nor style, which could in our judgment make the remotest appeal to the eye. If little children at once want to have it, it is because they can see the possibility of play that it opens to them. It can touch

²⁷ *Koebring*, 37 F.2d at 422.

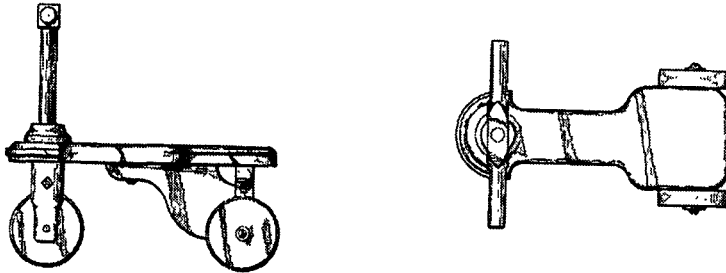
²⁸ *Contico Int’l, Inc. v. Rubbermaid Comm. Prods., Inc.*, 665 F.2d 820, 825 (8th Cir. 1981); *cf. In re Bourns*, 252 F.2d 579, 580 (C.C.P.A. 1958) (accepting characteristics such as “neatness” and “efficiency” as evidence of ornamentality).

²⁹ *H.C. White Co. v. Morton E. Converse & Son Co.*, 20 F.2d 311, 312 (2d Cir. 1927).

³⁰ *Id.*

³¹ *Id.*

their fancy only by what they can do with it, not by the pleasure they get by looking at it.³²



2. *Ornamentality as Visibility—The “Matter of Concern” Test.* Other decisions attempted to equate ornamentality with visibility. Designs that were hidden or obscured in use, the argument went, would not be capable of satisfying the design patent system’s purpose of promoting progress in the visual arts, because their appearance could not be a “matter of concern” to consumers.³³ For example, in *Rowe v. Blodgett & Clapp Co.*³⁴ the court invalidated the design patent for a horseshoe calk (i.e., a spike that attached to a horseshoe for traction) because it was “a mere bit of iron or steel, not intended for display, but for an obscure use, and adapted to be applied to the shoe of a horse for use in snow, ice, and mud.”³⁵ Other invalidated designs included insulating plugs for electrical lines,³⁶ typewriter spools,³⁷ coupling washers,³⁸ and internal belt-fastener plates.³⁹

³² *Id.* Presumably, the children were not themselves the relevant purchasers, so perhaps the parents’ aesthetic judgments would have been more relevant, albeit no more predictable.

³³ *In re Stevens*, 173 F.2d 1015, 1019 (C.C.P.A. 1949) (“It has been held repeatedly that articles which are concealed or obscure in normal use are not proper subjects for design patents, since their appearance cannot be a matter of concern.”); *Gorham Mfg. Co. v. White*, 81 U.S. 511, 524 (1871) (characterizing the design patent system’s purpose).

³⁴ 112 F. 61 (2d Cir. 1901).

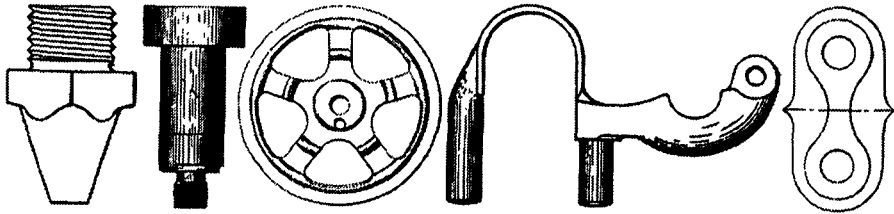
³⁵ *Id.* at 62.

³⁶ *Williams v. Syracuse & S.R. Co.*, 161 F. 571, 574 (C.C.N.Y. 1908) (invalidating the plug design because “[i]t is used overhead, out of reach, and out of sight to the naked eye so far as its design is concerned, and, as stated, when in use, it is covered up”).

³⁷ *Wagner Typewriter Co. v. F.S. Webster Co.*, 144 F. 405, 407 (C.C.N.Y. 1906) (invalidating the typewriter spool because it “is not designed for display, but for an obscure use, and there is no evidence it is ornamental or appeals to the eye or to purchasers and users of the machine as a thing of beauty”).

³⁸ *Bradley v. Eccles*, 126 F. 945, 949 (2d Cir. 1903) (invalidating the coupling washer because it “is not intended for display, but for an obscure use”).

³⁹ *Eaton v. Lewis*, 115 F. 635, 636–37 (C.C.N.Y. 1902) (invalidating, in part, because the belt-fastener plate’s appearance within the machine was “wholly immaterial”). For an older example, see *Ex parte Seaman*, 4 O.G. 691, 692 (1873) (“The body of a lamp chimney cleaner is a mere



The ornamentality-as-visibility approach drew some well-deserved criticism. It had the potential effect of eliminating certain product classes from protection altogether, as the examples above attest,⁴⁰ even if products within those classes displayed a high degree of design excellence. It also seemed to invite ancillary disputes about whether the design needed to be visible at the point of sale (or, more particularly, at the point of ultimate use of the article associated with the design), or merely at some point during the article's lifetime. In *In re Webb*,⁴¹ the Federal Circuit adopted the latter approach, ruling that "[i]n each case, the inquiry must extend to whether *at some point* in the life of the article an occasion (or occasions) arises when the appearance of the article becomes 'a matter of concern.'"⁴² For the design at issue—a design for a hip prosthesis—this meant that even though the design was obscured at the point of ultimate use (when implanted in a patient), it might well be visible (and hence conceivably ornamental) at earlier points, such as when the prosthesis was advertised for sale.⁴³ In the court's view, the period of "normal and intended use" for assessing visibility commenced as soon as the article was assembled and continued through the duration of the article's commercial life.⁴⁴ This strikes us as a defensible analysis, but also one that renders the ornamentality requirement a virtual nullity.⁴⁵

In sum, several decades of effort to wrest legal standards from the ornamentality rubric has yielded little progress. Construed as a referendum on

swab, not intended for display, but for a very dirty use; and when not in use, it is usually kept as far out of sight as possible. It is sought by the public, not for its beauty of contour, but because its form is adapted to fit and clean the interior of lamp-chimneys.").

⁴⁰ See *Bradley v. Eccles*, 126 F. at 949 (noting that there was no evidence that a hidden washer "appeals in any way to the eye, or serves to commend it to purchasers and users as a thing of beauty," nor any evidence "that the sale of a single washer was ever induced by reason of any attractiveness in its appearance").

⁴¹ 916 F.2d 1553 (Fed. Cir. 1990).

⁴² *Id.* at 1557 (emphasis added).

⁴³ *Id.* at 1557–58.

⁴⁴ *Id.*

⁴⁵ See *Larson v. Classic Corp.*, 683 F. Supp. 1202, 1202–03 (N.D. Ill. 1988) (characterizing the visibility requirement as a mere "guideline" rather than a "statutory requirement").

visual aesthetics, ornamentality fails because it is too subjective.⁴⁶ It is also anachronistic, reflecting patentability doctrine that could only suit the embellished peculiarity of the Decorative Arts movement from which the design patent act originated.⁴⁷ Construed as a mere assessment of visibility, the ornamentality requirement does virtually nothing other than reiterate the conventional meaning of what constitutes “design” for design patent purposes.⁴⁸

B. FUNCTIONALITY

In modern design patent cases, courts have tended to turn to the rhetoric of functionality, paying mere lip service to the ornamentality rubric.⁴⁹ The judicial embrace of functionality as the frame for analyzing the statutory ornamentality requirement began quite early,⁵⁰ but has produced a jurisprudence as ungainly and problematic as the ornamentality jurisprudence discussed above. We analyze two of the primary problems with the design patent functionality jurisprudence in this section.

1. *Design Dissection and Elemental Functionality in Design Patent Scope Determinations.* The most intractable problem in the modern law of design

⁴⁶ Cf. Christopher Buccafusco, *Making Sense of Intellectual Property Law*, 97 CORNELL L. REV. 501, 527 (2012) (finding it “problematic” that “[i]n its anxiety about visual aesthetics, the Federal Circuit has effectively read out of the statute any affirmative requirement that the patentee’s design contain aesthetic ornamental features”). We disagree; we regard the court’s anxiety to be well-founded.

⁴⁷ Preceding the turn of the twentieth century, when many American designers mimicked the craftsmanship and style of their European counterparts, this form of analysis might have been appropriate for a large number of industrial designs. CARROLL GANTZ, *THE INDUSTRIALIZATION OF DESIGN* 75 (2011). Design was more a process of adornment, showcasing the designer’s craftsmanship, whereby utilitarian objects were decorated with artistic styles, such as the “Beaux Arts styles, with neoclassical images of virtuous Greek or Roman gods or goddesses, Gothic details or other historical designs allusions, floral or botanical details, filigree, fretwork, or simple geographic patterns.” *Id.* Identifying the juxtaposition of ornamental and functional features in a given object would not have been terribly difficult for courts. *Id.* (noting that “the functional aspect of the product was largely impractical, and in many cases, totally irrelevant”). Modern design necessitated a less byzantine approach to functionality.

⁴⁸ See, e.g., MANUAL OF PATENT EXAMINING PROCEDURE 1502 (8th ed. rev. July 2010) (specifying that, in the context of design patents, design refers to “the visual characteristics embodied in or applied to an article”).

⁴⁹ See, e.g., *Best Lock Corp. v. Ilco Unican Corp.*, 94 F.3d 1563, 1566 (Fed. Cir. 1996) (“[I]f the design claimed in a design patent is dictated solely by the function of the article of manufacture, the patent is invalid because the design is not ornamental.”).

⁵⁰ See, e.g., *Strause Gas Iron Co. v. William M. Crane Co.*, 235 F. 126, 131 (2d Cir. 1916) (invalidating the “sad iron” design patent, in part, because it was not “dictated by [anything] other than utilitarian considerations”).

patent functionality is the rise of the elemental approach to functionality in determining the scope of design patent rights. The elemental approach, in turn, rests on a highly problematic premise: that courts can remain faithful to the principle that a design is to be considered as a whole, even while carrying out patentability and scope determinations that call for the design to be dissected into individual components for serial analysis.

The tension between dissection and anti-dissection is ubiquitous in design patent law, and elsewhere in intellectual property law.⁵¹ On the one hand, courts in design patent cases routinely claim to adhere to the principle that the “overall appearance” of the design must be the basis for determinations of patentability⁵² and scope.⁵³ In *Egyptian Goddess*,⁵⁴ the Federal Circuit’s only *en banc* opinion on design patent law, the court reinstated the ordinary observer test as the governing test for design patent infringement, discarding the separate “point-of-novelty” test in part on the rationale that the point-of-novelty test had placed undue emphasis on individual design features “rather than on the proper inquiry (i.e., whether the accused design has appropriated the claimed design as a whole”).⁵⁵ Subsequently, the court confirmed that the test for novelty—one of the primary conditions for patentability—likewise should rely on the ordinary observer’s perception of the design as a whole.⁵⁶

Yet on the other hand, even outside the strict confines of the (now defunct) point-of-novelty analysis, courts have felt free to scrutinize individual design features in making patentability and scope determinations. In the context of

⁵¹ Indeed, it arises in many intellectual property disputes involving visual works, see Michael D. Murray, *Copyright, Originality and the End of Scènes à Faire and Merger Doctrines*, 58 BAYLOR L. REV. 779, 800 (2006), and in some disputes that involve verbal works such as word marks. See DINWOODIE & JANIS, *supra* note 3, at 530 (describing the same phenomenon, the “anti-dissection” principle, in connection with rules of trademark infringement for word marks).

⁵² See, e.g., *In re Haruna*, 249 F.3d 1327, 1335 (Fed. Cir. 2001) (“The patentability of a claimed design turns on whether its overall appearance and visual effect are novel and non-obvious.”).

⁵³ See, e.g., *In re Rubinfeld*, 270 F.2d 391, 395 (C.C.P.A. 1959), *cert. denied*, 362 U.S. 903 (1960) (“It has been consistently held for many years that it is the appearance of a design as a whole which is controlling in determining questions of patentability and infringement.”) (collecting authority, including *Gorham Co. v. White*, 81 U.S. 511, 530 (1871)).

⁵⁴ *Egyptian Goddess, Inc. v. Swisa, Inc.*, 543 F.3d 665 (Fed. Cir. 2008) (*en banc*).

⁵⁵ *Id.* at 679; see also *Crocs, Inc. v. Int’l Trade Comm’n*, 598 F.3d 1294, 1303 (Fed. Cir. 2010) (“The ordinary observer test applies to the patented design in its entirety, as it is claimed.”); *id.* at 1302 (observing that “[i]n *Egyptian Goddess*, this court warned that misplaced reliance on a detailed verbal description of the claimed design risks undue emphasis on particular features of the design rather than examination of the design as a whole.” (citation omitted)).

⁵⁶ *Int’l Seaway Trading Corp. v. Walgreen’s Corp.*, 589 F.3d 1233, 1240 (Fed. Cir. 2009) (concluding that “the ordinary observer test must logically be the sole test for anticipation” in view of the *Egyptian Goddess* ruling on the infringement standard).

functionality, this has supplied the basis for an elemental approach to functionality determinations, in which a court purports to assess the “functionality” of individual design components and to derive conclusions about scope or validity from that assessment. An early example is *Pashek v. Dunlop Tyre & Rubber Co.*,⁵⁷ involving a design for tire tread. After identifying individual design components and serially discussing the functional purpose of each, the court asserted that “ornamentation and decoration have little if any relation thereto,”⁵⁸ and concluded that the tire’s “ridge, grooves, and skid pads are primarily designed to realize these advantages of function and utility.”⁵⁹



In *Rose Mfg. Co. v. E.A. Whitehouse Mfg. Co.*,⁶⁰ the court was even more categorical in dissecting and branding design elements as functional, invalidating two design patents for motor vehicle license plate holders on the grounds that “every feature of [those] patents [was] mechanical and functional, and not ornamental.”⁶¹ Under this form of analysis, design elements were either categorically functional or not; it was not a question of degree.

In more recent Federal Circuit cases, the court has frequently professed fealty to the importance of considering the design as a whole when evaluating functionality, but sometimes, in the same breath, has engaged in an elemental approach to functionality. Typical is a statement from *KeyStone Retaining Wall*,⁶² referring both to non-functional “aspects” of a design and the design seen “as a

⁵⁷ *Pashek v. Dunlop Tyre & Rubber Co.*, 8 F.2d 640 (N.D. Ohio 1925).

⁵⁸ *Id.* at 641.

⁵⁹ *Id.* (invalidating the design patent).

⁶⁰ 201 F. 926 (D.N.J. 1913).

⁶¹ *Id.* at 929.

⁶² *KeyStone Retaining Wall Sys., Inc. v. Westrock, Inc.*, 997 F.2d 1444 (Fed. Cir. 1993).

whole” in consecutive sentences: “A design patent protects the non-functional *aspects* of an ornamental design as shown in a patent [and as seen] *as a whole*.”⁶³ The notion that the court should consider design “aspects” in its functionality analysis evokes the point-of-novelty test, a fact that seemed evident from the Federal Circuit’s pre-*Egyptian Goddess* precedent.⁶⁴

Worse still, the Federal Circuit further enmeshed itself in an elemental functionality analysis in a handful of cases by drawing a dubious distinction between “purely” ornamental designs and designs containing both ornamental and functional aspects. In *OddzOn*,⁶⁵ the court declared that “[w]here a design contains both functional and non-functional elements, the scope of the claim must be construed in order to identify the non-functional aspects of the design as shown in the patent.”⁶⁶ That is, if a design contains “both functional and ornamental features, the patentee must show that the perceived similarity is based on the ornamental features of the design.”⁶⁷

This was a ruling of potentially stunning breadth. Design patents protect designs for articles of manufacture,⁶⁸ and most articles of manufacture are likely to have features to which some purpose may be attributed. That fact alone could qualify any such features as “functional” elements under an exuberant application of elemental functionality, and it is not clear that the *OddzOn* court recognized this.

Instead, the *OddzOn* court took refuge in the proposition that some designs would be “purely ornamental” and thus would escape the reach of the functionality rule. But the distinction between purely ornamental designs and all other designs collapses upon scrutiny. Tellingly, the court cited the design at issue in *Gorham v. White* as an example of a purely ornamental design. The *Gorham* design was a silverware handle design (as shown below):

⁶³ *Id.* at 1450 (emphasis added).

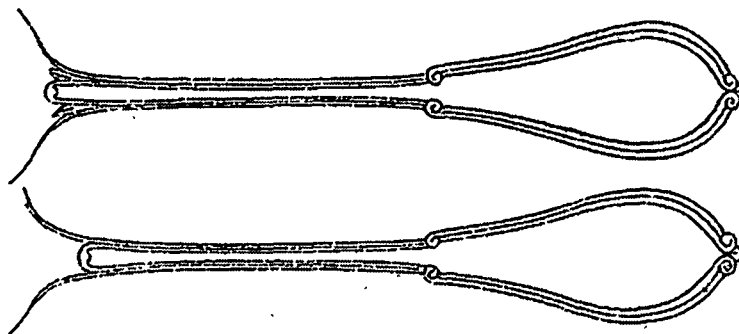
⁶⁴ See, e.g., *Lee v. Dayton-Hudson Corp.*, 838 F.2d 1186, 1188 (Fed. Cir. 1988) (“[I]t is the non-functional, design aspects that are pertinent to determinations of infringement.” (footnote omitted)). *Lee* relied, *inter alia*, on *Applied Arts Corp. v. Grand Rapids Metalcraft Corp.*, 67 F.2d 428, 430 (6th Cir. 1933), one of the primary cases from which point-of-novelty analysis germinated.

⁶⁵ *OddzOn Prods., Inc. v. Just Toys, Inc.*, 122 F.3d 1396 (Fed. Cir. 1997).

⁶⁶ *Id.* at 1405 (citing *Lee*, 838 F.2d at 1188).

⁶⁷ *Id.* (citing *Read Corp. v. Portec, Inc.*, 970 F.2d 816, 825 (Fed. Cir. 1992) (stating that the design patentee “must establish that an ordinary person would be deceived by reason of the common features in the claimed and accused designs which are ornamental”).

⁶⁸ 35 U.S.C. § 171.



Viewed as a whole,⁶⁹ the design would seem to include the shape of the handle and the scrollwork carved into it; the handle surely has a utilitarian purpose, raising questions about whether the design is properly characterized as purely ornamental. Alternatively, if the design is construed to include only the scrollwork carved into the handle—a more dubious construction—this is also problematic, because it suggests that only surface treatment designs are ever likely to qualify as purely ornamental, potentially eviscerating protection for virtually any product shape design. That cannot be a fair reading of the design patent provisions.

The Federal Circuit could have done away with *OddzOn* and its ilk in *Egyptian Goddess*, as part of the exercise of ridding the design patent law of an independent point-of-novelty analysis. It could have distanced itself from *OddzOn* in the course of warning trial courts about the pitfalls of attempting to provide verbal claim constructions in design patent cases, a warning motivated in part by the risks entailed in the elemental analysis—that is, “the risk of placing undue emphasis on particular features of the design and the risk that a finder of fact will focus on each individual described feature in the verbal [claim construction] rather than on the design as a whole.”⁷⁰ Unfortunately, the court did the opposite. Seeking to provide an alternative to verbal claim construction, the court encouraged trial courts to “guide the finder of fact by addressing a number of other issues that bear on the scope of the claim.”⁷¹ The court described one of those issues as “distinguishing between those features of the claimed design that are ornamental and those that are purely functional,”⁷² thus

⁶⁹ Which the court claimed to be doing, *OddzOn*, 122 F.3d at 1405 (“It is the appearance of a design as a whole which is controlling in determining infringement.”).

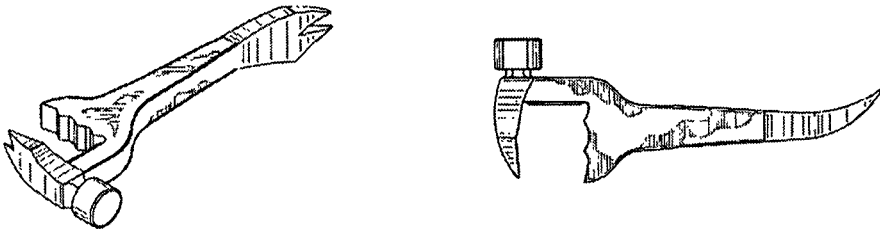
⁷⁰ *Egyptian Goddess*, 543 F.3d at 680.

⁷¹ *Id.*

⁷² *Id.* This, of course, was not quite the rule from *OddzOn* in any event. See *OddzOn*, 122 F.3d

leaving the door open for further iterations of the dissection versus anti-dissection debate.⁷³

The court's opinion in *Richardson v. Stanley Works*⁷⁴ demonstrates the prominence of this debate for future functionality jurisprudence. In *Richardson*, the patentee owned a design patent on a tool that combined a hammer, a stud-climbing tool, and a crowbar.⁷⁵ Stanley manufactured the accused products under the name "Fubar,"⁷⁶ depicted in the drawings below.⁷⁷



The trial court ruled for Stanley, first engaging in a "claim construction" exercise that entailed identifying individual features that were "primary utilitarian elements,"⁷⁸ and then concluding that an ordinary observer would not consider the designs to be substantially similar in appearance after the "functional" features had been discounted.⁷⁹

On appeal, relying on the *Egyptian Goddess* dicta, and, in turn, on *OddzOn*, the Federal Circuit upheld this methodology.⁸⁰ It was proper, the Federal Circuit asserted, for the trial court to "factor[] out the functional aspects of Richardson's design as part of its claim construction."⁸¹ Those "aspects" seemed to include virtually every visual feature of the claimed design:

1396 (distinguishing between "purely ornamental" designs and all other designs, not between ornamental and purely functional designs).

⁷³ One such further iteration has arisen in the court's post-*Egyptian Goddess* novelty jurisprudence. *Int'l Seaway*, 589 F.3d at 1243 ("Although the ordinary observer test requires consideration of the design as a whole . . . this does not prevent the district court on summary judgment from determining that individual features of the design are insignificant from the point of view of the ordinary observer and should not be considered as part of the overall comparison" for purposes of novelty analysis).

⁷⁴ *Richardson v. Stanley Works, Inc.*, 597 F.3d 1288 (Fed. Cir. 2010).

⁷⁵ *Id.* at 1290.

⁷⁶ An acronym for "Functional Utility Bar."

⁷⁷ *Richardson*, 543 F.3d at 1291–92.

⁷⁸ *Richardson v. Stanley Works, Inc.*, 610 F. Supp. 2d 1046, 1050 (D. Ariz. 2009).

⁷⁹ *Id.* at 1052.

⁸⁰ *Richardson*, 597 F.3d at 1293.

⁸¹ *Id.*

Richardson's multi-function tool comprises several elements that are driven purely by utility. As the district court noted, elements such as the handle, the hammerhead, the jaw, and the crowbar are dictated by their functional purpose. The jaw, for example, has to be located on the opposite end of the hammer head such that the tool can be used as a step. The crowbar, by definition, needs to be on the end of the longer handle such that it can reach into narrow spaces. The handle has to be the longest arm of the tool to allow for maximum leverage. The hammer-head has to be flat on its end to effectively deliver force to the object being struck. As demonstrated by the prior art, those are purely functional elements whose utility has been known and used in the art for well over a century.⁸²

However, like *OddzOn* and other cases before it, the Federal Circuit's *Richardson* opinion did pay lip service to the role of the overall design in design patent infringement analysis. The court duly recited the proposition that the "discounting of functional elements must not convert the overall infringement test to an element-by-element comparison,"⁸³ and that "[i]n evaluating infringement, we determine whether 'the deception that arises is a result of the similarities in the overall design, not of similarities in ornamental features in isolation.'" ⁸⁴

Thus, when it turned to the infringement analysis, the court freely gravitated back and forth between analysis of the individual design elements and consideration of the design as a whole. For example, the Federal Circuit had identified the crowbar feature as one of the functional features that it was "ignoring" for infringement purposes.⁸⁵ Perhaps the court indeed would have ignored the crowbar's appearance if the crowbar had contributed favorably to the case for similarity. In fact, the court *relied* on the appearance of the crowbar as evidence of *dissimilarity*:

Each of the Fubar tools has a streamlined visual theme that runs throughout the design including elements such as a tapered hammer-head, a streamlined crow-bar, a triangular neck with

⁸² *Id.* at 1294.

⁸³ *Id.* at 1295 (citing *Amini Innovation Corp. v. Anthony Cal., Inc.*, 439 F.3d 1365, 1372 (Fed. Cir. 2006)).

⁸⁴ *Id.* (quoting *Amini Innovation*, 439 F.3d at 1371).

⁸⁵ *Id.* at 1294 ("As the district court noted, elements such as the handle, the hammerhead, the jaw, and the crowbar are dictated by their functional purpose.").

rounded surfaces, and a smoothly contoured handled [sic]. In a side-by-side comparison with the [design of the patent-in-suit], the overall effect of this streamlined theme makes the Fubar tools significantly different from Richardson's design. Overall, the accused products clearly have a more rounded appearance and fewer blunt edges than the patented design.⁸⁶

The problems with the elemental functionality approach as espoused by *Richardson* are numerous.⁸⁷ First, the inevitable consequence of "factoring out" features (and arbitrarily factoring them back in) is to distort the appearance of the claimed design. Surely even an expert would find it difficult to conjure up the visual appearance of the claimed design with gaps where the "functional" elements would have been located, like a jigsaw puzzle with pieces missing. It might well be impossible for an "ordinary observer."

This leads to a second critique: the *Richardson* elemental functionality analysis cannot be reconciled with the proposition that design patent claim scope is defined by the perceptions of the ordinary observer. As such, *Richardson* breaks faith with *Egyptian Goddess*.⁸⁸ Indeed, the *Richardson* analysis may be tantamount to a "point of non-functionality" requirement,⁸⁹ presenting many of the problems that moved the Federal Circuit to discard the point of novelty requirement in *Egyptian Goddess*.

Third, although the factoring out of functional elements is presented as a strategy for narrowing claim scope,⁹⁰ the actual effect on claim scope is indeterminate, at least in theory. Factoring out a feature could broaden the scope of a claimed design, especially where that feature otherwise would have detracted from the overall similarity between the claimed and accused designs.⁹¹

⁸⁶ *Id.* at 1296.

⁸⁷ For another commentator's critique, see Shin Chang, *The Proper Role of Functionality in Design Patent Infringement Analysis: A Criticism of the Federal Circuit Decision in Richardson v. Stanley Works, Inc.*, 19 TEX. INTELL. PROP. L.J. 309 (2011).

⁸⁸ The *Egyptian Goddess* dicta invoking *OddzOn* leaves the door open for an elemental functionality analysis, as discussed.

⁸⁹ Brief for Am. Intellectual Prop. Law Ass'n as Amicus Curiae Supporting Petition for Rehearing En Banc at 2, *Richardson v. Stanley Works, Inc.*, No. 2009-1354 (Fed. Cir. Apr. 22, 2010) (describing it as a 'Point of Ornamentality' approach); Saidman, *Functionality*, *supra* note 8, at 333, 334 (describing it as a 'point of functionality' test).

⁹⁰ *Richardson*, 597 F.3d at 1294 (remarking that "[a] claim to a design containing numerous functional elements, such as here, necessarily mandates a narrow construction").

⁹¹ In theory, any given feature in a design patent drawing might contribute prominently to the overall design, or it might not. Again in theory, it might be borrowed by the accused infringing design, or it might not be. Accordingly, the effect on claim scope of ignoring the feature is not certain. There might be no effect, if the "functional" feature contributes virtually nothing to the

The *Richardson* court avoids this eventuality by relying on features (such as the crowbar) to establish lack of similarity in the infringement part of the analysis after having factored those features out in the claim construction part of the analysis. But this bit of legerdemain simply generates confusion about what it means to “factor out” features.⁹²

Fourth, when *Richardson* speaks of functionality at the elemental level, the court seems only to be analyzing whether the feature at issue has some purpose—whether it is de facto functional.⁹³ This approach, used systematically, would result in most features of most design patent subject matter being deemed functional features; only surface ornamentation would seem to survive scrutiny. This surely cannot be the desired end of design patent policy. The Federal Circuit had seemed to recognize as much in some of its pre-*Richardson* functionality decisions. For example, in *L.A. Gear*,⁹⁴ the alleged infringer had argued that each element of the shoe design at issue had “a utilitarian purpose.”⁹⁵ Specifically:

[T]he delta wing provides support for the foot and reinforces the shoelace eyelets; the mesh on the side of the shoe also provides support; the moustache at the back of the shoe provides cushioning for the Achilles tendon and reinforcement for the rear

overall appearance of the design.

⁹² To be fair, *Richardson* is not the sole source of confusion on this point. See *Amini Innovation Corp. v. Anthony California, Inc.*, 439 F.3d 1365, 1372 (Fed. Cir. 2006) (holding that the trial court had been “correct to factor out the functional aspects of various design elements,” but had erroneously permitted this “discounting of functional elements” to “convert the overall infringement test to an element-by-element comparison”); *Berry Sterling Corp. v. Pescor Plastics, Inc.*, F.3d 1452, 1455 (Fed. Cir. 1997) (taking the position that “analyzing elements of the design may be appropriate in some circumstances” if the analysis ultimately returns to the overall appearance, because “the determination of whether the patented design is dictated by the function of the article of manufacture must ultimately rest on an analysis of its overall appearance”). The court did not specify the circumstances under which elemental analysis would be “appropriate.” *Power Controls Corp. v. Hybrinetics, Inc.*, 806 F.2d 234, 239–40 (Fed. Cir. 1986) (distinguishing between validity and infringement, and claiming that it was unnecessary to consider the design as a whole for purposes of validity). *But cf. Int’l Seaway Trading Corp. v. Walgreens Corp.*, 589 F.3d 1233, 1240 (Fed. Cir. 2009) (applying the *Egyptian Goddess* infringement framework to novelty analysis on the ground that symmetry between infringement and validity rules is the norm in patent law).

⁹³ Judge Rich distinguished between de facto functionality and de jure functionality in the context of trade dress functionality in *In re Morton-Norwich Prods., Inc.*, 671 F.2d 1332 (C.C.P.A. 1982) (asserting that mere inquiry into de facto functionality is inadequate to determine whether offering trade dress protection would subvert the competition goals of the trademark law).

⁹⁴ *L.A. Gear, Inc. v. Thom McAn Shoe Co.*, 988 F.2d 1117 (Fed. Cir. 1993).

⁹⁵ *Id.* at 1123.

of the shoe; and the position of each of these elements on the shoe is due to its function.⁹⁶

According to the Federal Circuit, this argument had to be rejected, because the elemental inquiry into functionality was the wrong inquiry:

[T]he utility of each of the various elements that comprise the design is not the relevant inquiry with respect to a design patent. In determining whether a design is primarily functional or primarily ornamental the claimed design is viewed in its entirety, for the ultimate question is not the functional or decorative aspect of each separate feature, but the overall appearance of the article, in determining whether the claimed design is dictated by the utilitarian purpose of the article.⁹⁷

The *LA. Gear* analysis is correct; the *Richardson* analysis is wrong, both as a matter of precedent and as one of policy.⁹⁸

Fifth, *Richardson* brings to the fore a longstanding structural anomaly in design patent functionality doctrine. *Richardson* and its predecessor decisions fold functionality into the claim construction exercise. Claim construction precedes an infringement analysis, as *Richardson* illustrates. But claim construction also precedes the validity analysis,⁹⁹ and yet functionality is also a condition of validity.¹⁰⁰ The Federal Circuit needs to confront these dual notions of functionality more explicitly than it has done to date. Are two functionality doctrines—scope functionality and validity functionality—necessary? Do they have the same purposes? Should they proceed under the same analysis?

⁹⁶ *Id.*

⁹⁷ *Id.* (citing *Lee v. Dayton-Hudson Corp.*, 838 F.2d 1186, 1189 (Fed. Cir. 1988); *Gorham Co. v. White*, 81 U.S. 511, 530 (1872)).

⁹⁸ One trial court has found that *Richardson* does not compel a departure from the *LA. Gear* form of analysis. See *Good Sportsman Mktg. LLC v. Li & Fung Ltd.*, 2010 WL 2640385, at *4 (E.D. Tex. June 29, 2010) (“[*Richardson* does not] compel[] the Court to wholly ‘factor out’ any element that serves a functional purpose. . . . The utility of individual elements is irrelevant to the question of functionality, as it is the design in its entirety that provides the basis for the patent. . . . While the identified components may have functions, they need not be excluded simply because they perform functions, *e.g.*, the clip need not be excluded because it fulfills the clipping function, and the same rationale applies to the other elements.”).

⁹⁹ *Berry Sterling Corp. v. Pescor Plastics*, 122 F.3d 1452, 1456 (Fed. Cir. 1997).

¹⁰⁰ See *infra* cases discussed in II.B.2.

At a minimum, the Federal Circuit should refine its functionality jurisprudence by discarding *Richardson* and its ilk and resisting the elemental functionality methodology. It should also recognize explicitly that functionality is operating in two different contexts, and may require two different analyses.

2. “*Alternative Designs*” Evidence in Functionality Determinations. The U.S. design patent functionality jurisprudence suffers from another problem independent of the problem of elemental functionality: The Federal Circuit has failed to articulate consistently the test for proving design patent functionality. To date, the inconsistency has been most apparent in cases involving functionality as a theory of invalidity. It has manifested in two primary ways. First, the court has oscillated, seemingly at random, between a balancing test and a categorical test. In some cases, the Federal Circuit has recited a balancing formulation: A design is unpatentable if it is “primarily functional.”¹⁰¹ In other cases, it has propounded a “dictated by” standard, under which a design for an article is unpatentable only if the design is dictated solely by the use or purpose of the article.¹⁰² At times the Federal Circuit has simply recited both standards *in seriatim*, as if they were consistent,¹⁰³ even though they are plainly not.¹⁰⁴

Second, the court has sometimes borrowed functionality standards ad hoc from trade dress law, which suffers from its own problems of inconsistency. In one case, *Berry Sterling*, the Federal Circuit suggested in dicta that courts consider a series of factors in deciding design patent functionality, including

whether the protected design represents the best design; whether alternative designs would adversely affect the utility of the specified article; whether there are any concomitant utility patents; whether the advertising touts particular features of the design as having specific utility; and whether there are any elements in the design or an overall appearance clearly not dictated by function.¹⁰⁵

Although the court did not acknowledge it, this set of factors closely resembles the Federal Circuit’s (and CCPA’s) *Morton-Norwich* factors for assessing whether

¹⁰¹ See, e.g., *Lee*, 838 F.2d at 1188.

¹⁰² See, e.g., *L.A. Gear*, 988 F.2d at 1123.

¹⁰³ See, e.g., *PHG Techs., LLC v. St. John Cos.*, 469 F.3d 1361, 1365–66 (Fed. Cir. 2006); *Hupp v. Siroflex of America, Inc.*, 122 F.3d 1456, 1460 (Fed. Cir. 1997).

¹⁰⁴ The “dictated by” standard is comparatively more difficult for the patent challenger to satisfy. See *Rosco, Inc. v. Mirror Lite Co.*, 304 F.3d 1373, 1378 (Fed. Cir. 2002) (characterizing the “dictated by” standard as “stringent”).

¹⁰⁵ *Berry Sterling*, 122 F.3d at 1456.

trade dress should be unregistrable for functionality.¹⁰⁶ Setting aside the question of whether it is sensible to borrow trade dress functionality concepts for design patents,¹⁰⁷ the viability of the *Morton-Norwich* test for trade dress functionality has become a matter of debate in the wake of the Supreme Court's decision in *TrafFix Devices*.¹⁰⁸ Yet, in the design patent area, there is Federal Circuit precedent which continues to rely on the factors,¹⁰⁹ and there is Federal Circuit precedent reciting (although not applying) the *TrafFix* standard for functionality.¹¹⁰

The Federal Circuit could remedy this inconsistency easily enough (e.g., by ruling that the *TrafFix Devices* framework does not apply to design patent cases), but the court would first need to arrive at a normative vision for the functionality doctrine in design patent cases. There is little evidence of any such vision articulated in the existing cases.

In any event, both the *Morton Norwich* test for trade dress functionality and the *Berry Sterling* test for design patent functionality frequently revolve around the alternative designs factor. The central idea is that a design should not be deemed functional if there are alternative (substitute) designs that would carry out the function equally well.¹¹¹ The criterion is highly manipulable, and judges

¹⁰⁶ The court did not cite *Morton-Norwich* (or any other trade dress functionality case), but was unquestionably inspired by the *Morton-Norwich* factors analysis, which calls for a court to consider factors including “the existence of an expired utility patent which disclosed the utilitarian advantage of the design sought to be registered;” evidence that “the originator of the design touts its utilitarian advantages through advertising;” evidence “that there are other alternatives available;” and evidence “that a particular design results from a comparatively simple or cheap method of manufacturing the article.” *In re Morton-Norwich Prods., Inc.*, 671 F.2d 1332, 1340–41 (C.C.P.A. 1982).

¹⁰⁷ We have serious doubts about whether it is appropriate. See *infra* Part IV.

¹⁰⁸ *TrafFix Devices, Inc. v. Mktg. Displays, Inc.*, 532 U.S. 23 (2001). *But cf. In re Becton Dickinson and Co.*, 675 F.3d 1368 (Fed. Cir. 2012) (continuing to apply the *Morton-Norwich* factors notwithstanding *TrafFix*).

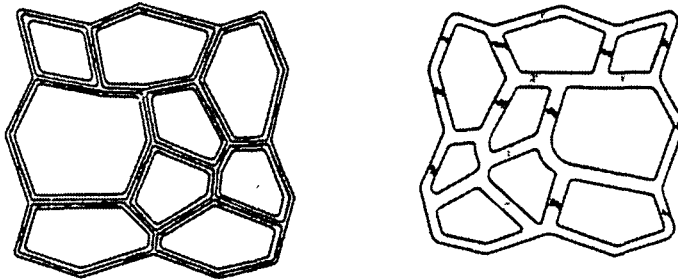
¹⁰⁹ *PHG Techs., LLC v. St. John Cos.*, 469 F.3d 1361 (Fed. Cir. 2006). A few district courts have also followed suit. See, e.g., *Rip-It Holdings v. Wilson Hunt Int'l*, 2012 U.S. Dist. LEXIS 4490 (M.D. Fla. 2012); *SFD Enter. v. CVS Pharm., Inc.*, 2012 WL 994761 (E.D. Mich. 2012); *Cheng v. Aim Sports, Inc.*, F. Supp. 2d (C.D. Cal. 2011) (unpublished); *Depaoli v. Daisy Mfg. Co.*, No. 07ocv-11778-DPW (D. Mass. July 14, 2009).

¹¹⁰ *Amini Innovation Corp. v. Anthony Cal., Inc.*, 439 F.3d 1365, 1371 (Fed. Cir. 2006) (stating that an “aspect” of a patented design 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”; failing to cite *TrafFix*, but citing one of its predecessors, *Inwood Labs., Inc. v. Ives Labs., Inc.*, 456 U.S. 844, 851 (1982)). It has not invoked the *TrafFix* standard in a design patent case since then.

¹¹¹ See, e.g., *Rosco, Inc. v. Mirror Lite Co.*, 304 F.3d 1373, 1378 (Fed. Cir. 2002) (“[I]f other designs could produce the same or similar functional capabilities, the design of the article in question is likely ornamental, not functional.”); *Seiko Epson Corp. v. Nu-Kote Int'l, Inc.*, 190 F.3d 1360, 1368 (Fed. Cir. 1999) (“[T]he design must not be governed solely by function, *i.e.*, that

have taken full advantage of that flexibility in deciding design patent functionality issues. For example, in *Best Lock*,¹¹² the court found that there were no adequate alternative designs for performing the function (and consequently invalidated the design patent-in-suit) by defining the function narrowly. *Best Lock* held design patents on key blade blanks¹¹³ that had unusually-shaped profiles, most noticeable when viewed from the end.¹¹⁴ The court majority found the key blade design solely dictated by function because “no alternative blank key blade would fit *the* corresponding lock.”¹¹⁵ Had the court not limited the design’s purpose to a specific corresponding lock—defining it broadly as intended to fit *a* keyway—it seems unlikely that it would have reached this outcome.¹¹⁶ In dissent, Judge Pauline Newman pointed out that there were “thousands of alternative key blade profiles” that could have been designed to mate with appropriate keyways.¹¹⁷

A year later in *Hupp v. Siroflex*,¹¹⁸ with Judge Newman authoring the opinion, the Federal Circuit reversed the district court’s invalidity finding, in part, because there were alternative designs that provided the “same general use.”¹¹⁹ Hupp owned a design patent covering a mold that, once concrete was poured into it, created a simulated stone path.



this is not the only possible form of the article that could perform its function.”); *L.A. Gear, Inc.*, 988 F.2d at 1123 (“When there are several ways to achieve the function of an article of manufacture, the design of the article is more likely to serve a primarily ornamental purpose.”).

¹¹² *Best Lock Corp. v. Ilco Unican Corp.*, 94 F.3d 1563 (Fed. Cir. 1996).

¹¹³ A key blade “blank” is one that does not yet have any biting cut into it. *Id.* at 1564.

¹¹⁴ *Id.* at 1565 (e.g., fig.1).

¹¹⁵ *Id.* at 1566 (emphasis added). In European parlance, the majority effectively created a judicially-derived “must fit” or “must match” exception to patentability.

¹¹⁶ To the extent that it is relevant, Professor Janis was among the lawyers representing *Best Lock* in this matter.

¹¹⁷ *Best Lock*, 94 F.3d at 1567 (Newman, J., dissenting).

¹¹⁸ 122 F.3d 1456 (Fed. Cir. 1997).

¹¹⁹ *Id.* at 1461.

According to Judge Newman, the relevant function here was “producing a simulated rock walkway,”¹²⁰ and there were numerous alternative designs for doing that, even though the alternative designs would not produce *the* specific simulated concrete walkway claimed in the design patent.

Other decisions examine the extent to which the proposed alternative design indeed performs the function at issue equally as well as the claimed design. In *Rosco v. Mirror Lite*,¹²¹ the Federal Circuit reversed the district court’s invalidity finding, ruling that adequate alternatives to the claimed mirror design existed. Hinting at the need for latitude with this approach, the court noted that “if other designs could produce the *same or similar* functional capabilities, the design of the article in question is likely ornamental, not functional.”¹²² The court focused on the oval design’s ability to produce a particular field of view and aerodynamic effect, rather than generally defining the design’s purpose as a cross-over mirror. Because other mirrors were able to match the field of view and aerodynamics, the court reversed.

By contrast, in *PHG*, the Federal Circuit adopted a much more stingy approach en route to finding that the proposed alternative designs were not acceptable because they did not perform the function as well as the claimed design.¹²³ PHG owned design patents relating to 8.5” x 11” medical label sheets containing a grid of labels (of a size that corresponded to standard medical chart labels) and two additional rows of labels (respectively corresponding to the sizes of pediatric and adult patient wristbands).¹²⁴ The district court had concluded that the claimed designs were “primarily ornamental” because there were various ways to arrange differently-sized labels on an 8.5” x 11” sheet.¹²⁵ Alternative arrangements did exist, of course, but the Federal Circuit claimed that its case law “makes clear that a full inquiry with respect to alleged alternative designs includes a determination as to whether the alleged ‘alternative designs would adversely affect the utility of the specified article,’ such that they are not truly ‘alternatives’ within the meaning of our case law.”¹²⁶ The court relied on an affidavit submitted by the defendants, to the effect that functional considerations drove the decision to locate the wristband labels along the bottom of the label sheet. St. John had found that the wristband labels are

¹²⁰ *Id.* (emphasis added).

¹²¹ 304 F.3d 1373 (Fed. Cir. 2002).

¹²² *Id.* at 1378 (emphasis added).

¹²³ PHG Techs., LLC v. St. John Cos., 469 F.3d 1361 (Fed. Cir. 2006).

¹²⁴ *Id.* at 1363–64.

¹²⁵ *Id.* at 1366.

¹²⁶ *Id.* at 1367.

the first labels to be removed when a patient enters a medical facility, and that it is easiest for a right-handed person to remove the labels if they are located along the bottom of the sheet (starting in the right-hand corner).¹²⁷ Because there was a clear functional reason for its placement at the bottom and “there were other functional reasons for each of the other features of the medical label sheet,” the court concluded that the affidavit raised a substantial question of validity, such that the district court’s grant of a preliminary injunction could not stand.¹²⁸ Nevertheless, the patentee’s testimony—that the claimed design was chosen because it had “the best flow and look”—was judged insufficient to refute statements in the affidavit,¹²⁹ although that testimony presumably could be understood as the designer’s subjective assertion of his intent to supply an ornamental visual appearance.¹³⁰

Perhaps it would be fair to conclude from these cases that the alternative designs criterion fares poorly and should be discarded in favor of some other test. We draw a different conclusion. We think that these cases reflect such a diversity of outcomes not because the alternative designs criterion is inherently flawed, but because courts are applying it aimlessly, without any coherent guiding vision for the functionality doctrine’s purpose. Thus, we would not predict success for efforts to refine the alternative designs calculus until the functionality doctrine’s deeper problems are addressed.

III. THE EUROPEAN APPROACH

The United States is not the only jurisdiction struggling to grasp design’s place in its broader intellectual property ecosystem, or the crucial role that functionality plays in its ontology. The European Union’s Community design

¹²⁷ *Id.* One may also wonder whether this analysis rested upon a proper consideration of the design as a whole or an elemental approach more characteristic of *Richardson*. The court claimed to be maintaining a proper focus on the overall impression while still considering individual design features. *Id.* at 1368, n.2. See *supra* II.B for a discussion of *Richardson*.

¹²⁸ *PHG Techs.*, 469 F.3d at 1367.

¹²⁹ *Id.* at 1368.

¹³⁰ On remand, the patentee introduced an expert affidavit asserting that the bottom two rows of labels “could have been placed anywhere on the label sheet design” and would still “function as a label sheet just as well as a label sheet bearing the Patented Designs.” *PHG Techs., LLC v. St. John Cos.*, 529 F. Supp. 2d 852, 860–61 (M.D. Tenn. 2007) (quoting Affidavit of Amy Sharp). The district court granted a motion for summary judgment that the defendant had failed to make out a functionality defense. *Id.* at 868. Plainly, the district court was more willing to accept the proposition that the relevant “function” at issue was simply the ability for the sheet to serve as a label sheet, whereas the Federal Circuit’s opinion reflects the view that the relevant function was to provide convenient access to wristband labels on the label sheet.

regime has followed a similarly complex maturation process, except over a much shorter time frame. Building on harmonization that resulted from the 1998 Community Design Directive,¹³¹ the EU enacted a unitary Community-wide design regime in 2002.¹³² Within its second year of operation, the Office charged with administering the Community Design registration system, the Office for Harmonization of the Internal Market (OHIM), became the second busiest design office in the world, behind only China.¹³³

The Community Design system provides both registered and unregistered design protection with no pre-grant substantive examination.¹³⁴ Registered rights are protected for a five-year term (renewable for up to twenty-five years), provide a relatively generous scope of protection, and vest upon registration.¹³⁵ Unregistered rights, which are intended for designs having shorter lifecycles and rapid turnover,¹³⁶ are protected for a three-year term, require a showing of copying, and vest upon being made available to the public.¹³⁷ To be protectable under either scheme, the design must be new and have individual character.¹³⁸ In addition, the design must avoid being captured by the functionality exclusions, which are the same for both registered and unregistered forms of protection.¹³⁹ As we discuss below, the EU experience offers a mixed bag for U.S. policymakers, providing some insights while also exhibiting some of the same internal inconsistencies present in U.S. functionality jurisprudence.

¹³¹ Directive 98/71/EC of the European Parliament and of the Council of 13 October 1998 on The Legal Protection of Design, O.J. (L. 289) (Oct. 28, 1998) [hereinafter Design Directive].

¹³² Council Regulation (EC) No. 6/2002 of 12 December 2001, O.J. (L. 3) (Jan. 5, 2002) [hereinafter Design Regulation].

¹³³ World Intellectual Property Indicators, W.I.P.O. Economics & Statistics Series 158 (2011) (covering data from 2010).

¹³⁴ The validity of a registered design can be challenged at OHIM or through the national courts, whereas unregistered designs can only be challenged when they are enforced in a designated Community design court. Design Regulation, *supra* note 132, art. 24. Despite never being examined, registered Community designs are presumed valid at trial. *Id.* art. 85(1); *see also id.* art. 85(2) (requiring national courts to “treat the [unregistered] Community design as valid if the right holder produces proof that the conditions laid down in Article 11 have been met and indicates what constitutes the individual character of his Community design.”).

¹³⁵ *Id.* art. 12 (term of protection); *id.* art. 19(1) (scope of exclusive rights); *id.* art. 1 (vesting upon registration).

¹³⁶ *Green Paper on the Legal Protection of Industrial Design*, at 79, Working Document of the Services of the Commission, Doc. # 111/F/5131/91-EN (June 1991) [hereinafter *Green Paper*].

¹³⁷ Design Regulation, *supra* note 132, art. 11 (term of protection); *id.* art. 19(2) (scope of exclusive rights); *id.* art. 1 (vesting upon public availability).

¹³⁸ *Id.* art. 4(1).

¹³⁹ *Id.* art. 8.

A. AVOIDING THE ORNAMENTALITY RUBRIC

In contrast to the U.S., the EU does not have an ornamentality or aesthetics-based requirement that operates in either the validity or scope context. According to Professor Graeme Dinwoodie, this absence “is arguably the most important contribution that the proposals [(now encapsulated in the Directive & Regulation)] make to the advancement of design protection laws.”¹⁴⁰ From the beginning, the Max Planck Institute’s proposal disavowed the adoption of an aesthetics-based standard,¹⁴¹ and this was carried into the Commission’s Green Paper and throughout the Directive and Regulation’s legislative development.¹⁴² Indeed, lawmakers expressly condemned the idea of including an aesthetic quality requirement in the Directive and Regulation’s recitals¹⁴³ because they understood that antiquated ornamentality-based standards are prone to erratic application and outmoded for the protection of modern design.¹⁴⁴ Accordingly, unlike U.S. law, EU law rests solely on the rubric of functionality. That is, EU decision-makers must either avoid relying on their subjective aesthetic preferences, or they must subjugate those preferences and filter them through functionality doctrines.

¹⁴⁰ Graeme Dinwoodie, *Federalized Functionalism: The Future of Design Protection in the European Union*, 24 *AIPLA Q.J.* 611, 647–48 (1996).

¹⁴¹ TOWARDS A EUROPEAN DESIGN LAW 58 (Max Planck Institute for International Patent, Copyright and Competition Law, Munich, Germany, 1991) (“A general exclusion of functional forms from protectability as designs cannot be reconciled with the intent and purpose of modern design which lies in the very combination of product aesthetics and optimum functional design.”).

¹⁴² *Id.* *Explanatory Memorandum Accompanying the Proposal For a European Parliament And Council Directive*, at 7, COM(96)366 final-COD 464 (Dec. 3, 1993) [hereinafter *Directive Memorandum*] (noting that “whether a design does or does not contain aesthetic elements is irrelevant in the context of the requirements for protection . . .”); *Explanatory Memorandum Accompanying the Proposal for a European Parliament and Council Regulation on the Community Design*, at 14, COM(93)342 final-COD 463 (Dec. 3, 1993) [hereinafter *Regulation Memorandum*] (noting that “[n]o distinction is made in the Regulation between aesthetic and functional designs; they are equally able to attract protection”).

¹⁴³ Design Regulation, *supra* note 132, rec. 10 (“Technological innovation should not be hampered by granting design protection to features dictated solely by a technical function. It is understood that this does not entail that a design must have an aesthetic quality. Likewise, the interoperability of products of different makes should not be hindered by extending protection to the design of mechanical fittings. Consequently, those features of a design which are excluded from protection for those reasons should not be taken into consideration for the purpose of assessing whether other features of the design fulfill the requirements for protection.”).

¹⁴⁴ See *Green Paper*, *supra* note 136, at 60 (avoiding the “aesthetic effect” approach in favor of a “negative approach” forged from functionality).

B. FUNCTIONALITY AND THE PROBLEM OF DISSECTION

The functionality exclusions affect both validity and scope in the EU design protection regime. In the following sections, we first analyze functionality as it operates in the validity context. We then take up functionality as a limitation on scope.

1. *Functionality in the Analysis of Validity.* The EU deals with functionality in the context of validity in two concurrent ways: (1) directly, by excluding functional design features that fall under Article 8's exclusions,¹⁴⁵ and (2) indirectly, by assessing the designer's degree of freedom when determining whether the design possesses the requisite "individual character" for protection.¹⁴⁶ While the first adopts an elemental approach to the issue of functionality, the latter is more holistic.

a. *Direct Exclusions.* Unlike the U.S. doctrine, the EU's functionality doctrine was rooted in its regulation from the outset.¹⁴⁷ Article 8 expressly denies protection to visual product *features* that are (1) solely dictated by technical function, or (2) necessary for mechanical connectivity so that the product may perform its function.¹⁴⁸ Any features not captured by the two exclusions are potentially protectable, whether they would be considered de facto functional, ornamental, or any combination thereof. Reflecting modern sensibilities about the nature of design (in a way that the U.S. statute arguably does not), Article 8's architecture rejects any notion of a simple, binary schism between purely ornamental and purely functional features.¹⁴⁹ Instead, the EU's framework begins with the assumption that most product design features perform a function, and the exclusions call for an inquiry into the extent of functionality.¹⁵⁰ While this helps avoid defining features as either functional or ornamental, it suffers from the same ailments inherent in any elemental approach to functionality.

¹⁴⁵ See Design Regulation, *supra* note 132, art. 8.

¹⁴⁶ *Id.* art. 6.

¹⁴⁷ The functionality provisions are mirrored in the Directive and Regulation. Compare Design Directive, *supra* note 131, art. 7, with Design Regulation, *supra* note 132, art. 8.

¹⁴⁸ Design Regulation, *supra* note 132, art. 8.

¹⁴⁹ See *Green Paper*, *supra* note 136, at 56 (noting, "modern industrial design tends to be less reliant on the notion of 'decoration' or 'ornamentation' applied to a product and instead to have the most intimate merger of functionalism and aesthetic value as its purpose. The more a form corresponds to the function for which the product is intended, the greater its design merits will be.").

¹⁵⁰ See *id.* at 60 (finding this approach leaves "open the question of the interplay of the two aspects, functional and aesthetic, which are both present in the vast majority of cases").

Indeed, both of Article 8's exclusions are applied on an elemental basis and serve gatekeeping roles in the regime. However, the first exclusion does most of the heavy lifting. On the critical question of what it means for a feature to be solely dictated by technical function under the Article 8(1) exclusion, two schools of thought have emerged.¹⁵¹ The first—the so-called “mandatory” approach—excludes any design feature whose technical function *mandates* its form.¹⁵² As long as the feature's technical function can be achieved by another form (e.g., there are a “multiplicity of forms”¹⁵³ that can carry out its function), the exclusion does not apply.¹⁵⁴ On the other hand, the second approach—the so-called “causative” approach—excludes design features that were *caused* by functional considerations¹⁵⁵ in the sense that the designer was motivated only by technical constraints while designing the feature.

Although a majority of Member States currently follow the mandatory approach, OHIM has arguably endorsed a variant of the causative approach.¹⁵⁶ In *Lindner Recyclingtech v. Franssons Verkstäder*,¹⁵⁷ OHIM's Third Board of Appeal

¹⁵¹ See LIONEL BENTLY & BRAD SHERMAN, *INTELLECTUAL PROPERTY LAW* 618 (2d ed. 2004); Dinwoodie, *supra* note 140, at 670.

¹⁵² See BENTLY & SHERMAN, *supra* note 151, at 618; Dinwoodie, *supra* note 140, at 670.

¹⁵³ The mandatory approach to Article 8(1) is also commonly referred to as the “multiplicity-of-forms theory.” See, e.g., *Lindner Recyclingtech v. Franssons Verkstäder*, OHIM, Third Board of Appeal, 22 Oct. 2009, Case R 690/2007-3, ¶ 31. In our framework, however, one might aptly describe it as a *test* for determining whether the design was solely dictated by function under the mandatory approach.

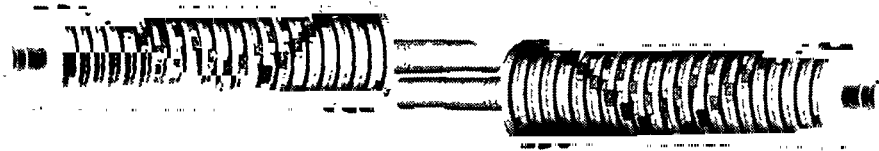
¹⁵⁴ While Member States are hardly uniform in application of the mandatory approach, most give little weight to the competition-based acceptable substitutes line of reasoning. See MARQUES: A REVIEW OF THE FIRST 300 DECISIONS ON THE VALIDITY OF REGISTERED DESIGNS 28 (2d ed. 2008) (finding it does not matter if the alternative is “more difficult, or more expensive, or financially, environmentally or otherwise disadvantageous”).

¹⁵⁵ BENTLY & SHERMAN, *supra* note 151, at 618; Dinwoodie, *supra* note 140, at 670. The identification of functional considerations also appears to invite broader unfair competition-related interpretations of functionality. See, e.g., *Dr. Oetker Polska v. Zakland Produkcyjno*, OHIM, Third Board of Appeal, 12 Nov. 2009, Case R 1114/2007-3, ¶ 18 (finding features functional where alteration would increase the product's cost). Such broad interpretations are not only problematic for the reasons outlined in the U.S. section, but they also arguably pull the test further away from its statutory language—demanding the feature be solely dictated by its *technical* function.

¹⁵⁶ A majority of Member States followed this approach before the Directive and it was reinforced by the AG in a prominent trade mark case. *Koninklijke Philips Electronics NV v. Remington Consumer Products Ltd.*, Case C-299/99, 2002 E.C.R. I-05475, ¶ 34 (Opinion of the Advocate General) (“[T]he level of functionality must be greater in order to be able to assess the ground for refusal in the context of designs; the feature concerned must not only be *necessary* but *essential* in order to achieve a particular technical result: form follows function. This means that a functional design may, none the less, be eligible for protection if it can be shown that the same technical function could be achieved by another different form.”).

¹⁵⁷ *Lindner Recyclingtech*, Case R 690/2007-3, ¶ 30.

was faced with an application for the invalidity of a registered design for a chaff cutter, which uses a series of rotating knives to shred materials such as paper, cardboard, plastic, and glass for recycling.¹⁵⁸



The principal issue on appeal was whether the chaff cutter's features were solely dictated by technical function under the first exclusion.¹⁵⁹ After noting that the purpose of the exclusion was to police the boundary between design protection and utility patent protection,¹⁶⁰ the Board ruled that the mandatory approach failed to advance this purpose.

The Board acknowledged that many national courts and commentators had endorsed the mandatory approach. Nonetheless, the Board critiqued the approach on the ground that it so rarely justified the exclusion of subject matter that it had little real effect.¹⁶¹ After all, the Board averred, it was usually possible to modify a design's form without subverting its function.¹⁶² The Board appeared to be most concerned by the scenario in which a given technical solution could be achieved by only two designs. Under this hypothetical, "both solutions could be the subject of a design registration, possibly held by the same person, which would have the consequence that no one else would be able to manufacture a competing product capable of performing the same technical function."¹⁶³ According to the Board, this

¹⁵⁸ *Id.* ¶ 16.

¹⁵⁹ *Id.* (explaining that as a component part of a complex product, its validity is dependent upon design characteristics that are visible during normal use).

¹⁶⁰ *Id.* ¶ 28 (asserting that "[t]he assumption has generally been made that the purpose of such provisions is to prevent design rights from being used to obtain monopolies over technical solutions without meeting the relatively stringent conditions laid down in patent law."). The recitals in the Directive and the Regulation are frequently cited in support of this boundary-policing rationale. See Design Directive, *supra* note 131, ¶ 14 ("Technological innovation should not be hampered by granting design protection to features dictated solely by a technical function."); Design Regulation, *supra* note 132, ¶ 10. However, neither recital explicitly references the utility patent/design protection boundary.

¹⁶¹ *Lindner Recyclingtech*, Case R 690/2007-3, ¶ 30.

¹⁶² Of course, this will always depend on the specificity the court ascribes to the design's functional features.

¹⁶³ *Id.*

consequence demonstrated that the functionality exclusion was too easily avoided under the mandatory approach.¹⁶⁴

Instead, the Board adopted the causative approach espoused in a (pre-Directive) 1970s British design case, *AMP v. Utilux*.¹⁶⁵ In *AMP*, the House of Lords had rejected the mandatory approach, and interpreted the United Kingdom's (U.K.) similarly worded exclusion¹⁶⁶ as barring designs whose features "originated from purely functional considerations."¹⁶⁷ However, instead of resting its analysis on the subjective intent of the designer—as the English courts often did when applying *AMP*¹⁶⁸—the Board "assessed [functionality] from the standpoint of a reasonable observer who looks at the design and asks himself whether anything other than purely functional considerations could have been relevant when a specific feature was chosen."¹⁶⁹ In this case, the Board found the design registration invalid because nothing about the chaff cutter's appearance indicated that aesthetic considerations played any part in its development.¹⁷⁰

The Board's decision is perplexing for a number of reasons. First, it breathes new life into the dubious distinction between functional and aesthetic design innovation, a distinction that was critiqued¹⁷¹ and ultimately rejected in

¹⁶⁴ *Id.*; cf. Dinwoodie, *supra* note 140, at 674 (arguing that a more flexible solution to the so-called design depletion problem might depend on whether the number of alternative designs is enough to permit competition or "requir[ing] more than minimal creative choices on the part of the designer").

¹⁶⁵ *AMP Inc. v. Utilux Pty. Ltd.*, [1971] F.S.R. 572.

¹⁶⁶ Compare Registered Designs Act, 1949, 14 Geo. 6, c. 88, § 1(C)(1) ("A right in a registered design shall not subsist in features of appearance of a product which are solely dictated by the product's technical function."), with Design Regulation, *supra* note 132, art. 8(1) ("A Community design shall not subsist in features of appearance of a product which are solely dictated by its technical function.").

¹⁶⁷ *AMP*, [1971] F.S.R. at 578. Although the Board did not explain as much, the *AMP* causative approach operated alongside the U.K.'s "eye appeal" requirement, which required that at least one of the design's features be motivated by the designer's intention to appeal to the eye of a prospective consumer. See *Interlego A.G. v. Tyco Indus.*, [1988] 2 H.K.L.R. 509, 519 (noting that "any feature which went beyond those dictated solely by function and provided eye-appeal would entitle the shape as a whole to protection."); see also MARTIN HOWE, RUSSELL-CLARKE & HOWE ON INDUSTRIAL DESIGNS 115–16 (8th ed. 2010) (providing background on the eye appeal requirement); MARY VITORIA ET AL., LADDIE, PRESCOTT & VITORIA: THE MODERN LAW OF COPYRIGHT AND DESIGNS 1947 (3d ed. 2000) (same); Registered Design Act 1949, ch. 88, 12, 13 & 14 Geo. 6, § 1(3) (Dec. 16, 1949) (statutory authority for the eye appeal requirement).

¹⁶⁸ See, e.g., *Gardex Ltd. v. Sorata Ltd.*, [1986] R.P.C. 623.

¹⁶⁹ *Lindner Recyclingtech*, Case R 690/2007-3, ¶ 36.

¹⁷⁰ *Id.* ¶ 42.

¹⁷¹ *Green Paper*, *supra* note 136, at 56 (observing, "modern industrial design tends to be less reliant on the notion of 'decoration' or 'ornamentation' applied to a product and instead to have the most intimate merger of functionalism and aesthetic value as its purpose. The more a form corresponds to the function for which the product is intended, the greater its design merits will

the EU¹⁷² as being irreconcilable with the protection of modern design.¹⁷³ Indeed, not even the U.K. still requires “eye appeal,” a concept that is central to the reasoning in *Amp* but demonstrably problematic for modern design.¹⁷⁴ Second, all other issues of validity and infringement in Community design law are posed from the viewpoint of the informed user, not the reasonable person.¹⁷⁵ The Board’s invocation of the reasonable person creates an internal inconsistency and offers no real guidance as to the reasonable person’s capacities and how they might differ from those of the informed user. And, third, since the chaff cutter was a component part that was barely visible in the larger shredder,¹⁷⁶ the Board could have achieved the same outcome by simply defining the design’s features more broadly, or its functionality with more specificity. The Board could then have concluded that there was not a multiplicity of forms that could perform that specific technical function,¹⁷⁷ supporting its invalidity judgment without turning to the causative approach.¹⁷⁸

be.”).

¹⁷² Design Directive, *supra* note 131, ¶ 14; Design Regulation, *supra* note 132, ¶ 10; *see also Green Paper*, *supra* note 136, at 60 (“This criterion is however of very little help, as it is just as difficult to define what ‘aesthetic effect’ means as to define the notion of ‘artistic work’ in copyright law.”). The Board in *Lindner Recyclingtech* was quick to claim that the *AMP* approach “is not, it must be stressed, tantamount to introducing a requirement of aesthetic merit into the legislation.” *Lindner Recyclingtech*, Case R 690/2007-3, ¶ 35.

¹⁷³ It also ignores the classic Bahaus credo that beauty results from purity of function. Indeed, the “form follows function” axiom has been treated as both a description and prescription of beauty for decades. WILLIAM LIDWELL ET AL., *UNIVERSAL PRINCIPLES OF DESIGN* 106 (2010).

¹⁷⁴ *See* MARTIN HOWE RUSSELL-CLARKE & HOW ON INDUSTRIAL DESIGNS 38 (6th ed. 1998) (noting that the U.K.’s solely dictated by functionality exclusion “probably does no more than make explicit what is already implicit in the positive part of the definition requiring eye appeal”).

¹⁷⁵ *See* *PepsiCo, Inc. v. Grupo Promer Mon Graphic SA*, Case C-281/10 P, 2011 ECJ EUR-Lex LEXIS 2593, ¶ 43 (Opinion of Advocate General Mengozzi) (“Obviously, the informed user to whom the Regulation refers is not the average consumer to whom reference must be made in order to apply the rules on trade marks, who needs to have no specific knowledge and who, as a rule, makes no direct comparison between the trade marks at issue; nor, however, is the informed user the sectoral expert referred to for the purposes of assessing a patent’s inventiveness. The informed user can be said to lie somewhere between the two. Accordingly, the informed user is not a general consumer who might, entirely by chance and with no specific knowledge, also come into contact with the goods characterised by a particular design. Nor yet is the informed user an expert with detailed technical expertise.”).

¹⁷⁶ *Lindner Recyclingtech*, Case R 690/2007-3, ¶ 40 (noting the chaff cutter’s orientation at the top of the industrially-sized shredder meant it “might only be visible through a mirror or with the aid of a camera”).

¹⁷⁷ This mandatory approach has been championed since the regime’s origins in 1991. *Green Paper*, *supra* note 136, at 60 (“If a technical effect can be achieved only by a given form, the design cannot be protected. On the other hand, if the designer has a choice among various forms in order to arrive at the technical effect, the features in question can be protected. Understood in this way the exclusion from protection corresponds exactly to the idea/expression dichotomy of

Prior to *Lindner Recyclingtech*, OHIM had never invalidated a design for being solely dictated by technical function under Article 8(1). While the causative approach does not appear to have opened a Pandora's box, its use is on the rise.¹⁷⁹ Nevertheless, the split between OHIM and several Member states will likely culminate in a referral to the ECJ,¹⁸⁰ and it may reflect a lack of consensus about the deeper question of the role that functionality is meant to play in the European design system.

In stark contrast, the remaining exclusion's application has been far less contentious. Unlike the first broad exclusion, the mechanical connectivity exclusion under Article 8(2)¹⁸¹ was intended to exclude only those specific features of the design that must "be reproduced in their exact form and dimensions in order to permit the product . . . to be mechanically connected to or placed in, around or against another product so that either product may perform its function."¹⁸² While this interconnectivity or "must-fit"¹⁸³ exclusion might seem to be encompassed by (and thus redundant in view of) the first general exclusion,¹⁸⁴ the presence of a separate must-fit exclusion was deemed

copyright law. What is meant in reality is that if there is no choice when designing a product with a given effect, there is no personal creativity displayed and consequently nothing to protect — at least under copyright or design law.”).

¹⁷⁸ Although the Board addressed the design's visibility as a threshold validity issue, the component part's overall impression, for purposes of validity and scope, should be grounded in its impression during normal use. Design Regulation, *supra* note 132, art. 4(2)(b); *see also* Shenzhen Taiden Industrial Co. v. OHIM, Case T-153/08, 2010 ECR II-02517, ¶ 65. When undertaking its functionality analysis, the Board could have extended this reasoning to the interpretation of the design's essential features. Since the chaff cutter was so difficult to see during operation in the shredder that it required using a mirror, camera, or observation platform, one may rightly question whether the five acute dimensions that the Board identified fairly represent the overall visual impression of the chaff cutter during normal use. Had the Board instead characterized the overall impression less surgically, the Board could then more readily have arrived at the conclusion that only by appropriating a design of the same overall impression could a competitor have carried out the same function. Alternatively, the Board could have defined the chaff cutting function with a high degree of specificity, again making it very difficult to demonstrate that alternative designs could perform such a function.

¹⁷⁹ *See, e.g.*, Firma Weremczuk Spółka Jawna v. Marzena Karczmarek Agrotop-Kaczmarek, OHIM, Invalidity Division, 3 Mar. 2011, ICD 7081, ¶ 13 (“No one cares whether such a product [(combine harvester design)] looks good, bad or indifferent because no one spends much time looking at it. All that matters is that the product performs its function properly.”); Nordson Corp. v. UES, OHIM, Third Board of Appeal, 29 Apr. 2012, Case R 211/2008-3 (invalidating the glue-gun dispersal unit design); *Dr. Oetker Polska*, Case R 1114/2007-3 (invalidating a design for a dual-chambered foodstuffs bag); Wallop Defense Systems Ltd v. Chemring Countermeasures Ltd., OHIM, Invalidity Division, Sept. 16, 2011, ICD 8290 (invalidating a design for a saw blade).

¹⁸⁰ *But see* Dyson Ltd. v. Vax Ltd., [2011] Bus. L.R. 232, 242–43 (adopting the board's reasoning in *Lindner Recyclingtech's* and returning the U.K. to the AMP approach); *Samsung v. Apple*, [2012] EWHC 1882 (Pat), ¶ 52 (agreeing in dicta with *Dyson* and *Lindner Recyclingtech*).

to be a political imperative for the spare parts markets.¹⁸⁵ For example, consider the design of a USB flash drive.¹⁸⁶ The USB interface of the device is likely to be excluded under the connectivity exclusion, but the overall appearance of the remaining flash drive features may still warrant protection if they are novel and have individual character.¹⁸⁷ Thus, the exclusion ensures competition in the market for flash drives by making the USB interface available to other designers while contemporaneously encouraging innovation in the features that are capable of change and therefore eligible for protection.

¹⁸¹ See Design Regulation, *supra* note 132, art. 8(2). This provision is commonly applied in conjunction with Article 4(2), concerning component parts of complex products. *Id.* art. 4(2) (examining the design's novelty and individual character based on features that are visible during normal use).

¹⁸² *Id.* art. 8(2). This exclusion does not apply to features in a modular system (e.g., Legos). *Id.* art. 8(3); BENTLY & SHERMAN, *supra* note 151, at 621.

¹⁸³ Although there is a clear political relationship between the U.K.'s pre-Directive must-fit exclusion and the connectivity exclusion adopted by the EU, we are hesitant to use this label because of its unique baggage. See *Camatic Pty v. Bluecube*, OHIM, Invalidity Division, Jan. 9, 2012, ICD 8384 (referring to Article 8(2) under the "must-fit" moniker).

¹⁸⁴ Compare *Nordson Corp.*, Case R 211/2008-3 (invalidating the glue-gun dispersal design, on appeal, on the ground that it was solely dictated by function under Article 8(1)), with *Nordson Corp. v. UES AG*, OHIM, Invalidity Division, Nov. 20, 2007, ICD 2970 (invalidating the same glue-gun dispersal design on Article 8(2) grounds). See also *Dinwoodie*, *supra* note 140, at 674 (describing this exclusion as a specific application of the first general exclusion). Whether these exclusions are redundant will depend upon two things: (1) the level of specificity used to define the product's function, and (2) the Member State's methodology for determining whether a product is solely dictated by technical constraints.

¹⁸⁵ Pre-Regulation national approaches varied widely, and the stakeholders interested in promoting secondary markets were influential. See generally *Dinwoodie*, *supra* note 140, at 679–92 (detailing the contentious spare parts debate); Henning Hartwig, *Protection of car designs in Europe*, 11 ERA FORUM 439 (2010) (discussing the design protection of automobiles today in the EU).

¹⁸⁶ The canonical example used by commentators to describe this section's operation is the automobile exhaust pipe—a component that obviously must be manufactured to specific dimensions for interconnectivity. See, e.g., BENTLY & SHERMAN, *supra* note 151, at 620; JEREMY PHILLIPS, EUROPEAN DESIGN PROTECTION: COMMENTARY TO THE DIRECTIVE AND REGULATION PROPOSALS 89 (Mario Franzosi ed. 1996). The exhaust pipe, however, is probably not a very good example because it would also be restricted by the visibility or component-parts doctrine. See Design Regulation, *supra* note 132, art. 4(2)–(3) (so-called "under-the-bonnet" or "under-the-hood" provisions); see, e.g., *A.C.V. Manufacturing NV v. AIC S.A.*, OHIM, Invalidity Division, 15 Dec. 2011, ICD 8325, ¶¶ 14–15 (invalidating the heat exchanger design because it is a component part that is covered by a boiler during normal use).

¹⁸⁷ See BENTLY & SHERMAN, *supra* note 151, at 617; PHILLIPS, *supra* note 186, at 89; Design Regulation, *supra* note 132, at rec. 10; *Jos Ten Berg's Handelsmaatschappij BV v. Pi-Design AG*, OHIM, Invalidity Division, 23 May 2011, ICD 7084, ¶ 18 (noting "the double-wall feature of the contested RCD is not solely dictated by technical function and hence is not excluded in the assessment of the novelty and the individual character of the RCD").

Like the Art. 8(1) exclusion, the Art. 8(2) exclusion operates on a feature-by-feature basis.¹⁸⁸ As we have discussed elsewhere in connection with analogous rules of U.S. law, the feature-by-feature approach, as applied, is often at odds with the very concept of protecting an article's overall visual impression.¹⁸⁹ Feature-based exclusions are also in tension with other validity and infringement doctrines emphasizing the design taken as a whole.¹⁹⁰ Even if it is impractical to expunge feature-based analysis altogether from design law, the law should at least take measures to minimize it.

b. The Indirect Approach. To assess the full impact of functionality doctrines in EU law, one must consider not only the complexities of the Article 8 exclusions, but also the nuances of the degree of freedom inquiry.¹⁹¹ The degree of freedom inquiry is analogous to functionality, but it operates indirectly through the EU's individual character requirement.¹⁹² In *PepsiCo. v. Grupo Promer Mon Graphic*, Advocate General (AG) Mengozzi recently explained that the degree of freedom inquiry is necessary to better understand which design features are *compulsory*.¹⁹³ As for these features, "the designer is not free

¹⁸⁸ This feature-based approach was intentionally carried throughout both exclusions. The originally proposed language in the Directive took a more holistic approach. Article 7(1) stated that "[a] design right shall not subsist in a design to the extent that the realisation of a technical function leaves no freedom as regards arbitrary features of appearance." *Directive Memorandum*, *supra* note 142, at 25. And, Article 7(2) stated that

[a] design right shall not subsist in a design to the extent that it must necessarily be reproduced in its exact form and dimensions in order to permit the product in which the design is incorporated or to which it is applied to be mechanically assembled or connected with another product.

Id. The European Commission's proposal, however, amended both into the feature-based form that exists today. Unfortunately, the legislative history does not explain why this approach was adopted. According to the Directive's explanatory memorandum, "the Commission felt that clearer wording was needed, especially after the amendment proposed as regards paragraph (2)." *Id.* at 7. In other words, Article 7(1) was changed in response to the adoption of Article 7(2), adopting a feature-based approach to "must-fit" elements of a design. *Id.*

¹⁸⁹ See discussion *supra* Part II.B.1.

¹⁹⁰ See Design Regulation, *supra* note 132, arts. 6, 10 (*e.g.*, individual character and scope of protection).

¹⁹¹ *Id.* art. 6(2).

¹⁹² The EU's individual character requirement is conceptually analogous to the U.S.'s nonobviousness requirement, yet vastly different in substance and application. See *Apple v. Samsung*, Düsseldorf Court of Appeals of 31 January 2012, Case No. 20 U 175/11, Report: Zum Erfordernis der 'Nonobviousness' im US-amerikanischen Designschutz im Vergleich mit dem Kriterium der Eigenart im Gemeinschaftsgeschmacksmusterrecht (Annette Kur & Jason Du Mont) (December 2011) (on behalf of Apple) (briefly describing some of the doctrinal nuances in the application of these two standards).

¹⁹³ *PepsiCo, Inc.*, 2011 ECJ EUR-Lex LEXIS 2593, ¶¶ 29–30. Although the AG rejected the Board and General Court's reliance on market expectation as a constraint on the designer's

to change them, and the fact that they bear similarities to features of another design cannot be regarded as significant.”¹⁹⁴

Not surprisingly, the designer’s degree of freedom is a strong indicator of whether a design has individual character.¹⁹⁵ This factor is treated on a sliding scale. When the designer is confronted by numerous technical constraints and has a limited degree of freedom, minor variations over the prior art are often enough to confer individual character.¹⁹⁶ By the same token, minor variations from the registered design are frequently sufficient to avoid infringement when the degree of freedom is limited.¹⁹⁷ Although this analysis invariably cuts both ways for the designer—enhancing the ability to obtain rights, while decreasing the ability to successfully enforce them—it is thought to strike a crucial balance between rights-holders and the next generation of designers by attempting to award a scope of exclusivity that is commensurate with contribution. The objective is to ensure competition while providing the designer with the

degree of freedom, this case also highlights some of the confusion surrounding the role of prior art in the EU’s individual character analysis. *See id*; *Samsung*, [2012] EWHC 1882, ¶ 40 (resting its degree of freedom analysis on technical considerations and avoiding the issue of whether economic constraints or market expectations should be incorporated when evaluating the design’s scope). Indeed, features necessitated by market demand may still be relevant if they are exemplified in the design corpus, and are therefore part of the informed user’s general familiarity with the design corpus’s features. *See* Design Regulation, *supra* note 132, ¶ 14; *Samsung*, [2012] EWHC 1882, ¶ 52. The key is the existence of these features in the design corpus before the creation of the claimed design and the role they play on the informed user’s overall impression of the claimed design. The net effect on the overall impression may be the same, but we think courts are better served by keeping this analysis separate from the degree of freedom.

¹⁹⁴ *PepsiCo, Inc.*, 2011 ECJ EUR-Lex LEXIS 2593, ¶ 29. In dicta, the AG added that the “constraints on creative freedom to be taken into consideration in accordance with the Regulation are exclusively those constraints which are dictated by the need for the goods to fulfill a certain function. . . .” *Id.* ¶ 31. Arguably limited by the product’s nature and the design’s industrial sector, these technical constraints should also be exemplified by the existing design corpus. *See* Design Regulation, *supra* note 132, at rec. 14; Design Directive, *supra* note 131, at rec. 13.

¹⁹⁵ *Compare* Kwang Yang Motor v. OHIM, Case T-11/08, 2011 ECJ EUR-Lex LEXIS 2669, ¶¶ 38, 45 (finding a “high degree” of freedom for internal combustion designs and concluding that the differences were not enough to confer individual character), *with* Jos Ten Berg’s Handelsmaatschappij BV v. Pi-Design AG, OHIM, Invalidity Division, 23 May 2011, ICD 7084 (finding minor differences in diameter between glasses enough to confer individual character where the degree of freedom was limited).

¹⁹⁶ *See* Daka Research Inc. v. Ampel 24 Vertriebs-GmbH & Co. KG, OHIM, Third Board of Appeal, 1 Dec. 2005, Case R 196/2006-3, ¶ 20 (“Presumably this means that if the designer had relatively little freedom in developing the design, especially on account of technical constraints, even small differences in relation to earlier designs may be sufficient to endow the design with individual character.”).

¹⁹⁷ *See* Kwang Yang Motor, 2011 ECJ EUR-Lex LEXIS 2669, ¶ 33.

marketplace signaling effects that accompany an intellectual property right.¹⁹⁸ On the other hand, where the degree of freedom is great, the designer must demonstrate more substantial departures from prior designs in order to warrant protection.¹⁹⁹

While the EU's statutory framework is notably silent about the degree of freedom's effect on the individual character analysis, requiring only that it be taken into consideration,²⁰⁰ courts have tied it more tightly to the individual character analysis by emphasizing its influence on the design's overall impression.²⁰¹ Informed users—having some awareness of the design corpus and its accompanying functional constraints²⁰²—are presumed to focus on aspects of the protected design that are different.²⁰³ In areas where the designer's degree of freedom is limited because certain features must be included due to technical constraints, it is assumed in formulating an overall visual impression that the informed user will attach less weight to those characteristics—emphasizing the remaining features when determining whether the overall impression is unique enough to produce a different overall impression (i.e., individual character).²⁰⁴ For example, in *3M v. Castello*, the applicant challenged the validity of the design for a skin antiseptic dispenser

¹⁹⁸ See e.g., Clarisa Long, *Patent Signals*, 69 U. CHI. L. REV. 625 (2002) (exploring the signaling effects of intellectual property rights).

¹⁹⁹ See *Shenzhen Taiden Indus. Co. Ltd.*, 2010 E.C.R. II-02517, ¶ 62 (finding the degree of freedom “relatively wide” and concluding that minor differences were not enough to give the design for a conference-call unit individual character).

²⁰⁰ See Design Regulation, *supra* note 132, art. 6(2).

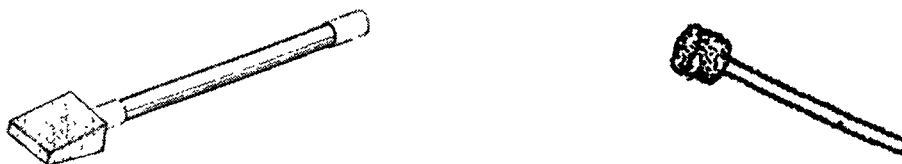
²⁰¹ See *id.* art. 6 (requiring the claimed design to produce a different overall impression in order to warrant protection).

²⁰² See *Procter & Gamble Co.*, [2008] E.C.D.R. 3, ¶ 17. These functional design features will likely be exemplified in the prior art because they are necessary for the product to operate. See *Shenzhen Taiden Indus. Co. Ltd.*, 2010 E.C.R. II-02517, ¶ 55.

²⁰³ See, e.g., *Aida A/S v. Pi-Design AG*, OHIM, Invalidity Decision, 21 Sept. 2009, ICD 5510, ¶¶ 17–18.

²⁰⁴ See *Miguel Soriano Sola v. RIDI Leuchten GmbH*, OHIM, Invalidity Decision, 3 June 2004, ICD 32, ¶ 14 (“The informed user will attach less weight to such technical characteristics that are unavoidably shared by these types of ceiling lights when assessing the overall impression.”); see also *Eredu S. Coop v. Arrmet*, OHIM, Invalidity Division, Apr. 27, 2004, ICD 24, ¶ 17 (“The informed user is familiar with the basic features of stools. When assessing the overall impression of the design he/she takes into consideration the limitations to the freedom of the designer and weighs the various features consequently. He/she will pay more attention to similarities of non-necessary features and dissimilarities of necessary ones.”). While psychologists might aptly point out that this legal analysis is out of touch with how people actually perceive designs, a weighted approach might comport with reality where the informed user is familiar with the functional design features because of their ubiquity in the prior art (i.e., demanded by a familiar product archetype).

(below left) on the basis that it lacked individual character over another disposable sterile swab (below right).²⁰⁵



After acknowledging that the dispenser's basic structure (i.e., its stem and head) was necessitated by the dispenser's functional purpose, the Invalidity Division noted that "the informed user focuses his attention to the features not necessarily implied by this function."²⁰⁶ The informed user was deemed to know that the basic head and stem configuration is necessary for the dispenser to operate; so the Board concluded that the informed user would place less weight on these characteristics, and more weight on aspects where the designer had some freedom.²⁰⁷

The degree of freedom inquiry speaks in terms of relative weight; it does not call for features to be factored out altogether so as to render the design invisible. Instead, it is understood that those features which are given less weight by the informed user still provide a reference frame for the informed user to consider when developing an overall impression of the design.²⁰⁸ In the *3M* case, the Invalidity Division found that the design's wedge shaped head and rounded stem created a different overall impression than the prior art's cylindrically shaped head and stem.²⁰⁹

²⁰⁵ José Mallent Castelló v. 3M Innovative Properties Co., OHIM, Third Board of Appeal, 14 June 2004, ICD 40, ¶ 19.

²⁰⁶ *Id.* ¶ 17.

²⁰⁷ See *Miguel Soriano Sola*, ICD 32, ¶ 14 ("The informed user will attach less weight to such technical characteristics that are unavoidably shared by these types of ceiling lights when assessing the overall impression.").

²⁰⁸ Some courts, however, will omit functional aspects in a similar manner to the Article 8 statutory exclusions. For example, in *Crocs v. Holey Soles*, the applicant challenged the validity of the Crocs clog design where the only difference between it and the prior art Crocs design was the existence of a heel strap. *Crocs v. Holey Soles Holdings*, OHIM, Third Board of Appeal, 26 March 2010, Case R 9/2008-3, ¶ 100. The Third Board of Appeal concluded that the strapped clog design lacked individual character. The Board reasoned that "since the two product designs only differ by an element that can be made to become redundant — thus proving its accessory and functional nature — they produce on the informed user the same overall impression." *Id.* ¶ 107.

²⁰⁹ *Miguel Soriano Sola*, ICD 32 at ¶ 19.

Whereas the direct approach to functionality is dominated by a problematic elemental approach, the degree of freedom inquiry offers a potentially more promising holistic framework. It also may be more effective in balancing the designer's need for protection with competitors' need to maintain an unencumbered product market.

2. *Functionality in the Analysis of Scope.* In the EU, both the direct and indirect approaches to functionality as discussed in the preceding section on validity are relevant to the design's scope. Beginning with the direct approach, those features that fall into the general functionality or mechanical connectivity exclusions must also be selectively parsed from the design's scope of protection.²¹⁰ Because protection cannot be leveraged on excluded functional features, competitors are theoretically free to copy them, making infringement contingent upon the reproduction of the protected design's remaining features.²¹¹ Accordingly, under the EU's framework, the design's scope of protection is as susceptible to distortion as U.S. design patents are under *Richardson*.²¹²

Similar to its validity analysis, however, the EU also indirectly deals with functional constraints by mandatorily factoring in the degree of freedom into its scope analysis.²¹³ The scope of protection and the individual character analyses mirror each other, requiring the claimed design to produce a different overall impression than the prior art (i.e., individual character) or requiring the putative infringer's design to produce a different overall impression than the protected design (i.e., scope).²¹⁴ Both require the informed user to take stock of the designer's degree of freedom. When technical constraints substantially limit the designer's degree of freedom, it is understood that competitors' designs must

²¹⁰ See Design Regulation, *supra* note 132, art. 8.

²¹¹ BENTLY & SHERMAN, *supra* note 151, at 617.

²¹² See, e.g., *Procter & Gamble Co.*, [2007] E.C.D.R. 4, ¶¶ 41, 51 (noting, "So far as Mr. Carr's point on the exclusion of features dictated solely by function is concerned, these are excluded from the ambit of the informed user's appreciation, since they do not form part of the registered design at all. That these features are not to be taken into account at all is, in my judgment, made clear by recital (10)," and confirming how the degree of freedom operates alongside the exclusions: "Having eliminated features dictated solely by function, and having taken into consideration the degree of freedom of the designer to develop his design, the informed user must come to his 'overall impression.'"), *appeal granted*, [2008] E.C.D.R. 3 (granting the appeal on different grounds).

²¹³ See Design Regulation, *supra* note 132, art. 10.

²¹⁴ By comparison to U.S. jurisprudence, it is similar to the relationship between anticipation and infringement. See *Int'l Seaway Trading Corp. v. Walgreens Corp.*, 589 F.3d 1233, 1240 (Cir. 2009). A more accurate comparison, however, would necessitate the alignment of nonobviousness and infringement.

closely resemble the protected design. Alternatively, when the designer enjoys a high degree of freedom, the design is accorded a greater scope of protection, ensuring a more robust buffer between the protected design and its rivals. As a result, the degree of freedom analysis offers many of the same benefits as the Article 8 exclusions, while reducing the potential for distortion caused by an elemental approach.²¹⁵ It is, however, equally difficult to reconcile this holistic approach with the mandatory feature-based exclusions discussed above.

IV. DOCTRINAL PRESCRIPTIONS FOR DESIGN FUNCTIONALITY

Our comparative analysis of functionality under the U.S. design patent law and under the Community Design regime leaves us skeptical about the role of the doctrine in either system. For us, the existing jurisprudence of functionality calls into question the value of retaining the non-functionality conditions for validity or scope of protection in design patent and design protection systems. We have not attempted to make the policy case here for discarding that condition altogether. Instead, our goal has been to supply the doctrinal analysis that provides the foundation for that policy discussion. We consider it a policy discussion worth having in the long term.

In the short term, courts could do much to refine the functionality doctrine as it presently applies. In particular, U.S. courts could incorporate the following prescriptions to refine the functionality doctrine in U.S. design patent disputes.

- (1) *Abandon efforts to assess ornamentality directly.* Courts should expunge the visibility or “matter of concern” test from the jurisprudence and should avoid analyses that attempt to assess aesthetic beauty directly. They should instead frame their assessments by using the language of functionality. The existing case law has largely moved in this direction already.

It might be useful to develop a simple legislative proposal that would discard “ornamentality” from 35 U.S.C. § 171 and would substitute the language of non-functionality.²¹⁶ This alone would be of some value, even if the legislation did not attempt to offer a definition of

²¹⁵ *Samsung*, [2012] EWHC 1882, ¶ 64 (explaining that the degree of freedom analysis is not a simple “binary question of whether a given feature is dictated solely by function or not. . . . The issue is one of weight”).

²¹⁶ A less attractive option might include simply defining “ornamental” in the definitions section of the Patent Act within the rubric of functionality. *See* 35 U.S.C. § 100 (2011).

functionality. The move away from ornamentality would be consistent with the approach adopted in the Community Design regime, as we have discussed.

- (2) *Distinguish between functionality as it applies to scope determinations and functionality as it applies in validity determinations.* The Federal Circuit has created a structural problem in U.S. design patent law by injecting functionality into both the claim construction and validity analyses. At the very minimum, the court should make explicit that existing U.S. design patent law contemplates two forms of functionality, one of which (purportedly) narrows the scope of exclusive rights, the other of which renders the design patent invalid. It is not at all clear that both forms of functionality should proceed under the same tests. Certainly, they will be subject to different evidentiary standards—validity functionality, when offered as a defense in litigation to design patent infringement, must be subjected to the statutory presumption of validity²¹⁷ and the requirement to prove facts by clear and convincing evidence.²¹⁸ As we have discussed, there is no corresponding problem in the Community Design system.
- (3) *Overrule Richardson’s elemental functionality analysis for assessing functionality in claim construction.* The line of cases culminating in *Richardson* that encourages courts to “factor out” functional features should be discarded. We recognize that it is likely to be impracticable for courts and granting agencies such as the USPTO to analyze designs without any reference to individual features of the design. Community Design law speaks in the language of a design’s features in its functionality analysis. And, in the analysis actually applied in *Richardson*, the court purports to consider the design as a whole even after “factoring out” individual features.²¹⁹ Of the numerous problems that *Richardson’s* elemental functionality analysis presents, the critical one is that it encourages courts to discount the effect of discrete features that carry out some definable purpose—that is, it encourages resort to de facto functionality. This permits

²¹⁷ *Id.* § 282.

²¹⁸ *Microsoft Corp. v. i4i Ltd. P’ship*, 131 S. Ct. 2238 (2011).

²¹⁹ *Richardson*, 597 F.3d at 1295.

courts virtually unconstrained discretion to alter the scope of design patent rights in order to achieve particular litigation outcomes, and presents a risk to the integrity of the design patent system. Here, the lessons from European law are mainly cautionary. Authorities in Europe, as we have shown, have periodically fallen into the same error of engaging in analyses of the utilitarian purposes of discrete design features while losing sight of the proper assessment of the design's overall visual impression.

- (4) *Definitively adopt the "dictated by" standard for validity functionality and resist efforts to borrow approaches from trade dress functionality.* The Federal Circuit's vacillation between a balancing standard for functionality and a categorical "dictated by" standard does not appear to be the consequence of adequate judicial deliberation. In this regard, the court simply needs to clean up its design patent jurisprudence. The court could start by definitively adopting the "dictated by" standard, and by measuring compliance with that standard through assessing whether there are alternative designs that would carry out the relevant function. We recognize that the alternative designs criterion is subject to manipulation, but it is still preferable to other alternative tests, such as tests developed in connection with trade dress functionality. Again, the European experience is instructive as to the emergence of the alternative designs criterion as the dominant analytical standard.

These doctrinal prescriptions reflect our views on the lessons to be learned from the functionality jurisprudence that we have discussed in this Article, lessons that are driven primarily by our holistic view of the subject matter of design protection and our concerns about making existing doctrine more predictable and reliable in its application.

Our prescriptions are also motivated by additional normative considerations that must await fuller articulation in our future work, although they merit brief mention in closing here. We take an instrumentalist view of functionality in design protection systems, one that calls for a reexamination of the role of functionality in design protection systems as a channeling mechanism.

In the literature and jurisprudence of trade dress protection, the idea that functionality operates as a channeling mechanism is quite familiar. Courts have characterized trade dress functionality as a mechanism for channeling design

innovation away from trademark regimes (where it would enjoy protection that is potentially unlimited in duration) towards patent regimes (where protection is time-limited).²²⁰ It is easy to make a compelling case for the existence of a trade dress functionality doctrine that is robust enough to channel innovation successfully.

However, it would be a mistake to assume that this same core idea of channeling subject matter towards the utility patent regime should animate the functionality doctrine in design protection systems. For example, it is not clear to us that there is a compelling competition-based rationale for directing subject matter out of the U.S. design patent system (with its fourteen-year from issuance term of protection)²²¹ into the utility patent system (with its potentially longer twenty-year-from filing term). Nor is it clear to us that there is a compelling case in favor of a robust functionality doctrine that channels subject matter out of the design protection system and into a zone where no protection is available at all, because such a functionality doctrine would call into question the rationale for having a design protection system in the first place. Indeed, a functionality doctrine patterned on this sort of channeling could mutate into an all-purpose judicial veto power, an eligibility restriction that could have the effect of thrusting entire classes of subject matter out of the system.

In sum, we are suggesting, at the very least, that trade dress functionality doctrine should be quite different from those doctrines which (unfortunately) bear the same name in design protection systems. We are also hinting that we have some serious doubts about the role to be played by functionality doctrine in design protection systems, and expect that in many cases, the application of that doctrine should be carefully circumscribed.

²²⁰ See, e.g., *Qualitex Co. v. Jacobson Prods. Co.*, 514 U.S. 159, 164 (1995) (“[T]he functionality doctrine prevents trademark law, which seeks to promote competition by protecting a firm’s reputation, from instead inhibiting legitimate competition by allowing a producer to control a useful product feature. It is the province of patent law, not trademark law, to encourage invention” by protecting useful product features).

²²¹ 35 U.S.C. § 173 (setting the duration of protection).

